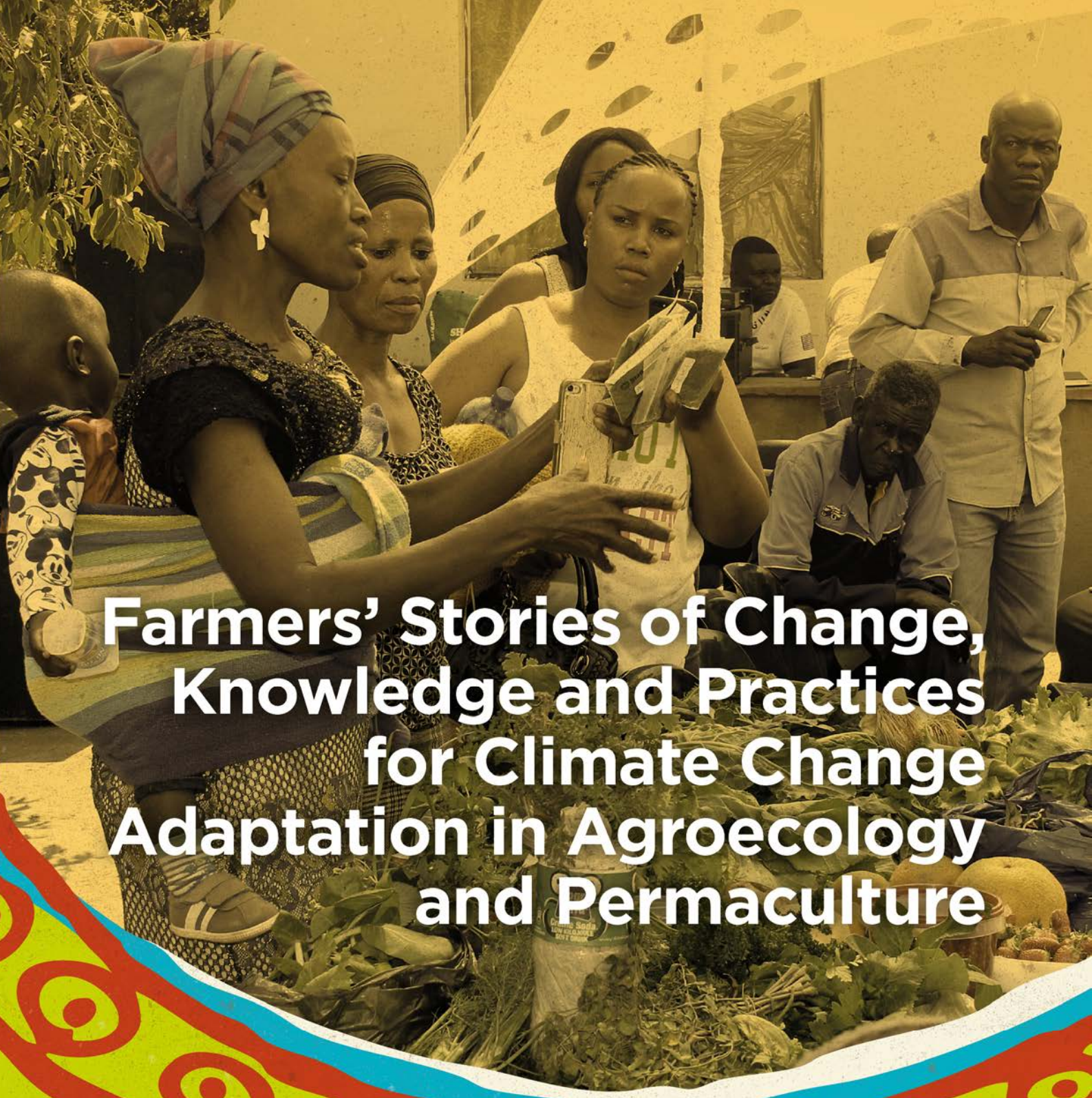

Farmers' Stories of Change, Knowledge and Practices for Climate Change Adaptation in Agroecology and Permaculture

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Contents

Introduction

The Case of AgriSI project in the Olifants River Catchment, South Africa

The Agri-SI (Agricultural Support Initiative) project is one of a set of coordinated projects being implemented by the Association for Water and Rural Development (AWARD) in the Olifants River catchment, under the USAID-funded RESILIM-O (Resilience in the Limpopo Basin Program – Olifants) project. RESILIM-O's overall goal is to reduce vulnerability to climate change through building improved transboundary water and biodiversity governance and management of the Olifants Basin. It uses science-based strategies that enhance resilience of people and ecosystems through systemic and social learning approaches

The Agricultural Support Initiative (AgriSI) was initiated as a sub-grant process within the larger RESILIM-O programme towards the end of 2016. This initiative works with smallholder farmers within communities lying in the lower Olifants River basin. The project is implemented jointly with Mahlathini Development Foundation and Ukuvuna Harvests.

The Agri SI project works with more than 300 smallholder farmers drawn from Sekhukhune, Capricorn and Mopani districts of the Limpopo province.

"The overall aim of Agri SI is to enhance the resilience of people and ecosystems in selected villages in the middle and lower Olifants River basin, using a systemic social learning approach."

Accordingly the project addresses two of the RESILIM-O program objectives directly:

- To institutionalize systemic, collaborative planning and action for resilience of ecosystems and associated livelihoods through enhancing the capacity of stakeholders to sustainably manage natural resources of the Olifants River Basin under different scenarios.
- To reduce vulnerability to climate change and other factors by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements.

Why Share their Stories?

It is against the project background described on the previous page that the farmers' stories of change shared in this monograph were developed. The ultimate aim was to tell the farmers' stories of change as a way of sharing experiences about best climate smart agro-ecological practices and support cross learning for resilience building and improved smallholder farmers' self-organisation.

Each story told is unique and provides a lens through which to understand how farmers are grappling to cope with the socio-ecological crisis and uncertainty that is associated with climate change. Each change being narrated is achieved through multiple processes of social systemic learning, learning by doing, experimentation, hard work and commitment to improve oneself.

Together the stories also reflect the innovativeness and diversity of technologies and practices, some as old as time itself, that rural farmers deploy as adaptation for climate change. We therefore share these stories not only because they represent possible agro-ecology best practices but also because they are in themselves sources of inspiration to other farmers, and to provide for continued sharing and learning.

The stories are told by the farmers themselves, in a way that enables the reader to easily appreciate the "before" and "after" of the Agri SI project and thus its emerging impact.

A Home Design Model
Joel Mahlangu

Joel Mahlangu is a contractor in the construction industry and in addition, he is a keen gardener. He splits his time equally between work and gardening in order to address the needs of the family. The construction sector brings him money while the gardening provides him with fresh, organic, healthy food.

"Why did you choose Permaculture even though you are getting money from your construction job?"

Joel Mahlangu:

"Remember the first thing which is needed by the family before they do any job is food. So for me, I work for food first and then seek money elsewhere. Being a carpenter or painter did not stop me from having my own garden because I have a space that I can utilise for fruit, herbs and vegetables."

Joel used to have a small garden, which he said was not ideal as he only had a few vegetables and some old fruit trees.

In early 2017, Joel participated in Permaculture training from Ukuvuna. He then started to design his homestead, putting in place every aspect he had learnt from Ukuvuna. For example, approaching his main entrance, you are welcomed by evergreen flower beds with groundcover, together with a small fishpond containing catfish.

The idea of the groundcover is to protect the soil during rainy season. When it rains, excess run-off is trapped inside the fish pond, where it is then directed via a small pipe to irrigate some fruit trees within his orchard.

The water from the fishpond is fertilised by the droppings from the fish, which in turn provide the necessary nutrients for the fruit trees.

Although Joel isn't fully satisfied with his home design yet, it is a good example of the permaculture model and one can see water management, soil conservation and appropriate landscape design alongside a vibrant vegetable garden and lots of fruit trees. His plan is to develop his homestead garden as a model for permaculture systems and agroecology practices so he can train other farmers via "see and learn" systems. He believes that adults learn better if they can see, feel, and taste a good example of sustainable food production and therefore more likely to replicate it at their places.

With enthusiasm, Joel explains that:

"When local farmers visit my place I will be able to give them a garden tour and lecture them on climate change, good food systems, seed systems, earthworms, live fencing, intercropping and much more."

Joel Mahlangu is a great example of an innovator who is also a community leader and a permaculture revolutionary, who can take the system of looking after the Earth and taking care of people to another level, by leading by example.

Talking of Diversity
Lillian Kgonyane

Lillian was not born a farmer but accumulated farming techniques as she grew up. She had a passion to see green all around her, but the most important part of all, the “how”, was a blank space for her.

If you want to scare away hunger and malnutrion, try to have a diverse range of projects at home. It literally depends on what you call diversification and how you diversify your projects.

Lillian Kgonyane met other permaculture farmers from Venda and Capricorn, during the Ukuvuna and AWARD permaculture workshop in February 2017, who motivated her. She learnt about Permaculture and how people should live in harmony with nature. Until the workshop, she had a 5 x 5 metre garden which she used for growing a small quantity of spinach for household consumption. She remembers the time she put fertiliser on her garden and now realises that it is not effective to apply fertilisers especially in areas where there is little rainfall.

Lillian started to implement what she had learnt from Ukuvuna in her garden. Because she had acquired the knowledge of how to save water, it became even easier for her to expand her garden to produce enough vegetables for the family. Her garden is characterised by a wide variety of projects including a vegetable garden, herb garden, chickens, empty plastic bottle collection area for recycling, run-off water harvesting, a plant nursery and seed saving storage.

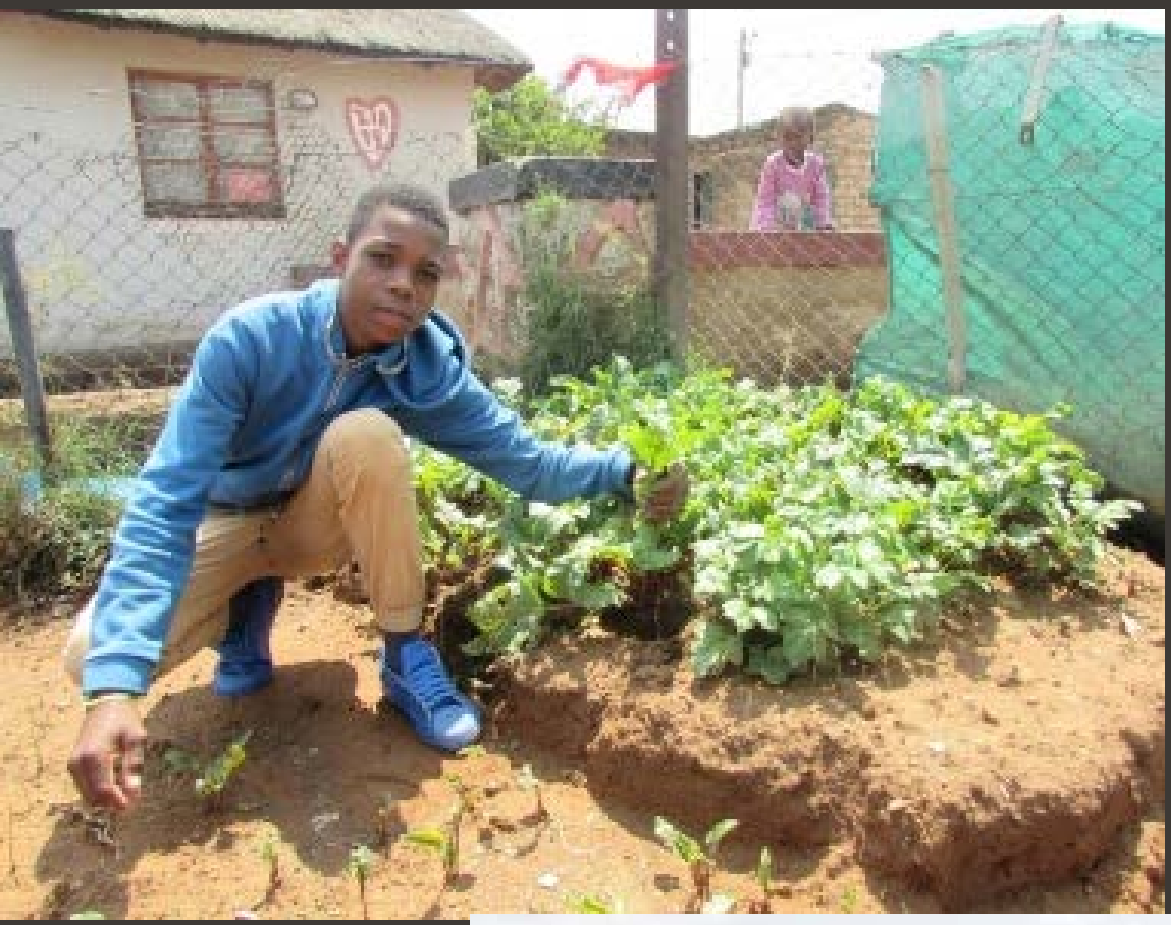
Lillian explains:

"I have a diversity of activities in order to produce a wide variety of results such as generating income, providing my family with meat and vegetables, managing waste (as you know in permaculture there is no waste), and keeping my own seeds so I do not have to depend on external suppliers.

The diversified projects complement the environment because I recycle waste like beer bottles, Coca Cola cans and organic waste. My immediate environment is clean and healthy because I clean it and support my agroecology activities on my plot."

Furthermore, *"I understand that there are adverse effects of climate change in my area due to industrialisation and commercial agriculture techniques using chemicals to maximise production. This is causing global warming and affecting rainfall patterns. Previously our area used to receive early rain, but now we only get it in December instead of early October. Many people are now suffering from poor water supplies as well as high temperatures, making it difficult for them to farm and cope with the climate change. In my garden, I am proud to know how to control run-off which has been wearing away my soil for several years; to cover the ground with plants to hold the soil; and make use of roof water. I have also learnt how to use local pest sprays to scare away pest and diseases."*

Youth Involvement in Farming
Tokelo Malatsi



For most 15-year-olds, their interest span is no further than their friends, school activities, drugs and their gadgets. More often consumers than contributors, the vast majority of teenagers are still figuring out what they would like to do with their lives

Tokelo is the exception to the rule. He was born and raised in the town of Tafelkop in Limpopo. While still pursuing his studies, Tokelo took note of the circumstances in and around his town and pondered on what young people were really lacking.

Tokelo Malatsi explains the water situation in *Tafelkop: "Being a small town, the residents of Tafelkop do not have good water supply to their homes and so the Municipality supplements tap water with water tankers that come to the village twice a week. The tanker water is shared between many households with each house getting 200 litres per week (5 buckets of 20litre each x 2 supplies). Most of the people who are eager to have gardens are finding it difficult to do so because of the lack of water. Rather than doing anything about this, they tend to sit back and take no action."*

Having this in mind and combined with the fact that he considered young people not really interested in farming methods as well as being too busy abusing drugs, Tokelo started to engage himself in farming at the age of 12. He helped his uncle with gardening in their small yard from which at least 20 people were being fed. He remembers that at that time, they were planting maize and a few spinach plants for household consumption. They used synthetic fertilisers to make plants grew fast because this was their line of argument for making farming a success. Even when his uncle was no longer part of the project, Tokelo continued with this type of farming.

Earlier this year, Tokelo met Lillian (Ukuvuna cluster leader) and she helped him with some permaculture practices to ease a few problems he was facing with his farming. When Lillian came to his place, he said that he saw his life changing in front of him, because he was enlightened on what to use and how to use it, to ensure sustainable farming outputs.

Through sharing and learning from Lillian, Tokelo dropped the use of chemicals and fertilisers and started using kraal manure, first composting it and then using it on a wide variety of crops. Apart from using kraal manure, Tokelo has also found it effective to use herbs for repelling certain insects to maintain a good relationship with nature as well as preventing his project from being ruined by insects.

Asked of his know-how about climate change, Tokelo said that he has a little idea about what climate change is, understanding it to be the change in the environment with extreme heat and cold. So for Tokelo, climate change is a difficult term to understand, but he is already working towards climate change adaptation. As of now, Tokelo is busy working in his small garden where he is planting some spinach, onions and cabbages and feeding twenty people with it. He says his wish is to expand his garden so that it becomes a little bit bigger, provided that his water is more readily available in due course. He is also sharing his experiences with his friends and some are becoming interested in his projects and he hopes they will soon join him.

In his final words he said: *"I realise it's very difficult for many people to understand that what I am doing is helping nature, so that nature helps me. Elderly people, politicians and municipalities leave rain water running away from us by the roadside, and it is causing erosion. They are not even thinking of controlling the water and the erosion happening in our area. There are no talks of water collection and storage for future use. If we all understand how the environment works, it will be easier to work on adaptive measures for climate change."*

Perma-Entrepreneur
Julious Cossa

"Being born in Mozambique and being married to a Zimbabwean wife, were not considered stumbling blocks by Julious Cossa when he started a new life for his family in South Africa. Having legally acquired a stand in Motetema, near Groblersdal Limpopo Province, the family have gone on to build a house, buy their cars and start various projects at their place. Familiar with generating his own income for most of his life, Baba Cossa decided to start directing his focus towards farming, which he saw as a positive activity, particularly with farm produce being in high demand in Motetema, due to water shortages."

To help others, Baba Cossa has put together some figures which can be used as a start-up business model:

Per month:

- labour @ R4000
- seeds @ R200
- water @ R200
- other costs @ R400
- Total costs per month R4800.
- Typical average income is R2000 per week

This is a good business in these punitive climate change conditions.

"But how can one start a garden in an area where there is lack of rainfall?" This is the question which Julious Cossa's story will answer. Motetema is primarily characterised by hot climatic conditions with average rainfall of 450mm per year. The area is surrounded by commercial farmers who have the right to pump water from the great Olifants River for irrigation. These farmers supply vegetables and fruit to the village.

"Commercial farmers in this area use synthetic chemicals to produce tropical fruits, vegetables and crops. A large percentage of these chemicals eventually end up in Olifants River and also in our bodies. We are not sure if the food we buy from these commercial farmers is safe to eat. Maybe it's a slow poison to our bodies?" asks Baba Cossa.

Even though living in an area like Motetema is a challenge, for entrepreneurial people like Baba Cossa, with training in permaculture, lost hope can be revived and life improved as demonstrated by this example. Baba Cossa was very concerned about his own health and that of his children and the community of Motetema. So he started off by approaching a local clinic for access to water and space to cultivate crops for his family and for the local market. When asked why he started a vegetable business in Motetema, he replied :*"I understand that every household needs vegetables to eat on a daily basis. Currently these households buy vegetables at the nearby national supermarket brands in Groblersdal. The vegetables are very expensive and the people don't even know who is growing products produced the organic way and they trust me, which helps to create harmony among ourselves. Also, my business helps to circulate wealth within our village and my production methods do not harm the mother earth."* Baba Cossa was introduced to John Nzira by Joel Mahlangu, when John was visiting the area on some projects. When John saw the passion and determination shown by the Cossa family, he organised a one-week permaculture course for the family and its neighbours.

Baba Cossa says: *"I learned that there were a lot of things that were lacking in my field. My intentions of having a garden were centralised on making money and I didn't know that to make money you should consider taking care of the earth (water, plants, soil and animals) and the people (no synthetic chemicals, share knowledge, maintain good health, etc.)."*

"If we take care of the environment now, in turn it will take care of us and the next generation. The workshop was instrumental in bringing in new ideas about water and soil management together with diversification of plants. When I started implementing the permaculture ideas, I noticed that my vegetable production doubled, compared to the first yield where I had little knowledge. This method is cheap and sustainable long term."

From being solely a green vegetable producer of beetroot and spinach, Baba Cossa has diversified by adding vegetables like potatoes, celery, cabbage, fruit trees and herbs. He has also started mixing crops to improve the yield and to naturally control pests. He is also busy establishing a nursery for vegetable, fruit tree and herb seedlings and collecting seeds from his garden for re-use so he doesn't have to depend on seed companies for the choice of seeds he needs. He introduced traditional chicken farming some time ago to supplement protein for the family and to provide manure for compost. He has also constructed contour ridges (swales) for water and soil conservation which has allowed run-off water to be controlled and erosion minimised.

Asked for his thoughts on the project, he said *"I am happy now, eating more fresh organic food and taking care of the environment as it will take care of me. Climate change is there but I will flow with it, through adaptation. Through this program, I am generating enough income for the family. I am now an employer. I can see positive change for me and the environment."*

Baba Cossa believes in sharing, and donates vegetables to the clinic, its patients as well as to pre-schools and old age homes.

Motivation from a Neighbour
Lucas Choma

In the African culture, people believe in sharing, and this is one of the most important moral codes. Sharing involves giving each other ideas and information about certain things and sharing in the realm of exchanging or giving items amongst others. The main reason behind this is to make society a collective haven for the human community whereby confidence is installed amongst each other.

Who would have thought that sharing of knowledge and information as well as having a positive mind about someone's projects could lead to generation of good water supply and soil management at Mr. Lucas Choma's project

Lucas Choma explains, *"I started my project this year in February, after admiring my neighbour Joel's projects. I found it easy to follow Joel's principles because of many things I admired about his work. I saw that his work reduces poverty and makes homesteads beautiful."*

Lucas and Joel have been neighbours for more than three decades but Lucas had not a single tree at his homestead. The Ukuvuna approach of node and cluster project management system helped Lucas to learn from Joel. And now, as neighbours, both have created great permaculture learning centres.

"I never thought one day I would be growing my own vegetables."

Lucas continued, *"During the rainy season, the run-off water would simply run through my place causing gullies all over my yard. Joel taught me the permaculture/ agroecology way of farming and in February 2017, I started controlling the gully by putting logs and old iron sheets across it. Furthermore, I planted different types of plants for erosion control and a variety of vegetables such as beetroot, spinach, onions, lettuce, and tomatoes using the mixed cropping method. Apart from vegetables, I also planted a variety of fruit trees such as peaches, mangoes, figs, avocados and grapes."*

"I also planted some flowers and various types of herbs. My teacher Joel was always there, guiding me to achieve all that I have today."

"The trees I planted are helping me to control soil erosion and keep the landscape beautiful. I know how to mulch the soils in my garden. I have learnt so much in this short period of time."

"I believe and am confident that Permaculture and agro-ecology are the way to better farming at the same time as taking care of our environment and our people. I still need further training in Permaculture and I believe my teacher Joel will help me".

Lucas is thankful for the permaculture principles which are helping him save his soil from being eroded as well as solving all the worries he had about the land.

Water Management
Anna Molala

Anna is an Ukuvuna Cluster Co-ordinator. She is responsible for the Capricorn district, specifically in Makweng area. Ukuvuna trained Anna in Permaculture and she took the knowledge and turned it into practice.

"Life in Makweng has been a testimony for me," expresses Anna Molala with great seriousness.

"I live with my children Lerato and Abram Molala and have been practising Permaculture for the past five years. I now lead a group of 180 active farmers, and I am doing extension service, teaching schools and other people in the area about Permaculture."

Ukuvuna encouraged Anna to develop her one-acre plot first before she started teaching Permaculture. Her plot became a good example of a Permaculture farm, after which she started teaching others about Permaculture. From a humble beginning, Anna has received three awards for her excellent work in Permaculture and climate adaptability. Now she is standing as a heroine in Makweng and the surrounding communities in Zebediela local municipality.

Anna narrated her story of change to Ukuvuna team: *"Life with my children and no support from their father was not a good life for me at all. I tried many things to improve the living conditions of my children. I received government benefit but it was not enough to send them to school, provide medical support and to buy the right food. One of the areas I got passionate about was farming, but I had no skills. But then I got training from Ukuvuna and started from a small base growing a few vegetables and crops."*

"The first time I met Mr. John Nzira was when he trained me in Permaculture. I remember he shared some herbs with me and other community members. I was captivated by the water management systems i.e. rain water harvesting and storage. I also learnt from him about grey water systems and compost-making. Through working with the prophet of Permaculture (John Nzira), I began to learn more and even understood that life was not difficult if you are being taught the right way. It was from 2012 that I started working with health peer educators. I was able to influence these peer educators to establish gardens within their homesteads to supplement the nutritional requirements of their bodies."

Anna now has a diversified food production system at her place. She has a water-harvesting system as well as poultry, vegetable garden, herb garden, fruit orchard, ornamental garden, tree nursery and crop farm. Anna is involved in bringing community members to her farm and training them in various aspects of Permaculture, such as the importance of eating healthy food, plant propagation, herbal teas, sharing knowledge with others and selling plant seedlings, seeds, and vegetables.

Anna further explained her project life: *"There is one simple charm in life for me - it's the charm of doing what I want with passion and with my heart. When I do this, it means life for me is coated with sugary calories! I realised that I have a gift for leadership. I teach and influence the community to apply the greening projects."*

She never realised how good she was at teaching and leading the community projects.

"Permaculture has taught me far more than going to university would have. I have learnt about real life, about taking care of my family and other people and about taking care of the environment."

Value Addition & the Environment

Reshoketswe Mduli

"Most of the people know me as a florist, but actually I am a jack of all trades with a passion for the processing industry," said mama Mduli from Monsterlus.

Reshoketswe Mduli tells her story: *"I stay at my place with my grandchild and have an open space for farming vegetables, grains and some fruits and on another larger area I am planting maize only. As you see, (pointing to a fruit orchard) I have fruit trees like pomegranates, figs, apples, peaches, oranges, lemons, plums and apricots. I also have herbs and flowers, which I sell for wedding functions and funerals. This is why people call me Ms Florist!"*

"In March 2017, I met Joel and learned about Permaculture. I then understood that farming is not only for today but how we need to design our land for tomorrow, so that it takes care of us and future generations. So, I have designed my garden to make sure it has annuals and perennials, conserves soil and water, there is enough water for my plants, and soil is protected from erosion."

"Furthermore, I process most of the extra crops and fruits I harvest from the farm. With fruits like oranges, peaches and bananas I make fruit juice and jam and also dry them. This helps generate income and maintain a range of fruit I need throughout the year. I also make compost from the leaves of the trees and use this for the vegetable, flowers and herb production. The system of Permaculture is the true way of living."

Going Commercial with a Mind for Environmental Conservation

Themba Machika

Themba was born and bred in Monsterlus, Sekhukhune District inLimpopo. His parents were great farmers who spent most of their time producing food for the family and for retail.

Themba Machika was originally formally employed, but with time he lost his job and came back to live at his place and in need of a project that would help with his livelihood. He is a diabetic and was advised to use herbs like garlic, which are very expensive to buy from shops.

Themba met Joel Mahlangu who was already practising Permaculture and was invited to his place to see some of the projects that Joel was involved in. Themba said that he found these projects very interesting and captivating, and was motivated to try them. In February, Joel started visiting Themba and helping him with his garden. From then on he started planting more herbs and vegetables and bought some chickens to supply him with meat, eggs and manure. He learnt a variety of permaculture techniques and he then took Permaculture to another level by starting to grow garlic, herbs and other vegetables on a commercial basis. He makes huge compost heaps to supply good natural fertiliser for his crops.

Themba's aim is to supply his community with "non-poisoned" herbs and vegetables i.e. food produced in an agroecological way. He believes the rate of sickness and disease will decline if people just focussed on eating a more diverse range of organic food.

"I will grow enough food for my village," Themba explains, "because the permaculture techniques allow a farmer to grow his products easily, healthily and cheaply. Because of my health challenges, I believe organic produce will be good for me."

Themba's place is now covered with wide variety of food production systems.

Enterprising Nurseries
Isaac Lechaba

Mr Lechaba is a resident of Makweng in Capricorn District. He lives alone in an RDP house on a one-acre plot. Lechaba‘s life is devoted to transforming his garden by means of a vegetable garden, fruit trees and an ornamental plant nursery.

"I never thought I would be making a living from nursery projects when Mr Nzira introduced me to the Nursery Production System in 2015."

This is what Isaac Lechaba said when the Ukuvuna team asked him about his Climate Change adaptability intervention. He first started gardening activities in 1997, but with no success. This changed when he met the Ukuvuna Team in 2012.

Lechaba's Nursery is one of the best Climate Change Adaptation projects in Capricorn District. The project is the backbone of Mr Lechaba and his reason for living. It's neither magic nor juju, it's just skills, talent and adoption of an open mind to live in harmony with nature and to create wealth. His story has allowed him to earn a living from a nursery business at the same time as championing for the effects of climate change at household level.

He expresses his feelings: *"When I started my nursery project, I wasn't sure if this was the right choice for me. Through my teachers, who included John Nzira and his team, I managed to sense a good smell of prosperity and taking care of the environment. When you really understand what you want to do in life, it means you are also able to see the reason why. For me the reason was associated with the lack of tree population in the area. I saw that the community was moving towards desertification, with no planting of trees being initiated by the community. Residents were cutting down trees indiscriminately in order to open up lands to grow monoculture crops for their families and for sale. Also, some natural forest in my area was cleared for residential development, especially the RDP houses in which I live. No one ever came back with a tree-planting programme within our village except Ukuvuna."*

Mr Lechaba lays down a challenge: ***"I stand as an example of a South African who cares about the environment, the people and even about the animals around us.*** *"Today, I am proud of my nursery project. My place is a paradise with a variety of evergreen trees; fruit trees (oranges, lemons, nartjies, avocados, pomegranates, guavas, etc.); vegetables (beetroot, spinach, covo, carrots, chilies, turnips, celery and tomatoes); herbs (moringa, pelargonium, yarrow, rosemary, etc.); flowers; shrubs; and succulents. All of these help to address climate change challenges. My nursery has distributed over 50 000 trees in Makweng community and in other communities in the Capricorn district. These trees were planted to green our community and establish afforestation activities for my community. This is about creating the lungs of nature and providing habitation for wild animals and food and medicine for the local people.*

My project is an income spinner. I earn around R5000 a month from the nursery, when the business is doing well. This means I don't need to go and look for a job in the city again. My business is here in the community and thus where my passion is. With the income derived from the project I managed to drill a borehole, which has allowed my project to expand further. I don't feel the effects of the harsh sun so much now; there is zero erosion; zero waste; and I am living peacefully with nature; and alongside lovely local people."

Mr Lechaba does not see problems in the community but rather solutions to any problem that may arise. Most townships have challenges of waste management. Mr Lechaba found that there is not enough littering of empty plastic bottles of Mazoe, cooking oil, empty maize bags, etc.! He collects them and converts them into nursery containers. He grows his plants in these containers. This is saving baba Lechaba's money. Mr Lechaba is one of the unsung heroes – an environmentalist, an ecologist and a businessman in his own right.

Farming since 2013
Pauline Mello

56 year-old Pauline Mello started gardening in the year 2013, by becoming involved with Ukuvuna. She said that up until then, she did not know how to grow crops.

Pauline Mellos said she was taught by Ukuvuna about mulching, which she understands as a means of helping plants to get enough water, since mulching suppresses weeds and maintains moisture in the soil. She also learnt about the importance of raised beds which she said were important in terms of holding water inside the beds as well as along their ridges.

Paulina explains, *"Raised beds help make mulching easier and give plants a good root zone in which to grow well. The raised bed is good for plants like tomatoes, potatoes, carrots, chilies, sweet potatoes and Irish potatoes and green peppers."*

"I also learnt that good farming does not mean using synthetic chemicals but rather inputs that are nature-friendly. This is when I started to make my own trench beds. With trench beds, you create a trench which you fill with organic waste from the farm, close with soil and then plant on top. The organic waste is turned into plant food."

"It's not only cheaper but a way of reducing waste in the environment. The method helps return carbon back into the soil, rather than the approach of burning organic waste, where the carbon gets released into the atmosphere and in turn affects the ozone layer. My farming activities involve growing bananas, vegetables, herbs, lucerne for cattle and fruit trees."

"Since I was introduced to Permaculture, I have employed one person to assist me. Permaculture creates jobs and business for local people."

"With Ukuvuna I have grown from an ordinary farmer to a teacher and a cluster leader in my village. I have over 15 followers, who are growing vegetables, fruits, herbs and crops. Some are rearing goats, sheep and cattle. I am proud of the work I am doing. It's great to be part of Permaculture."

Years after Retirement
Rebecca Mathabatha

Rebecca was born in 1960 and was never into serious farming.
She worked as an engineer until the time she went on pension in 2015.

Her garden was in Shoprite, Woolworths or Spar, because she found it easier to buy from shops than farming!

Rebecca Mathabatha started her garden in 2015 after visiting baba Masetla whom she saw was doing a great job with his garden. She admired the green and the varieties being grown and asked him how he was doing it. Baba Masetla was generous enough to share the information, so he told her that she was welcome to come and learn from him and also to connect to Ukuvuna's network of Permaculture.

In 2015 she joined Ukuvuna as a cluster member and started farming the Ukuvuna way.

Her first vegetable was spinach and from there on she started blending in some carrots and onions. She chose to place her garden near the orchard of mangoes and oranges. From baba Masetla she also learnt to control pests in other ways than by using chemicals from the shops.

Her garden is mulched and she uses manure to make compost for the crops. She discovered that crops grown using organic fertilisers look fresher, more attractive and taste better than those from a shop. Rebecca and her family are now focusing on vegetable production and they are hoping to diversify crop varieties to address the family's nutritional requirements as well as generate income through establishing a tuck shop.

Despite being affected by harsh climatic conditions, Rebecca says

"I will continue with Permaculture because I have learnt that any problem has a solution, if I think 'out of the box'. So I need more coaching on Permaculture!"

Living off the Land
Alfios Galani

Alfios was born in the year 1969. He was never employed formally but only started farming in 2017, growing different vegetables including spinach, lettuce and cabbage.

His motivation to start gardening was initiated by the need to have an income for the family so they would be able to buy basic necessities.

Alfios Galani always used synthetic fertilisers and other agricultural chemicals such as Blue Death. To him Blue Death was the answer for all pests and diseases. He was fetching water with a bucket from a community tap 1.5km from his home where he farms. Even with this water, with the increase in daily temperatures he was finding that his vegetable production was reducing.

Alfios says: *"Through the Ukuvuna teaching I am now mulching and using organic fertiliser and I can see my plants are not stressed any more."*

"I have learnt about making liquid manure and composting and I have put these practices in place. I see such positive changes in my garden. I used to irrigate four times a week but now I do so only once as the moisture is not so quickly lost from the vegetable beds because of deep mulching and application of organic matter. I am no longer worried about fetching water far away because instead of fetching the water four times a week, I am now fetching it only once a week."

Despite Physical Challenges
Elizabeth Lechaba

Many people around the world still cling to the belief that if someone is physically disadvantaged, they cannot do anything, especially physical work. These physically challenged people are sometimes looked down upon by society.

Lechaba is physically disadvantaged (her left leg is amputated) but she is making a living from her own piece of land.

Elizabeth Lechaba started to farm at her place in 1992, a year after she gave birth to her first daughter. Since then she has been farming a 5 x 6m kitchen garden but at the start, it was characterised by a few plants of five varieties of vegetables (beetroot, spinach, cabbage, onion and mustard), all being grown in a monoculture way.

Her farming methods were the normal, traditional ones in terms of soil cultivation. She was using external agricultural inputs such as pesticides, fertilisers and seeds and was dependent on agricultural supply companies. She shared with Ukuvuna how and why she changed her traditional way of farming.

"I joined an Ukuvuna cluster in 2014 after I received permaculture training at a Cluster Leader's homestead. During the training, I learnt how to establish a vegetable garden, fruit orchard and herb garden; how to prepare and use natural fertilizer (liquid manure); and how to manage water and soil. I also learnt that herbs can be used to control pests and diseases in the garden."

It is evident from her garden that what she learnt, has been applied! Her garden has been extended from 30m^2 to 2000m^2 and now boasts a wide variety of food plants, fruits, herbs, vegetables, berries and tubers. Mulching is everywhere and burning of organic matter is a thing of the past. All organic waste is either turned into compost or used as mulch.

Her children have also joined her in these projects, help with irrigating and weeding the garden. They have also learned about the variety of plants and how to cook with them.

Elizabeth and family comment on climate change in her area: *"In the 1990s and early 2000s, the weather and climate were great. We used to receive good rainfall and temperatures were cool. In 2003, I started to see serious changes in the climate and weather - our area started to become very hot, with less rainfall and plants were difficult to grow. Food and agricultural inputs started to go up in price; family and community conflicts grew; and more crime was recorded within our community. I think the climate change is because the gods are angry with us as people are more evil than they were before."*

The Lechaba family also has commercial plant nurseries and are involved in retailing fruits especially mangoes, bananas and oranges. They hope to expand this side of business by adding more trees to diversify their means of living. Future plans also include the installation of water harvesting tanks around their house as well as the creation of a Family Sustainable Living Centre in the district of Capricorn, for teaching and sharing purposes.

Living on the Land
Pebetse Sedibeng

"I am currently unemployed and living at my parent's place. I used to work at Shoprite in Lebowakgomo but lost my job. As a person who was used to earning a few thousand Rand as a salary every month, I found it difficult to start a new life without work or a husband to lean on. I look after my kids alone, monitoring their health and seeing to it that they have eaten, are clothed and are able to go to the better school in my community. I used to do piece jobs (any job that would give me some income) in and around the community. I tried to engage myself in a better way of life, but was always faced with challenges."

I am a single mother of two children" says Pebetse Sedibeng, who started narrating her story to the Ukuvuna team. Her story is of a typical African girl at odds with life and now trying to cope with life's demands.

"I never thought that I would go this far, when I was in the darkness of what to do to improve my life and take care of my children I met mama Elizabeth Lechaba in early 2017. Lechaba called me to her place, gave me a garden tour and shared with me her success story of farming with nature. Her garden inspired me a lot and convinced me that permaculture farming was the ultimate solution to make ends meet, even at the age of 32 years old."

"Mama Elizabeth taught me how to make raised beds and helped me with seeds and seedlings. She demonstrated how to do mixed farming, alley cropping and mulching. Every Wednesday afternoon I visited mama Lechaba's homestead and worked with her in her garden."

"I learnt about compost-making and how to take care of the soil. I learnt that if I take care of the soil in turn it will take care of me. Soil is the mother of our food - it needs the right food so that it feeds us as well."

With a sigh, she continues her story, *"I used to see my family using Blue Death to spray the insects and pests in our garden and thought this was the only solution to control them. After spraying we were told not to go into the garden for 3 to 4 days and also not to eat the vegetables until after 14 days. As I continued working with Mama Lechaba I shared with her how I used Blue Death."*

She shared with me a story of a couple who fought and one used Blue Death to commit suicide. Therefore I learnt if Blue Death can kill people, what happens to us if it is applied to the plants we eat every day. I figured out that it may be a slow killer for my family."

"It kills pests instantly and I reckon it is definitely killing us gradually. Mama Lechaba advised me on pest-repellent crops to plant in my garden alongside major crops"

"I also learnt how to mix and brew strong smelling plants to make a tea spray for different kinds of pests. The teas were a mixture of chilies, garlic, fever plants, two-day plants and others that have strong smells. They were soaked for five days and then sprayed on plants under attack from pests. The pests started to disappear slowly and my garden was fresh once again and became a lovely place to work in. I learnt that the natural way of controlling pests is slow but costs less and is environmentally friendly. There is no need to wait for 14 days to reduce the toxicity of the sprays. Within a day, vegetables can be harvested and used for consumption."

Pebetse explains with a smile, the importance of respecting elders. *"I respect Mama Elizabeth. She is like my biological mother and I shall call her mama now and in the future. She is my permaculture teacher from whom I learnt how to mulch. She always says a garden without mulching is like a naked body lying in the sun. The skin changes colour, it's prone to cancer and other related skin diseases. So mulching is the blanket of the soil that protects micro-organisms and prevents soil erosion. The protection of the soil will help reduce evaporation of water, conserve soil and promote healthy plant growth."*

"Instead of watering five days per week, I only water my garden once a week, thus saving water and this helps fair water distribution to all people living in my area. If I save water and others do the same, it means the community will have more water throughout the week or the month."

Pebetse unveiled a great happiness to us: *"This farming method helped me to understand that life and money are in the soil. Good farming activities provide me with healthy food, generate money, create social links and take care of the environment. Taking care of the environment is an intervention that helps with climate change adaptation and is caring."*

"This programme has resulted in me having an opportunity to take care of the earth and people and to win permaculture competitions. Now my children are getting what they need because of the sales from the vegetables and herbs from my garden. I'm able to take my children to school and to buy fashion clothes for both myself and my children. I'm now a business lady with local people buying vegetables from me. I am also a teacher like Elizabeth, with my first students being my parents and my children."

These days, Pebetse is a proud single mum who has understood the need to diversify projects within a household. She would love to install a water tank and open a 'Peb Veg Shop' (a vegetable shop) for the village. This shop would sell her own homegrown vegetables and buy vegetables from others for resale.

award

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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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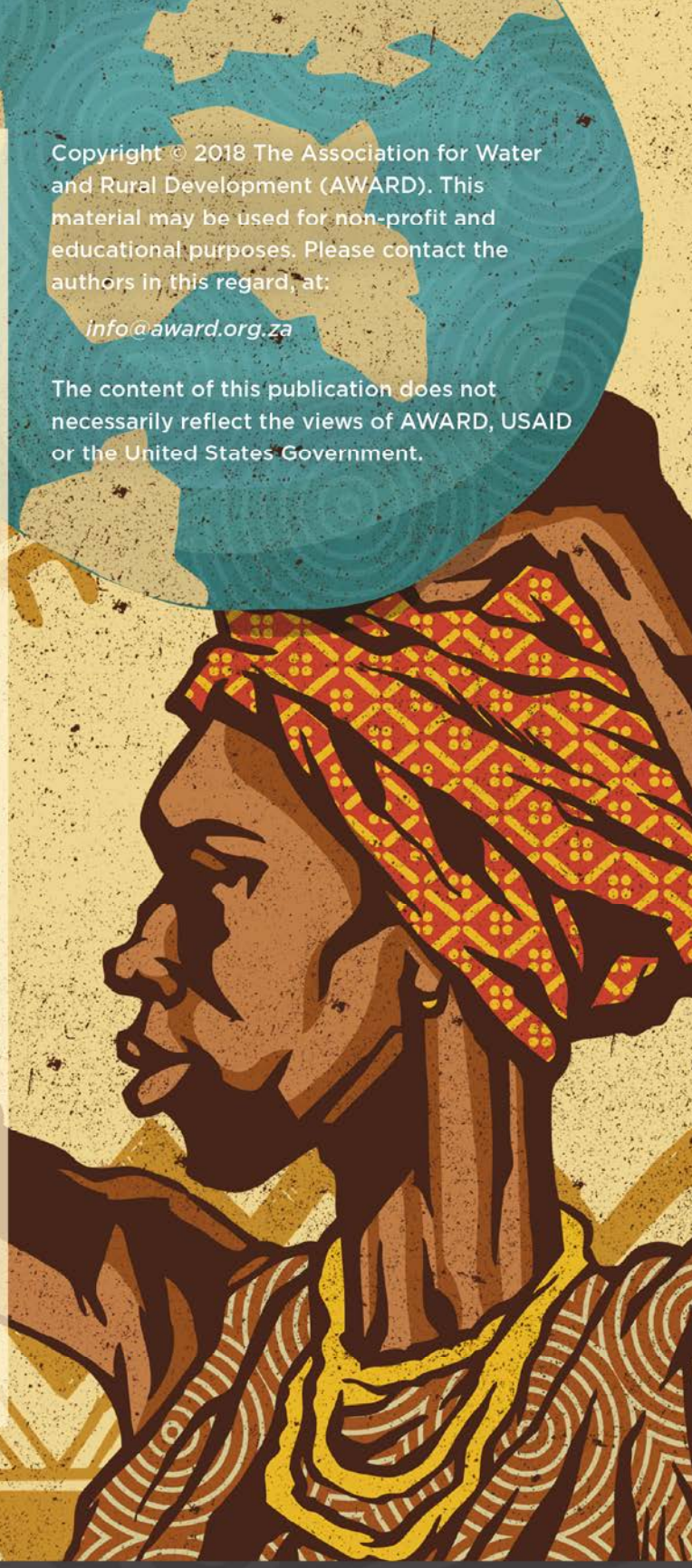
About USAID: RESILIM-O

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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