

USAID RESILIENT WATERS PROGRAM BASELINE STUDY RIETVLEI

USAID's Resilient Waters Program aims to build more resilient and water-secure communities in the Okavango and Limpopo river basins. Resilient Waters focuses specifically on transboundary water security and resource management; safe, sustainable drinking water and sanitation services; climate change adaptation; and conserving biodiversity and ecosystems.

The purpose of this document is to:

- Provide the community of Rietvlei with feedback from our study;
- Highlight priority areas for Rietvlei to become more resilient; and
- Facilitate a planning session based on the information we have collected.

RIETVLEI AT A GLANCE

We interviewed 46 people in Rietvlei

Most of the people interviewed were older than 35 years.

Younger than 35 (27%)

Older than 35 (73%)

Most of the people interviewed were female.

Male (20%)

Female (80%)

In Rietvlei, **government work opportunities** are key sources of income.

Understanding of resilience in Rietvlei



Sources of natural shocks and stressors in Rietvlei are **droughts and flash floods**.

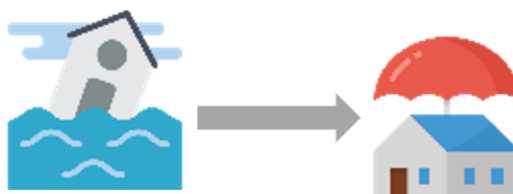


These shocks and stressors negatively impact households namely in the form of damage to homes and **limited access to water for the community**.



In Rietvlei, resilience is seen as **social protection from the government and more work opportunities**.

What is resilience?



Resilience is the ability to respond to shocks and stressors. There are four dimensions of resilience.

Absorptive Capacity



Can we **protect** ourselves and **cope** with events?



Adaptive Capacity

Can we **adjust** the way we live after an event has happened?

Anticipatory Capacity



Can we make a **plan** for other events that might happen to us?



Transformative Capacity

Can we **change the way that we do things** based on what we have learned?



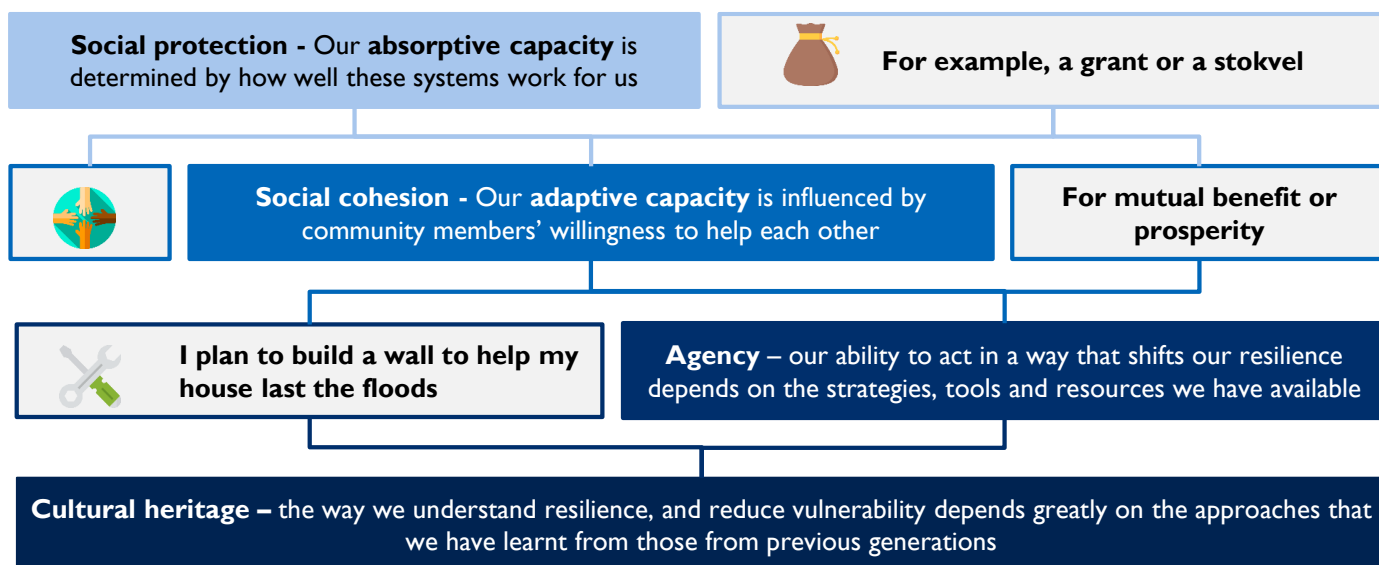
USAID
FROM THE AMERICAN PEOPLE

BASELINE STUDY

We did a baseline study in 13 communities in seven countries in the Limpopo and Okavango river basins between July and August 2019. We did this to find out how households understand resilience, how communities are building resilience, and what this means for our work. One of the areas that we surveyed was Rietvlei, South Africa. Rietvlei falls into Limpopo river basin. The Limpopo Basin covers Southern Botswana, Northern South Africa, Southern Zimbabwe and Southern Mozambique.

WHAT DETERMINES RESILIENCE?

Our baseline study found that resilience is determined by four factors: **1. Social protection, 2. Social cohesion, 3. Agency, and 4. Cultural heritage.**



WHAT DID WE FIND OUT IN RIETVLEI?

Inadequate housing (made from mud and sticks) and toilets (long-drops), made worse by water shortages, are the biggest challenges people spoke about living in Rietvlei. Rietvlei's water source is powered by a pump that requires pre-paid electricity to work and there are a few water tanks that are meant to service the whole community. Often, even when the electricity has been paid, the pump provides little to no water due to the drought. Natural resources are a source of food and supplementary income, but also pose a threat for households in Rietvlei. Weather and climate are the primary forms of shocks and stressors. The effects of shocks and stressors have been less access to food and water, less social support and less income / resources. The effects of the shocks and stressors were widespread.

INADEQUATE HOUSING, TOILETS AND INSUFFICIENT WATER ARE THE BIGGEST CHALLENGES IN RIETVLEI



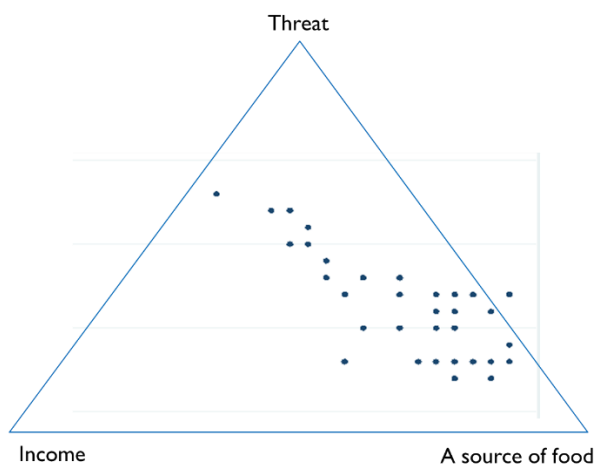
The Rietvlei community has insufficient housing and toilet infrastructure to support the residents. Water shortages, caused by the drought, are another source of stress for households in Rietvlei.

The community has access to a number of natural resources but residents tend to rely on these only to supplement their income. Rietvlei residents have access to government supplied resources as a result of the neighbouring towns and make use of these.

RIETVLEI AND NATURAL RESOURCES

Natural resources are source of food and income, but also pose a threat for households in Rietvlei.

The heatmap below shows that water is a source of food / livelihood in Rietvlei, but that it is also a threat because of the drought in the areas, as well as the severe storms and flooding in the area.

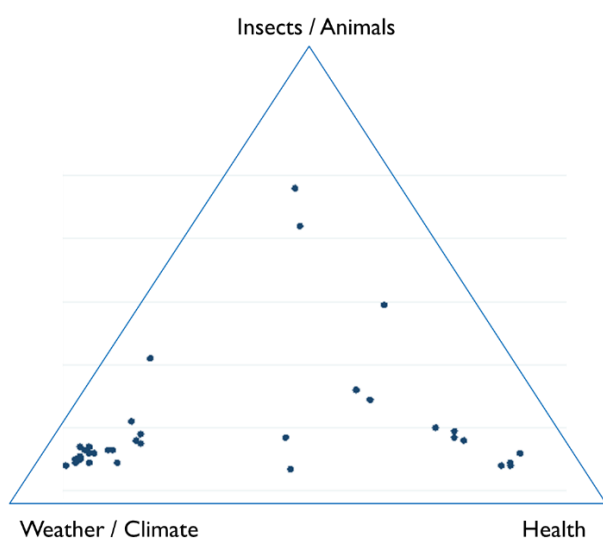


- Plants are largely seen as both a source of income and a source of food.
- Animals are largely seen as a threat and a source of food.

THE CAUSES OF SHOCKS AND STRESSORS

Weather and climate are the main forms of shocks and stressors.

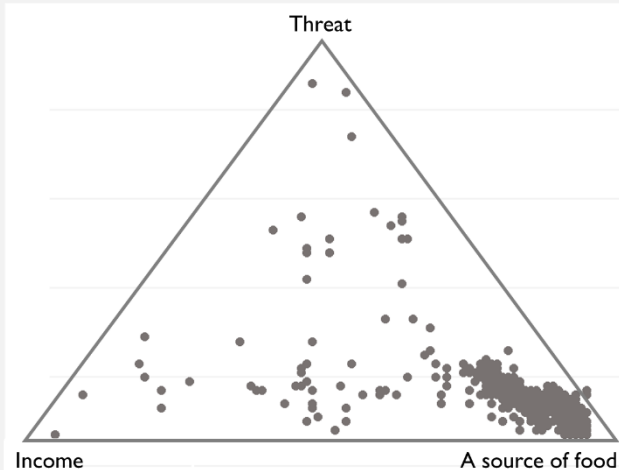
Rietvlei is heavily affected by drought conditions and extreme rainfall resulting in flash floods.



RIETVLEI COMPARED TO THE LIMPOPO RIVER BASIN

As with Rietvlei, natural resources in the Limpopo River Basin are a key source of livelihood, but can be threats.

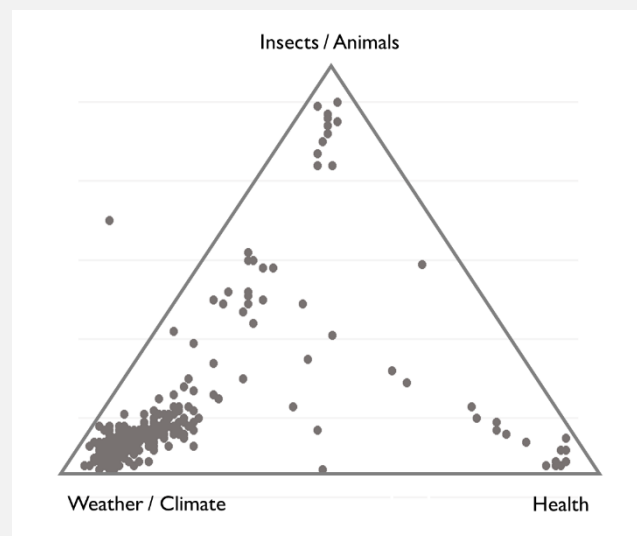
As in Rietvlei, the heatmap below shows that water is a source of food / livelihood, as well as a threat in the Limpopo River Basin. The Basin as a whole has been subject to extreme weather events.



- As in Rietvlei, plants are largely seen as the source of income and food.
- As in Rietvlei, animals are largely seen as a source of food, and a threat.

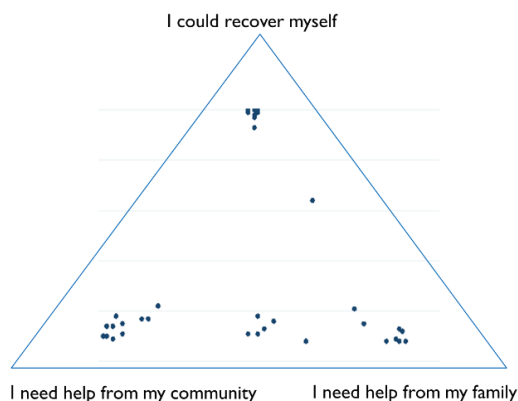
THE CAUSES OF SHOCKS AND STRESSORS

As with Rietvlei, weather and climate are the main forms of shocks and stressors in the Limpopo River Basin. The Basin as a whole however, faces more shocks and stressors from animals, when compared to Rietvlei.



RECOVERY FROM SHOCKS AND STRESSORS

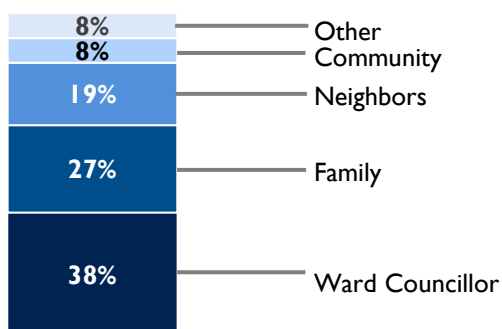
Households in Rietvlei were either able to recover themselves, or needed help from both their community and their family



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS IN REITVLEI

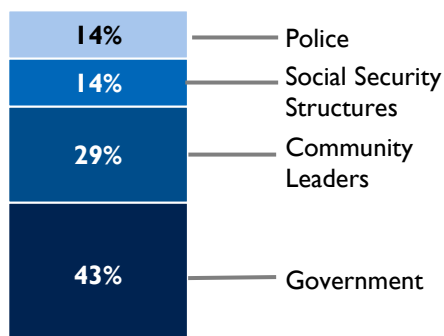
38% of households have people that they can turn to for support

There are therefore low levels of support in Rietvlei. Of those that **do have people to turn to**, most could turn to their ward councillor or family.



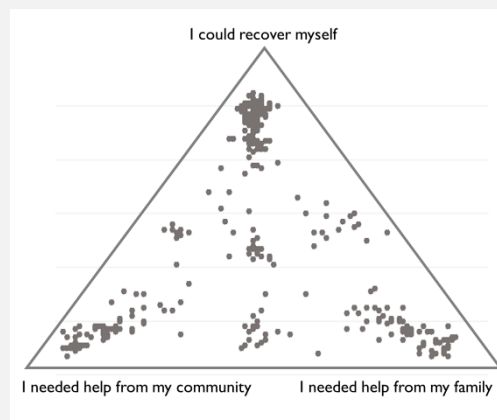
11% of households have organizations that they can turn to for support

Of the 11% who have organizations to turn to, the majority rely on government or community leaders.



RIETVLEI COMPARED TO THE LIMPOPO RIVER BASIN

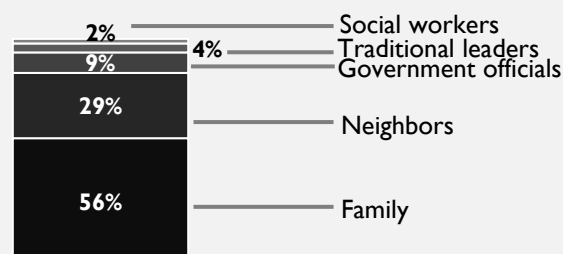
When compared to households in Rietvlei, households in the Limpopo River Basin seem more able to recover from shocks and stressors themselves.



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS THE LIMPOPO RIVER BASINS

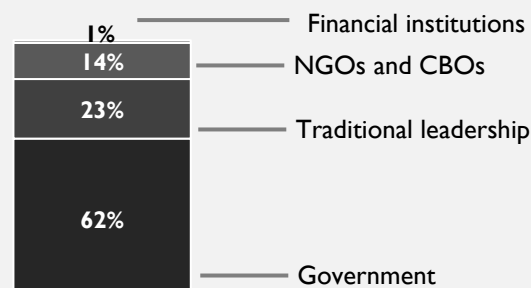
56% of households have people that they can turn to for support in the Limpopo River Basin.

This is considerably higher than the 38% in Rietvlei. Of those that **do have people to turn to**, most could turn to their family and community. This is unlike Rietvlei, where the community more heavily relies on the local ward councillor.



42% of households in the Limpopo River Basin have organizations that they can turn to for support. This is substantially higher than the 11% in Rietvlei.

Of the 42% who have organizations to turn to, the majority (as in Rietvlei) rely on various government departments.

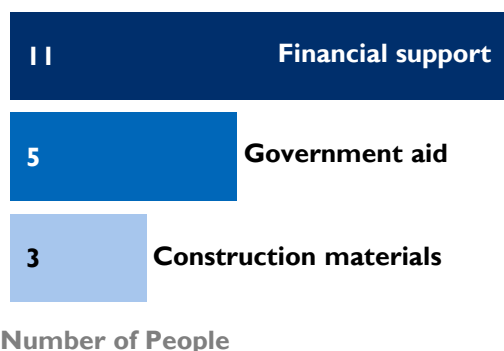


PLANNING FOR THE FUTURE IN RIETVLEI

Overall, households in Rietvlei felt **that more resources, more knowledge and stronger social networks** would help them to respond better to shocks and stressors in the future. **Personal beliefs, information and what people in the community do were critical to people's decision-making.** Therefore, there is a need to ensure that communities have access to reliable and helpful information and resources so that they can plan better.

43% of households in Rietvlei indicated they **have a plan** for future natural shocks and stressors. However, of this 43% that reportedly have a plan, 100% of these reflect the need for government / external support to enact. Examples of the plans that people reported include needing assistance with financial support, government aid and construction materials – as shown in the graph below.

Types of plans that households in Rietvlei have



Specific examples of plans include:

- **Financial support:** People indicated they needed financial support to plan but did not have these resources available.
- **Government aid:** Residents requested help from the government.
- **Construction materials:** Bricks, cement and other construction materials are needed.

A lack of resources and government support prevents people in Rietvlei from implementing their plans.

HOW COULD RIETVLEI BECOME MORE RESILIENT?

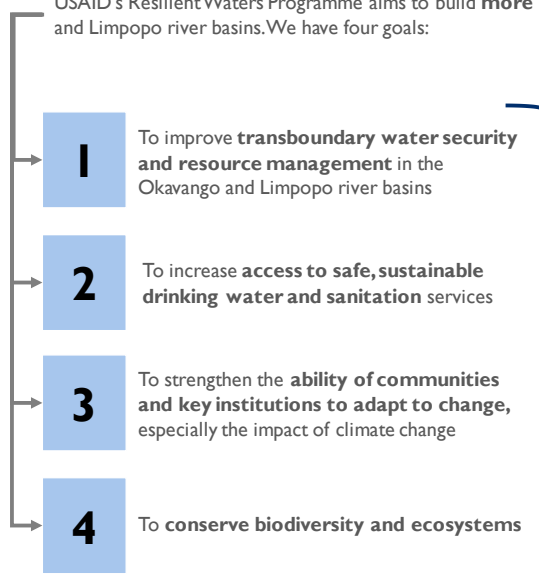
In Rietvlei, what set the community apart from others in the basin was the lack of government support and reliable information, which limited their ability to plan appropriately. A key area of focus to build access to resources should be around building community cohesion. Based on the findings of the study, and to improve resilience in the area, recommendations for Rietvlei include:

- **Connect the community to available support:** Residents of Rietvlei report having significantly fewer people and organisations they can turn to for support, which is key to building resilience. It would strengthen resilience if organisations who have a remit to work in the area, such as social services, would share information with the community about the support they offer.
- **Collective purchasing:** A collaborative approach to purchasing of goods required by the community, especially agricultural inputs like seeds, may provide additional opportunities for funding through government or non-profit organisations. Such an approach also allows for a wide variety of seeds to be shared between residents thus broadening the types of crops grown, and nutrients available from which all residents can benefit. This type of approach reduces individual risk, and can also be a step towards building community.
- **Collecting rain water:** Given the increasingly dry climate, it is extremely important to maximise water use whenever the region has rainfall. One of the challenges cited by residents in Rietvlei was flash floods resulting from heavy rains. As such, storage tanks provide a safe and relatively low-cost solution for storing this rain water to be used at a later stage. Furthermore, multiple residents in the community can have storage tanks without interfering with each other's water supply, as opposed to boreholes.
- **Community building activities:** Residents in Rietvlei cited the lack of information received as one of the reasons preventing them from planning for shocks and stressors. Only 38% of residents indicated they had people to turn to for help. Our research shows that communities who can protect themselves from events and adjust their way of living after an event have strong communication channels and social networks. This suggests a need to establish a regular community meeting to support sharing of ideas, solutions and offering support networks.

Based on the findings of our research, the effects of shocks and stressors are widespread in the form of reduced access to food and water, fewer resources and income. The initiatives highlighted above seek to enable the community of Rietvlei to improve their preparation for future shocks, and to recover from these shocks quicker. This is enabled by creating more resilient methods of communication, food production and water collection.

OVERVIEW OF USAID'S RESILIENT WATERS PROGRAMME

USAID's Resilient Waters Programme aims to build **more resilient and water-secure communities** in the Okavango and Limpopo river basins. We have four goals:



In order to do this we will build:



RESILIENT INSTITUTIONS

- Institutions are central to managing resources and building resilience
- We are supporting institutions in building capacity to plan, building strong networks, enhancing an enabling environment and meeting their objectives.
- Institutional ownership is important for sustainability.



ROBUST INFORMATION SYSTEMS

- To manage resources better and build resilience, we need information that is accessible and that can be used to make decisions.
- We are working on filling information gaps, synthesising information and integrating it into decision-making.



INNOVATIVE PRACTICES

- We need to consider new ways to live to adapt to climate change. To this, we need to understand what these practices are and how we can use them.
- We will support the innovation and systems of dynamic adaptation.