RESILIENT WATERS PROGRAM BASELINE STUDY
MATOPOS

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

MATOPOS AT A GLANCE

We interviewed 92 people in Matopos

Most of the people interviewed were older than 35 years.

Not answered (1%)

Most of the people interviewed were female.

Not answered (2%)

In Matopos, **agriculture and government pensions** are key sources of income.

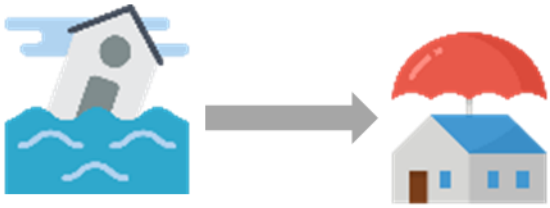
Understanding of resilience in Matopos

Sources of natural shocks and stressors in Matopos are **droughts, floods** and **hailstorms**

These shocks and stressors negatively impact households involved in agriculture and other water-based livelihoods; and result in **lower yields and loss of livestock.**

In Matopos, resilience is seen as **having opportunities to earn additional income and find alternative water sources.**

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?

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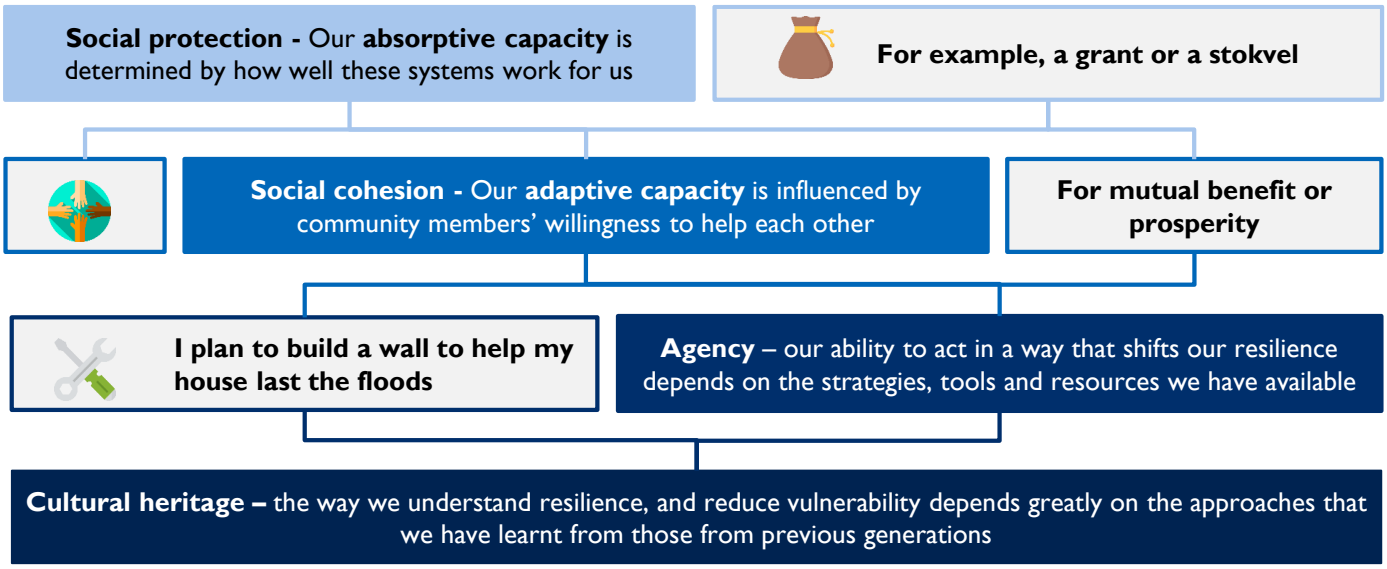
BASELINE STUDY

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 Matopos, Zimbabwe. Matopos falls within the Limpopo River Basin and, being a high-altitude catchment area, Matopos is a significant source of water for the Limpopo River. 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 MATOPOS?

Water shortages are the biggest challenges in Matopos. Natural resources are a source of food and income, but also pose a threat for households in Matopos. Weather and climate are the 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.

WATER SHORTAGES ARE THE BIGGEST CHALLENGES IN MATOPOS

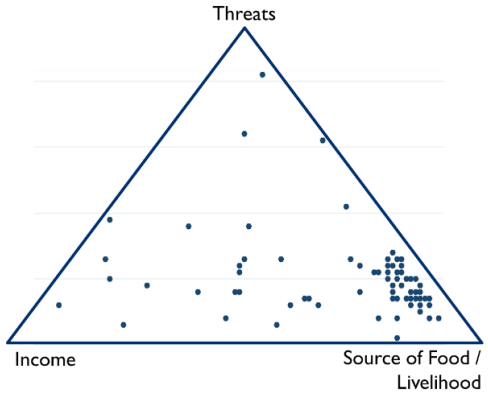
Water shortages are the biggest source of stress for households in Matopos. Water shortages are caused by drought. While the annual volume of rainfall in Matopos has not decreased, the period of rainfall has shortened. Matopos is largely made up of granite which impermeable to water. There is therefore little groundwater in Matopos.

Report finalised: September 2020

MATOPOS AND NATURAL RESOURCES

Natural resources are largely seen as a source of food and income with the exception of animals which are largely seen as a threat.

The heatmap below shows that water is largely a source of livelihood and food in Matopos. Matopos is a water scarce area. This is exacerbated by a lack of groundwater in the area which is a result of the Matopos' geological make-up.

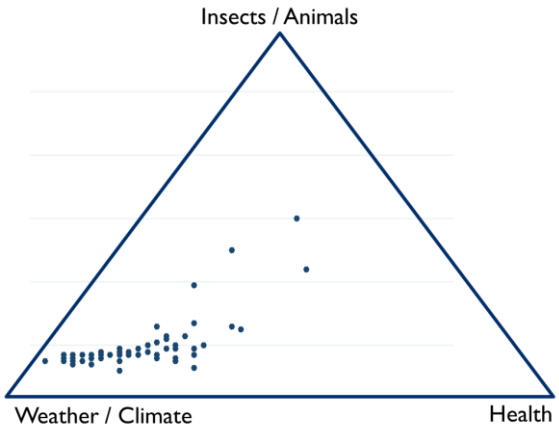


- Plants are seen as both a source of income and a source of food
- Animals are largely seen as a threat in Matopos. As the drought worsens, the competition with animals for food and water increases.

THE CAUSES OF SHOCKS AND STRESSORS

Weather and climate are the main forms of shocks and stressors in Matopos

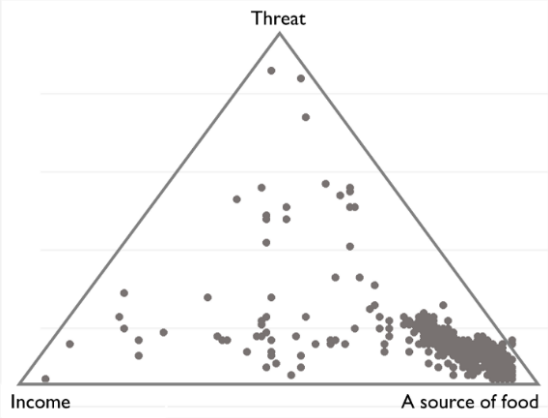
Matopos is heavily affected by drought conditions and extreme rainfall. A key concern is that the rainy season is now much shorter and the capacity to store water in the region is very limited.



MATOPOS COMPARED TO THE LIMPOPO RIVER BASIN

As with Matopos, natural resources in the Limpopo River Basin are a key source of livelihood.

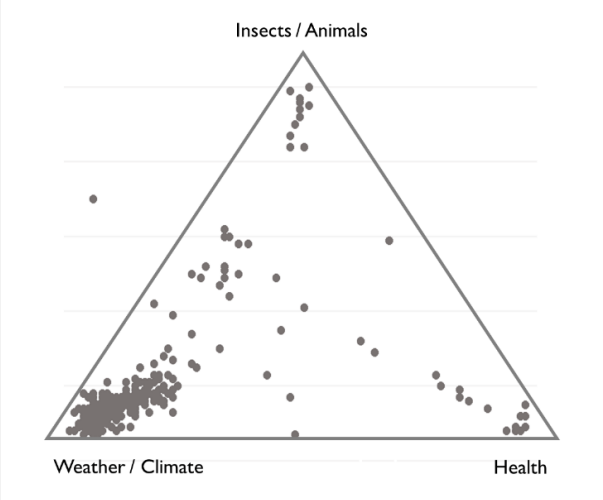
As in Matopos, water is acutely seen as a source of food / livelihood in the Limpopo River Basin. Similar to Matopos, water is also a threat in that the whole basin has been subject to droughts and extreme rainfall.



- As in Matopos, plants are largely seen as the source of income and food.
- In the Limpopo River Basin, animals are largely seen as a source of food. This differs from Matopos where animals are largely seen as a threat.

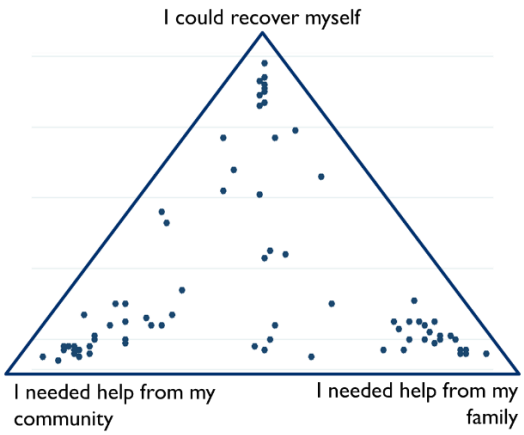
THE CAUSES OF SHOCKS AND STRESSORS

As with Matopos, weather and climate are the main forms of shocks and stressors in the Limpopo River Basin. Matopos, however faces few shocks and stressors in the form of insects and animals or health. This differs from the basin as a whole.



RECOVERY FROM SHOCKS AND STRESSORS

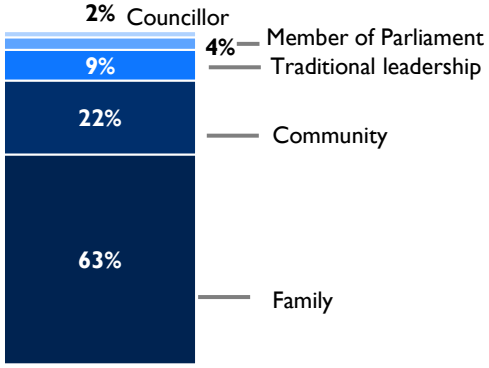
Households in Matopos could draw on support from their community and family to recover from shocks, as well as rely on themselves.



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS IN MATOPOS

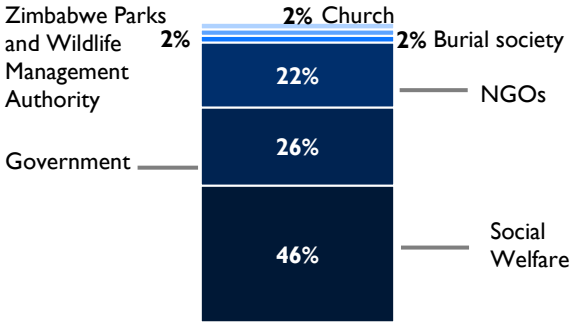
54% of households have people that they can turn to for support.

There are therefore relatively high levels of support in Matopos. Of those that **do have people to turn to**, most could turn to family and the community.



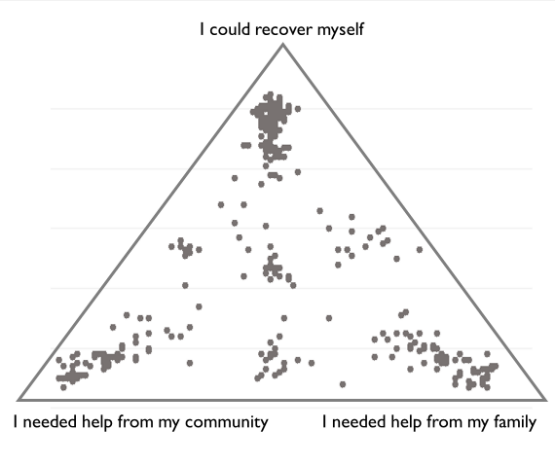
47% of households have organizations that they can turn to for support

Of the 47% who have people to turn to, Social Welfare is largest source of support.



MATOPOS COMPARED TO THE LIMPOPO RIVER BASIN

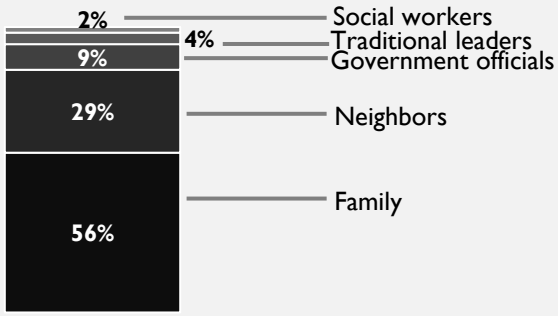
As in Matopos, households in the Limpopo River Basin can draw on a combination of community and family, and themselves to recover from shocks.



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS THE LIMPOPO RIVER BASINS

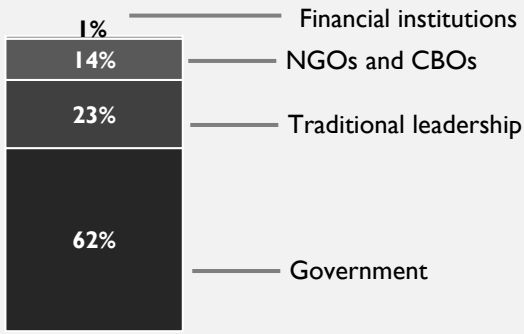
56% of households have people that they can turn to for support in the Limpopo River Basin.

This is similar to the 54% in Matopos. Similar to Matopos, of those that **do have people to turn to**, most could turn to their family and community.



42% of households in the Limpopo River Basin have organizations that they can turn to for support. This is slightly lower than the 47% in Matopos.

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



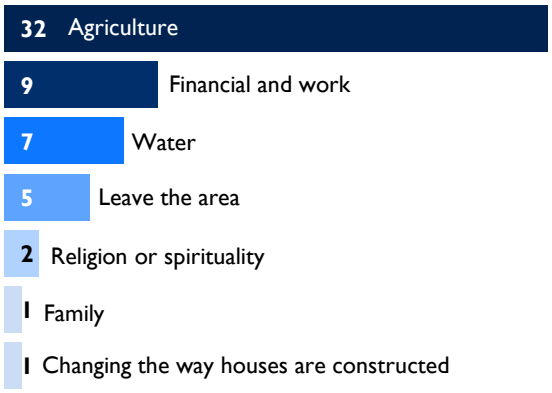
PLANNING FOR THE FUTURE

Overall, households in Matopos felt **that more resources** would help them respond better to shocks and stressors in the future.

What others do in the community is critical to people's decision-making. Any interventions should therefore target the community as a whole.

52% of households in Matopos **have a plan** for future natural shocks and stressors. Of the 52% of households in Matopos that have a plan, these plans were largely related to agriculture, work and water. Example of the plans that people reported include:

- **Agriculture:** Farm when the rains come, use different agricultural practices, gardening, reselling grain, poultry farming and guarding the fields from animals during the farming season.
- **Financial and work:** Diversifying livelihoods and undertaking income-generating activities, saving money, reselling clothes, finding employment and working hard.
- **Water:** Construct boreholes, find ways to store water, and wait for rain.



HOW COULD MATOPOS BECOME MORE RESILIENT?

Our research has found that communities that are resilient to natural shocks and stressors can 1. Protect themselves from events and adjust their way of living after an event has happened; 2. Make a plan for other events; and 3. Change the way that they do things. More specifically:

Communities that can protect themselves from events and adjust their way of living after an event have:

- Strong communication channels
- Strong social networks
- Access to functional institutions

Communities that can plan for other events that might happen have:

- A plan for shocks and stressors

Communities that can change the way they do things:

- Manage ecosystems well
- Manage water systems well
- Adapt agricultural practices to climate change
- Adapt livelihoods strategies

The people of Matopos have the advantage of feeling relatively high levels of support from people and organisations in the community. This communal support can be leveraged to help in areas where Matopos is less resilient. Some examples include:

- Rainwater storage. Matopos has a shortage of groundwater, and rains have become more uneven in recent years. More approaches to store rainwater could do a lot to support initiatives people are already undertaking.
- Training in maintenance of water storage infrastructure. There have been some provisions in the Matopos area for dams and boreholes, without sufficient attention given to management and repairs. A focus on water infrastructure maintenance could go a long way to support livelihoods in the area.
- - Sharing lessons on climate smart agriculture. There is a huge amount of knowledge in the Matopos community about agricultural techniques that work, such as high intensity rotational grazing. However, this information needs wider discussion, so there can be collaboration around it within the community.

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:

1. To improve **transboundary water security and resource management** in the Okavango and Limpopo river basins
2. To increase **access to safe, sustainable drinking water and sanitation** services
3. To strengthen the **ability of communities and key institutions to adapt to change,** especially the impact of climate change
4. To **conserve biodiversity and ecosystems**

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.