

RESILIENT WATERS PROGRAM BASELINE STUDY

XAI XAI

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

XAI XAI AT A GLANCE

We interviewed **190 people** in Xai Xai

Those interviewed were almost equally distributed youth and non-youth

* Younger than 35 (48%) Older than 35 (51%)

Most of the people interviewed were female.

Male (27%) Female (73%)

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

Understanding of resilience in Xai Xai



Sources of natural shocks and stressors in Xai Xai are **floods, cyclones, erosion and droughts**

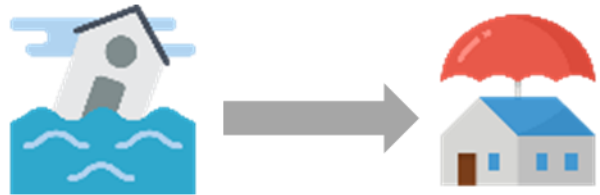


These shocks and stressors negatively impact households who depend on **agriculture and other water-based livelihoods**



In Xai Xai, resilience is seen as **self reliance and support from the community**.

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?

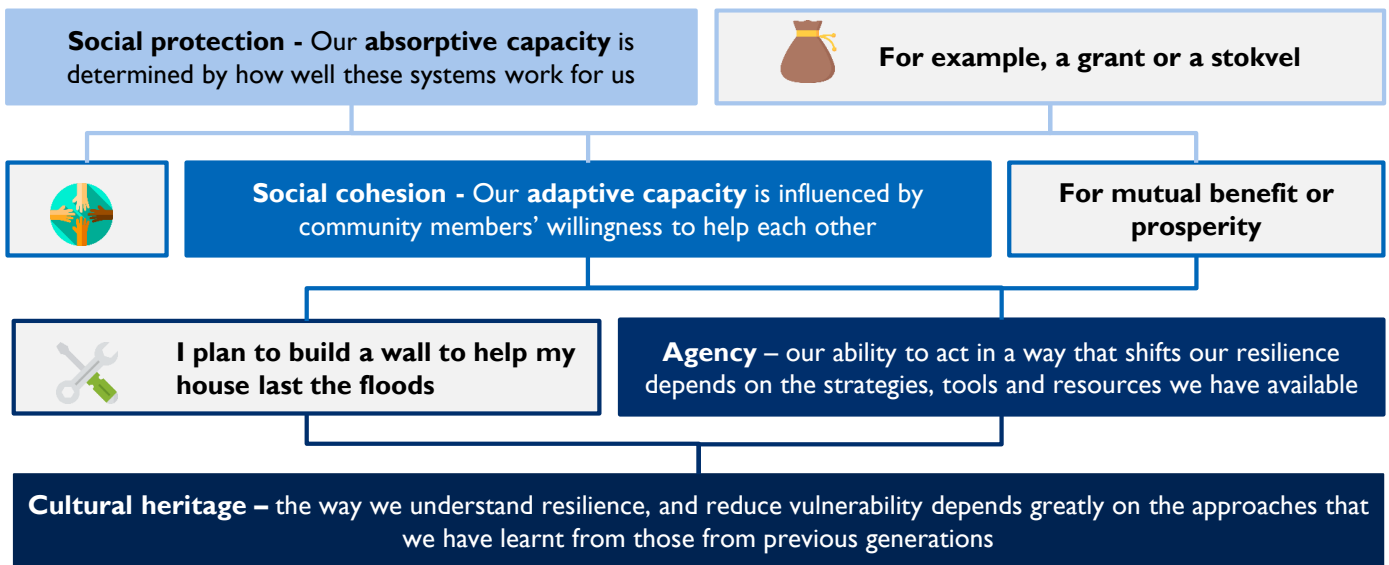
*1% =Prefer not to say

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 Xai Xai, Mozambique. Xai Xai falls into Limpopo River Basin. The Limpopo Basin covers southern Botswana, northern South Africa, southern Zimbabwe and southern Mozambique.

WHAT DETERMINES RESILIENCE?

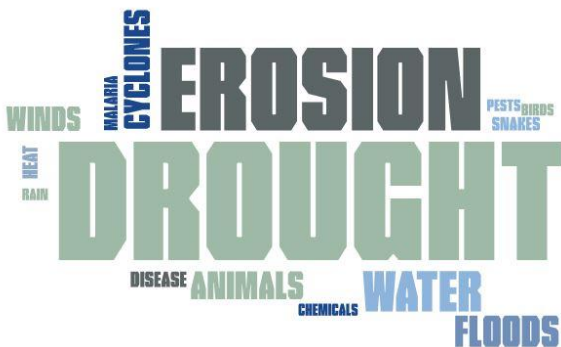
Our baseline study found that resilience is determined by four factors: **1. Social protection, 2. Social cohesion, 3. Agency, and 4. Cultural heritage.**



WHAT DID WE FIND OUT IN XAI XAI?

Drought is the biggest challenge faced by communities in Xai Xai. Droughts have a widespread effect reducing crop yields and increasing food security. This is exacerbated by high temperatures, strong winds and soil erosion. Natural resources are a source of food and income for households in Xai Xai. Weather and climate are the primary 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.

DROUGHT IS THE BIGGEST CHALLENGE IN XAI XAI



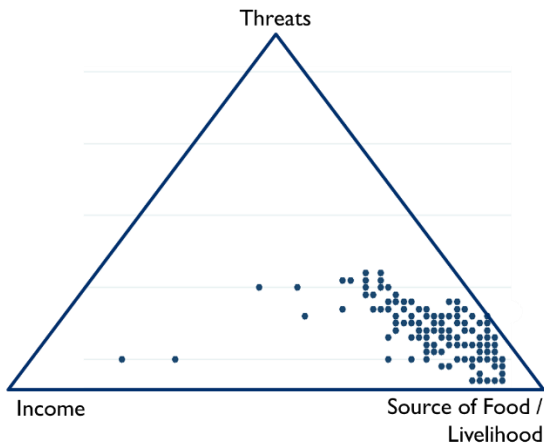
Water shortages caused by the drought is the biggest source of stress for households in Xai Xai. These have damaging knock-on effects in terms of food security particularly in Xai Xai where many communities are dependent on subsistence farming for food and income generation.

While droughts are a key challenge, communities in Xai Xai are also subjected to cyclones causing floods in some areas. Communities also mentioned the threat of animals – both to themselves and their crops / livestock. Similarly, they cited concerns about pests which bring disease to their livestock. Malaria is also a concern for communities in Xai Xai.

XAI XAI AND NATURAL RESOURCES

Natural resources are primarily a source of food for communities in Xai Xai and may, to a lesser extent also be considered a source of income.

The heatmap below shows that water is overwhelmingly a source of food / livelihood for communities in Xai Xai.

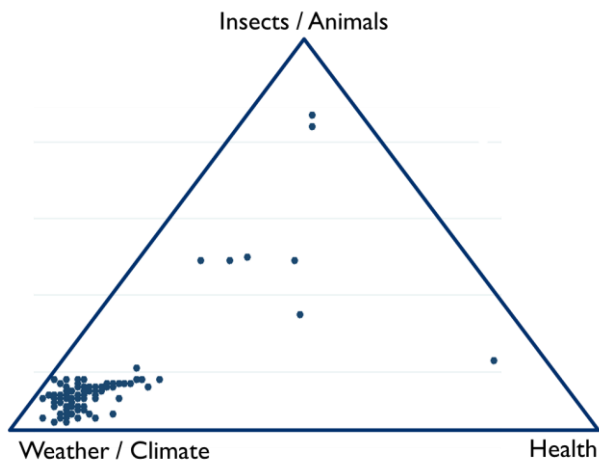


- Plants are seen as both a source of income and a source of food
- Animals are seen primarily as a source of food and to a lesser extent a source of income. They can also be a threat to livestock.

THE CAUSES OF SHOCKS AND STRESSORS

Weather and climate are the main forms of shocks and stressors

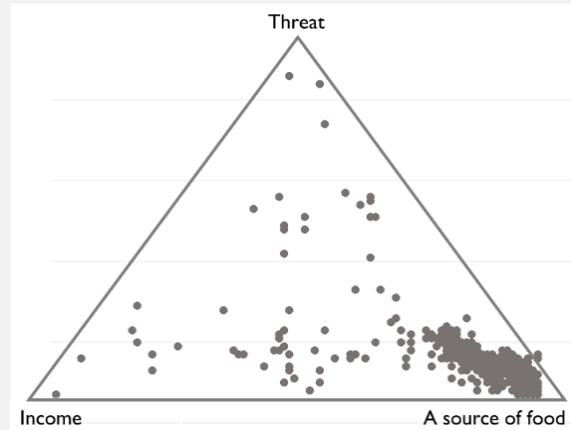
Xai Xai is heavily affected by both drought conditions and cyclones causing extreme flooding. Malaria remains an issue in Xai Xai.



XAI XAI COMPARED TO THE LIMPOPO RIVER BASIN

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

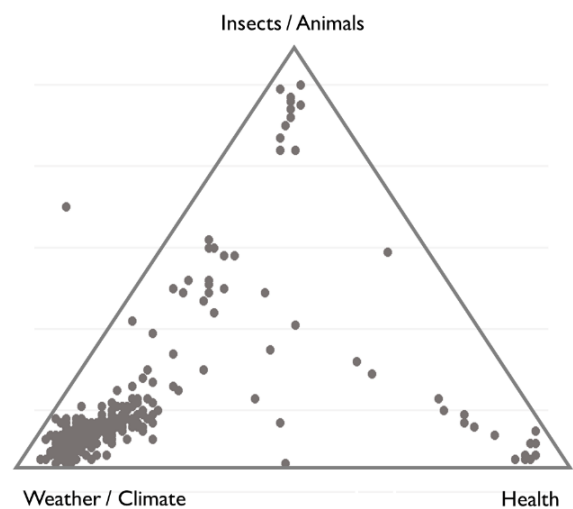
When compared to Xai Xai, the threat of water / lack thereof is more acutely identified in the Limpopo River Basin. Similar to Xai Xai, water is primarily seen as a source of food / livelihood.



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

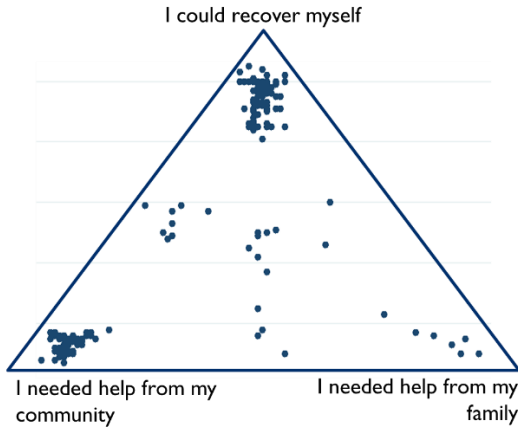
THE CAUSES OF SHOCKS AND STRESSORS

As with Xai Xai, weather and climate are the main forms of shocks and stressors in the Limpopo River Basin with health and insects / animals noted less acutely.



RECOVERY FROM SHOCKS AND STRESSORS

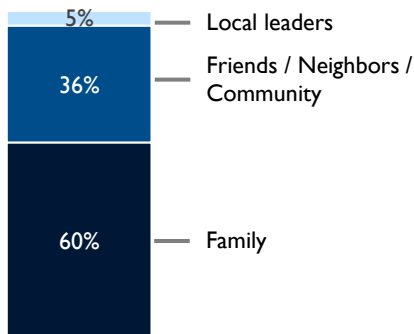
Households in Xai Xai were either able to recover themselves, or needed help from both their community and their family



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS IN XAI XAI

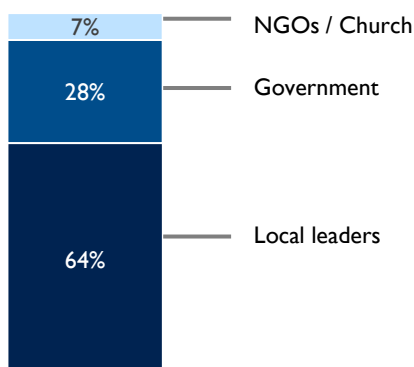
63% of households have people that they can turn to for support

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



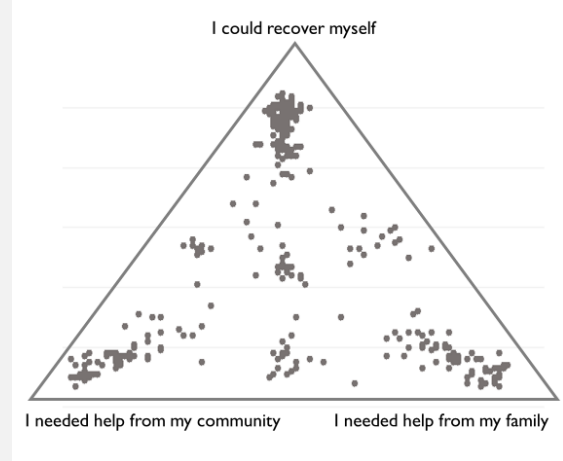
43% of households have organizations that they can turn to for support

Of the 43% who have people to turn to local leaders is the largest source of support. This could include local government officials and traditional leaders.



XAI XAI COMPARED TO THE LIMPOPO RIVER BASIN

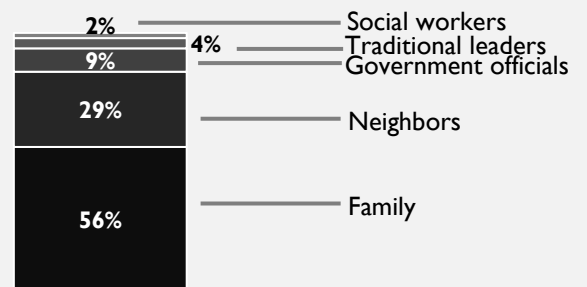
As in Xai Xai, households in the Limpopo River Basin can draw on a combination of community and family, and themselves to recover from shocks. Reliance on one's family was more acute in the basin, compared to Xai Xai.



SUPPORT AND PLANNING FOR SHOCKS AND STRESSORS THE LIMPOPO RIVER BASINS

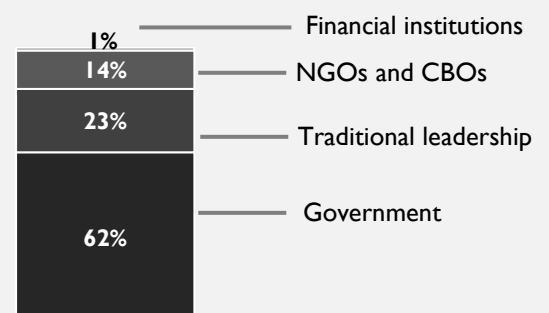
56% of households have people that they can turn to for support in the Limpopo River Basin.

Support levels in the basin are aligned with those in Xai Xai. Similar to Xai Xai, 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.

Of the 42% who have organizations to turn to, the majority rely on various government departments. In Xai Xai, there is more reliance on local governance structures



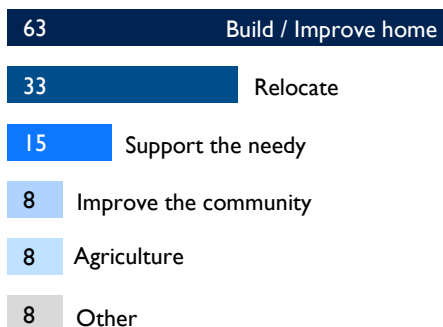
PLANNING FOR THE FUTURE

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

What others in the community do is the dominant influencer on household actions / plans. Therefore, there is a need to ensure that communities have access to reliable information and platforms to collaborate to ensure they can plan better.

71% of households in Xai Xai **have a plan** for future natural shocks and stressors. Of the 71% of households in Xai Xai that have a plan, these are largely focused on improving their homes, relocating from the area and supporting the less fortunate on the community. Example of the plans that people reported include:

- **Build / Improve home:** Strong winds in the area are often destructive. There is a need for more weather-hardy homes – specifically roofs.
- **Relocate:** Leave the area for somewhere with a more manageable climate.
- **Support the needy in the community:** Households noted their plan was to help those less fortunate through the provision of food and support.
- **Improve the community:** Weather is negatively affecting the infrastructure. Households were motivated to plant trees to help improve erosion and clean the street.
- **Agriculture:** Households focused on the need to increase irrigation and adjust farming methods to suit the changing climate.
- **Other:** This included asking for support and saving.



Number of people

A lack of resources prevents people in Xai Xai from implementing their plans.

HOW COULD XAI XAI 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

Xai Xai is facing challenges of variable access to water that affect the whole community. There are strong community ties – both in terms of support and drive. Leveraging these is identified as an important way to strengthen resilience in Xai Xai. As household actions are greatly influenced by what others in the community decide, there is a need for more public engagement platforms, such as community radio. This will enable local leaders to communicate with the whole community.

The desire expressed by households in Xai Xai not only to support those less fortunate but also the improve the community infrastructure provides an opportunity for people to come together, and plan together, for more efficient infrastructure development, and stronger, locally rooted planning. This can be further strengthened with local government includes climate resilience in their planning. With the residents of Xai Xai already planning to invest in infrastructure improvements to better adapt to unpredictable rainfall, there is an opportunity for policy makers to incentivise collective action, and environmentally sound, community responses to climate challenges.

Additionally, the strong community bonds can be leveraged for better developmental outcomes, particularly if they are applied to areas where residents of Xai Xai still need support. For example, climate smart farming can help improve food security and increase household income, and collective seed purchasing provides an opportunity to build on existing relationships to strengthen the local economy.

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.