



CLIMATE CROWD

Community-driven solutions to help people and nature in a changing climate

PASHU WARD BINGA DISTRICT, MATABELELAND NORTH ZIMBABWE SUMMARY REPORT

SEPTEMBER 2022



ABOUT

[Climate Crowd](#) is a bottom-up, community-driven initiative. Working with communities and local organizations in over 30 countries, we collect data on climate impacts on communities, analyse the data, present the data back to the communities, and work with them to develop, fund, and implement on-the-ground solutions that help people and nature adapt to a changing climate.

BACKGROUND

When people live adjacent to protected areas, how they respond to climate change affects nature's balance. In Zimbabwe, we worked with the Department of Agricultural Technical and Extension Services to survey how people experience climate change and its impacts on biodiversity. We conducted this Climate Crowd survey in November 2021 in Pashu Ward 19 in the Binga district of Matabeleland North Province. We interviewed 44 people (21 women, 23 men), including farmers, traditional leaders, teachers, and religious leaders. In this rural area, communities depend mainly on rain-fed agriculture. The climate affects the harvests that people rely on and the well-being of their livestock.

STUDY AREA

Pashu ward in Binga district of Matabeleland North Province of Zimbabwe (Fig. 1) is an agro-ecological region with low and erratic rainfall (<500mm per year) and high year-round temperatures. August is usually its driest month, while January is its wettest, with an average of 183.4mm of rain. The area falls in the [Kavango Zambezi Transfrontier Conservation Area](#), which spans Botswana, Namibia, Angola, Zambia, and Zimbabwe. Binga is on the Zambezi River, the border between Zambia and Zimbabwe. Binga and much of the surrounding area are part of important wildlife dispersal for Chizarira and Matusadona National Parks, Chete and Chirisa Safari Areas, and Sengwa Research Station. Pashu Ward is adjacent to Mzola Forest and Gwayi Conservancy. Wild animals like elephants, buffaloes, lions, kudus, and other species compete with people for space and resources, leading to livestock disease, mortality, and human-wildlife conflict.

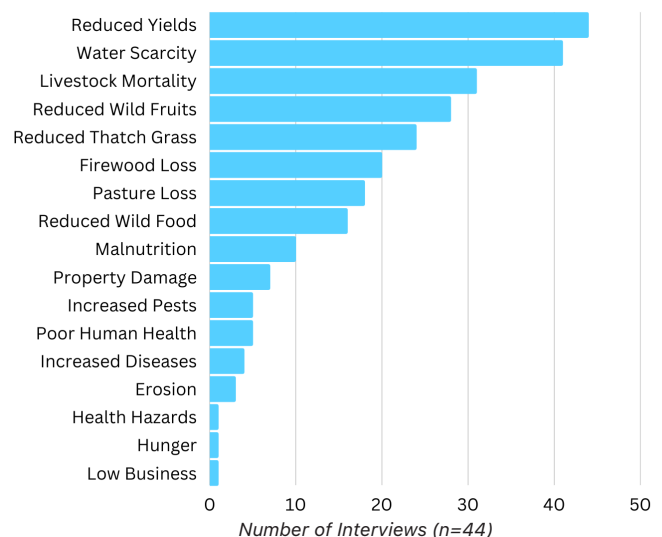
REPORTED CHANGES IN WEATHER AND CLIMATE (n=44)

When the respondents were asked about the observed weather and climate changes:

- 41 noted a decline in rainfall.
- 36 reported hotter temperatures/ heat waves.
- 33 reported changes in the timing of seasons.
- 21 indicated changes in drought occurrences.
- 9 observed increased flooding regimes and other changes.
- 7 reported losing water sources linked to storms and erosion, changes in wind, and cold spells (2, 3, and 4 respectively).

IMPACTS OF CLIMATE CHANGE ON COMMUNITY LIVELIHOODS

All the respondents (100%) reported reduced agricultural yields due to less rainfall. This has huge human impacts, with 2% of respondents reporting hunger, 23% reporting malnutrition, and 11% poor human health. Of those surveyed 11% of the respondents noted that pest outbreaks, particularly fall armyworm (*spodoptera frugiperda*), have worsened the situation. Water scarcity emerged as a significant challenge for 93% of the respondents. They attributed this to less rainfall, extremely high temperatures, drought, and delayed rainfall onset, with rains lasting for shorter periods.



Other critical impacts of climate change affecting livelihoods as reported by respondents include:

- Livestock mortality which is caused by water shortage (70% of respondents), pasture loss (41%), and an increase in disease infestations (9%).
- Less available wild fruits (64% of respondents), thatch grass

- (55%), firewood (45%), and wild food (36%), particularly small edible animals.
- Flooding and changes in wind regimes damaged property (16% of respondent).
- Erosion, low business, and health hazards (2% of respondents).

COMMUNITY RESPONSES TO CLIMATE CHANGE

Seventy-five percent of respondents said this community mainly relied on financial aid and farming inputs from the government and other donor agencies to cope. Sixteen percent of respondents relied on food aid. Significantly, 11% of respondents also reported that this leads to conflict as people scramble to benefit from assistance.



More than half of the respondents, 57%, are trying to increase their crop yields through conservation agriculture. About 64% of respondents also farm more drought-tolerant crops, such as small grains, instead of maize. Some community members (11% of respondents) are dry-planting or changing when they plant their crops.

Some families have moved their livestock to find new grazing areas (59% of respondents), which has increased conflict with predators. About 30% of the respondents use crop residues as supplementary feed for livestock. Other respondents, 20%, reported selling or slaughtering livestock, with few (2% of respondents) encroaching on protected areas to find pasture. Another 2% reported overgrazing.

To cope with water scarcity, 52% of respondents reported traveling long distances, while 36% have built dams. Other respondents, 23%, have dug deeper wells, while fewer, 11%, rely on rainwater harvesting. A small percentage, 2%, reported attempting to access water in protected areas, greatly risking their personal safety. Additionally, the government and NGO donor agencies have drilled some boreholes.

Community members have also responded to climate change impacts by selling assets (22% of respondents), venturing into business (57%), borrowing (30%), and harvesting wild fruits

(2%). They also purchase food (5% of respondents), trade (14%), sell charcoal (11%), do casual work (7%), and poach (5%). High deforestation levels resulted in 52% of respondents walking long distances for firewood and 2% gathering firewood in protected areas.

“Community members have encroached into sacred places in search of water and wood”

Lead Farmer- Pashu, Binga

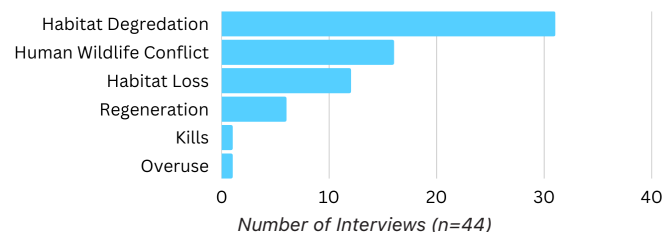
According to 7% of respondents, parents have withdrawn children from school as parents and guardians struggle to feed their families. Most children only complete primary education and don't proceed to the secondary level.

To cope with storm and wind impacts, community members use alternative roofing material (16% of respondents) from their crop residues or zinc if affordable. Crop residue roofing is a temporary measure and exposes households to adverse weather conditions. To search for thatch grass for roofing, 11% of respondents reported traveling long distances and being exposed to attacks from wildlife and criminals. Two percent of respondents reported that villagers have responded to climate change impacts through both alternative livelihood diversification and diet changes.

IMPACTS OF RESPONSES TO BIODIVERSITY

Activities to cope with climate change impacts can adversely affect nature by degrading land, destroying habitat, reducing vegetation, causing or worsening soil erosion and river siltation, and impacting microbial organisms, eventually affecting biological diversity.

Seventy percent of respondents reported land clearing for agriculture, grazing, or to harvest firewood as a coping mechanism which threatens biodiversity. Survey respondents reported that this has led to more human-wildlife conflict (36% of respondents) and habitat loss (27%). Resource over-use was noted by 2% of the respondents. However, 14% of the respondents reported that they had been involved in reforestation, resulting in ecosystem regeneration.



Declines in flora and fauna were reported by 48% of the respondents. In comparison, 45% noted a significant shift in the home ranges of species with constant mention of species migration and species disappearing from areas they used to occur in. Of those surveyed, 32% attributed species mortality to drought and 16% attributed the mortality to heat. Twenty-five percent of the respondents reported that changes have led to phenological changes in species. Five percent said that climate change has led to disease outbreaks in wildlife.

WANT TO LEARN MORE?

Visit the Climate Crowd [website](#) to explore and download interview data, view [project pages](#), and read more summary reports like this on our [publications page](#).

[wwfclimatecrowd.org](https://www.wwfclimatecrowd.org) climatecrowd@wwfus.org
<https://www.facebook.com/wwfclimatecrowd>