



Climate Vulnerability and Capacity Analysis

Zimba District, Chuundwe Zone

MAIN LIVELIHOODS AND RESOURCES

Livelihoods: Farming; livestock production involving cattle, goats, sheep, pigs, chicken and guinea fowl; milk and milk product merchandising; home grocery shop (tuntemba); herding cattle (long term service payable in cattle)

Natural resources: Rivers, forests, which are often used for charcoal production

CURRENT AND FUTURE CLIMATE CHANGE TRENDS

- Mean annual temperature is increasing (2° c between 2040-2059)
- More frequent extreme weather events: heat waves, thunderstorms, floods.
- Rainfall seasons less predictable and shorter. Rainfall decreases in September-November and increases in January - March
- More extremely wet periods, severe flooding and flash floods.
- More frequent, longer, and severe droughts



HAZARDS IN ORDER OF IMPORTANCE

1. Drought
2. Flooding and flash floods
3. Increased Temperature
4. Strong Winds

The world must come together to confront climate change. If we do nothing, we will face more drought, famine and hunger.

Barack Obama

VULNERABILITIES IDENTIFIED BY EACH GROUP

Group	Vulnerability Faced	Capacities and Strategies Used
Older People	<ul style="list-style-type: none"> • Loss of income • Animal fertility has gone down • Limited grazing area for livestock • Limited land for cultivation • Increase in prices of chemicals (pesticides, insecticide, herbicides) 	<ul style="list-style-type: none"> • Small livestock keeping • Drought resistant crops, legume production instead of maize, adapted agriculture techniques such as ripping • Planting high breed crop varieties, and growing vegetables during the months when water is available
Women	<ul style="list-style-type: none"> • Low yield • Low income • Most of land is infertile and there is a lack of knowledge about how to use the land • Women usually only have small livestock such as goats and chickens, and they have limited money to buy cows and men usually discourage them from owning cows • Women face challenges in paying for dipping services as it is only provided by a private company • Women also do not always have money for education further than grade 9 	<ul style="list-style-type: none"> • Planting early maturing seeds • Crop diversification • Gardening, selling of livestock and doing small business (selling busala, brooms and wild fruits). • FGD participants reported going to the town and farms looking for work • Selling big animals to buy food.
Men	<ul style="list-style-type: none"> • Grazing land and crop yields have reduced due to reductions in rainfall • Lower livestock productivity, and reduced gardening. • Animal diseases have also affected livestock productivity. • Traditional seeds are no longer used. • Floods 	<ul style="list-style-type: none"> • Plant early maturing crops • Planting drought resistant crops, rotational grazing • Conservation farming, food preservation, resorting to eating wild fruits, and other income • Keeping small livestock, and planting pastures
Young Women	<ul style="list-style-type: none"> • Soil erosion • Increased diseases (animal, human) • Women have little control over the decisions of how natural resources are allocated as men and headmen decide how these are allocated • Women have had to travel farther distances to fetch water, even traveling while pregnant • Access to markets is affected by the destruction of road infrastructure due to floods 	<ul style="list-style-type: none"> • Husbands travel long distances via bicycle to look for water • Ridging • Selling small livestock • Selling milk and sour milk • Working as labourers in other people's farms, gardening • Some reported that there are women participating in sex work for additional income
Young Men	<ul style="list-style-type: none"> • Increased temperature & soil erosion from overgrazing • Rivers drying up from overgrazing • Increased livestock death due to reduced water for drinking and increases in animal-borne diseases such as FMD. • There has been widespread crop loss in valuable crops as droughts have forced people to shift to drought tolerant crops. Floods can also destroy crops • Income derived from animal products such as leather and use of animal draft power has been reduced due to livestock death. 	<ul style="list-style-type: none"> • Men try to receive income from mining and selling precious gems. • There is more work sought from brick working and moulding bricks as people cannot rely on selling animals. • Some people have resorted to stealing. • School children are staying home from school to cope with hunger and malnutrition.

Impacts: Extreme events, droughts and existing land use practices have resulted in:

Ecosystem degradation: Forest, river ponds, wetlands are no longer accessible due to over exploitation and increases in agricultural activities. Forests are slowly being lost due to charcoal burning and cutting down trees for firewood. It is extremely difficult to sink boreholes In Chuundwe zone due to reducing level of water table (below 100 meters).

Water Scarcity: All that remains in place of water is the sand in rivers due to droughts. Water scarcity due to limited rain has made people to walk longer distances in search of water, and streams dry up faster and people find it harder to take their animals to drink water.

Vast bare land: Grazing land has reduced owing to reduced rainfall and increased temperatures over time, rains come late and leave earlier, making grazing for animals a mammoth task. Despite this, there still exists practices such as uncontrolled grazing for animals.

Loss of Biodiversity: There has also been loss of fish due to droughts and loss of some species of trees leading to reduction in wild fruits and most of the land is now infertile. There has also been extreme loss of indigenous tubers and wild food, loss of mushrooms species, and disturbed habitats for wild animals.

Low yields and loss of crops: Loss of crops due to flooding during rainy season. Plants are often washed away due to heavy downpours. Loss of potential yields due to crops being planted after false start of rain season.

Barriers to overcoming current and future climate change impacts and vulnerabilities

Cultural and traditional beliefs: Traditionally, women are not allowed to have equal participation in household or community decision making. This was cited as being a critical barrier for developing the capacities and having the agency to adapt to the current and future impacts of climate change and their effects on women and girls.

General lack of knowledge on climate adaptive measures: Need for more information about early warnings, a lack of proper knowledge on the importance of forest preservation, high resistance to change and lack of resources to adopt climate solutions, and overgrazing on limited and shared grazing lands, were cited as barriers to climate adaptation.

Low incomes: The long distances required to go to market, inconsistent precipitation patterns that have reduced crop yields, and the drying up of dams and increased water security have all negatively impacted livelihoods and reduced incomes.

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