



Climate Vulnerability and Capacity Analysis

Kalomo District, Katundulu Zone

MAIN LIVELIHOODS AND RESOURCES

Livelihoods: Livestock rearing- Cattle, goat, and chicken; smallholder farming-maize, sunflower, vegetables, and groundnuts.

Natural resources: Forest depleted due to charcoal burning. Water resources diminishing from dams, streams, and boreholes, because they are all communal and freely accessed by all community members.

CURRENT AND FUTURE CLIMATE CHANGE TRENDS

- Mean annual temperature is increasing (by an estimated 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, dry spells



HAZARDS IN ORDER OF IMPORTANCE

1. Drought
2. Livestock diseases
3. Floods
4. Extreme temperatures, heat waves

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
All	<ul style="list-style-type: none"> • Livestock deaths and diseases • Reduced crop yields, cultivated land, incomes • Reduced attendance at school: flooding prevents access, hunger and limited income keeps students at home • Reduced income, increase in poverty 	<ul style="list-style-type: none"> • Grazing management • The community has established CDF Loans groups, and savings, and credit groups
Older People	<ul style="list-style-type: none"> • Food shortages • Reduced incomes • Inadequate resources for building houses, malnutrition 	<ul style="list-style-type: none"> • Migration • Sell Livestock • Ask others for help • Diversify businesses • Piece work
Women	<ul style="list-style-type: none"> • Poor yields equate to low incomes. • Loss of livestock due to disease • Lack of grazing area • Lack of access to livestock use by women, which all leads to low incomes. • Low crop production due to late planting by women (women must consult from men whether to buy seed or start planting) • Low incomes 	<ul style="list-style-type: none"> • Conduct sensitisation on regenerative of reforestation • Animal vaccination and setting up of dip tanks • Improved farming techniques e.g., conservation agriculture, tree planting
Men	<ul style="list-style-type: none"> • Drought leads to less productive livestock/ crops 	<ul style="list-style-type: none"> • Early warning information from reliable sources • Climate Smart Agriculture Practices • Grazing animals being done in their field
Young Women	<ul style="list-style-type: none"> • Drought has been connected to loss of houses • Drought to hunger/high labour demand/low income 	<ul style="list-style-type: none"> • Gardening/building shallow wells • Women are now able to own pieces of land giving them access to livestock and business opportunities • Plant early maturing crop varieties, Plant drought resistant crops • Use conservation agriculture practices and keeping small livestock
Young Men	<ul style="list-style-type: none"> • Frequent floods prevent female children from crossing the river • Droughts and floods lead to loss of income, poverty, hunger, and homelessness 	<ul style="list-style-type: none"> • Climate smart agriculture practices • Planting drought resistant crops • Migration to where there's water • Controlled grazing, controlled dam usage, planting/ploughing on hillside • Planting trees around farmlands and major resources as a wind breaker • Building climate resilient structures/roads, vaccinating animals

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

Reduced yield/ income: Due to drought and flooding, there is less productivity of crops and livestock leading to increased food shortages and malnutrition, reduced incomes, and inadequate resources for building houses.

Increase in livestock challenges: There is an increased loss of livestock due to disease.

Scarcity of water resources: Damage to fragile ecosystems such as the drying of stream banks and wetlands, limited dam water supply, pollution of shallow wells, and a lack of drinking water. 10 years ago, streams which are now seasonal had water throughout the entire year.

Ecosystem decline: The indigenous fruits and mushrooms have disappeared. Overgrazing, deforestation, and increased droughts have all decreased the availability of pasture and grazing land.

Destruction of assets: Flooding of fields, roads and bridges washed away and destroyed, buildings submerged, roofs blown off.

A vicious cycle: Climate change is accelerating land and natural resource degradation. As natural vegetation cover decreases, degraded forests and soil are less able to reduce the impacts of extreme events (floods, strong winds), causing greater destruction of resources and assets. This impacts livelihoods which in turn causes people to exploit natural resources further in a non-sustainable way. When farming and livestock fail, forests come under pressure for income. Forests are also under pressure from energy needs related to live livelihood developments: for cooking, charcoal for income, curing of tobacco and producing bricks for house building. Social relations are challenged as resources are depleted. For example, livestock belonging to men eat vegetables grown by women, women have to travel farther to collect water and face increasing pressure to find food.

Barriers to overcoming current and future climate change impacts and vulnerabilities

Health: lack of health facilities/trained personnel, the clinic has a shortage of medicine and long distances to the health clinic.

Literacy and Education: Not enough teachers/long distance for school children and discrimination against girls in school. Lack of teacher accommodation.

Infrastructure and services: Inadequate dip tanks, and veterinary offices are very far away from the community. There is also a lack of police service, and a lack of forestry officers and a forestry agency in the zone. Extension officer from the Agriculture Department doesn't stay amongst the community, and there is a lack of agricultural inputs from the Ministry of Agriculture.

Community and social life: Traditional beliefs of leadership at Church; lack of resources/short supply of boreholes, low access to services in social welfare, low media coverage for media agency.

Gender inequality: Women often lack the ability to own and control land and resources such as grazeland and finances, and women also lack power in decision-making within households and among the community and local institutions. There are also restrictions on women's ability to travel into town for marketing. Women's household roles such as caring for children in addition to fetching water or firewood leave them uniquely vulnerable to the effects of climate change such as increased temperatures, floods, and drought.

Climate information and early warning: no daily or weekly information, poor communications (weak radio signal, no information on weather on local channels), no climate and early warning committee in Katundulu or farmer forums to raise awareness, women have difficulty accessing climate information services when they are not allowed to access means of communications such as phones and radios.

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