CLIMATE CROWD

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

COMMUNITIES IN CONSERVANCIES (SALAMBALA, BAMUNU AND BALYERWA), ZAMBEZI REGION, NAMIBIA SUMMARY REPORT

SEPTEMBER 2022

ABOUT

Climate Crowd is a bottom-up, community-driven initiative. Working with communities and local organizations in more than 30 countries, we collect data on climate impacts on communities, analyze 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

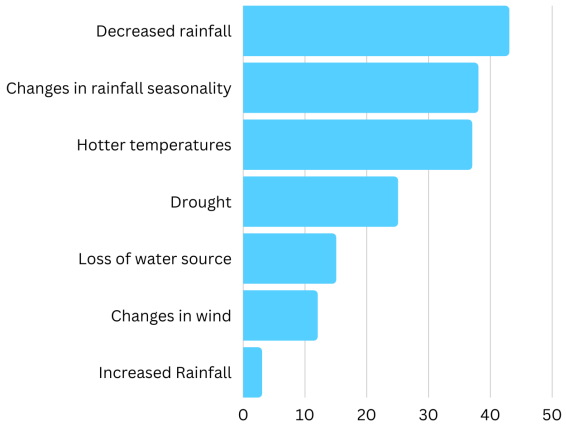
When people live adjacent to protected areas, how they respond to climate change affects nature's balance. We partnered with Namibian NGO Integrated Rural Development and Nature Conservation for 45 interviews (33 women and 12 men) in three communities in Muyako settlement, Salambala conservancy, Chinchimane, Bamunu conservancy, and Sauzuo settlement, Balyerwa conservancy. We conducted key informant interviews in November 2021 with community leaders, farmers, fishers, members of community development committees, and settlement elders. We asked them about the impacts of climate change on their livelihoods, natural resources, and biodiversity and how they respond or adapt to these impacts.

STUDY AREA

Namibia's Zambezi Region is at the heart of the Kavango Zambezi Transfrontier Conservation Area, which spans Botswana, Namibia, Angola, Zambia, and Zimbabwe. It is Namibia's most humid region, with an average annual rainfall of 650mm, a hot, semi-arid climate with minimum and maximum temperatures of 2-4°C and 34-36°C respectively. It has two major seasons: a dry season from April to November and a shorter wet season from mid-November to early April. Four perennial rivers run through this region: Zambezi, Chobe, Kwando, and Linyanti. The Namibia Meteorological Service has noted warmer temperatures than usual in the Zambezi Region. Data shows that, from 1901-2016, the average annual temperature in Namibia increased annually at a rate of 0.0123°C. Communities in Muyako, Chinchimane and Sauzuo earn a living from crop and livestock farming, selling reeds and thatching grass, and fishing. One of the Zambezi region's most famous lakes, Lake Liambezi, is located in Muyako and attracts wildlife and people from neighboring countries due to its abundance of fish. Despite the proximity to this natural body of water, the community still faces challenges such as access to potable water. The communities in Chinchimane and Sauzuo also rely on the Kwando River to support their livelihoods.

CHANGES IN WEATHER AND CLIMATE

When questioned about the observed weather and climate changes, 96% of respondents reported a decline in rainfall, followed by 84% who reported changes in rainfall seasonality and 82% noted hotter temperatures. Fifty-six percent reported prolonged drought, followed by 33% that reported loss of water source, while 27% noted changes in wind patterns and 7% reported increased rainfall.



Number of Interviews (n=45)

IMPACTS OF WEATHER AND CLIMATE ON COMMUNITY LIVELIHOODS

In the past, communities mostly lived off what the land could produce, however, crop production has decreased as noted by 98% of respondents due to decline in rainfall, increased temperatures, and prolonged droughts. This decreased crop production has resulted in hunger, food insecurity and income loss.

Namibia is the driest country in sub-Saharan Africa. Although the Zambezi Region receives high rainfall compared to other regions in the country, 91% of the respondents mentioned water scarcity due to prolonged drought and decreased rainfall. The community in Muyako also mentioned an issue of lacking access to potable water. Hence, they must rely on the lake, streams, and boreholes for freshwater. However, these water sources were tested and deemed contaminated. With no other option, the communities are forced to

drink from these sources leading to disease. In Chinchimane and Sauzuo, the communities do have access to potable water, however they often face water shortages and are forced to fetch water from the conservancies' office, the Mafwe Traditional Khuta or from the Kwando River. Water scarcity adds to food insecurity because it leads to a decline in fish species. In addition, when streams or water ponds start getting dry livestock such as cattle become stuck in the mud while trying to access water and eventually die. Sixty-four percent of respondents reported a decline in pasture, resulting in poor livestock health (diseases and weight loss) and mortality.

Many community members also rely on nature for food; 49% of respondents reported a decline in wild fruit, with trees bearing fewer edible fruits because of decreased rainfall and hotter temperatures. Some respondents, 47%, also noted a decline in firewood and 29% noted a decline and thatching grass and reeds. These decreases were attributed to deforestation, decreased rainfall, and hotter temperatures.

COMMUNITY RESPONSES TO CLIMATE CHANGE

Despite relying on subsistence crop farming, some community members are unable to produce enough; 47% of respondents reported purchasing food from commercial markets in Katima Mulilo. Eighteen percent of survey respondents have been switching to more drought resistant crops, some (13% of respondents) are varying their planting time or have backyard gardens (9%), while others are farming in different location (7%). Because not everyone can afford to purchase food or drought resistant crops, a small number (7% of respondents) are still farming the same crop and must ration their food to survive.

"Our settlement does not have access to potable water. We rely on streams and ponds which do not hold as much rainwater as they used to."

To cope with water scarcity, some community members trek long distances to fetch water from the lake or the river as noted by 38% of the respondents, some are harvesting rainwater (24% of respondents) and others are drilling wells and boreholes (22%), and a small number (7%) purchase clean water from Katima Mulilo. Responses depend on income and human resources available: more affluent families can afford to drill wells/boreholes and purchase water, but others are forced to fetch water from the lake and the river, thus making women vulnerable to hippo and crocodile attacks as they are often tasked with this chore.

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Number of Interviews (n=45)

Declines in available pasture have forced some families to move their livestock (44% of respondents) to a different location. Additionally, survey respondents reported that widespread deforestation means people must walk long distances to fetch firewood (27% of respondents). A small group has become highly reliant on other alternative livelihoods (20% of respondents) such as selling reeds and thatching grass, and vegetables, to generate an income to support their families.

IMPACTS ON BIODIVERSITY

One of the most significant impacts on biodiversity has been the decline in plant and tree species reported by 47% of respondents due to decreased rainfall, hotter temperatures, and elephants. Respondents also noted wild animals moving through Muyako, Chinchimane and Sauzuo settlement in search of water and food, and 7% reported mortality in wild animals such as zebra, buffalo, elephants, hippos, reedbuck, waterbuck, rabbits, sables, and birds because of drought. As a result, 4% of respondents mentioned hippos are being translocated to water-rich areas by the Ministry of Environment, Forestry and Tourism. Survey Respondents also reported incidents of human-wildlife conflict, with the majority involving elephants (31% of respondents), unspecified species (22%), buffalo and hippo (16%), kudu and bush-pig (7%), and predators (7%). Communities have responded by playing drums (13% of respondents), fencing their crop fields (4%) and learning about human-wildlife conflict strategies (4%). Other survey respondents have resorted to using prohibited fishing nets (9% of respondents) to capture. According to 24% of the respondents these actions cause habitat degradation and 7% of those surveyed also noted these measures cause soil erosion.

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