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

# JOMOTSHANGKHA WILDLIFE SANCTUARY BHUTAN SUMMARY REPORT

## ABOUT

<u>**Climate Crowd</u>** is a bottom-up community-driven approach. Working with communities and local NGOs in over 40 countries, we <u>collect data</u> on climate impacts to communities, <u>analyze the data</u>, present the data back to the communities, and work with them to develop, fund and implement <u>on-theground solutions</u> that help people and nature adapt to a changing climate. The Climate Crowd model provides a rapid way to gather data, pilot projects, and mobilize financial resources for the most vulnerable communities, through a participatory method.</u>

#### BACKGROUND



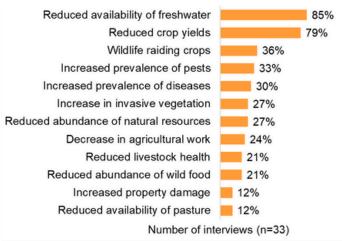
This report summarizes what was learned from 33 interviews with key informants (10 female, 23 male) in various communities within Jomotshangkha Wildlife Sanctuary—a tiger landscape—in the southeastern corner of Bhutan, bordering India. Interviews were conducted by WWF-Bhutan in collaboration with the Department of Forest and Park Services in May 2024.

#### REPORTED CHANGES IN WEATHER AND CLIMATE (n=33)

- 58% Flooding
- 55% Heat waves and hotter days
- 52% Changes in the timing of seasons
- 48% Loss of water source
- 42% Decreased rainfall
- 39% Changes in wind patterns
- 39% Storms
- 30% Erosion and landslides
- 12% Increased rainfall

### IMPACTS ON COMMUNITY LIVELIHOODS

JULY 2024



The majority of respondents (85%) reported that there has been a reduced availability of freshwater, contributing to a reduction in crop yields, according to 79% of respondents. Respondents also reported an increase in wildlife raiding crops (36%) and pests (33%), further contributing to reduced crop outputs.

Hotter daily temperatures were reported to have caused more diseases within the communities (30%). Other weather phenomena like flooding, landslides, and storms have caused damage to community members' property (12%), including their homes, farms, and crop fields.

27% of respondents reported that there has been a reduced abundance of natural resources like non-timber forest products in addition to wild food (reported by 21% of respondents).

There has been an increase in invasive vegetation (27%) that has been contributing to the decline in pasture productivity and availability—an impact reported by 12% of respondents. A lack of sufficient pasture also results in a reduction in livestock health (21%). Reduced livestock health in conjunction with reduced crop yields has caused an overall decrease in agricultural work within the respondents' communities (24%).



#### **COMMUNITY RESPONSES TO CLIMATE CHANGE**

Change in water access Increased reliance on markets Change in crop type Maintenance of water source Construction of fences Change in agriculture practice Increased pesticide use Increased conservation efforts Flood mitigation Clearing invasive vegetation

27% 24% 21% 21% 15% 15% 12% 12% 12%

45%

< In response to decreased freshwater availability, 45% of respondents reported changing where they get their water from and 21% reported working to maintain and manage their existing water source.

Due to decreased crop yields and reduced livestock health, 27% of respondents reported relying on nearby markets for food and other items.

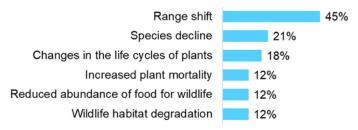
In an effort to increase agricultural productivity, respondents reported switching to droughtresistant crop types like the areca nut (24%), changing their agricultural practices (15%), and using pesticides (15%). To protect crops from wildlife, 21% of respondents mentioned constructing fences around their farms.

Noticing the impacts on their environment and natural resources, community members have increased their conservation efforts (12%) by creating a community forest, planting trees, stopping cattle from grazing in forests, and clearing invasive vegetation (12%). Similarly, 12% of respondents reported increasing efforts to mitigate the damage from floods, including constructing river embankments and flood walls.





#### **IMPACTS ON BIODIVERSITY**



45% of respondents reported that changes in weather and climate have been causing wildlife to shift their range, resulting in an increase in wildlife species nearby communities. While respondents have noticed an increase in some species, they have also noticed a decline in other species like elephants, tigers, and hornbills (21%).

■ 18% of respondents reported changes in the life cycles of plants, meaning that plants have been observed to flower at different times than in the past. Additionally, 12% of respondents reported increased plant mortality.



Wildlife is also being affected by reduced food sources in the wild (12%) and habitat degradation (12%).



#### WANT TO LEARN MORE?

Visit the Climate Crowd website to explore and download interview data view project pages, and reports like this on our publications page.

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