



CLIMATE CROWD

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

KAMDI CORRIDOR

NEPAL SUMMARY REPORT

NOVEMBER
2024

ABOUT

Climate Crowd is a bottom-up community-driven approach. Working with communities and local NGOs, we collect data on climate impacts to 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. 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.

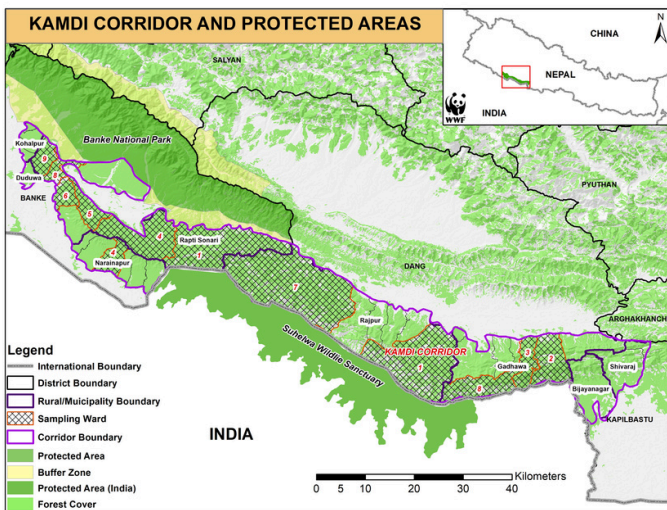
This report summarizes what was learned from 50 interviews with key informants (15 female, 35 male) in various communities within the Kamdi corridor in central Nepal—a priority tiger landscape for WWF—which links Banke National Park with Suhelwa Wildlife Sanctuary in India. The key informants consisted of diverse backgrounds, including local government workers, forest management committee members, local leaders, farmers, members of the Indigenous communities, and more. Interviews were conducted by WWF-Nepal in September 2024.

At 1,460 square kilometers, the Kamdi corridor is the longest in TAL. The corridor's varied terrain, spanning the Chure, Bhabar, and Terai floodplains, supports north-south wildlife movement.

The Kamdi corridor is highly susceptible to climate impacts, particularly in the Chure and Bhabar zones, which face prolonged droughts, forest fires, and flooding from the Rapti River. These areas' poor water retention contributes to flash floods during monsoon season. Local communities, heavily dependent on forest products and agriculture, are therefore vulnerable to climate impacts and variability.

REPORTED CHANGES IN WEATHER AND CLIMATE (n=50)

- **100%** Changes in the timing of seasons
- **98%** Decreased rainfall
- **96%** Heat waves and hotter days
- **92%** Loss of water source
- **80%** Flooding
- **48%** Drought
- **20%** Cold spells and frost
- **18%** Erosion and landslides



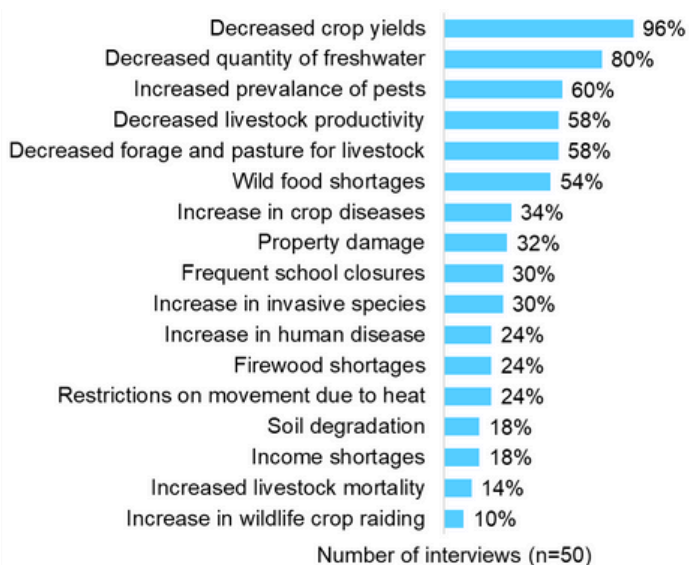
BACKGROUND

The Terai Arc Landscape (TAL) in Nepal spans 24,710 square kilometers and includes six protected areas and eight wildlife corridors. TAL not only supports rich biodiversity, but it also sustains over six million people who rely on its forests for essential resources like food, fuel, and medicine.



IMPACTS ON COMMUNITY LIVELIHOODS

Changes in weather and climate have been affecting community livelihoods in various ways, but the most pronounced effect is decreased crop yields, as reported by 96% of respondents, with many pointing towards changing seasonality, decreased rainfall, hotter temperatures, and water scarcity as primary drivers. Crop yields have also been affected by an increase in pests (reported by 60% of respondents), crop diseases (reported by 34% of respondents), invasive vegetation species (reported by 30% of respondents), and soil degradation (reported by 18% of respondents). There has also been an increase in wildlife raiding crops, as food sources diminish for them as well (reported by 10% of respondents).



Respondents also reported declines in livestock productivity (reported by 58% of respondents) due to heat, decreased water, and lack of fodder and pasture (reported by 58% of respondents). Some respondents noted that this has culminated in the death of livestock (reported by 14% of respondents).

Increased heat has made outdoor labor difficult for community members, according to 24% of respondents. The extreme heat often prohibits them from farming or participating in other income-generating activities. This, coupled with decreased agricultural productivity, has resulted in income shortages for community members (reported by 18% of respondents).

Natural resources have also diminished as a result of changes in weather and climate, especially wild food and firewood, according to 54% and 24% of respondents, respectively. Respondents specifically noted a decrease in wild mushrooms and mahua plants.

Increased severity of weather has affected community wellbeing in significant ways, with 32% of respondents reporting property damage caused by floods, 30% of respondents reporting frequent school closures due to extreme heat, and 24% of respondents reporting increased human illness from extreme temperature fluctuations.

"This area has always been prone to flooding, but floods in the past decades have lasted for longer periods and are milder, meaning that the high waters stayed stable for 3-4 days while the rain continued for up to a week. But the floods nowadays are destructive with extremely high-water levels for 1-2 days. The last flood, as you can see on the walls, was something we had never imagined. We were born and have lived here for 57 years but had never seen a flood of this intensity and their frequency is increasing as we have observed similar floods twice in the last 10 years."

-Forest guard, 57

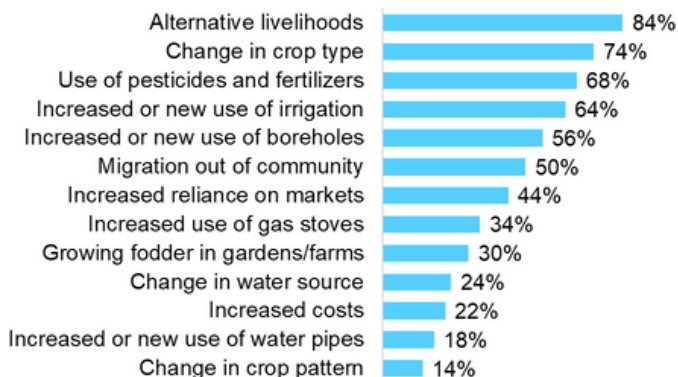



COMMUNITY RESPONSES TO CLIMATE CHANGE


In response to general climate change impacts, 84% of respondents noted that community members have been changing their livelihoods from farming. Half of respondents also reported that people have been moving away to find other employment opportunities.

Those who have stayed in the agricultural sector have changed crop types, usually to hybrid species, (reported by 74% of respondents), and have begun using pesticides more frequently to cope with the increase in pests (reported by 68% of respondents). Community members have also changed their cropping patterns (reported by 24% of respondents) and have begun growing fodder for livestock in their personal gardens and farms (reported by 30% of respondents).

To cope with decreased rainfall, 64% of respondents reported new or increased use of irrigation for crops, often from boreholes (reported by 56% of respondents). Respondents also reported changing where they get irrigation and drinking water from (24%), including increased or new use of piped water (18%).



 Since resources are dwindling and agricultural production is declining, 44% of respondents noted that they rely more heavily on nearby markets for food, water, and fodder. Similarly, community members have experienced increased costs in order to sustain agricultural production and irrigation systems (reported by 22% of respondents).

 Respondents have also reported an increased use of gas stoves in response to lack of firewood (reported by 24% of respondents).

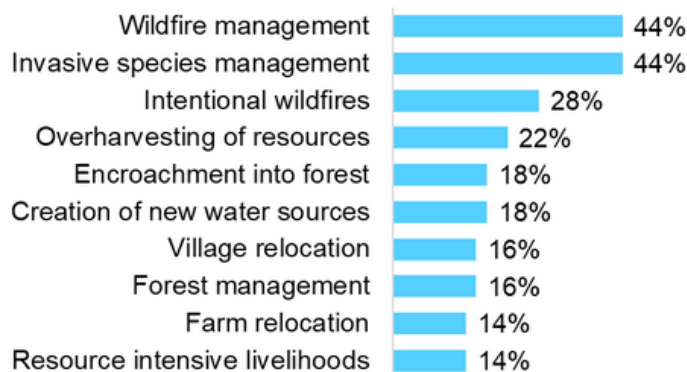
DIRECT IMPACTS ON BIODIVERSITY


Changes in weather and climate have caused **an increase in invasive vegetation species** in the nearby forest, according to 86% of respondents. Additionally, there has been increased plant mortality (reported by 16% of respondents) and changes in the life cycles of plants (reported by 22% of respondents). Community members have also noticed **a decrease in certain wildlife species** like sambar deer and a variety of bird and fish species, as reported by 56% of respondents. Some wildlife species have also shifted their typical range, often migrating into the area (reported by 40% of respondents). Some respondents have noticed an increased presence of wildlife species in their communities as compared to the past (reported by 14% of respondents). Generally, community members have observed and experienced **increasingly dry conditions within the forest**, according to 46% of respondents. This often leads to and exacerbates wildfires, as





reported by 44% of respondents. However, respondents said that the forests that were severely degraded roughly 30 years ago have recovered well since the establishment of community-run forests in the area.

INDIRECT IMPACTS ON BIODIVERSITY



 Some actions community members are taking to cope with the effects of climate change impact the area's biodiversity, whether it is intentional or not. For example, 44% of respondents reported that there has been increased efforts to manage wildfires and invasive species. A few respondents also noted that they have been creating new water sources in the forest for human and wildlife use (reported by 18% of respondents).

 On the other hand, 28% of respondents reported that some community members have begun setting intentional forest fires to better harvest mushrooms, fodder, and tree flowers. Since resources are becoming scarce, there has also been an increase in the overharvesting of certain resources like firewood and fish, according to 22% of respondents. Similarly, 14% of respondents noted that there has been an increase in resource-intensive livelihoods—like intensive fishing, firewood collection, and gravel and sand mining—to cope with economic declines in agricultural livelihoods.

 18% of respondents have reported that there has been increased forest encroachment, usually as a result of community members needing to look further for resources or needing to relocate settlements (reported by 16% of respondents) or farms (reported by 14% of respondents). Relocating settlements and farms has become more common as properties are increasingly destroyed by severe weather events.

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](#).



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