



PARSA NATIONAL PARK NEPAL SUMMARY REPORT

JUNE
2026

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.

BACKGROUND

This report summarizes what was learned from 50 interviews with key informants (22 female, 28 male) living in and around Parsa National Park (PNP) in Nepal. PNP is located in Parsa district in the southern lowland Terai region in Nepal, along the border of India. Spanning 63,700 hectares, PNP is home to iconic species like Bengal tigers, Asian elephants, one-horned rhino, gaur, and sambar deer. Over 100,000 people live in the 28,530-hectare buffer zone next to PNP, making the area a key landscape for both people and wildlife. Interviews with key informants in the buffer zone were conducted by WWF-Nepal in April 2026.



CLIMATE TRENDS & PROJECTIONS

Nepal experiences four distinct seasons: winter (December-February), pre-monsoon (March-May), monsoon (June-September) and post-monsoon (October-November). PNP is characterized by hot summers and dry winters. Heat and water scarcity are at their worst during the pre-monsoon season, with temperatures exceeding 100°F and seasonal water sources depleted.¹ During monsoon season, temperatures decline and precipitation increases. Temperatures continue to decrease in the post-monsoon season, along with precipitation, with peak dryness occurring during the winter and lasting into the pre-monsoon season.

Climate change is causing changes in seasonal patterns, resulting in less predictable and more intense monsoon and dry seasons. PNP's porous soils make it especially vulnerable to climatic shifts and with dry-season temperatures reaching up to 107°F (as it did in 2023)², 70% of the park has been experiencing water scarcity in recent dry seasons.³ Climate change is further intensifying the stress in the area. In late September 2024, monsoons brought a record-breaking rain event to the region, causing landslides, flooding, property damage, and casualties.⁴ The timing of this event is in line with recent trends showing a later ending to the monsoon season, now in October rather than September.⁵

There is “high” confidence in the likelihood that temperatures will continue to rise and cause longer and more intense heatwaves across all of Asia, with increased forest fires, droughts, and water scarcity during the dry season in Nepal.⁶ It is also projected that the monsoon season will intensify in the region, causing more flooding and by 2045, rainfall is expected to triple in volume in Nepal.⁷

1. Rosales-Richard et al., 2019. *The socioecological system of Parsa National Park: Insights for an adaptive management using the ecosystem approach*; ICIMOD Working Paper 2019/5. International Centre for Integrated Mountain Development (ICIMOD). 2. Government of Nepal, 2023. *Nepal Climate Summary*. 3. Lamichhane et al., 2018. “Rapid Recovery of Tigers Panthera Tigris in Parsa Wildlife Reserve, Nepal.” *Oryx* 52 (1): 16–24. 4. Government of Nepal, 2024. *Situational Report on Extreme Precipitation and Flooding Event of 27-29 September 2024*. 5. Poudel, A. 2024. “Monsoon patterns have shifted. Authorities’ mindset has not.” *The Kathmandu Post*. 6. Shaw et al., 2022. “Chapter 10: Asia.” In *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by Pörtner et al. Cambridge University Press. 7. World Bank Group, 2022. *Country Climate and Development Report: Nepal*. World Bank Group.

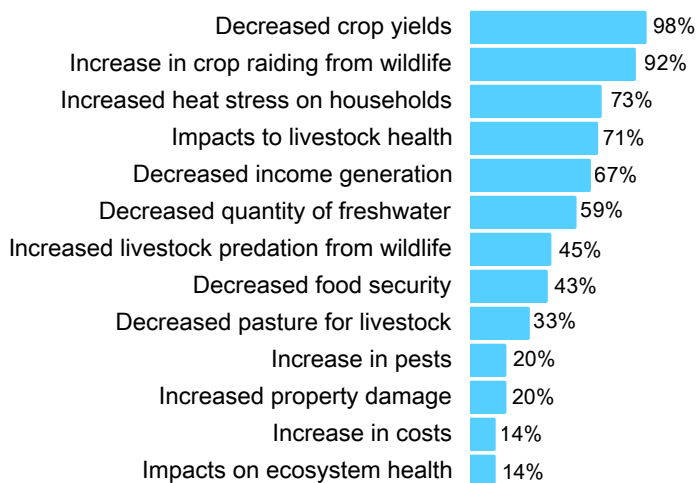
COMMUNITY REPORTED CHANGES IN WEATHER AND CLIMATE (n=50)


- **86%** Changes in the timing of seasons
- **82%** Heat waves and hotter days
- **29%** Cold spells and frost
- **24%** Decreased rainfall
- **16%** Drought
- **14%** Increased rainfall





A community meeting in Parsa National Park.


IMPACTS ON COMMUNITY LIVELIHOODS




 Nearly all respondents (98%) reported declining crop yields, mainly due to heat, which 73% said has increased household stress and reduced their ability to work. Crop losses were also linked to wildlife intrusion in search of food and water (92%) and rising pest infestations (20%). Respondents noted that wildlife crop raiding is seasonal, with losses increasing during periods of resource scarcity.

 Livestock has also been affected by heat stress, with 71% of respondents reporting impacts driven by rising temperatures and reduced pasture and forage availability (reported by 33% of respondents). Additionally, 45% reported livestock is more frequently being attacked by wildlife looking for resources.

 As an agrarian region, declining crop yields and livestock productivity have led to reduced household income (67% of respondents), lower food security (43%), and higher expenses as families spend more to compensate for crop losses (14%).

 Respondents also observed climate change impacts on nearby water sources, with 59% reporting reduced water availability. Additionally, 14% noted that these effects extend across the broader ecosystem, including surrounding forests.


 Extreme weather events and wildlife intrusion have also caused property damage, as reported by 20% of respondents.

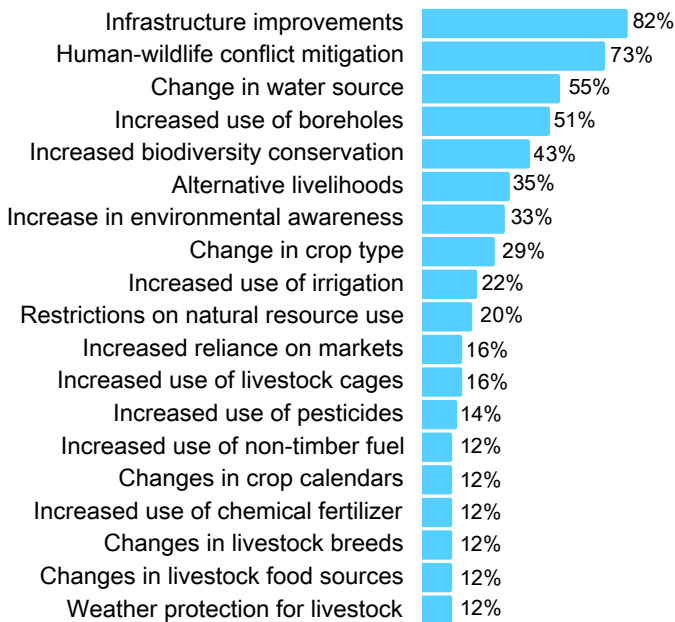
“When water is plentiful in the God Nahar canal, which flows from the forest, wildlife tends not to enter the village, showing how resource availability in the forest directly influences conflict intensity.” - Unidentified farmer in PNP



A restored wetland within Parsa National Park.

COMMUNITY RESPONSES TO CLIMATE CHANGE

 To cope with the impacts described, 82% of respondents reported improving community infrastructure, especially water infrastructure. Many noted improvements in water facilities and piped water access, reducing reliance on shrinking streams. Others noted fencing for farms to protect crops and livestock from wildlife.




Community members have also switched their livelihoods from agriculture (reported by 35% of respondents) and relied more on markets to purchase food (16%).





IMPACTS ON BIODIVERSITY


As people have started participating in more conservation activities to safeguard the landscape, 59% of respondents observed ecosystem regeneration, noting that there are more trees and greenery than there were before.


On the other hand, 27% of respondents reported that some parts of the ecosystem have been degraded from things like illegal forest encroachment, pesticide use, and the overuse of boreholes.

 In response to wildlife attacks on crops and livestock, 73% of respondents reported using mitigation measures like collectively guarding fields at night and chasing wildlife away. This has commonly been done as a group effort, allowing some farmers to have nights off. Additionally, 16% reported keeping livestock in cages to reduce attacks.

 Declining freshwater availability has forced community members to seek alternative water sources, with 55% of respondents reporting changes in water access and 51% reporting the increased use or construction of boreholes.

 In response to climate change impacts on the environment, 43% of respondents reported increased biodiversity conservation efforts, including forest and water source conservation and tree planting. Environmental awareness has also increased, according to 33% of respondents, while greater restrictions have been placed on natural resource use (20% of respondents), encouraging some households to adopt non-timber fuel sources (12%).

 In response to crop losses, respondents reported switching to more heat resilient crop types like mangos (29%), relying more on irrigation (22%), and using pesticides and chemical fertilizers on crops to improve yields (14% and 12%, respectively). Due to changing seasonality, 12% of respondents have also adjusted the times when they plant and harvest crops.

 To cope with climate-related impacts on livestock, 12% of respondents reported switching to smaller livestock breeds that need less food, using straw instead of grasses from pastures for feed, and implementing measures to protect livestock from severe cold fronts, like providing hot water and cage covers for warmth.

WANT TO LEARN MORE?

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