



CLIMATE CROWD

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

NORTHERN YUCATÁN PENINSULA MEXICO SUMMARY REPORT

MARCH
2023

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

This report summarizes what was learned from 103 interviews with key informants (30 female, 63 males, 10 not specified) in 7 communities in rural, coastal and small communities in Northern Yucatán, Mexico. Interviews were conducted by WWF Mexico and partners in March 2019 and March 2023.



REPORTED CHANGES IN WEATHER AND CLIMATE (n=103)

- 47% Changes in wind.
- 46% Storms.
- 43% Heat waves/hotter days.
- 41% Change in timing of seasons.
- 38% Decreased rainfall.
- 35% Flooding.
- 29% Drought.
- 21% Cold spells/frost.
- 17% Increased rainfall.
- 11% Sea level rise.

Almost half of the respondents (47%) reported changes in wind patterns, closely linked to a similar number of observations regarding an increase in storms (46%). Many respondents also noted an increase in heat waves and hotter days (43%) and decreased rainfall (38%)—all of which can be substantiated by the 29% of respondents reporting drought. Additionally, 41% of those interviewed observed changes in the timing of seasons with prolonged dry and wet periods which is also evident by the significant number of interviewees reporting flooding during precipitation events (35%). The least commonly reported changes in weather and climate were an increase in cold spells and frost (21%), an increase in rainfall (17%), and a rise in sea level (11%).

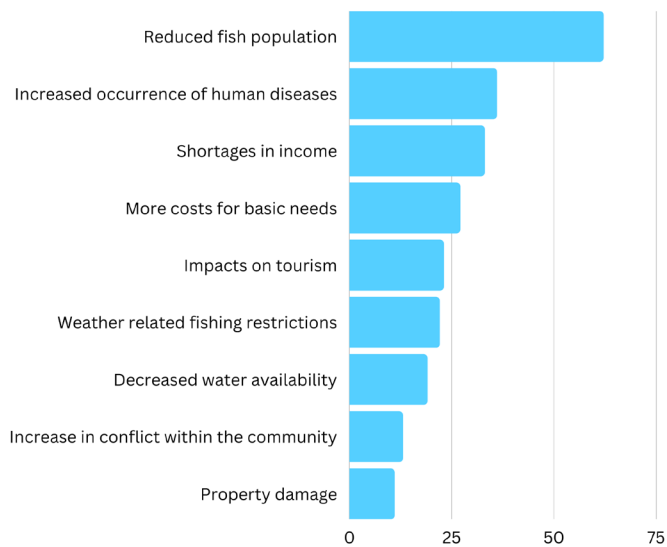
"The weather is erratic and unpredictable. Winds from the southeast used to be very stable and easy to predict, but not anymore."

- Salt industry worker, Lagartos, Mexico

IMPACTS ON COMMUNITIES

As the weather and climate change, communities in Northern Yucatán have been feeling the impacts—most notably a reduction in the local fish population, as reported by 60% of the respondents. It is important to note, however, that this is also a consequence of inadequate fisheries management. This lack of fish has also had direct consequences on the economic security of communities, as the main source of income for a significant portion of the Northern Yucatán population has been from fisheries. This is reflected in the 32% of respondents who reported shortages in income. The

forementioned changes in weather have also affected the local tourism industry, according to 22% of interviewees, which in turn contributes to the shortages of income felt by the community.

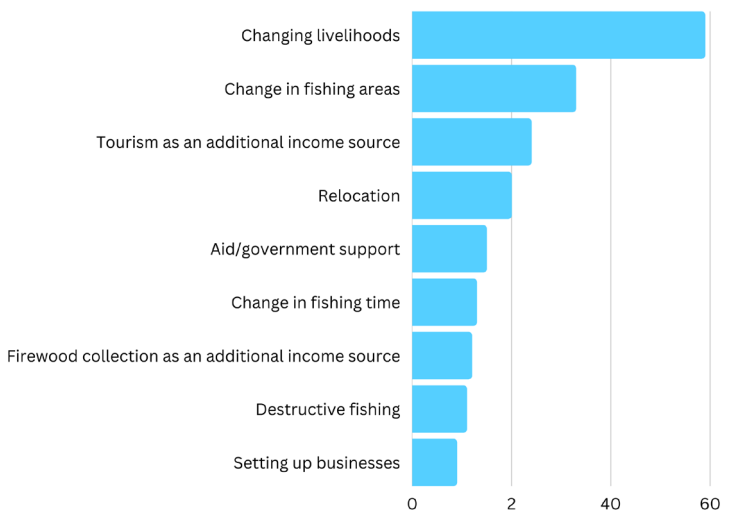


Additionally, the self-sufficiency of communities has been affected by the reported declines in fish—and thus income—as they now incur higher costs for securing basic goods (26%). These effects are often exacerbated by weather-related fishing restrictions as mentioned by 21% of those interviewed, as more frequent and intense storms limit the ability of locals to fish in the same ways they used to. The health of the population in the area has also been significantly affected as well with 35% of respondents reporting an increase in the occurrence of human diseases, most of which are in the form of vector-borne viruses related to the extended wet season and extreme temperatures. The community members who were interviewed also observed a decrease in water availability (18%), an increase in resource-related conflict within the community (13%), and property damage due to severe weather (11%).



COMMUNITY RESPONSES TO CLIMATE CHANGE

Communities in the Yucatán Peninsula have already started adapting to the most pronounced impacts highlighted above in a number of ways. Given the high percentage of respondents that noticed a reduction in fish population, 57% of respondents mentioned that they have undergone a change in livelihood by shifting their main activity away from fishing and towards other types of income sources. Other sources of supplementary income include tourism (23%), firewood collection (12%), and setting up small businesses (9%). To cope with the decline in the area's fish, 33% of those interviewed mentioned moving to different areas to fish and 13% of people altered their usual fishing times. Limited fish stock has also resulted in people fishing more intensely and in areas which were not as exploited in the past which has led to destructive fishing, as mentioned by 11% of those interviewed. Some people (19%) were driven to permanently relocate to a different area in Yucatán or to a different province. Lastly, 15% of respondents made mention of relying on aid or government support as a way of coping with these changes, highlighting the urgency for effective adaptation measures in these communities.



IMPACTS ON BIODIVERSITY

The most pronounced impact on biodiversity has been a decline in the number of species, reported by 33% of those interviewed, and a similar number of people reported shifts in species ranges (32%). Additional impacts to biodiversity included increased observations of invasive species (9%), species mortality due to drought or flood (6% and 5% respectively), and changes in the life cycles of plants (4%).

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"The strong winds do not let us go out to fish. Before they lasted 1 or 2 days, now we can be 15 days without going to fish because of the strong winds"

– Fisherman, Yucatan