



CLIMATE CROWD

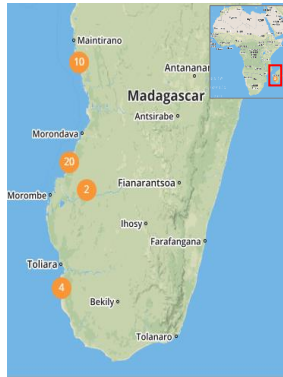
Crowdsourcing to help people and nature in a changing climate

MADAGASCAR: SUMMARY OF FINDINGS

November, 2017

OVERVIEW

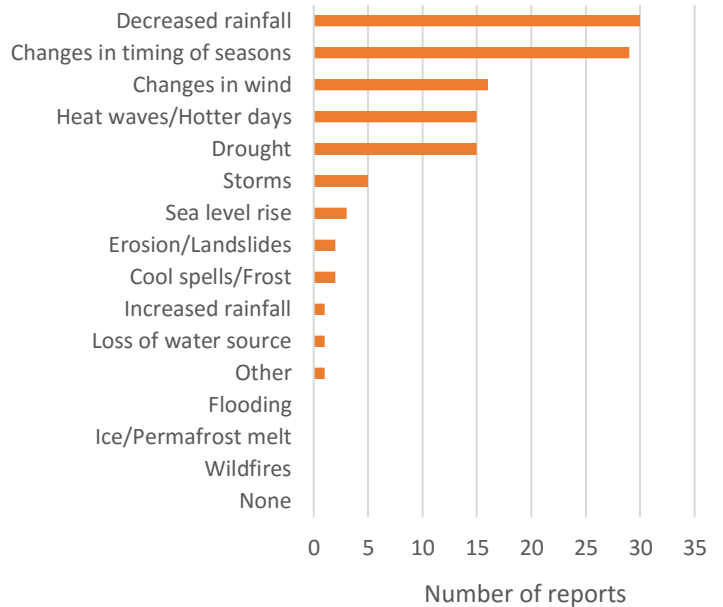
Climate Crowd is researching how communities are being impacted by, and responding to, changes in weather and climate, and how this affects nature. 35 interviews were conducted along the West coast of Madagascar, home to thousands of endemic species of plants and animals.



Facing decreased rainfall and shifting seasonal patterns, the farming and fishing communities of this region have adopted a number of coping techniques to deal with declining fish availability and failing crops such as resorting to destructive fishing practices, increasing extraction of natural resources and pursuing alternative livelihoods. Many reports indicate that biodiversity is suffering both as direct result of a changing climate and as a consequence of human activity in response to climate change.



REPORTED CHANGES IN WEATHER/CLIMATE



IMPACTS ON COMMUNITIES



Decreasing rainfall and changing seasonality has impacted communities in the following ways:

- Reduced abundance of fish (~66% of surveys) coupled with fewer opportunities to go fishing due to poor weather conditions (~17% of surveys)
- Crop failure due to insufficient or unreliable rainfall (60% of surveys)
- Reduced availability of freshwater for crops and livestock (40% of surveys)
- Increased prevalence of disease (~29% of surveys)
- Increased famine due to reduced fish stocks and yields (20% of surveys)

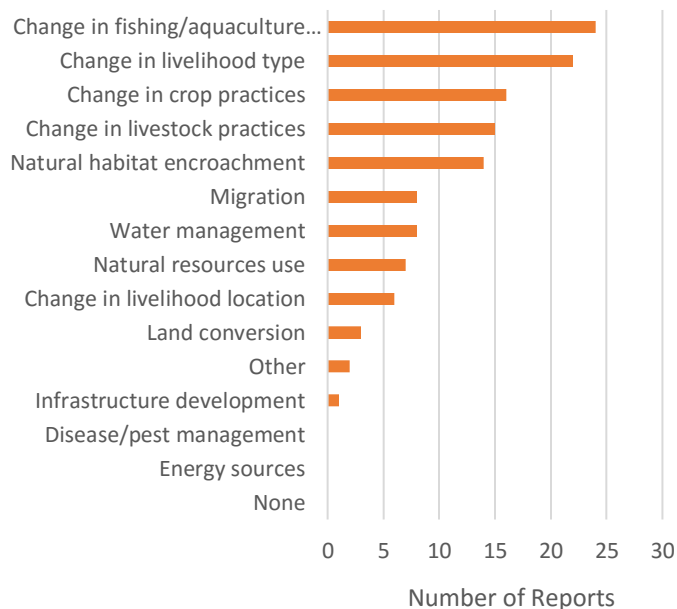
COMMUNITY RESPONSES TO CHANGES

Left to their own devices, communities are responding to the above impacts by:

- Using destructive fishing practices particularly involving the use of illegal fishing gear (60% of surveys) in order to maximize catch
- Diversifying or pursuing alternative livelihoods (60% of surveys), with several farmers engaging in fishing (20% of surveys) to make up for agricultural losses and some pursuing small businesses (~14% of surveys) such as selling shellfish
- Traveling further and to new areas for fishing (34% of surveys) often in mangrove channels
- Gathering non-timber forest products such as yams to supplement diet and income (~31% of surveys)
- Constructing wells and pipes to access freshwater (20% of surveys)
- Logging (~14% of surveys) and hunting (~11% of surveys), which are most often illegal, as alternative sources of income
- Restoring or conserving areas to maintain key ecosystem services (~14% of surveys)
- Migrating to other areas, including natural reserves (~14% of surveys), and clearing/cultivating new land (~9% of surveys)



RESPONSES TO CHANGES IN WEATHER/CLIMATE



IMPACTS ON BIODIVERSITY

- With destructive fishing practices as the most commonly reported coping strategy, overexploitation of fish and associated damage to marine ecosystems represents the biggest threat to biodiversity in the area. Reports mention depleted fish stocks, reef destruction, disturbance to breeding grounds, death of mangroves and loss of juveniles
- Destruction of forest ecosystems associated with logging and land clearing activities
- Degradation of natural habitat and disturbance to wildlife associated with increased hunting and foraging activity in forests
- Direct impacts of reduced rainfall and increased temperatures on native vegetation and wildlife

