



CLIMATE CROWD

Crowdsourcing to help people and nature in a changing climate

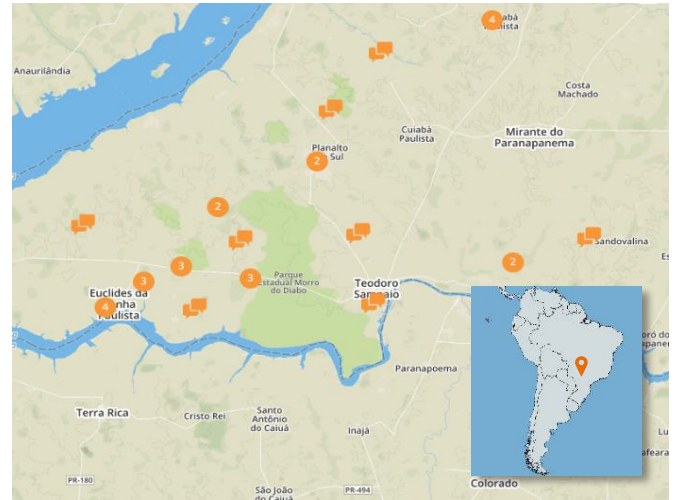
BRAZIL SUMMARY REPORT

August, 2019

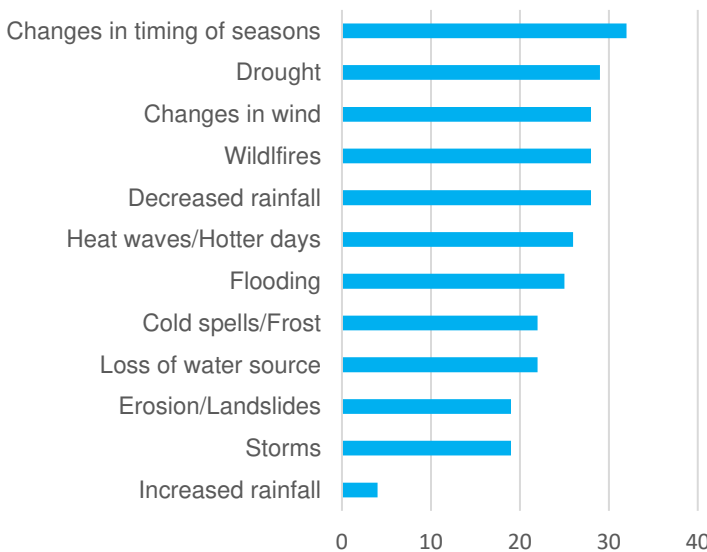
Context

[Climate Crowd](#) is a crowdsourcing initiative that convenes and supports a network of partners to gather data on how climate change is impacting people and nature, and supports on-the-ground [projects](#) that help rural communities adapt while reducing pressure on biodiversity.

As a part of this initiative, WWF partnered with staff from Instituto de Pesquisas Ecológicas, a local environmental organization, to conduct 32 interviews (17 women, 15 men) in the Pontal do Paranapanema region of Brazil, where the majority of people raise cattle as their primary source of income. Interviews were conducted in communities nearby the Morro do Diabo State Park, home to 80% of the entire population of endangered black lion tamarin (IPE).



Reported changes in weather/climate



Direct impacts on natural resources

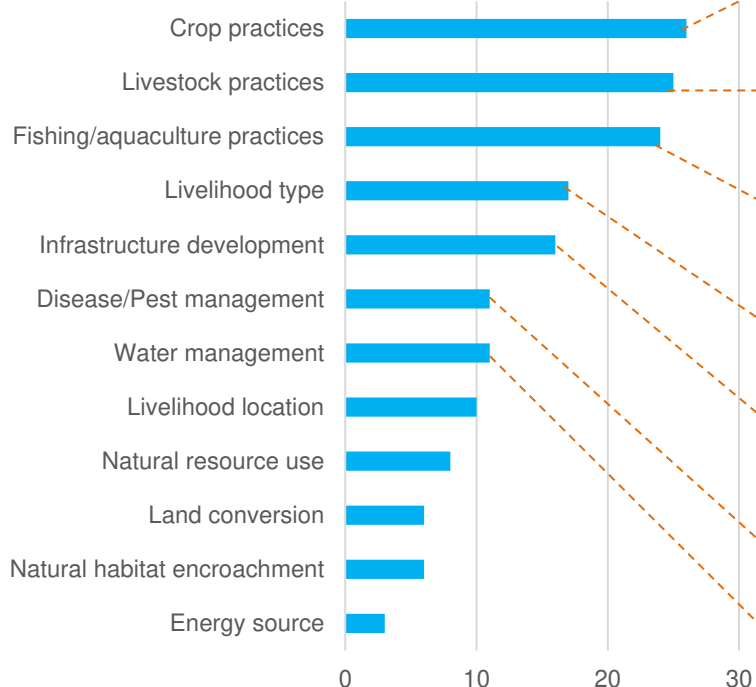
All respondents noted a change in the timing of seasons and nearly all observed decreased rainfall, changes in wind patterns, and more frequent/severe droughts. Wildfires were frequently noted, though human activity within the forests is at least partially to blame. This overall drying trend coupled with warming temperatures has led to a decline in water sources according to over three quarters of respondents. Rivers, springs and streams are reportedly drying up or dwindling. Drought is also causing pasture to shrink (44% respondents) and has affected tree health (25%). Respondents note that trees are weaker and more susceptible to disease.

Impacts on communities

The observed changes in weather patterns have greatly impacted the livelihoods and health of people living in the area. **Well over half of respondents have observed a decrease in crop yield, particularly beans, corn, rice, and cotton** as a result drought and increased prevalence of pests. Almost half of respondents noted an increase in pests such as cucurbit beetles on beans and cotton, and caterpillars on corn. The decline in pasture and increase in ticks, flies, and diseases, is affecting livestock health according to one in four respondents. Some have lost cattle, while others have seen a decline in milk production in dairy cows. Many respondents (78%) spoke of emerging health concerns, primarily respiratory and sinus issues. Several attribute this change to the recent shift towards drier weather conditions.



Community responses to climate impacts



People have changed the types of crops they are planting (59%) with greater focus on drought resistant crops such as cassava. A quarter of respondents also report altering the times at which they plant to better align with the shifting seasons and implementing conservation agriculture practices.

Due to a degradation in pasture area, respondents have had to change the area in which they let their livestock graze. Many are now growing and purchasing fodder (sugar cane, elephant grass) to feed livestock during drought.

Though interviewees noted this as a coping strategy, few provided further details on how this was taking place.

Some farmers have started small gardens to feed themselves and family when other livelihood sources are unsuccessful, some have switched to livestock rearing, and a few dairy farmers have switched to beef due to poor milk production.

A quarter of respondents have increased their use of fences as a way to restrict the encroachment of wild animals on their land.

In response to the increase in pests, 28% of the people interviewed reported that there has been an increase in pesticide usage.

Includes drilling wells (13%) to access groundwater and use of irrigation (25%) primarily to grow fodder.

Impacts on biodiversity

Over half of the respondents have observed a rise in human wildlife conflict. Many attribute this to a lack of food and water within the forests causing wildlife, particularly jaguars, birds, and snakes, to enter farms and settlements in search of these resources. Almost half of respondents (47%) explained that drought has impacted the availability of food within the forests, particularly wild fruits.

“We observed more jaguar attacks and we think it is because [of] the lack of prey in the forests nearby. The common prey animals are decreasing due to the lack of water and consequently fruits and seeds.”

~Female smallholder farmer

Approximately 30% of respondents have noted the loss or degradation of wildlife habitats as a result of human activity. Respondents (31%) explained that people had taken livestock into protected areas to graze. Illegal fires have also been reported. Respondents have witnessed an overall decline in certain types of wildlife including armadillos, butterflies, and bees (47%, 38% and 25%, respectively).

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 wwfclimatecrowd.org

 climatecrowd@wwfus.org

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Photos: Climate Crowd interview © IPE; Reforestation project © JRPireni
Citation: Climate Crowd, 2019. Brazil summary report. World Wildlife Fund, Washington, DC.



Nature based solutions

WWF and IPE worked together on a project to improve the resilience of a local watershed and improve habitat connectivity through community-based reforestation. Once mature, the newly planted hectare of tropical forest consisting of 48 species of native trees will provide direct benefits to people such as water provision services, decreased damage from wind storms and protection from soil degradation and erosion. The new forest will also contribute to important habitat corridors for local wildlife including the endangered black lion tamarin, as well as ocelots, jaguars, monkeys, armadillos, etc. and create a buffer zone for the Black Lion Tamarin protected area.