

Gendered Experiences of Climate Change: Coping with High Flooding in the Peruvian Amazon

Department of Ucayali, Peru
June 28 – October 5, 2017

I have just returned from three months of fieldwork in the Peruvian Amazon. I was based out of Pucallpa, in the Department of Ucayali. I conducted data collection in two riverine communities located about two hours upriver from Pucallpa city. These communities are located on the floodplains, which offer fertile soils, water access for fluvial transportation, and an annual flood that considerably increases fishing opportunities. However, riverine communities are particularly vulnerable to environmental hazards, such as extreme flooding or extended drought. Climate change research has indicated that these environmental shocks will only increase in the future, making this a critical time to better understand how riverine communities are impacted by these shocks and how they cope. Using a feminist lens in this research, I also sought to understand these experiences from a personal perspective, to account for gendered differences and other axes of differentiation. Building upon prior research in the Peruvian Amazon, my research seeks to answer the following questions, using the 2014 major flooding as an analog: **1.** How were community members impacted and what were the axes of differentiation? **2.** How did community members cope? **3.** To what extent is gender determinant of coping mechanisms? **4.** What role do social networks play in leveraging coping strategies?

For my data collection, I lived with a family in the larger of the two communities for the majority of my time in Peru. Living in the community, and in a homestay in particular, allowed me the opportunity to conduct participant observation and informal conversation to better understand livelihoods and lifestyles in the area. I was also able to participate in local activities, such as fishing, planting maize, regional soccer tournaments, and community events. The first community had 43 households, 33 of which were present in the community during the 2014 flood; the second community had 8 households, 4 of which were present during the 2014 flood. Of the 37 households between the two communities that were present during the 2014 flood, 35 of them formally participated in my study. To achieve this, I conducted 28 interviews and 27 surveys. My data collection was very successful, and I now have an ample amount of data to begin to analyze.

Communities are purposefully situated on the floodplain for the unique livelihoods it creates. During the summer, community members farm their nearby land holdings. The majority of fields are planted with maize, which is nearly all sold to Pucallpa. Other common crops include cucumber, tomato, cassava, plantain, and fruit trees. Some families also hunt birds, some wild land animals, and fish, mostly for consumption and sale in the community. During the winter, livelihoods change drastically. Floods often last for two to four months, and inundate farmland and the community itself. Most families switch their focus to fishing, with many families fishing daily and travelling to Pucallpa regularly to sell their catch. Many communities along the Ucayali River are relatively mobile to accommodate for changes in the river course. One of my fieldwork communities had had to relocate their houses inland multiple times in the past as the river continued to move closer. Houses are therefore built with the possibility of relocation kept in mind.

Community members are well accustomed to the annual floods. Most houses are raised on stilts in preparation for flooding. Participants in my research spoke of many different annual strategies that are implemented to reduce the impacts of flooding, such as planting water-resistant crop varieties, building rafts to keep their animals on, buying new canoes and fish nets every year, and planning agricultural seasons around the flood cycle. While the flood offers livelihood benefits and community members are well accustomed to annual flooding, my fieldwork also found that flooding can create detrimental impacts for community members. This was most often attributed to the variability in flooding each year. For example, a flood too early can kill crops before they have been harvested; a flood too late can prevent expected income from fishing; a flood too high can force people to leave their homes once they are inundated with water; and a flood that lasts too long can create food shortages and illnesses. Participants shared the direct impacts that flooding has on agriculture and livelihoods, health, food, mobility, income, and care of animals.

My research indicated that floods affect people very differently. Through both quantitative and qualitative methods, I explored possible axes of differentiation, such as males compared to females, elderly compared to youth, people who fish compared to people who do not fish, people born in the community compared to new migrants to the community, and differences in land holdings. Each of these lines of difference generated unique responses among participants. In addition, there were obvious differences in how the flood affected individuals and households, and in their approach to coping with the flood. For example, some participants had considerable losses, such as hectares of maize or fruit trees. Other households mentioned few to no impacts of the flood, and were grateful for the extra fish it brought. Some people referred to the 2014 flood as a devastating crisis, whereas others said that they are used to the flooding and that it did not create any stress. Therefore, based on my fieldwork experience and early findings, I have many questions to consider when moving forward with data analysis.

In addition to many lines of difference that I explore in my research, some common themes emerged from the interviews and surveys. While impacts on livelihoods are critical to all of the participants, so too were impacts on them as individuals and on their bodies. For example, the floods were commonly associated with many illnesses, such as influenzas and fevers. Moreover, the loss of mobility from not being able to walk outside of the house can mean weeks or months at a time of sitting inside the house or in boats. Participants spoke of the aches and soreness that comes with this, and the impact that being in water constantly has on their skin and joints. Furthermore, a common sentiment that emerged in data collection was a lack of support and assistance during floods. Many participants are very upset that the government does not do more to support them during severe floods. Within the village, many participants also feel that there is a lack of assistance, as floods are covariant and therefore few households are able to support other households.

This research was made possible in part by the CLAG Field Study Award. The funds from the CLAG award went towards my research expenses, including my research equipment, field assistance, and transportation costs to the communities.



Side channel that leads to communities in the summer (non-flood) season



Three houses in the first community, all raised on stilts to prepare for floods



Community members planting maize



River side channel with maize planted along the shore
All of this would be under water during the annual flood



Harvested corn laid out to dry before bagging the seeds to sell in Pucallpa



Fresh fish that was just caught on one of the river's side channels