

## **The Impacts of Fisheries Management Practices on Food and Income Security in Belize**

**Flores, Wendy**; Student, Columbia University, United States, [wf2212@columbia.edu](mailto:wf2212@columbia.edu)

Fisheries throughout the world are being over-exploited through unsustainable fishing practices and face additional stresses from pollution and climate change. Millions of people are dependent on fisheries for food and income; this holds especially true for those in less economically developed areas. Belize is considered a leader in expanding conservation regulations towards stabilizing marine ecosystems. Despite their efforts, however, the Mesoamerican Reef, which borders Belize, is facing degradation through anthropogenic nutrient loading, further threatening fish populations. Furthermore, the continuation of over-harvesting impacts fish abundances in the area. This study will perform household interviews in the Corozal, Belize, Stann Creek, and Toledo coastal districts in order to characterize dietary intake and patterns in fish sales and consumption. Interviews will be conducted along a gradient of urban to rural communities to determine the relationship between fish dependency and geographic location. Focus groups with government officials and NGO workers involved in fishery management will also be conducted to obtain historical patterns of how economic and ecological shocks have impacted fish availability in coastal communities. It is expected that fish dependency will wane in areas that rely on other markets, such as crop-based agriculture. It is also expected that participants in the study who are most affected by over-harvesting fish will have to turn to other sources of animal protein. Understanding the connection between food security and fisheries management practices is the next step in adopting management protocols that will benefit marine conservation and human well-being, as well as highlight areas where the two are incongruous. The results of my research in Belize would help explain similar issues in other coastal communities, perhaps limited to those that use the Mesoamerican Reef for harvesting. This research provides an immediate opportunity to have large-scale policy influence on marine conservation in a critically important marine biodiversity hotspot.