

## **THE IMPACT OF CLIMATE CHANGE ON WATER & FOOD SECURITY FOR THE LIL'WAT FIRST NATION, BC, CANADA**

*By*

*Anna Leenay, Jingzhi (Amanda) Liang, Chelsea Powers, Nivedita Pande, Sky Jarvis*

This project involves examining the water-energy-food (WEF) nexus security of the Mount Currie Band within the Líl'wat Nation which is a progressive First Nation community located near Pemberton, British Columbia in the southern Coast Mountains region in Canada. With a membership of almost 2,200 people - approximately 1,450 of whom live in the community, the Líl'wat Nation is the third largest First Nation in British Columbia. We involved the stakeholders representing this community including the Political Chief (Skalulmecw) to gauge the environmental issues of the community. To date, the community has reported severe degradation in the quality of fish in their rivers, especially salmon which is a crucial part of their staple diet, along with an increase in the rate of cancer amongst their members. Analysis of satellite imagery for this region from 1985 to 2016 shows glaciers retreating which is leading to increased flooding in the region. In fact, the community faced flooding as recently as 2020. We used a systems theory approach to develop a model displaying the many factors and their inter-dependencies. We analyzed several scenarios ranging from best-case to worst-case outcomes for this community subject to the proactiveness of the government and the community. We hope this project initiates the conversation and helps bridge the knowledge gap within the community. A pandemic like COVID-19 has exacerbated the well-being of this community. There are pressing issues related to climate change that directly affect the quality of life, health, and safety of the Líl'wat Nation that need to be addressed. This will be accomplished only by involvement from governments, local authorities, and the community. Despite the current barriers due to COVID-19, we will strive to further our initiative to continue the conversation around climate change, WEF nexus security, and resilience within the community.