## MyCClimate 2023: Climate change and conservation in three Naga villages

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This paper details preliminary research for the global joint project MyCClimate, which intends to improve academic and policy understandings of the relationships between conflict dynamics and climate change activities in regions bordering Myanmar. Drawing on ethnographic fieldwork in Nagaland state, India, it examines environmental conservation initiatives and climate change perceptions in three different villages.

**Keywords:** climate change, climate adaptation, environmental conservation, forest conservation, deforestation

The research project seeks to investigate climate change perceptions and experiences in the Indo-Myanmar border region of Nagaland and how these are influenced by histories of conflict. We began fieldwork in April 2023, with a visit to Khonoma village, Kohima District. This magnificent village has a long record of environmental conservation and waste management, and is simultaneously a tourist attraction. Our intention is to compare Khonoma with more remote villages on the Indo-Burma border. At Khonoma, we learned that deforestation had been a major problem on the village lands prior to 1998. This was when warring factions in the village decided to come to an agreement and protect the forest and the rare Blyth's tragopan, which is native to the area. As we toured the village, we observed stunted, knobbly trees lining the land in rows. Our guide explained that these were alder (*Alnus nepalensis*), which releases nitrogen into the soil even as it produces boughs suitable for firewood. The trees are pruned regularly (pollarded), giving them their characteristic shape. After cutting, each tree is allowed to regenerate. Stems are selected for their strength, and then allowed to shoot up before being cut for fuel. This is an indigenous wood-production method that protects the forests from excessive logging (Fig. 1).

Apart from Khonoma, we selected Phek district as our primary study area, partly because it shares a border with the Naga-inhabited territory on the Myanmar side, where we have done fieldwork before and

<sup>1.</sup> The Highland Institute



Figure 1: Pollarded alder trees (left) and cut stems piled up for firewood (right) at Khonoma

have connections. So far, we have conducted fieldwork in Lesoyo (pseudonym) and Machi (pseudonym), and this will continue in 2024. In these places, we explored the indigenous people's land practices, their understanding and utilization of natural resources, climate adaptation practices and gendered roles in everyday life. In Lesoyo, we explored the implementation of gender awareness and income-generating activities, including seed banks (Fig. 2), initiated by the Northeast Network (NEN), an organization



Figure 2: Preservation of seed banks at Lesoyo



Figure 3: Salt production at Machi

collaborating with and led by local people. Interesting findings included the indigenous cultivation practices, organic food production, and climate-change adaptations in farming.

Machi is locally famous for its salt production (Fig. 3). Lying close to the Myanmar border, it could be regarded as a frontier area. According to our analysis, the village has fewer projects driven by external actors, such as government and international organizations, than Khonoma or Lesoyo. Therefore, we are able to compare the perceptions of environmental issues, climate change, adaption practices, and so on between two relatively accessible villages and one remote village.

At Machi, we learned that by the early 1980s, increased felling by timber companies had caused depletion of the forest cover on the village's land (Fig. 4). As a result, the Village Council prohibited timber production from village-owned land.

We found that many villagers blame the disappearance of large trees for the weather changes they observe. A 78-year-old grandfather remarked:

We moved to this village in 1966, when I came here as a teacher. At that time, the forest was still dense. We could predict a good harvest for the year based on the condition of the plants and flowers. However, these days, even if the plants and flowers appear healthy, unpredictable weather patterns, insects, and other factors affecting the fruiting stage can greatly impact the yield, contradicting our expectations. Consequently, accurate predictions are no longer possible.

Another grandfather, 83 years old, also felt that tree cover loss had significantly affected the weather. He remarked: 'I moved to this village in 1970. At that time, there were still many large trees'. Pointing towards the mountains north of the village, he said:

In the past, I could tell if it was going to rain by looking at that mountain. If it appeared dark, I knew the rain would soon come to us as well. But now, even if it's dark from that side, the rain doesn't come anymore. I wonder if it's because there are no more trees. In the past, my grandparents could predict the weather for the year as early as January and February by observing the wind speed. Their predictions were consistently accurate.



Figure 4: Logging activities close to Machi

Back then, the wind started to blow in January and grew stronger in April. The rain came in May. Now, the wind doesn't blow, and the rain falls abnormally and untimely.

The perception that climate change is occurring due to forest destruction is widespread in the community and the elders and youth take the issue seriously. Since 1982, the village has prohibited cutting down forest trees, and has designated and maintained the village forest and wildlife conservation area through a self-sustaining system for approximately 20 years. Cutting trees and hunting wild animals for any reason is strictly prohibited in the village forest reserve. The Village Council and *Gaonbura* (Village Headman) have delegated environmental preservation to the youth, who patrol the conservation area regularly and conduct random inspections. During inspections, individuals found hunting can face fines of up to 5,000 rupees, regardless of whether they have caught any prey or not. Fines for a dead animal can range from 5,000 to 20,000 rupees, depending on the species. In addition, there is an anonymous reward system for responsible citizens who report violations. If the perpetrators refuse to accept the decisions of the youth and engage in arguments, they will be handed over to the village council, resulting in a doubling of the punishment.

The MyCClimate project is a partnership between the Danish Institute for International Studies, which coordinates the project, Nyan Corridor, the Regional Centre for Social Science and Sustainable Development (RCSD) at Chiang Mai University, and The Highland Institute. The overall objective is to strengthen academic and policy understandings of the linkages between climate change actions and conflict dynamics in Myanmar's ethnic border regions and build research capacity that contributes to sustainable peace and development.