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**Study of Ecological  
Distress faced by the  
Gaddi pastoralists of the  
Himalayas**



A FOREST WALK IN THE HIMALAYAS

# Ecological Stress

We looked at ‘Ecological stress’ as the unease or anxiety that can be linked causally to changes in ecology. The Anthropocene has seen rapid changes in ecology that affect us all, but these changes are more relevant and their effects more immediately felt by people who are directly dependent on nature or exposed to its vagaries.

A roadside laborer in the city, for instance, would experience global warming more intimately than an office worker. Similarly, rain-dependent agriculture would be more vulnerable to climate change than that dependent of ground water.

## QUESTIONS TO THINK ABOUT:

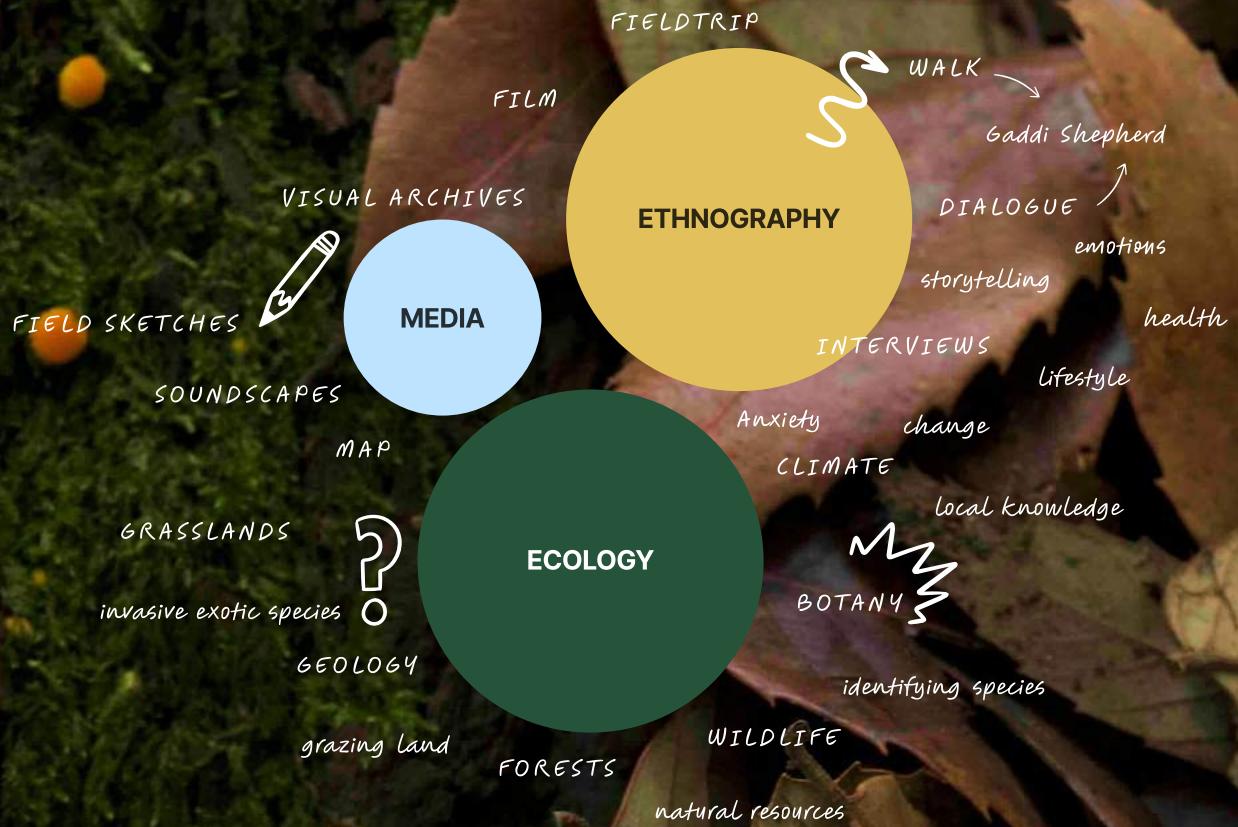
- 1. How would you characterize Ecological Stress in your field site?**
- 2. Whom would you talk to, and where would you have these conversations?**
- 3. What tools do you think might aid the discussion?**
- 4. Can you think of relevant questions or ways in which the people you are talking to can speak about their environment objectively, through the lens of another?**



**WRITING ACTIVITY:** Write an essay about how ecological changes affect you. Are there activities/behaviours in your daily life that are affected by changes in ecology or climate? It could be something you eat, how you travel, or where you wait for the bus. Are there others who share your environment and are affected differently by the same changes?



# Ideating tools for fieldwork



## Why embark on a walk?

The collaboration between Dr.Nikita Simpson(anthropolgist) , Sartaj Ghuman (wildlife scientist), Shyam (mountaineer and a Gaddi shepherd) and Soujanya (new media artist) led to the exploration of the idea of curated nature walks as a research methodology to understand Ecological Distress.

The objectives were to:

- to engage with the semi-nomadic Gaddi shepherd community and understand what their nature of relation is with their ecology, by walking the trails that they take to navigate their herd of sheep and goat across the grazing lands,
- to understand the relation between ecological distress and mental distress in local context,
- to document the conversation, processes and learnings from this walk.

# Case study / Pilot Walk

*By talking to herders, we were able to identify two ways in which changing ecology leads to stress for them:*



Gaddi herders live a large proportion of their lives exposed to the elements, and with their livelihood intricately linked to delicately-balanced ecological cycles in relatively fragile ecosystems, they are at the forefront when it comes to facing the brunt of ecological stress.

## **1. Increasing unpredictability in the weather.**

Weather dictates the rhythms to which vegetation grows and wilts, and thus, in turn dictates the herders' annual migrations up into the mountains and back down. Changes in the onset of winter and altered patterns of rain and snow leads to grasses sprouting late or early and throws the herders' movements off-beat.

In the short term, sudden, heavy rains, snow, or fluctuations in temperature can cause the herd to go hungry, fall ill, or in the worst case, lead to the death of the animals.

## **2. Degrading pastures**

In the mountains, repeated trampling around the deras, where a herd rests everyday, and an overdose of nutrient-rich droppings and urine has led to a few, hardy species taking over these places. Given a choice, the sheep and goats don't eat these plants and they would rather go farther afield to graze.

These non-preferred species of plants are also making their way into what used to be good pastures. The animals, therefore, have to travel further and work harder to eat their fill. Sometimes they're still hungry when it's time to head back.

Hungry goats and sheep thinking nothing of inclement weather and will move out to graze in the afternoons, when it is time to rest, or even at night. Small groups separated from the herd can get lost and are vulnerable to attacks by leopards and bears, and must be looked for and brought back, which is not an easy task in the high mountains. But all of these troubles are nothing compared to what the herders and their flocks have to face down in the plains, their winter grazing grounds. The approach roads have to be shared with ever-increasing vehicular traffic and the pastures have all but disappeared in the face of rapid development, giving way to agricultural fields, brick kilns or factories. What's left is overrun by weeds like lantana that are hard to even walk through, let alone feed on.

This results in the herders having to walk for kilometers on end just to make sure their herd has eaten, and even then, after having searched for grass all day, the animals are often left hungry when the day is done. The dangers of hungry animals straying in the plains, too, are multiplied. They might wander into agricultural fields or, as sometimes happens, get stolen.

*The shepherds of old were more patient and stoic, their herds more content and obedient. That's changed now, the herds are more restless, the herders more anxious.*



# Methodology / Pilot Walk



This information came out of a pilot walk conducted in the second week on July, 2024. Shyam and Soujanya curated the walk. Shyam was an active shepherd until the age of 26, when he gave up herding in 2013. Rinku (35), Rintu (38) and Anuj (36) accompanied us on the walk as local resource persons. They grew up herding sheep and goats and still help their fathers when it is time to cross the passes. Anuj has also worked in a manufacturing unit in Punjab for about 10 years and now runs a rather successful trekking venture.

On the walk we met a number of shepherds at their deras, which are located from about 2500m to 3600m. We met Jaipalji (Anuj's father) in Houdi, Chokasji at Tappu, Pritamji in Khaprotu, and Chinjuji, Bolamji and Vijayji at Bakhrudu. They are all in their 50s and 60s.



## Planning the Walk

- Identify local resource person: In this case, young shepherd currently herding, young shepherd who used to herd and son of a shepherd who chose other means of earning livelihood.
- Identify field area, routes and weather conditions, as it's primarily an outdoor program.
- Finalise dates and timelines for the fieldwork.
- Budget planning and remuneration for the local resource persons/participants.
- Plan backup and security measures.
- Finalise list of activities and research tools and respective materials.
- Prepare materials for the activities: repository of soundscapes (birdcalls, kulls, forest fires, thunder, rain, slate mine dynamites), printed topography map of the trail (ascending from Kangra and descending to Chamba), stationery supplies, binoculars, headlamp, equipments for recording and battery backup.

# Tools & Activities

The following tools were used to aid discussions and nudge conversations towards the topic of ecological stress.

## 1. Maps

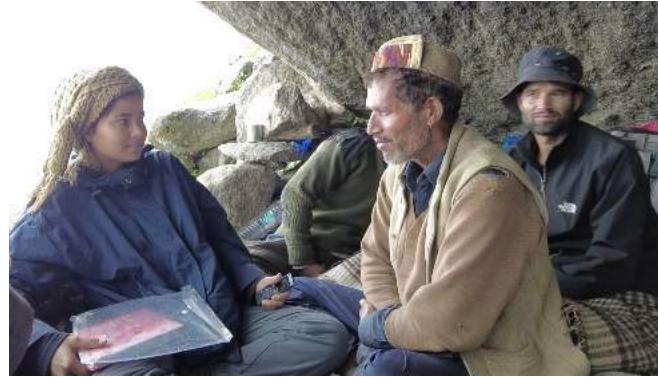
All the shepherds we met found it hard to decipher topographic maps, and even 3D terrain maps were looked at with some confusion.

It would be interesting to see how they conceive of maps in their heads, and how they would give directions to someone else. The most common way to learn about a place, for most of them, is to visit it with someone who knows it well and to become acquainted with it through that shared experience.



## 2. Soundscapes Playback / Bird Calls

We played back calls of the birds commonly found in the area and that elicited some interesting folklore about the birds and their calls. We did not, however, come across any information about changes in bird diversity.



## 3. Old photos of places and people

Some of the shepherds found it hard to see the photos (maybe because of far-sightedness), though they have no problem spotting their animals on distant slopes. Others recognized the people and the places they saw in the photographs but questions about ecological changes related to these places did not lead anywhere.



## 4. The walk

The walk stimulated Shyam's memories, (as it did for Rinku, Rintu and Anuj) and stories related to a place, a plant or the route itself emerged. These forays into the past held great insights and were full of comparisons with the present.



These comparisons were what we found to be most effective at addressing the question of ecological changes and the stress that they entail. With the young shepherds, this information surfaced when talking of the past, and with the older generation, as we'll see below, when talking about the future.

## 5. Dialogue

Long, meandering dialogues with the young shepherds accompanying us on the walk, as well as those with the older shepherds in the deras, were the most fruitful exercise for gathering information.

Within these dialogues, the two questions that got us the most relevant information were:

### ***1. What is the relationship of the herder with the herd?***

This clearly demonstrated the concern that the shepherds have for their herd and that anything that happens to the herd affects the herder.

### ***2. Do you want your children to take up herding? (And since the answer was always no) Why not?***

This brought forth a litany of woes. The tough shepherds, who think nothing of the hardships that a life in the mountains entails, listed out all the reasons they do not want that life for their children.



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Facilitation: Shyam, Sartaj & Soujanya

Local Resource: Anuj, Rintu, Rinku, Chinju,  
Bolum, Pritamji, Chokasji, Viru ji, Pandi & Mitthu

Visual Documentation: Suraj Gupta & FICA team