

Reassessing the population status and conservation of lion-tailed macaques in Nilambur forest with community participation

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Introduction

Lion-tailed macaques (*Macaca silenus*) (LTM) are an endemic species of primates in the Western Ghats of India, and they are assessed as globally **Endangered** as per the IUCN Red List.

There are only around 3500 individuals in the wild, and there are no published records on this species in the Nilambur forests from the last two decades. The last published population study reported nine troops of LTM.

Objectives & Methods

- Assessing the population status of LTMs and identifying the threats
LTM survey through existing forest trails.
- Identifying knowledge, awareness and perception towards LTM among the indigenous communities and local people
In-depth Interviews and discussions with Indigenous community members in forest villages and Semi-structured questionnaire surveys with the general public through offline and online modes.
- Identifying LTM crossing paths in Nadukani Ghat Road and assessing their safety and further improving them through conservation action.
Regular weekly survey through Nadukani Road for 10 months (October 2021-August 2022).

Selected community members received trainings and became part of LTM conservation project. Consulted with community members and groups at various stages of the project.

Results

1. In the survey through the forest trails, we identified 10 distinct LTM troops with an average troop size of 12. We counted 156 individuals. All sightings were from elevations between 500-1400m. During the survey, we also encountered nine traps for monkeys and 23 evidence of traps.

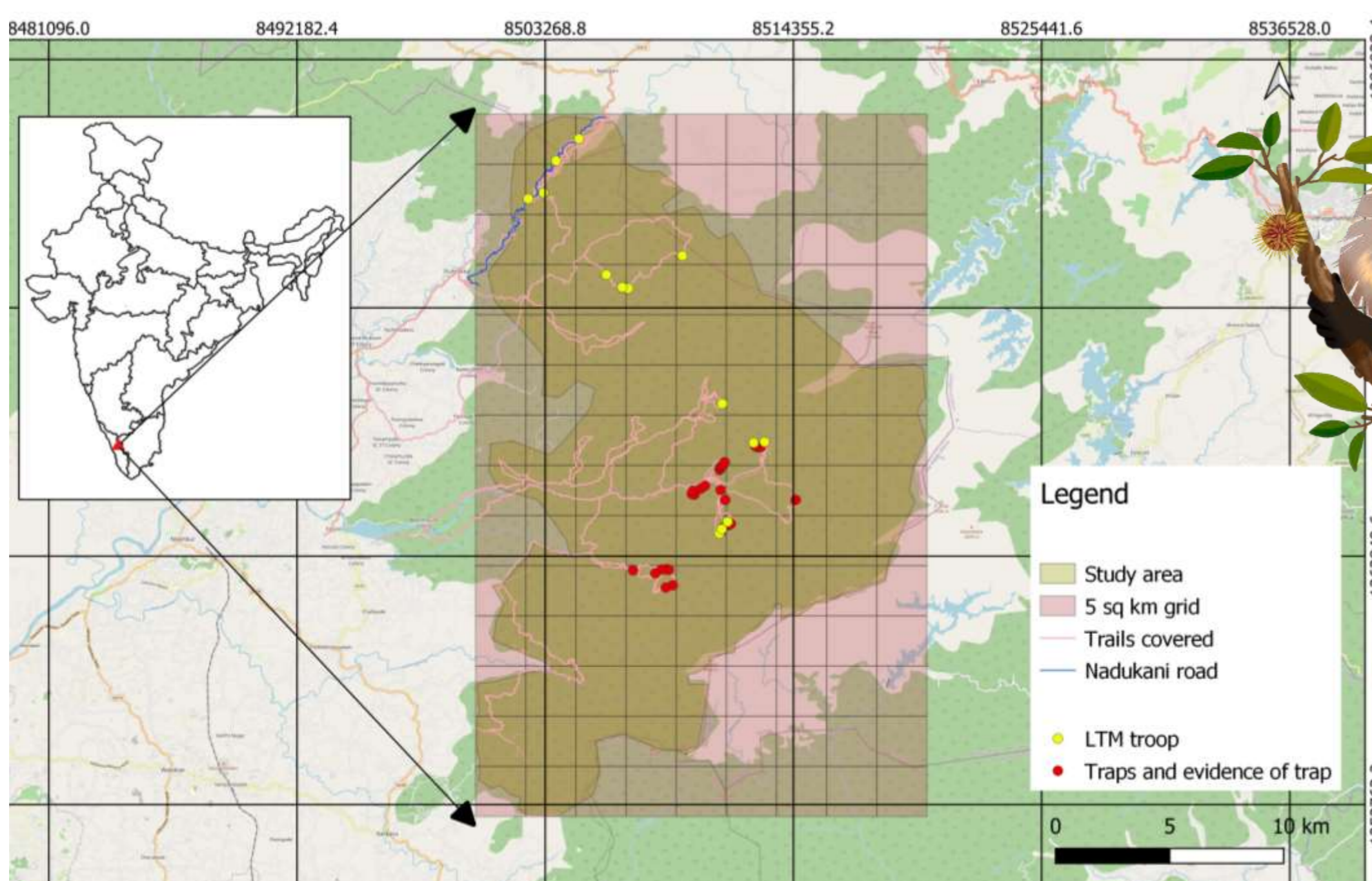
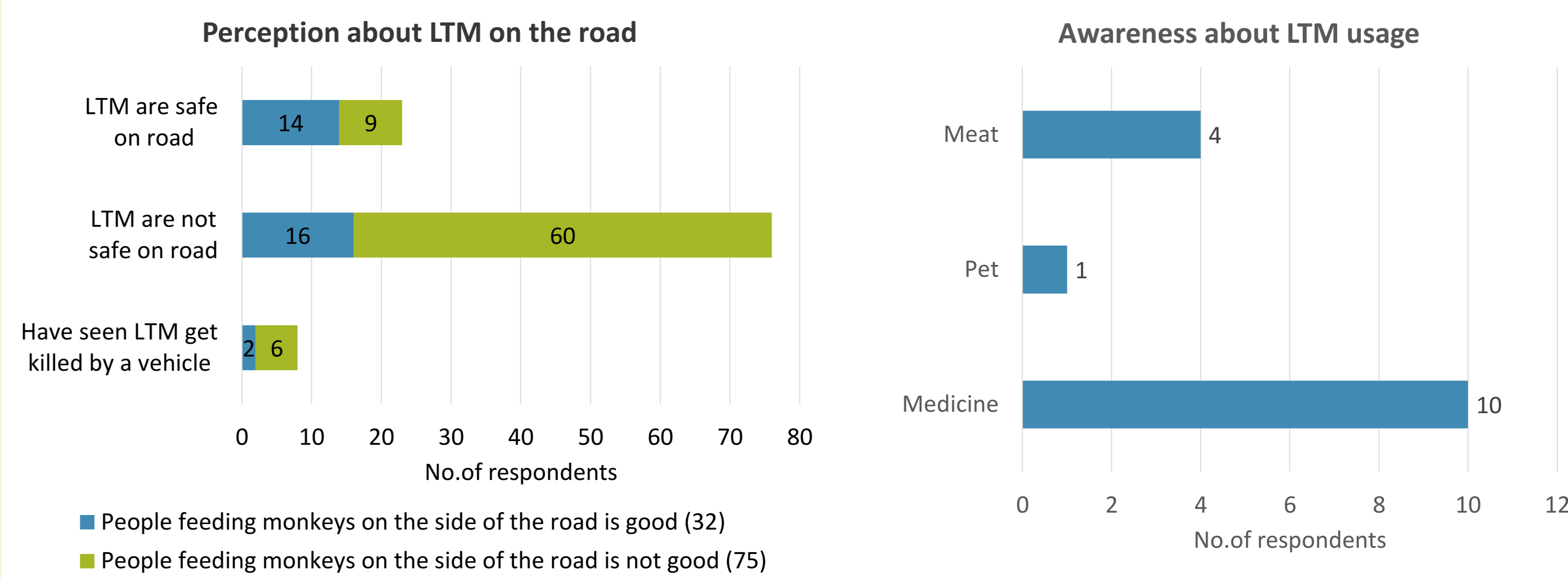
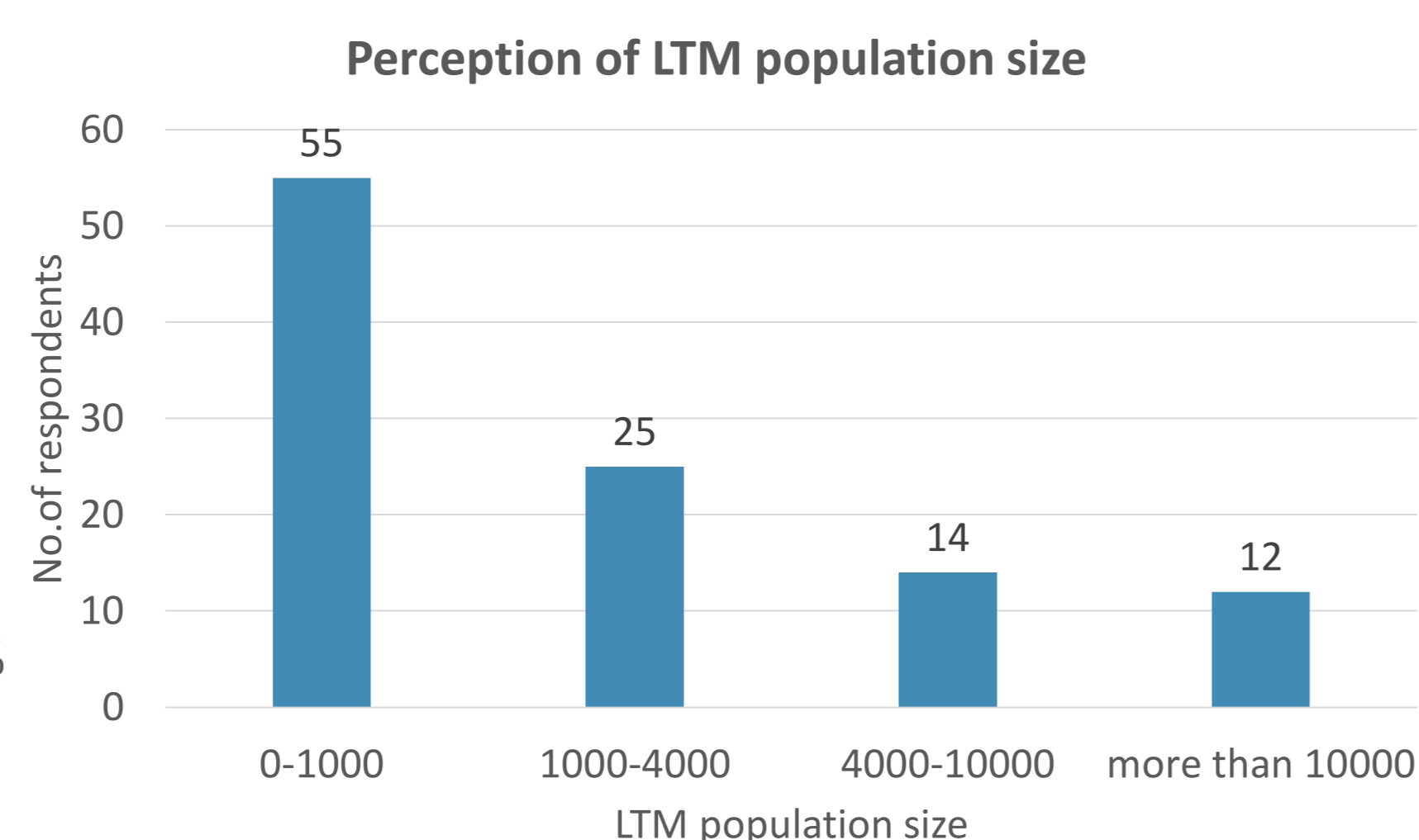
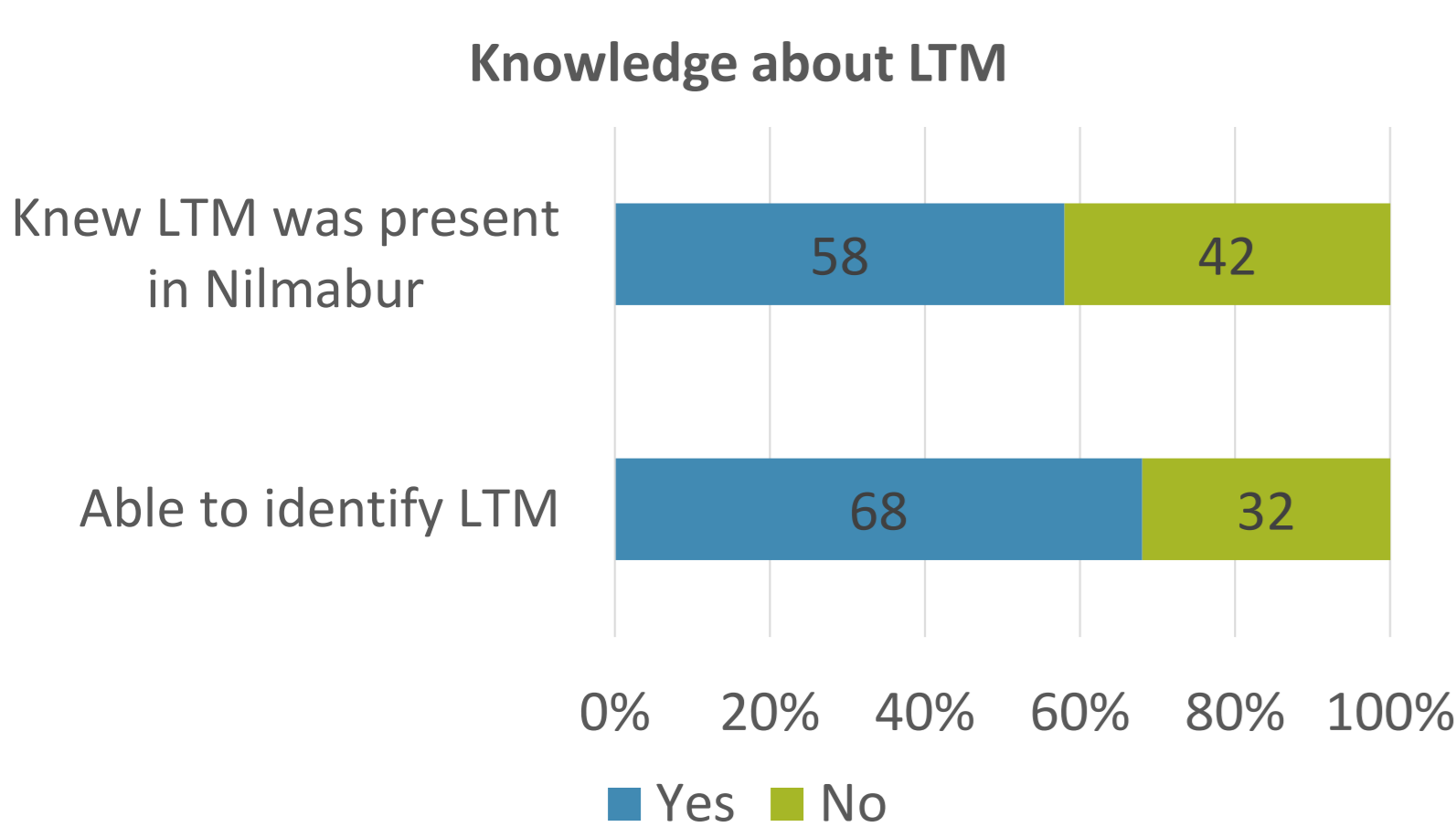
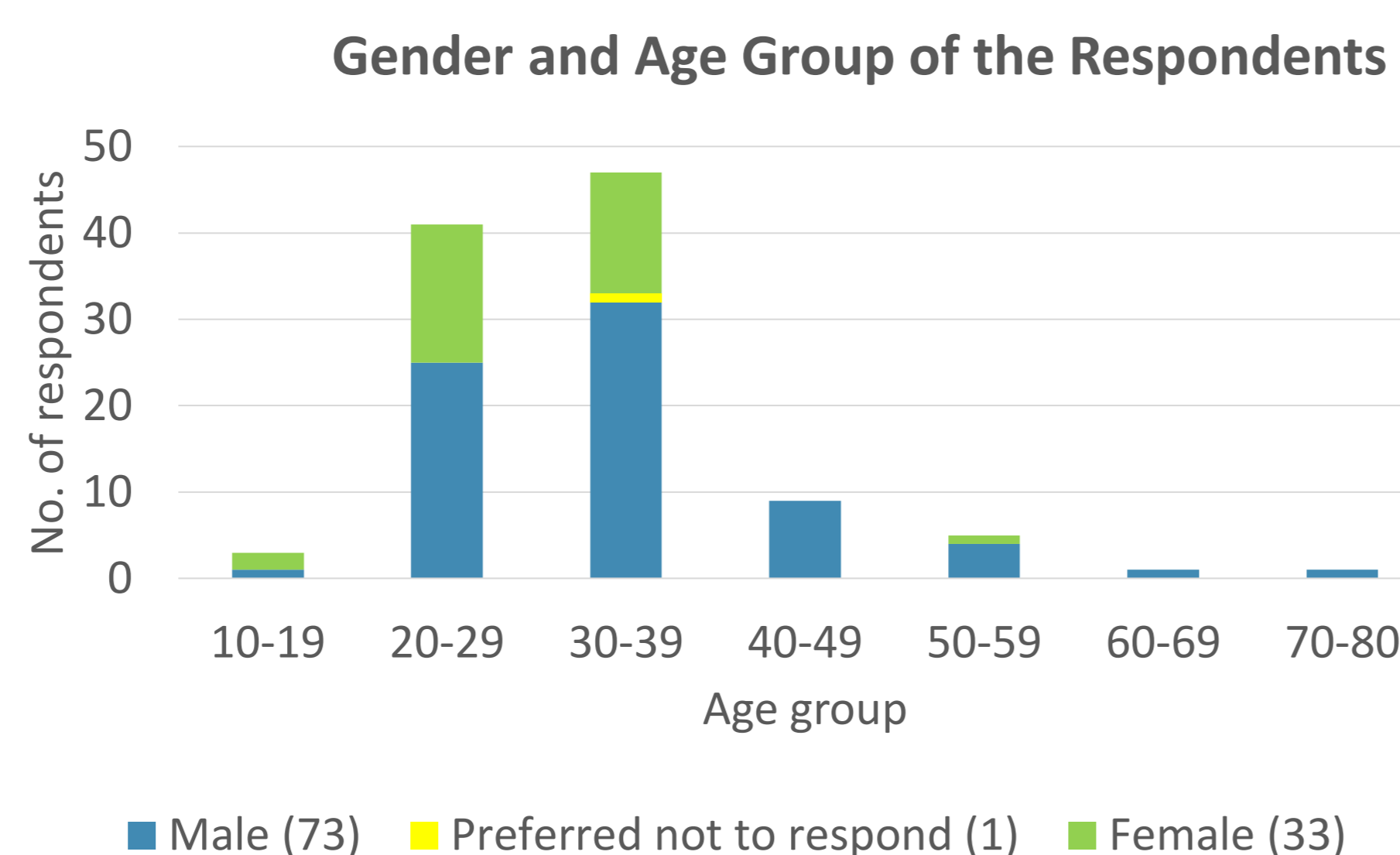


Fig : Map showing Study area with locations of LTM troops sighted and indicators of traps sighted

2. In-depth interviews with indigenous people in the forest villages
- Many remembered keeping LTM as a pet in their village.
 - Many confirmed that villagers and outsiders used to hunt in the past for their meat and medicinal purposes but not anymore.
 - Some villagers did not hunt monkeys because they saw them as symbols of God.
 - All of them think that the LTM population in their forest would be increased compared to the past since no one is hunting now.

In the online and offline questionnaire survey with the general public around Nadukani, we got responses from **107 participants**.

56% of the respondents had more than 10 years of connection with Nadukani road.



- Regarding the global population size, 24% of respondents overestimated it, while 51% of respondents underestimated it.
- In terms of feeding monkeys on the roadside, 30% of respondents believed it to be good.
- Even among the respondents who think that LTM are safe on the road, 60% think that feeding monkeys on the roadside is good!
- Fifteen people reported they knew LTM being used for medicinal purposes, for meat or as pet.

3. Through the regular road survey through Nadukani road, we identified three distinct resident LTM troops. We identified important locations where conservation action was needed.

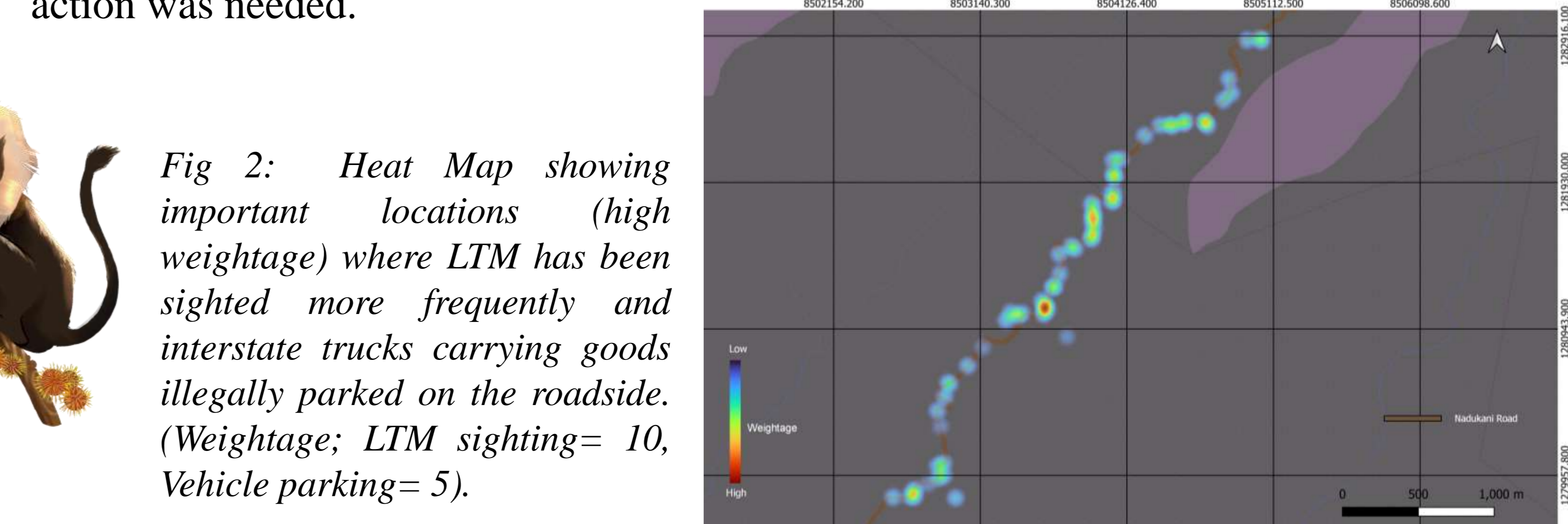
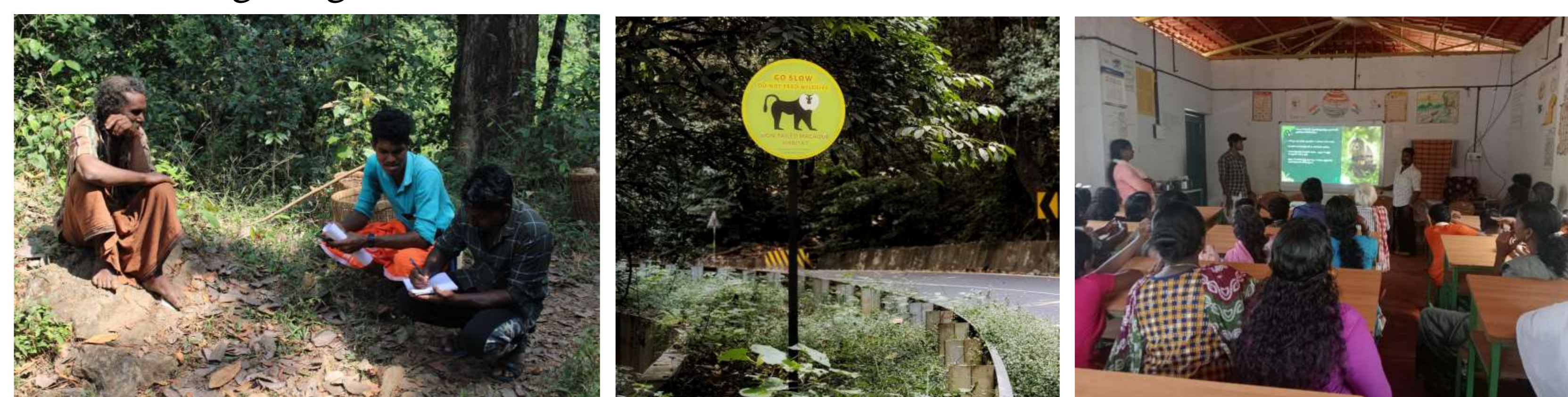


Fig 2: Heat Map showing important locations (high weightage) where LTM has been sighted more frequently and interstate trucks carrying goods illegally parked on the roadside. (Weightage; LTM sighting= 10, Vehicle parking= 5).

- | Threats in the forest: | Threats in the Nadukani road: |
|--|---|
| <ul style="list-style-type: none"> Hunting and Lack of awareness about population status of LTM among villagers in the forest. Habitat loss and Invasive plants. | <ul style="list-style-type: none"> Roadside littering by tourists and truck drivers Feeding wild animals on the road. Speeding vehicle. Lack of awareness among people. |

Conservation Actions:

- Conducted ten awareness programmes and three community consultation meetings to spread awareness and consultations.
- A total of 32 indigenous community members directly became part of this project by conducting forest field surveys and organizing outreach classes to raise awareness in villages and schools.
- Installed eight signboards on the Nadukani roadside.



Implications

- Increased emphasis on **conservation education programs** is crucial for addressing the evident threats to LTM. It is recommended to conduct targeted education campaigns targeting the general public and the communities residing within the forest in Nilambur.
- Promoting **community participation** is essential to ensure the long-term conservation of LTM. Engaging local communities in conservation efforts and fostering active involvement can lead to more effective and sustainable conservation outcomes.

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