

A Report on FIELD Tour To North Sikkim With Special Reference To Gurudongmar Lake.

Date: 15th June-18th June 2023

Location: Gurudongmar Lake, North Sikkim, India. (28.0258° N, 88.7097° E)

Introduction: This field report outlines the observations, findings, and geographical insights gathered during a 4-day field tour to Gurudongmar Lake in North Sikkim. The aim of the tour was to study the geographical features, environmental conditions, and the significance of this high-altitude lake in the context of geomorphological and regional geography. On a field trip, two faculty members from the geography department, Sikkim Government College, Namchi and a total of 60 students of IVth Semester (Geography Department) were present.

Day 1: Departure from Namchi to Lachen

- Departure from Sikkim Government College, Namchi to Lachen, North Sikkim was completed in day 1.
- Ascent through picturesque landscapes with varying vegetation zones due to elevation gain.
- Arrival at the Lachen with an elevation of approximately 8,838 feet.

Day 2: Approach to Gurudongmar Lake and departure towards Lachung

- Early morning departure for Gurudongmar Lake.
- Ongoing elevation gain leading to changes in climate, flora, and fauna.
- Transition from temperate forests to alpine meadows.
- Arrival at Gurudongmar Lake, situated at an altitude of approximately 17,800 feet.
- Observation of glacial formations and meltwater streams contributing to the lake's water source.
- Arrival to Lachung in day 2 after visiting Gurudongmar Lake.

Day 3: Approach towards Yumthang Valley, Lachung

- Early morning departure for Yumthang valley
- Upon reaching Yumthang Valley, our focus shifted towards understanding its geomorphology.
- The valley's formation was evidently glacial, characterized by U-shaped valleys, lateral moraines, and glacially polished rock surfaces.

- The pristine Yumthang River meandering through the valley showcased the influence of fluvial processes.

Day 4: Departure from Lachung to Namchi

- The departure for Namchi was completed following the visit to Yumthang Valley in Lachung.

Geographical Observations and Insights:

Altitudinal Zonation: The tour showcased distinct altitudinal zones, each with its own vegetation, from subtropical forests at lower altitudes to alpine meadows and barren landscapes at higher elevations. This gradient is a result of changing temperature and precipitation patterns.

Glacial Processes: The presence of glacial formations like moraines and the evidence of U-shaped valleys indicate the region's glacial history. The meltwater streams and glacial sediment contribute to the lake's water composition.

High-Altitude Setting: Gurudongmar Lake's location at a high altitude presents challenges such as low oxygen levels and extreme weather conditions. These factors impact both human activity and the ecological dynamics of the region.

Cultural-Environmental Interplay: The lake's cultural significance in local beliefs contrasts with the growing environmental concerns arising from tourism. Balancing cultural practices and environmental conservation is crucial for sustainable development.

Conclusion: The 4-day field tour to North Sikkim with special reference to Gurudongmar Lake provided valuable insights into the geographical features, environmental conditions, and cultural aspects of the region. The lake's glacial origin, the surrounding moraines, and the visible signs of past glaciations showcase the significant impact of geological processes. The lake's altitude and the resulting climatic conditions influence the ecosystem and limit vegetation growth. The observations highlighted the interplay between human activities, natural processes, and the need for responsible management to preserve both the geographical and cultural heritage of this unique and remote location.

This field tour not only enriched the students understanding of geographical concepts but also emphasized the importance of studying remote and ecologically sensitive areas to comprehend the Earth's intricate systems. Further research and conservation initiatives are crucial to safeguard the unique geographical and ecological heritage of Gurudongmar Lake and its surroundings.



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