



Landscape System Analysis Northern Finland

Content of the two-semester study project of Physical Geography & Landscape Ecology

The boreal and subpolar regions of Europe are characterised by relatively cold climate, resulting in comparably slow landscape processes, lower species diversity and limited options for land use by humans. We want to study and analyse these land systems from different perspectives: physical geographical components such as permafrost landforms (e.g. palsas) and processes (e.g. solifluction and glacial), vegetation development (incl. timber line dynamics and arctic greening) and aquatic ecology. These components form the natural base for human land uses including forestry, reindeer husbandry, tourism, nature conservation or mining. Hence, also various human activities and the ecosystem services they harvest will be assessed.

Learning outcomes

System-analytical assessments of different landscapes in Europe's subpolar zone with a strong focus on field methods (RTK GPS, UAV remote sensing, terrestrial laser scanning (TLS), peat drilling, vegetation biomass survey, lichen dating, land use mapping) and human-environmental systems analysis (e.g. land use options and conflicts, ecosystem services). The field course includes partly work under rough conditions (including a 14 km hike to the Steindalsbreen glacier), thus respective body fitness and field equipment are needed. The analysis of data collected during the field course will take place in the following winter semester in the GIS laboratory at the Institute of Earth System Sciences, Physical Geography and Landscape Ecology Section at LUH.

Schedule of the study project

During summer semester 2025:

22.05.2025:	Preparatory group meeting at LUH
18.08.2025:	Online group meeting with students' presentations
19.08. - 02.09.2025:	Data collection during a two-week field course in Finland
Winter semester 2025/26:	Data analysis in Hannover

Organisational matters

- Travel route (by 2 minibuses): Hannover – Travemünde (ferry) – Helsinki – Joensuu – Rovaniemi – Kilpisjärvi – Konnevesi – Helsinki – Travemünde (ferry) – Hannover
- Accommodations: hostel, comfortable huts and research stations
- Number of participants LUH: max. 14 (the course is part of our ERASMUS agreement with the University of Eastern Finland, which will participate with additional students and teachers)
- This module is given completely in English, thus respective language skills are mandatory
- Expected costs for students are depending on additional funding that we are applying for, but shall not exceed EUR 800.

- **Expressions of interest/registration** by email to stoermer@phygeo.uni-hannover.de Latest 28.02.2025 indicating your name and semester within the MSc „Landschaftswissenschaften“.

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