

Master thesis:

Are nutrient fluxes and leaching affected by deadwood management in forest ecosystems?

Using Self-Integrating Accumulators (SIAs) in the *PoToMa* project, which investigates the ecological effects of deadwood treatments, you will address questions such as:

1. Does deadwood management (amount/type) alter the fluxes of nutrients in soil solution and do they impact nitrate leaching risk?
2. How do abiotic conditions and forest floor characteristics influence nutrient fluxes?
3. Does deadwood management shift the chemical composition of leachate (form of nitrogen, dissolved organic carbon, pH, or ion balances), potentially affecting soil acidification or nutrient cycling?

Your tasks:

- Fieldwork and analysis of SIA data: Evaluate leaching fluxes of nitrate, ammonium, phosphate and sulfate from experimental plots with different deadwood management approaches
- Combine SIA data with other soil and sensor-based monitoring data from PoToMa, derive ecological conclusions
- Possibility to present findings in a seminar for PoToMa research group and to write a publication
- Work in German or English

Start:

From October 2026 onwards

Requirements:

- Interest in nutrient cycling and forest soil processes
- Basic knowledge in chemistry and statistical data evaluation (in R)
- Willingness to expand expertise in soil solution sampling methodology and ecosystem data integration

If you are interested, please contact:
Dr. Klara Mrak(klara.mrak@uni-jena.de)

PoToMa:

