

Inter-seasonal investigation of coupled C & N greenhouse gas fluxes in pristine northern ecosystems

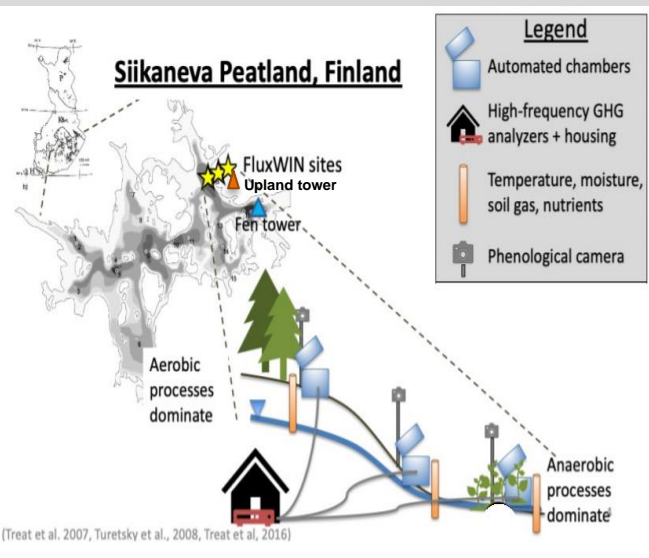
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FluxWIN

Aim → Identify changes in the biogeochemical CO₂, CH₄ and N₂O drivers throughout the year

Methods

- Continuous CO₂, CH₄ and N₂O in high frequency (≈ every 2 hours)



Focus on C & N link

- Mineral N → plant productivity ↑ & CO₂ ↓
- Mineral N → CH₄ oxidation ↓ & net CH₄ ↑
- Labile C + mineral N → N₂O ↑

Hypotheses

- **Ecosystem vegetation & moisture gradient** are constant drivers (site differences)
- **Non-growing season** significant component
- **Freeze-thaw dynamics** change soil biogeochemistry & the dominant CO₂, CH₄ and N₂O drivers

Outlook → process-based model development