

Program



COST Action 639 BurnOut

Mountain Soils under a changing climate and land-use

Conference and Workshop

Swiss Federal Research Institute for Forest, Snow and Landscape Research WSL

Birmensdorf Switzerland

6-8th March 2008

Thursday, 6th March

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| 08:30 | Coffee + Croissants | | |
| 09:15 | Welcome | Frank Hagedorn | |
| 09:30 | Lecture | Christian Körner | Chair Frank Hagedorn Alpine ecosystem responses to a changing climate |
| 10:00 | | Anita Risch | Long-term development of above- and belowground carbon stocks following land-use change in subalpine ecosystems of the Swiss National Park |
| 10:20 | | Jana Knuth | Carbon stocks, fluxes and turnover rates in a tropical montane forest in south Ecuador |
| 10:40 | | Donald Ross | Carbon, C/N ratios and tree species are tightly linked in Northeastern USA mountain research watersheds |
| 11:00 | Coffee | | |
| 11:30 | | Michael Bahn | Chair: Stephan Zimmermann Soil CO ₂ emissions from mountain grasslands in response to climate and land use |
| 11:50 | | Robert Björk | Effect of reduced below-ground C sequestration on greenhouse gas fluxes within dry tundra ecosystems along an altitudinal gradient |
| 12:10 | | Hermann Jungkunst | Impact of windthrow and heatwave on specific carbon cycles of mountain soils – examples from the High Tatras and the Black |
| 12:30 | Poster short presentations: 1-12 | | |
| 12:50 | Lunch | | |
| 13:50 | Poster sessions | | |
| 14:20 | Lecture | Sofie Sjögersten | Chair Werner Borken Carbon dynamics and ecosystem feedbacks in high altitude and latitude soils |
| 14:50 | | Richard Wright | CLIMEX: Effect of experimentally increased CO ₂ and air temperature on whole-ecosystem carbon and nitrogen fluxes |
| 15:10 | | Edward Mitchell | Carbon cycling in northern peatlands: effects of site history, vegetation and climate |
| 15:30 | Poster short presentations: 13-28 | | |
| 16:00 | Coffee | + Posters | |
| 16:30 | | Andreas Schindlbacher | Automated measurement of CO ₂ emissions from soil warming experiment |
| 16:50 | | Jan Mulder | Climate change experiments in the field: potentials and limitations of mini-catchments to study effects of precipitation amount and frequency on TOC and TON leaching |
| 17:10 | Discussion | Robert Jandl | Mountain soils – hot spots for greenhouse gas emissions from soils? |
| 18:00 | Posters, snacks, and wine | | |
| 19:00 | Dinner | | |

Friday, 7th March

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| 08:30 | Coffee + Croissants | | Chair Jens Leifeld |
| 09:00 | Lecture | Werner Borken | Carbon and nitrogen mineralization under extreme meteorological conditions |
| 09:30 | | Sonja Wipf | Winter climate change in mountain ecosystems: response of below-ground processes |
| 09:50 | | Gianluca Filippa | A Comparison of Summer and Winter CO ₂ fluxes from a seasonally snow-covered high alpine meadow at Niwot Ridge, Colorado |
| 10:10 | | Nadine Rühr | The contribution of root-rhizosphere respiration to soil respiration and to total ecosystem respiration in a mountainous temperate forest |
| 10:30 | Coffee + Posters | | |
| 11:20 | | Rolf Siegwolf | Informations of stable carbon isotopes from soil respired CO ₂ |
| 11:40 | | Katrin Meusburger | Effects of temporal change on soil stability in an alpine catchment (Urseren Valley, Switzerland) |
| 12:00 | | Witness Mojeremane | Effects of afforestation site preparation practices on soil traces gas emissions at Harwood Forest |
| 12:20 | | Bharat Shesta | Soil organic matter quality under different land uses in a mountainous watershed |
| 12:45 | Lunch | | |
| 14:00 | | Zaccone Claudio | Chair Sofie Sjögersten Diagenetic trends of phenolic constituents in Sphagnum-dominated peat and its corresponding humic fraction along a bog profile |
| 14:20 | | Evgenia Blagodatskaya | Fungal-to-bacterial ratio and N ₂ O-emission in the forest soils located on opposite slope positions under different management practice |
| 14:40 | | Lauric Cecillon | Decomposition, aggregation and sequestration of soil organic matter in a mountainous spatial climate gradient |
| 15:00 | | Frank Hagedorn | Concluding remarks |
| 15:10 | Coffee + Posters | | |

Poster presentations

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| 1 | Martinsen, Vegard | Levels of carbon and nitrogen in mountain soils; effects of land use and land cover |
| 2 | Strand, Line-Tau | Hirkjolen revisited - changes in soil, vegetation and tree-line in a mountain forest after 70 years |
| 3 | Pilborough, Stephanie | Assessing the Long-term Effects of Environmental Change on the Soils of Snowdon |
| 4 | Prietzl, Jürgen | Changes of soil organic matter pools 25 years after bark beetle infestation at a high-elevation site in the National Park "Bayerischer Wald" (Germany) |
| 5 | Monika Welc | Mycorrhizal associations at the Damma glacier forefield |
| 6 | Smittenberg, Rienk H. | Early evolution of the soil organic matter pool as measured on a high alpine chronosequence using organic geochemical and (radio)isotopic techniques |
| 7 | Esperschütz, Jürgen | Litter degrading microbial food webs along the chronosequence of a glacier forefield |
| 8 | Zahora, Jaroslav | Microbial respiration and nitrogen transformation in mountain soil |
| 9 | Knohl, Alexander | Tracing carbon and water fluxes through ecosystems with laser-based spectroscopy |
| 10 | Zinger, Lucie | Seasonal dynamics of microbial communities in two alpine soils: a molecular approach |
| 11 | Barta, Jiri | Activity of lignin-degrading enzymes in mountain spruce forest |
| 12 | Tahovska, Karolina | Microbial N assimilation in N saturated mountain forest soils |
| 13 | Kammer, Adrian | Upward-shifting treelines in the Ural mountains change soil organic matter dynamics |
| 14 | Rodeghiero, Mirco | INFOCARB: a Province scale Forest Carbon Inventory (Trento Province, Southern Italian Alps) |
| 15 | de Wit, Heleen A. | Regional and altitudinal gradients of C stocks and C to N ratios in high-latitude forest soils |
| 16 | Djukic, Ika | Climate Change Impacts in a Karst Landscape of the Austrian Alps |
| 17 | Budge, Karen | Soil composition and carbon storage across an elevation gradient of an alpine pasture in the Swiss Alps |
| 18 | Leifeld, Jens | Long-term management effects on soil organic matter in two subalpine grasslands: Clues from fractionation and radiocarbon dating |
| 19 | Diaz-Pines, Eugenio | Aboveground litterfall on a mediterranean mountain forest |
| 20 | Lejon David P.H. | Aboveground and belowground relationships along an environmental gradient in mountain soils ecosystem |
| 21 | Baltreinaite, Edita | pH variation in soil of three different land use: use of two pH methods |
| 22 | Risch, Anita | Land-use change in the Central European Alps: an assessment of soil organic matter decomposition using wood stakes along a successional gradient from former agricultural pastures to stone pine forest |
| 23 | Zürcher, Alois | Short-term response of soil respiration to experimental warming at the alpine treeline |
| 24 | Tuma Ivan | Can stands of Athyrium distentifolium fern improve soil environment similarly as grass stands do in mountain areas under enhanced nitrogen input? |
| 25 | Holub, Petr | Comparison of soil microbial activity and plant litter decomposition in the mountain and dry lowland grasslands affected by different amounts of precipitation |
| 26 | Fiala Karel | Comparison of root growth and plant belowground dry mass in the mountain and dry lowland grasslands affected by various amounts of precipitation |

- 27 Portner, Hanspeter Long-term soil carbon storage: Sensitivity of LPJ-GUESS to varying temperature dependencies of soil respiration
- 28 Holst, J., Kiese, R. TERENO - Terrestrial Environmental Observatories: Establishment and upgrading of a terrestrial observatory Alpine upland for long term observations of the impact of global change factors on biosphere-atmosphere interactions

Saturday, 8th March

Snow excursion to Alphthal

- 8:00 Departure at Zürich Triemli
- 9:00 Erlenbach catchment: Water and debris flow
Manfred Stähli, WSL
- 9:45 Ecosystem response to 10 years of increased nitrogen deposition
Patrick Schleppei, WSL
- 12:30 Furggelenstock (1650 m a.s.l.)
- 15:00 Departure Alphthal
- 16:00 Arrival Zürich Mainstation



Winter clothes and hiking boots required!!!