Tim Green

Modelling and analysis of carbon-climate interactions in northern forest ecosystems

Educational background:

- BSc. – University of Georgia (USA)
- MSc. – Universities of Kiel (Germany) and Helsinki (Finland)

Partnership & Funding:

- University of Edinburgh and University of Helsinki Partnership Programme on Forests

Supervisors:

- Mat Williams (UoE), Annikki Mäkelä (UoH), Jouni Pulliainen (FMI)

Significance:

- Most rapid warming occurring at high latitudes
- Responses of boreal ecosystems are poorly understood
- Highest degrees of uncertainty stem from BGCA & respiration

Aims:

- Test alternate process representations of BGCA (below-ground-C-allocation) & respiration in models developed at UoE and UoH in hopes of reducing forecast uncertainty – sink or source?

Foreseen methods:

- Employ Bayesian calibration techniques to quantify model parameter uncertainty and propagate these uncertainties into C cycle forecasts
- Analyze degree of forecast uncertainty reduction at 2 sites along a climate gradient as a result of:
  - Alternate BGCA/respiration model representations
  - Various combinations of assimilated data products