# To what extent do large scale biomass fires in eastern Europe contribute to the nitrogen load in northern Fennoscandia?

1. Trajectory analysis

EMEP daily sector analysis, period 1990-1996,1997-2009. EMEP sites, Esrange, Vindeln. Bredkälen, Pallas, Oulanka, Kevo, Tustervatn, Karasjok,

1. Air concentrations measurements

Air concentrations of black carbon, ox-N, red-N, ox-S, K, Ca, period 1990-1996,1997-2009. EMEP sites, Esrange, Bredkälen, Pallas 1995-, Oulanka, Kevo, Tustervatn, Karasjok,

1. Deposition

Dry deposition ????? Modelling, conc \* Dep velocities

Throughfall to detect high episodes...

1. Frequency of biomass fire events resulting in nitrogen deposition in northern Fennoscandia

Change over twenty year time?

1. Deliveries

Some quantitative broad estimates of the role of biomass fires for nitrogen load

Evaluation of possible effects for alpine vegetation change

Critical levels for alpine ecosystems?

Review of previous studies? Skog & Landscape? ENA. Scotland? Svalbard. Greenland.

Per Aarestad, NINA

Arktiska Rådet?

Samarbetsprojekt med Ryssland?

2010, the highest number of forest fires in eastern Europe and Russia ever, 2.3 M ha, impacts on Fennoscandia?