

Results from the Intercantonal Forest Observation



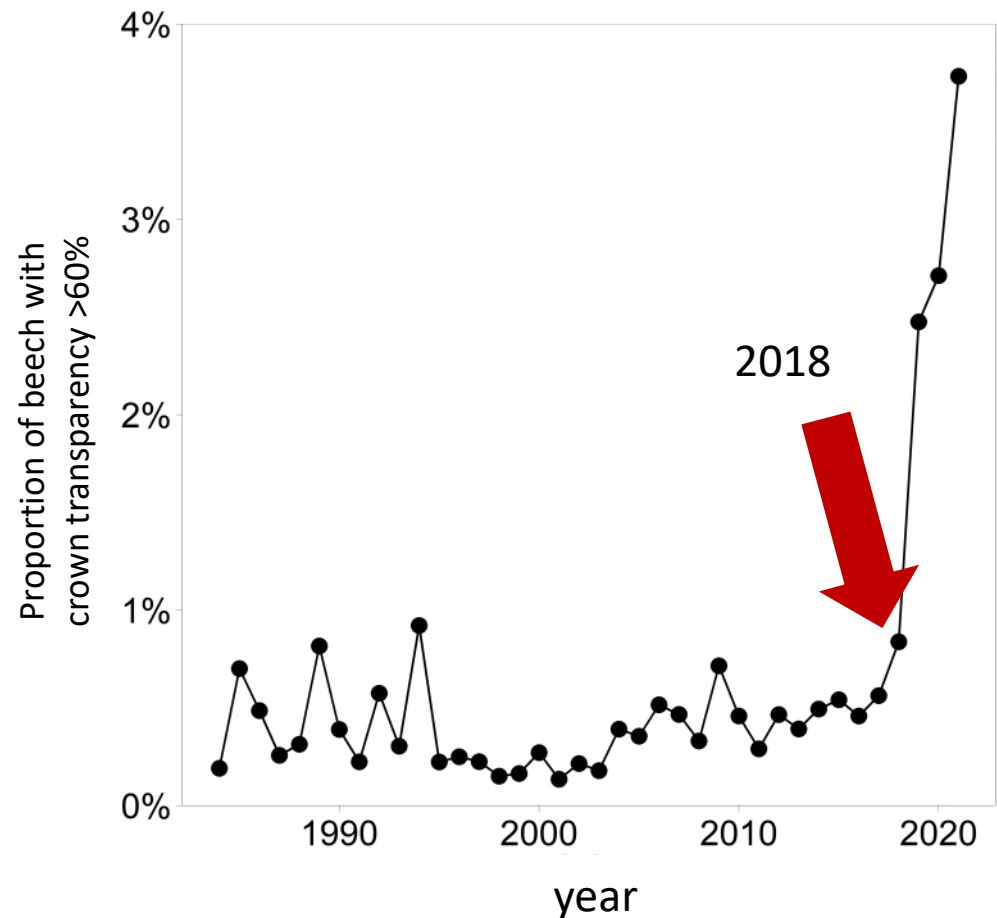
Sabine Braun
Sven Hopf, Simon Tresch
Institut für Angewandte
Pflanzenbiologie AG
Witterswil

Proportion of strongly damaged trees (crown transparency >60%)

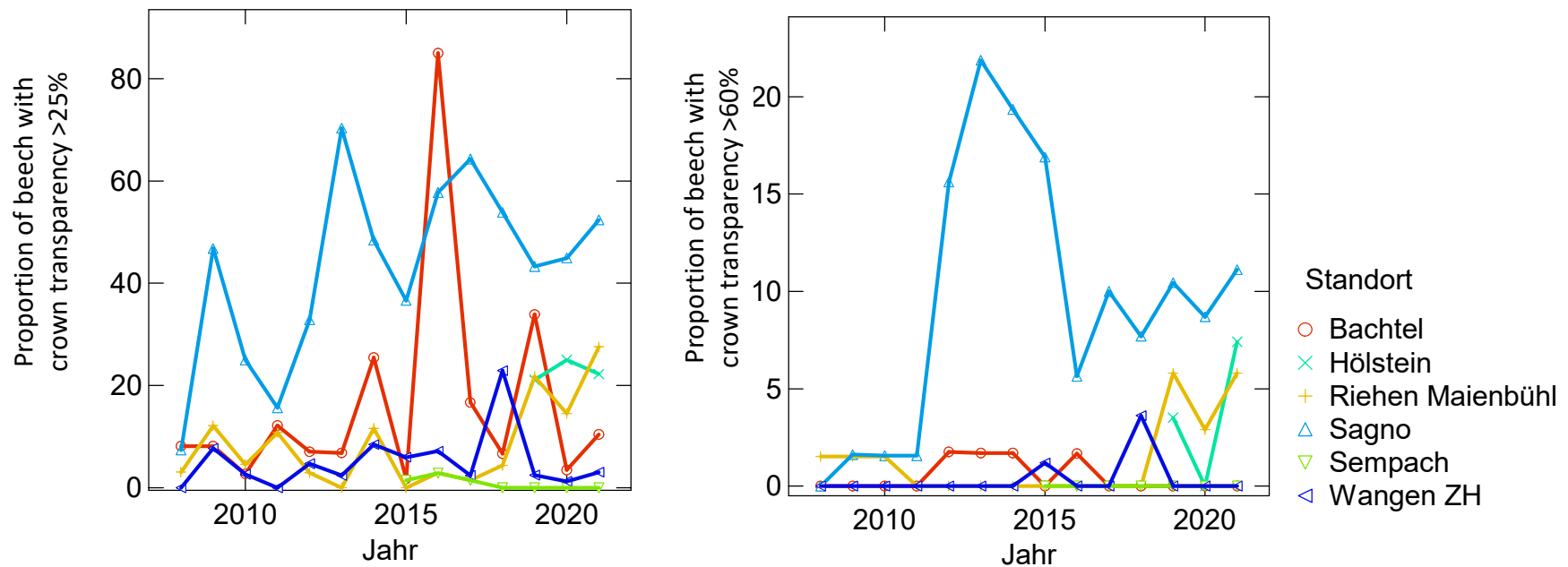


Coeve JU

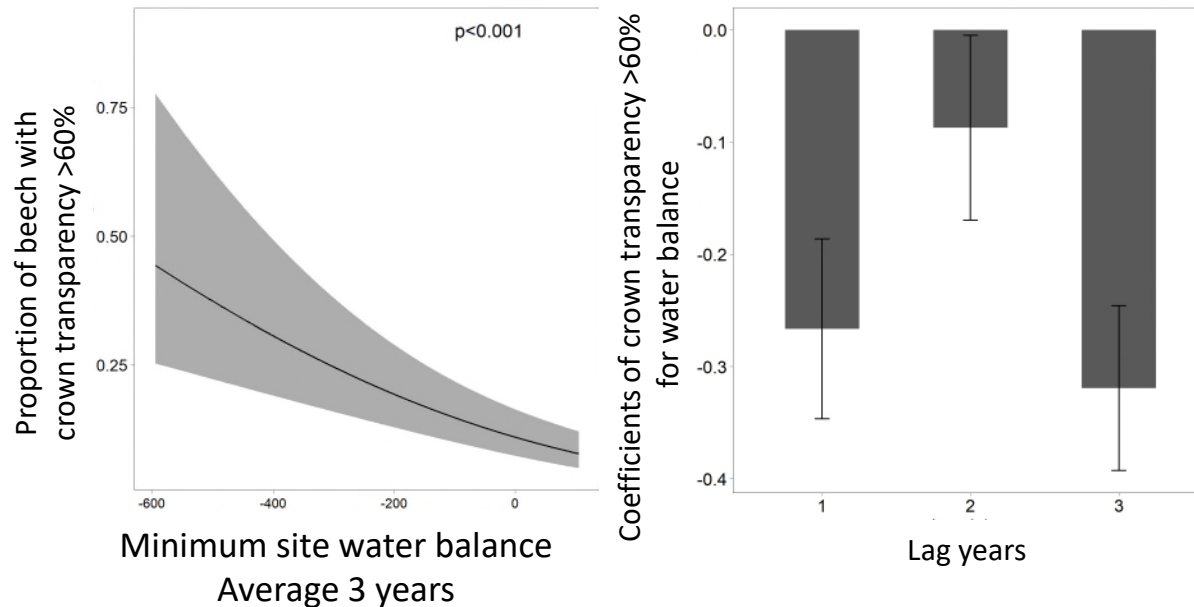
Braun et al. 2021 Frontiers in Forests and Global Change



Crown transparency of beech in treenet plots



Predictors for the proportion of beech with crown transparency >60%



Number of observations: 179176, strongly damaged: 920

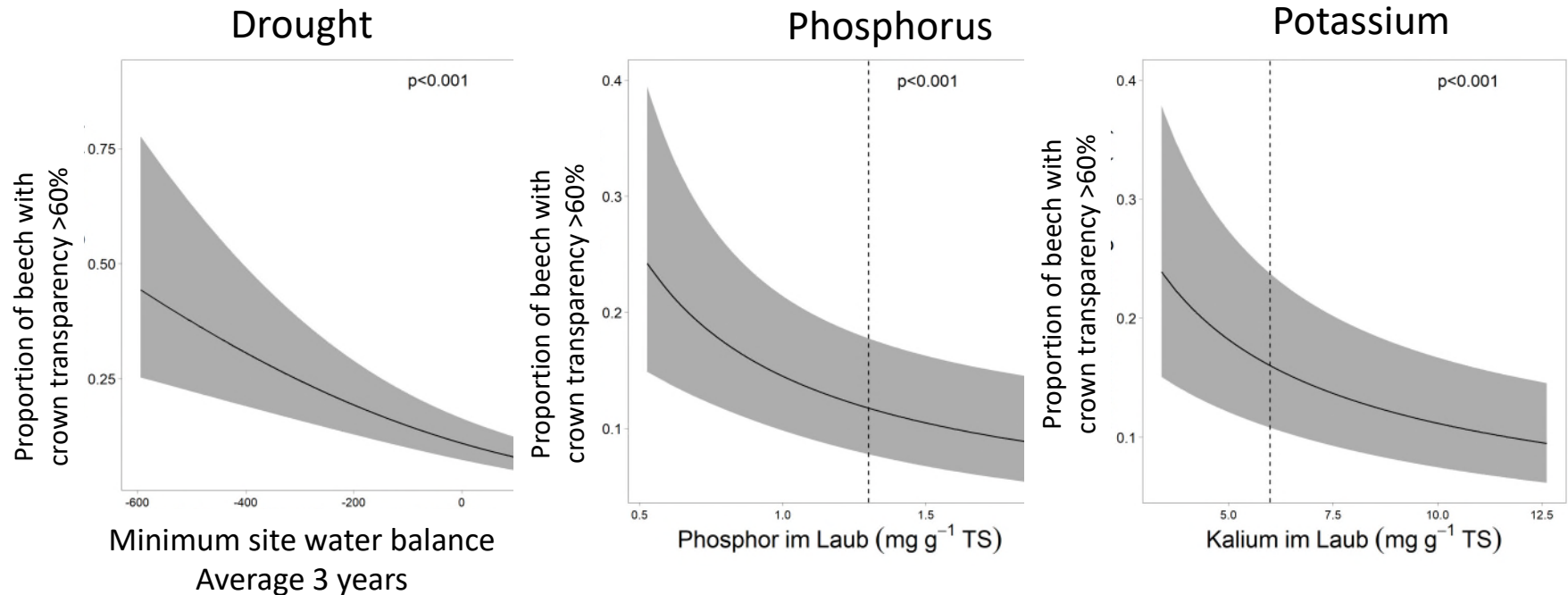
Number of trees: 9826

Number of plots: 100

Number of years: 34



Predictors for the proportion of beech with crown transparency >60%



Number of observations: 179176, strongly damaged: 920

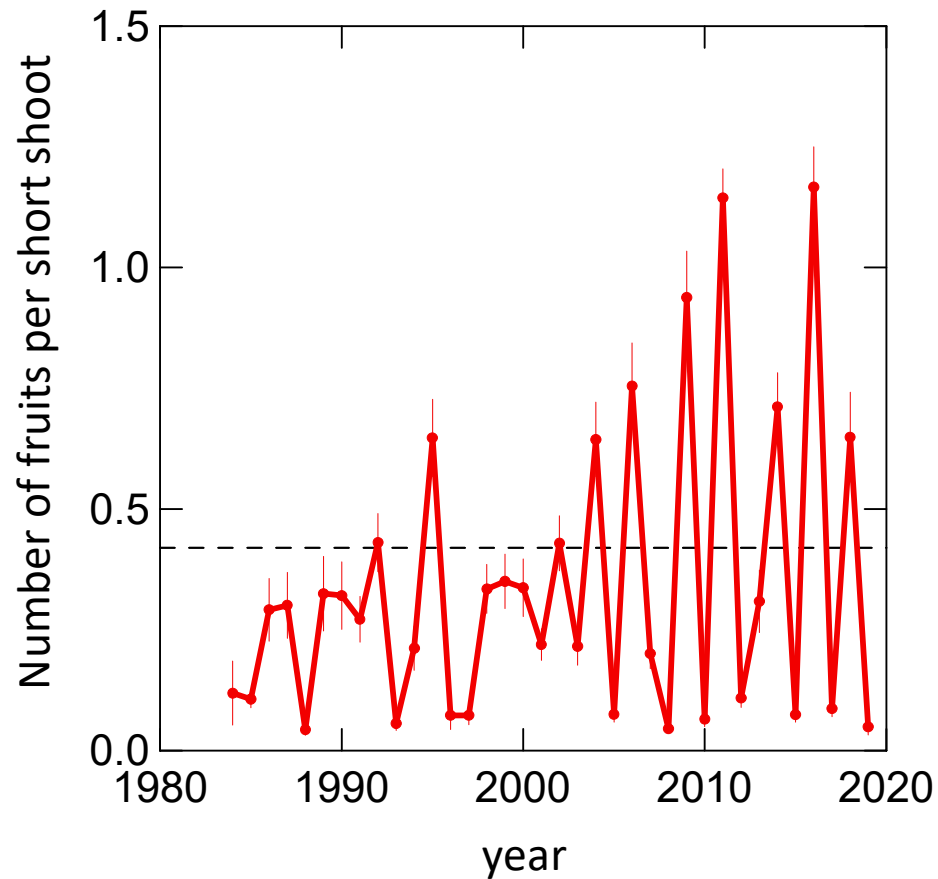
Number of trees: 9826

Number of plots: 100

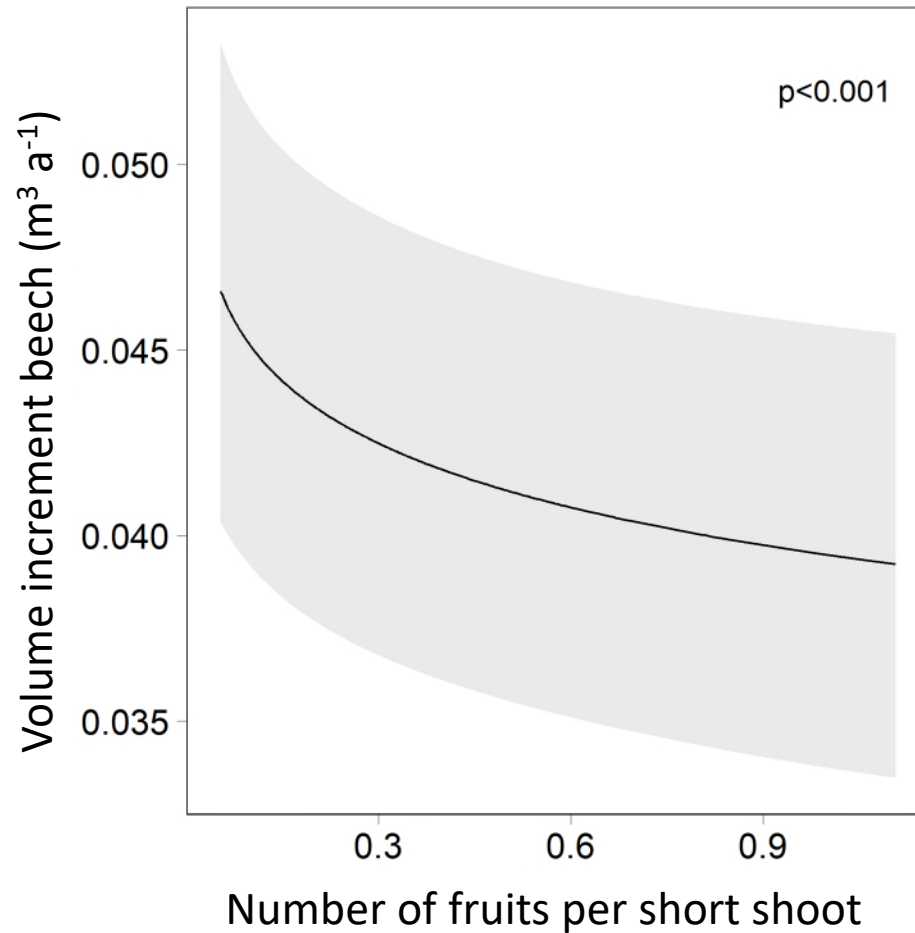
Number of years: 34



Development of fructification in beech



Volume increment and fructification



Number of trees: 7427

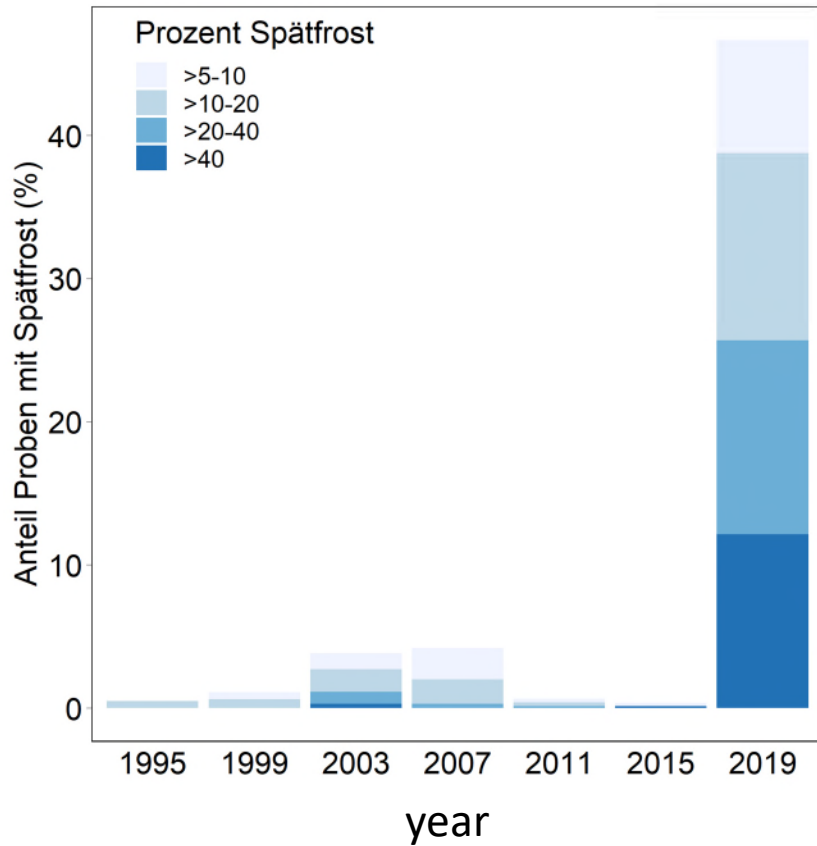
Number of plots: 91

Number of increment periods: 8

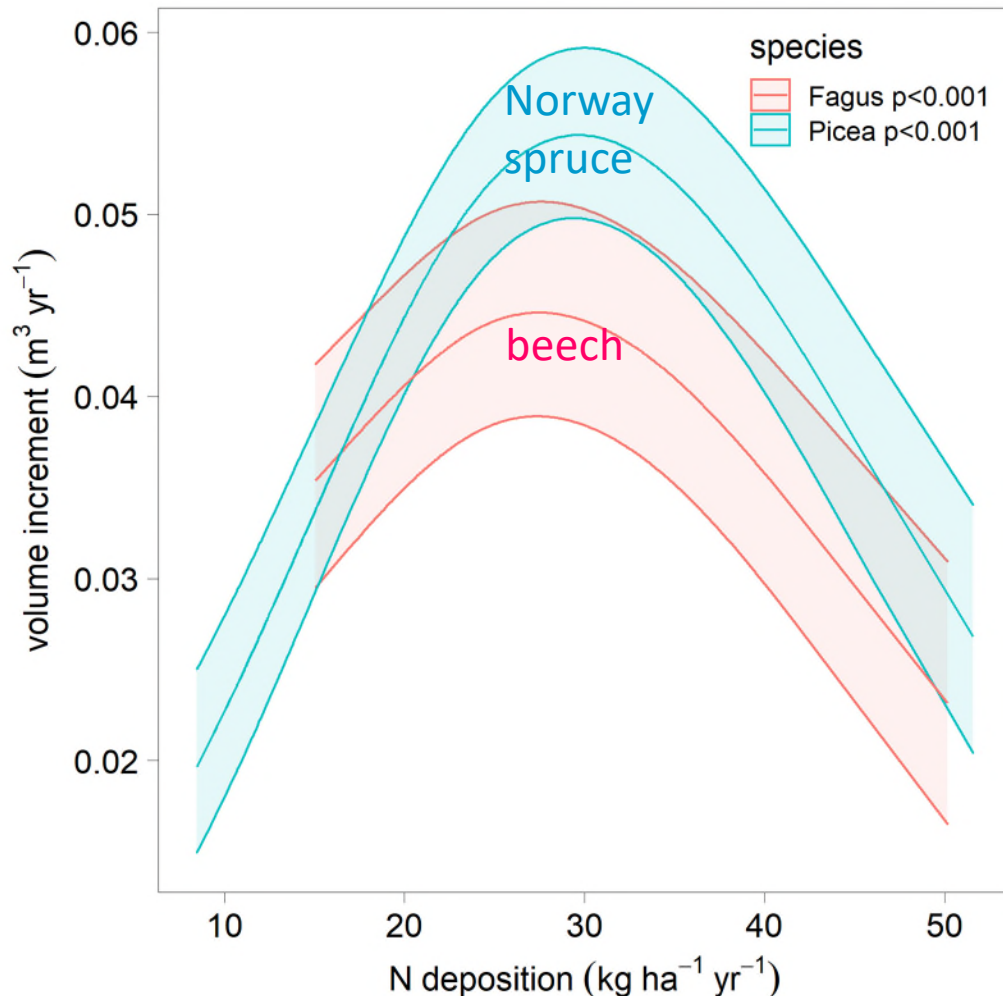


Late frost damages in beech

Assessment in harvested shoots



Stem increment and N deposition



Number of trees: 7427

Number of plots: 91

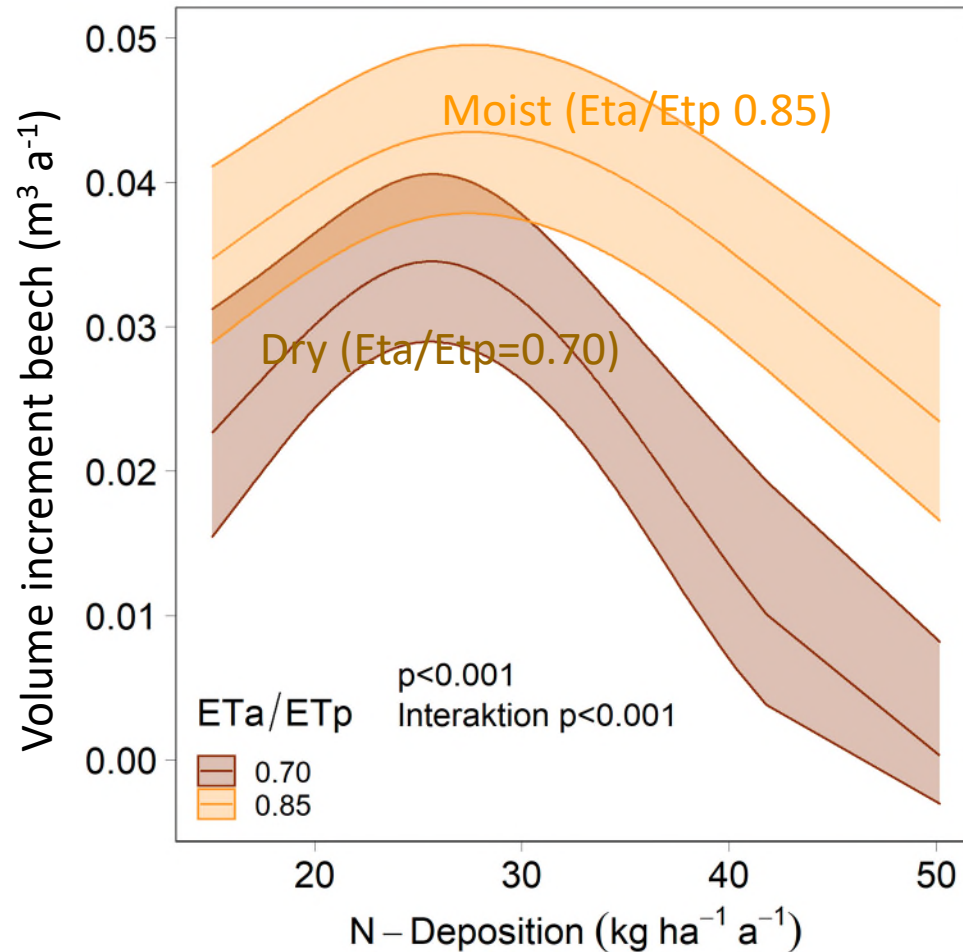
Number of increment periods: 8

Braun, S., Schindler, C.,
Rihm, B., 2017: Science of the
Total Environment 599-600,
637-646.



Stem increment and N deposition

Interaction between drought and N deposition



Number of trees: 7427

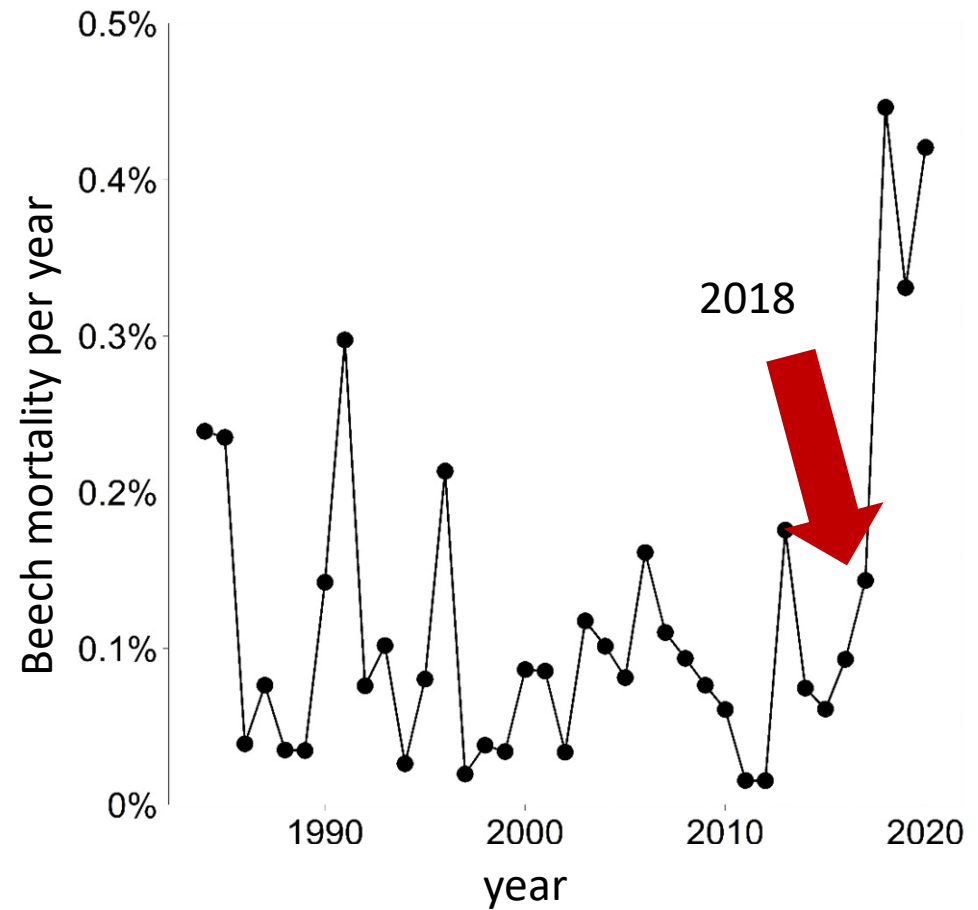
Number of plots: 91

Number of increment periods: 8

Braun, S., Schindler, C.,
Rihm, B., 2017: Science of the
Total Environment 599-600,
637-646.



Mortality of beech



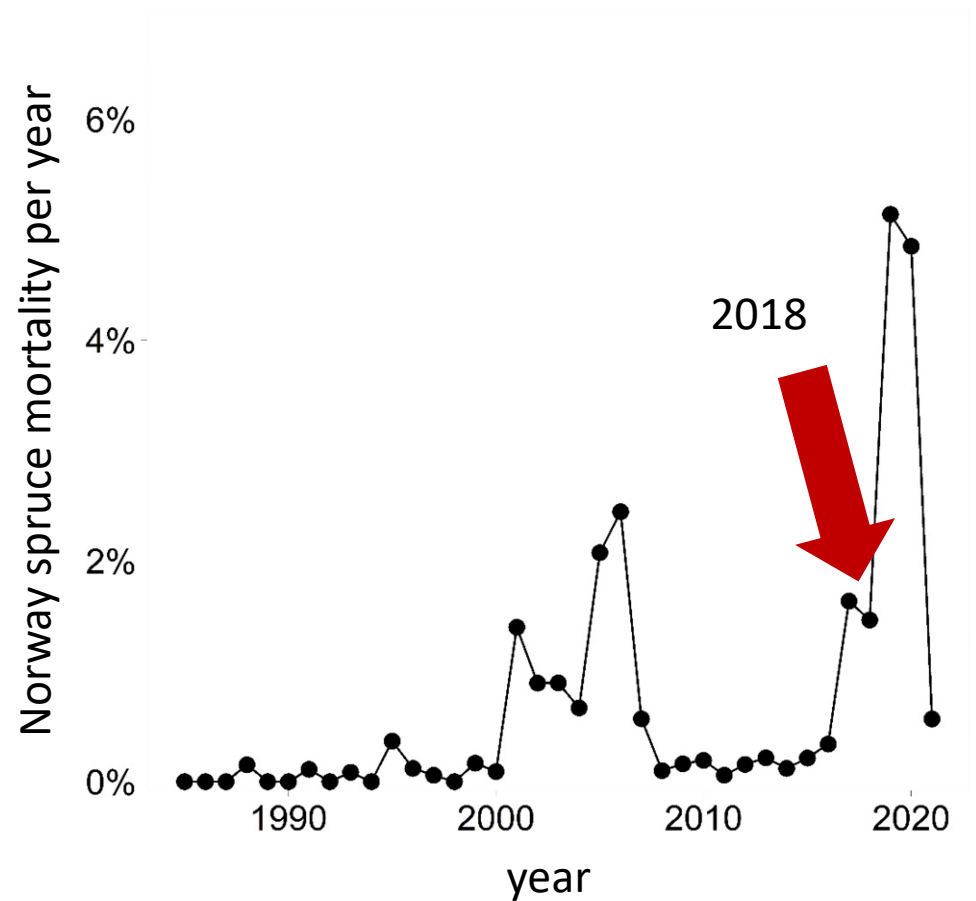
Riehen Ausserberg BS



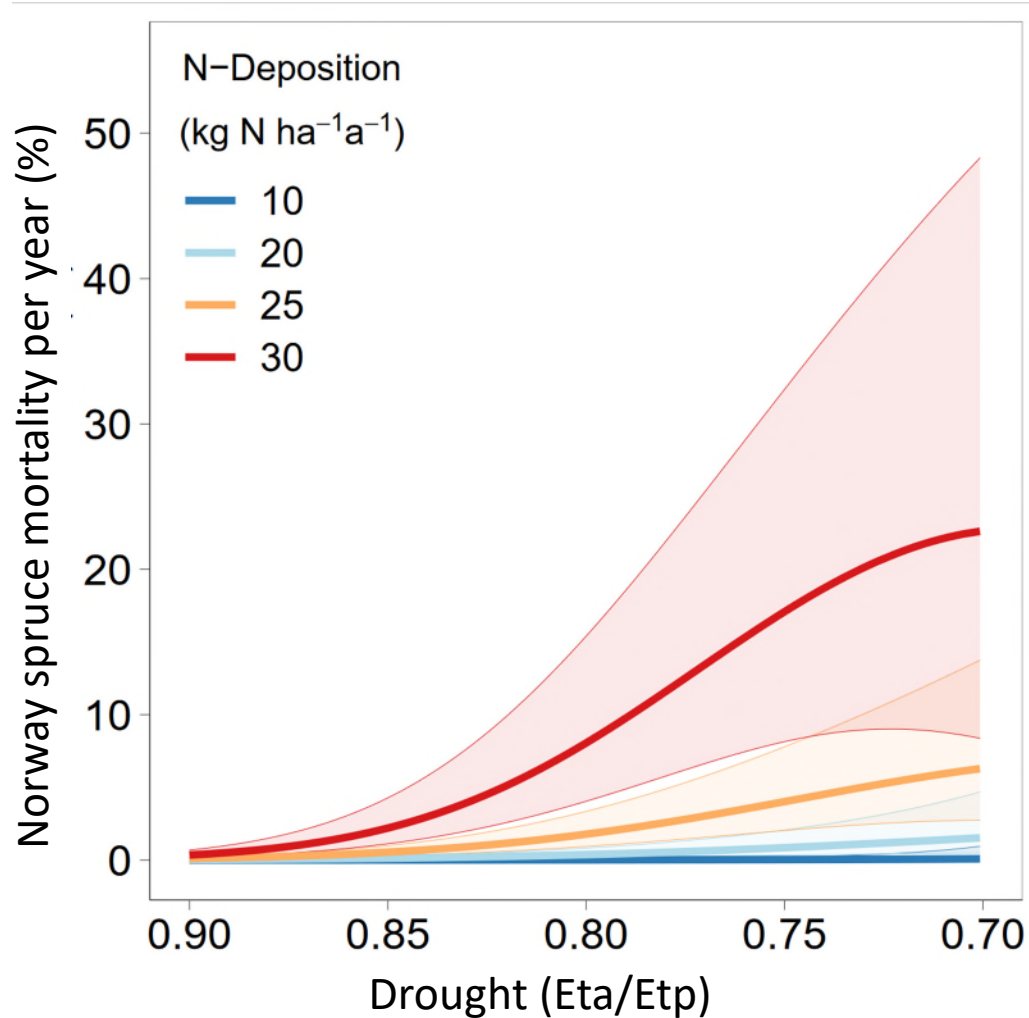
Mortality in Norway spruce



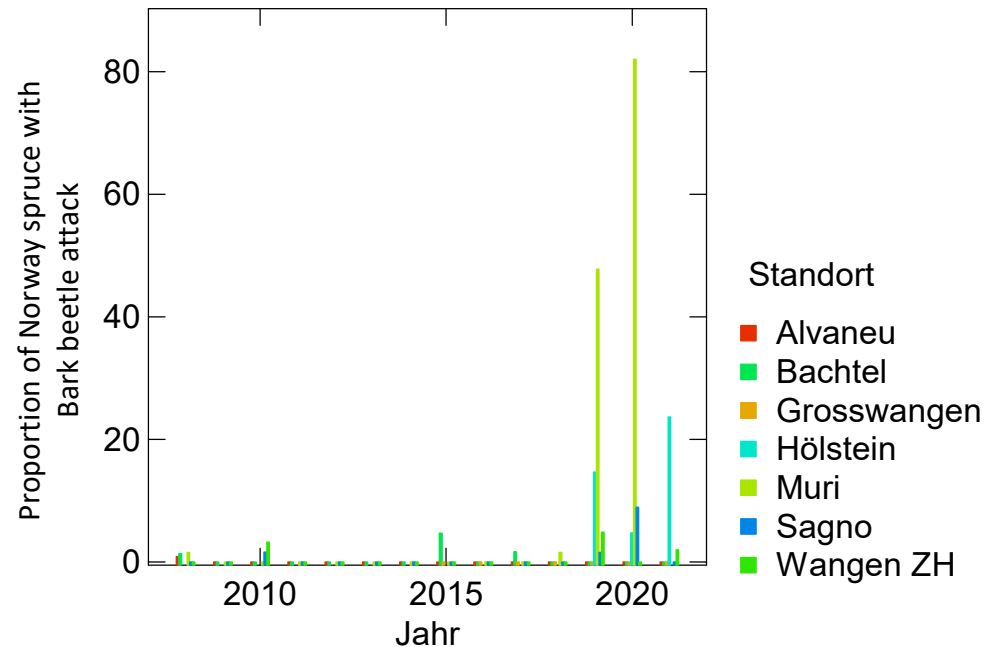
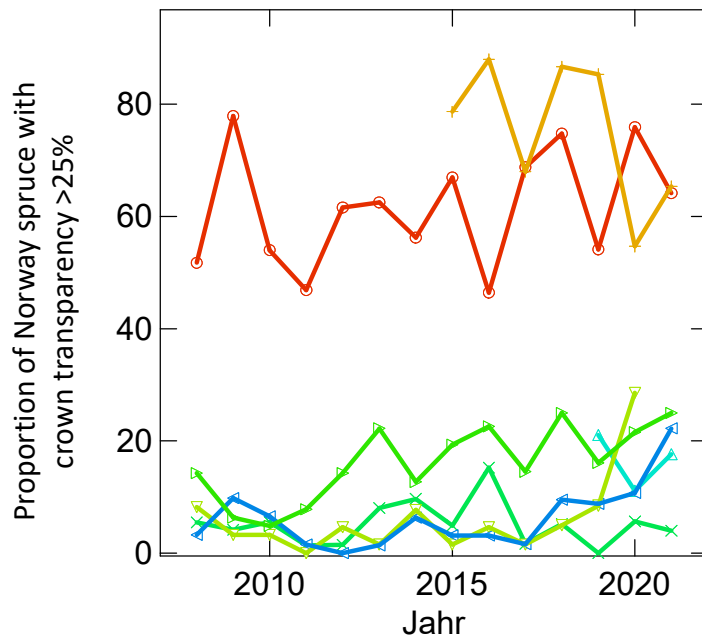
Lurengo TI



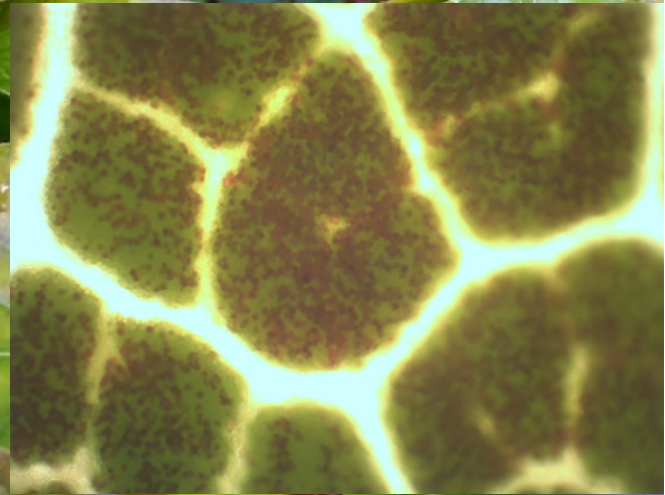
Norway spruce mortality and N deposition



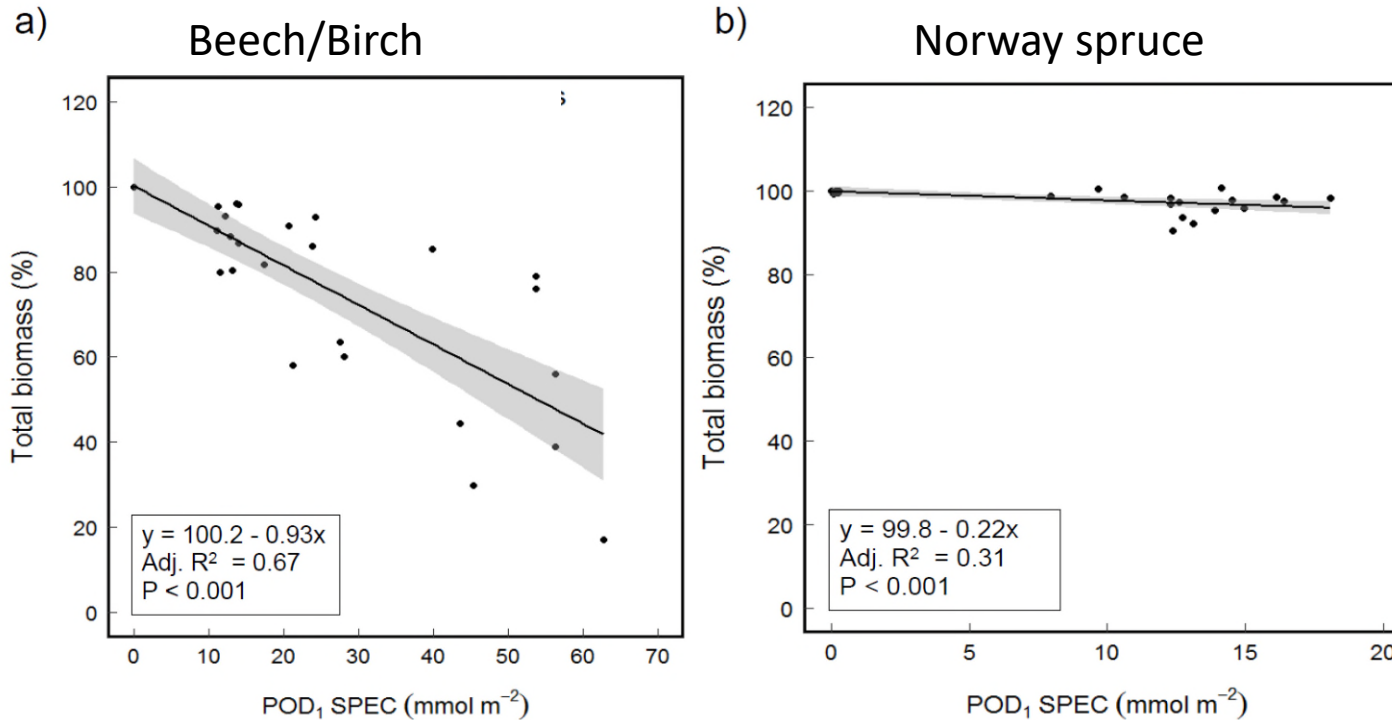
Crown transparency and mortality of Norway spruce in treenet plots



Ozone



Dose response curve (biomass)



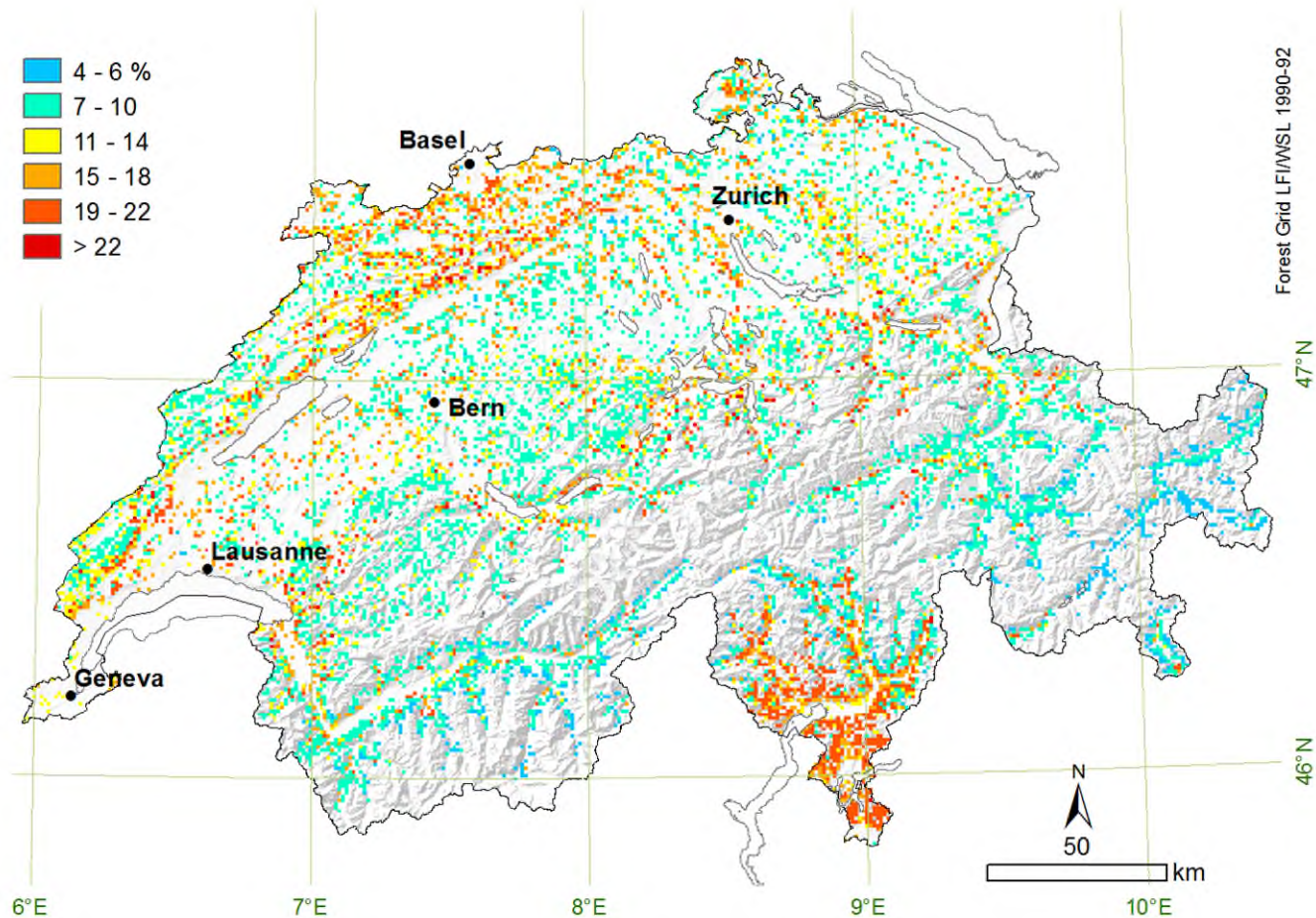
UNECE 2017, Mapping Manual

POD₁: **Ph**ytotoxic **O**zone **D**ose at threshold **1**



Growth reduction in the Swiss forest by ozone

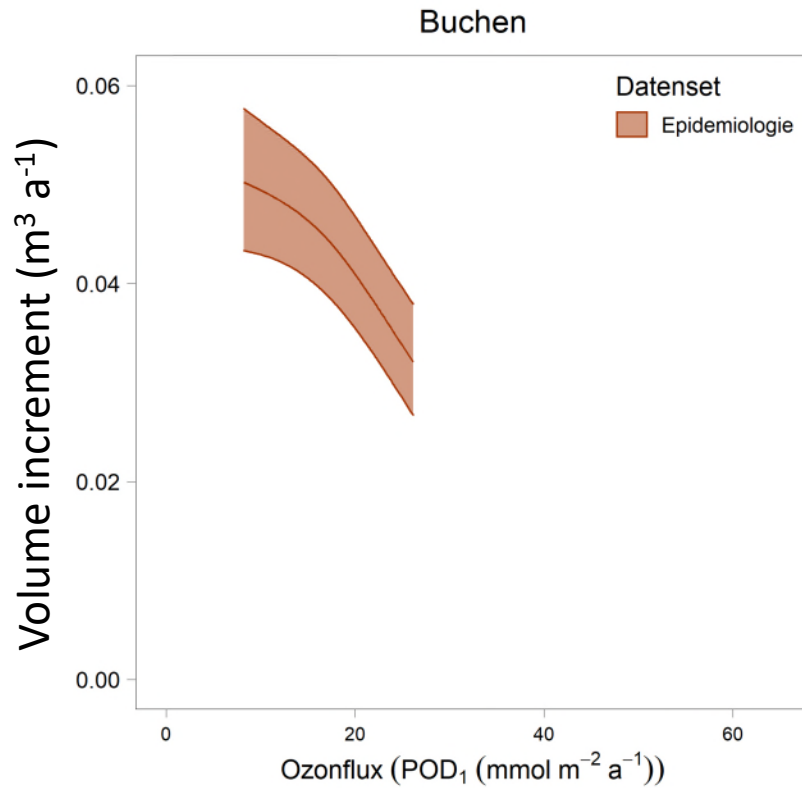
Model Beat Rihm, Meteotest



Mean growth reduction 11%



Ozone and stem increment



Number of trees: 7427

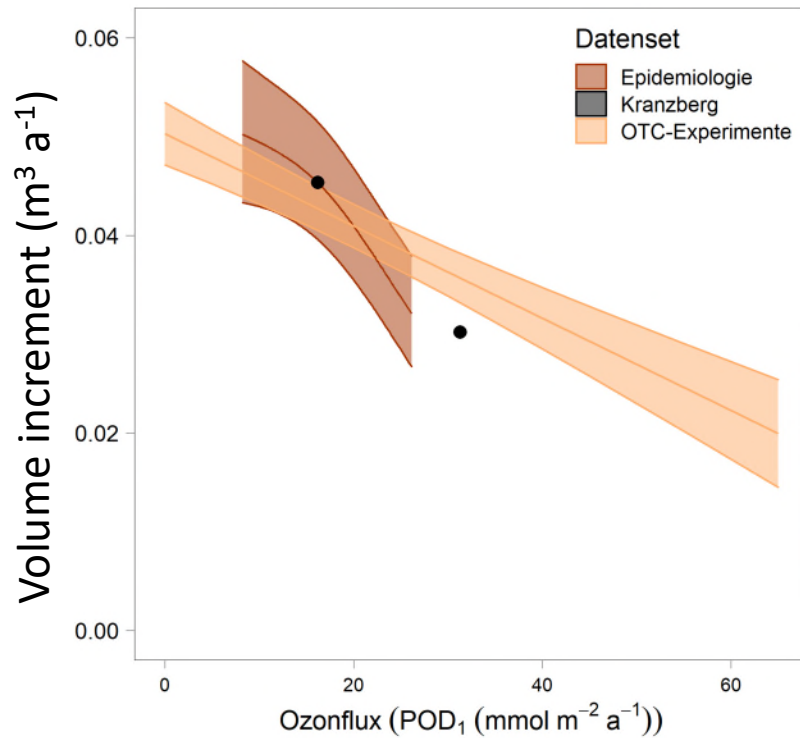
Number of plots: 91

Number of increment periods: 8

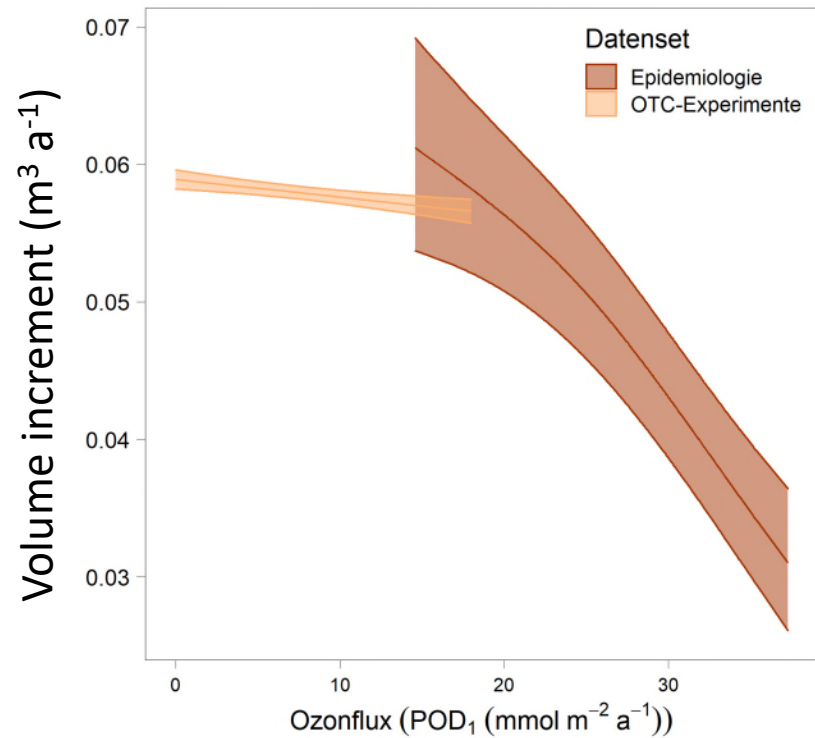


Ozone and stem increment

Beech



Norway spruce



Number of trees: 7427

Number of plots: 91

Number of increment periods: 8



A photograph of a forest floor. In the foreground, there is a large, decaying tree stump with exposed roots and a hollowed-out center. The ground is covered with green ferns and other low-lying vegetation. In the background, there are many tall, thin trees, likely Norway spruces, with green foliage. The lighting is natural, suggesting daytime.

Thank you for your attention

Situation in Norway spruce plot Sagno summer 2020
Mean throughfall deposition of N $58 \text{ kg N ha}^{-1} \text{ a}^{-1}$ (2012-2020)