Project Database of ICP Forests
PROJECT DESCRIPTION

PROJECT INFORMATION

Project title: Large-scale diversity, distribution and fate of Europe's forest mycorrhizas

Project ID: 85

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PROJECT DESCRIPTION

We are investigating mycorrhizas at 103 ICP Forests Level II plots to address three basic gaps in current knowledge:

i. What are the spatial patterns of mycorrhizal taxonomic and functional diversity and community structure?
ii. What are the environmental and ecological factors that control mycorrhizal distributions from landscape to continental scales?
iii. What are the likely responses of dominant mycorrhizal fungi to environmental change, e.g. nitrogen deposition, and how will they affect the long-term spatial resilience of communities?

We are answering these questions by combining molecular ecology with geographic information systems to generate new data on below ground mycorrhizas through sampling forest plots, as these approaches now largely resolve previous difficulties in large-scale mycorrhizal studies. We intend initially to integrate mycorrhizal data with data on deposition, soil and soil solution, foliage and litterfall. The vast European forest monitoring network is the study system selected because its intensively monitored long-term plots dramatically lower the logistic and cost barriers to the project.

This is a follow-up project of the external Project No 43 "What are the large-scale diversity and fate of Europe's forest mycorrhizas?" originally scheduled from 01/09/2013 to 14/08/2016. As the subject has become an item of the EMEP/WGE workplan for ICP Forests, the project should get therefore the rank of an internal project and the project will formally be elongated till end of 2017.