Scenarios for a Sustainable Future Forest Green Infrastructure

GREENFUTUREFOREST

Tord Snäll (Co-ordinator)

Funded projects final conference, 12-13 November 2019, Brussels

BiodivERsA COFUND Call (2015-2016)

« Understanding and managing biodiversity dynamics to improve ecosystem functioning and delivery of ecosystem services in a global change context: the cases of soils and sediments, and land- river and sea-scapes »


CONSORTIUM DESCRIPTION


Co-ordinator Tord Snäll, Swedish Univ. of Agricultural Sciences (SLU), Funded by Formas

Boris Schröder, Technische Universität Braunschweig, Germany, Funded by BMBF

Jenni Nordén, University of Oslo, Norway, Funded by NFR

Hans Pretzsch, Technische Universität Munchen (TUM), Germany, Funded by BMBF

Arpat Ozgul, University of Zurich, Switzerland, Funded by FNSNF


PROJECT DESCRIPTION

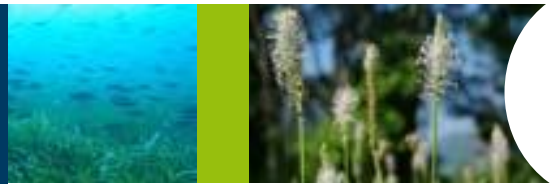

- What are the effects of local conditions and connectivity on local population occurrence or (meta)population dynamics for species representing different organism groups?
- Can Citizen Science Data be used to answer the above question?

- What are the estimated global demand for wood the coming 100 years given global socio-economic scenarios (Shared Socioeconomic Pathways)?
  - Includes downscaling the demand to study landscapes
- How should we manage the landscape (forestry, conservation) to deliver the wood demanded, allow profitable forestry and allow long-term persistence of species?

- What is the insurance value of alternative forestry (compared to BAU) given different future climate change uncertainties?


SCIENTIFIC OUTPUTS

- Both occurrence of mobiles species (birds) and sessile species (fungi) are explained by connectivity, but the spatial connectivity scales are different
- Species frequencies (commonness) in the landscape are explaned by different species' colonization rates, rather than extinction rates
- CSD constitute a promising data source to explain species distributions
- It is difficult to estimate rates of colonization-extinction dynamics based on CSD
- Given global socio-economic scenarios, future wood demand > possible supply in some EU countries, while in others it is the opposite
- Demand/supply relationships affect the future persistence of forest species in different EU countries
- Alternatives to BAU forestry, e.g. Stop thinnings, More broadleaves or Continuous Cover Forestry, may have significant insurance value given increased future storms
- Four scientific articles; 17 scientific oral presentations



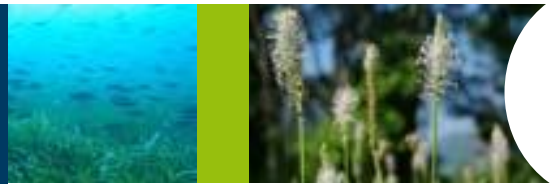
SOCIETAL / POLICY OUTPUTS

- Stakeholders include NGOs, landowner organizations, large forest companies, authorities on forest use and conservation, a state ministry
- Interactions with stakeholders at 16 events as basis for scenario formulations, interpreting results and spreading results
- Present and discuss results on factors (e.g. connectivity) affecting species occurrence and dynamics

- Informed about (simulations of) global socio-economic scenarios
- We developed landscape-scale forestry and conservation scenarios based on discussions with stakeholders or through an Analysis Hierarchy Process (AHP) survey
- Currently: simulating forestry and conservation scenarios

- Will present and discuss conclusions on insurance value of alternative forestry

- Four popular articles; Two popular oral presentations



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