

Connectivity dynamics: patterns, processes, predictions

Principal organizers

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Session description

Landscapes are dynamic, and increasingly transformed by human activities. Better understanding the impacts of changed landscape dynamics on populations and communities is a key challenge in ecology. In recent years, progress has been made in quantifying the link between landscape structure and individual movement, and in scaling this relationship to higher levels such as population patterns. A first objective of this symposium is to showcase the state of the art in the field:

- Conceptualising the link between landscape dynamics and movement strategies related to connectivity
- Empirically characterising connectivity in heterogeneous landscapes.
- Scaling up from individual movement to connectivity and to population patterns (modelling approaches and empirical approaches using functional traits)
- Evaluating alternative landscape change scenarios w.r.t. population responses.
- Linking connectivity to ecosystem services and to decision making.

Based on this encouraging status quo, the second objective of this symposium is to identify existing conceptual differences, research gaps, data needs and challenges for the adoption of results in management practices and landscape conservation planning to develop a refined research agenda for connectivity dynamics.

Speakers

- [Thomas Müller](#) (BiK-F, Germany)
A conceptual framework for understanding movement decisions in dynamic landscapes
- [Niko Balkenhol](#) (University of Göttingen, Germany)
Analyzing landscape impacts on effective dispersal
- [Aurelie Coulon](#) (Centre d'Ecologie et des Sciences de la Conservation, Montpellier)
A stochastic movement simulator improves estimates of landscape connectivity
- [Jonathan Potts](#) (University of Sheffield)
From individual movement decisions to population abundance patterns
- [Virginie M. Stevens](#) (CNRS Station for Experimental Ecology in Moulis)
Life-histories to predict dispersal and minimum area requirements
- [Franck Jabot](#) (Irstea)
Spatio-temporal graphs to assess connectivity in dynamic landscapes
- [Justin Travis](#) (University of Aberdeen)
Impact of alternative climate change adaptation strategies on range shifting ability in a fragmented landscape
- [Cécile Albert](#) (IMBE Université Aix-Marseille)
From land use change to changes in habitat network structure