Expressions of interest are being sought for four new PhD positions, for commencement in 2011 (details to be negotiated). Please register your interest and send your CV to Joern Fischer (Joern.Fischer@uni.leuphana.de; also see https://sites.google.com/site/joernfischerspage/). Do not send complete applications at this stage.

The project

Unprecedented global change poses an urgent challenge to humanity because it threatens ecosystems and human well-being, especially in poor countries. We will implement a transdisciplinary research agenda to foster sustainable development in ancient agricultural landscapes in Central Romania. The area is fascinating because ancient agricultural practices without machinery or artificial fertilisers have maintained unusually high biodiversity, from large carnivores to rare orchids. Following its recent inclusion in the European Union, Central Romania now faces a delicate balancing act between the aspirations of local people for greater economic prosperity and the region’s unique heritage values. You will be part of a team involving natural scientists, social scientists and regional stakeholders. We will map biodiversity and the ecosystem services generated by it, and will identify formal and informal institutions that can provide leverage points for enabling sustainable land use practices.

The project is funded through a Sofja Kovalevskaja Award by the Alexander von Humboldt Foundation (through funds by the German Federal Ministry of Education and Research). Visit https://sites.google.com/site/landscapefutures/Home

PhD 1: The future of birds and large carnivores

Primary focus: ecology. This component will gather data on birds and large carnivores, will map their distribution, quantify habitat relationships, and analyse likely changes under different scenarios of future development. Methods will include field surveys, statistical modelling, and GIS applications.

PhD 2: The future of plants and butterflies

Primary focus: ecology. The study area is exceptionally rich in plants and butterflies. This component will gather original field data, will map the distribution of the groups, quantify habitat relationships, and analyse likely changes under different development scenarios. Methods will include field surveys, statistical modelling, and GIS applications.

PhD 3: Cultural ecosystem services and historical changes

Primary focus: social sciences, humanities. This component will analyse land use changes since the middle ages, and will quantify the cultural benefits that people derive from nature. The possible impacts of different future trajectories on the provision of cultural ecosystem services will be assessed. Methodology will be broad and flexible, potentially including literature reviews, analysis of historical sources (e.g. old maps), interviews and workshops with local people, and GIS analysis. Experience with some of these methods, and ability to speak Romanian, will be advantages.

PhD 4: Changes in institutional arrangements

Primary focus: social sciences. This component will analyse informal and formal institutions, and their dynamic changes in the past – with a particular emphasis on recent changes since Romania joined the European Union. How can institutional arrangements foster the sustainable development of the region? Methods are flexible, including participatory methods with local people, and analysis of official policy documents (e.g. regarding EU agri-environment schemes).

This well-funded project includes collaborative links with St. Andrews University, Cambridge University, the Stockholm Resilience Centre, and the Mihai Eminescu Trust (Romania). All components will be theoretically grounded in a shared conceptual framework of ecosystem services, resilience theory, and social-ecological systems analysis. The research team will also involve more senior scientists who will focus on other, complementary aspects.