

Growing Places

The Newsletter of the **Social and Economic Research Group**

Autumn 2011

Welcome to the SERG newsletter.

This autumn edition highlights the interdisciplinary nature of much of our research.

Many complex and real-world land-management problems can only be resolved with input from different disciplinary perspectives. It is this realisation that has led to a growing demand for interdisciplinary work. The emphasis of interdisciplinarity is on joint working and interaction between disciplines, combining theories, experiences and methodologies and developing novel ways to address environmental problems. Interdisciplinary working can also encourage linkages between research, policy and practice, increasing the impact of research findings.

Social science can contribute to interdisciplinarity by helping to identify and frame research questions, and by providing explanations of human behaviour and the wider social, economic and political contexts in which environmental problems are embedded. Social scientists can also assist with understanding and facilitating interdisciplinary processes. It is not easy to be interdisciplinary – new skills may be needed to work across discipline boundaries, build a shared vision and identity, and establish ways of carrying out and communicating research. In a sense, researchers might have to change their behaviour; this is where social science can help. In each of the projects featured here, we contributed both to the processes themselves and new knowledge generated.

IN THIS ISSUE

Human dimensions of species management

Reducing the impacts of pests and diseases in our forests

Models to support forest landscape decision-making in Scotland

Assessing and communicating animal disease risks for countryside users

Beyond the forest edge

UK National Ecosystem Assessment

The findings of the UK National Ecosystem Assessment (NEA) were released this summer, providing a comprehensive overview of the state of the UK's natural environment. The first national assessment of its kind, the initiative was sponsored by the Department for Environment, Food and Rural Affairs (Defra) and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), and involved around 500 experts from a broad range of disciplines.

Forest Research contributed to the assessment, with economist Gregory Valatin a lead author of the chapters on 'Economic Values from Ecosystems' (chapter 22) and 'Woodlands' (chapter 8; co-authored by Chris Quine and Andy Moffat), which reports on changes in the values of ecosystem services provided by UK woodlands. The assessment notes that net carbon sequestration by UK woodlands increased about five-fold since 1945, with the current social value per hectare at least double the market value of wood production. The NEA also reports new estimates for amenity and non-use values of woodlands and greenspace. For details visit: <http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx>.

Human dimensions of species management

Britain's woods and forests are important places for both people and wildlife, providing a habitat for numerous species as well as essential places for our culture, recreation, science and economy. As a result, people interact with other species in these environments in a range of ways, both positive and negative, which can be a challenge for woodland management. Understanding these interactions is important in order to support managers. This is an interdisciplinary task as it relies upon assumptions and theories established in various disciplines and demands interaction between researchers and practitioners with differing backgrounds and expertise. Knowledge is needed not only of physical phenomena and ecological processes, but also of social factors influencing human behaviour.

Research by the Social and Economic Research Group (SERG) into human dimensions of species management (funded by the Forestry Commission) focuses on stakeholder attitudes and perceptions, the impact of policy and management on how new human-wildlife interactions develop (e.g. in urban areas) and how forest users impact directly on wildlife.

We have recently completed a review of published evidence relating to the impacts of recreational activities on forest species – widely considered to be one of the most significant sets of human-wildlife interactions – in multifunctional forests. Our review concludes that while some aspects are well researched, notably the trampling impacts of walkers and the disturbance of ground-nesting birds, there are substantial gaps in the information available. Only a few studies publish data collected in UK forests, and knowledge of how social factors relate to ecological impacts is very sparse. This is crucial as some social phenomena may perpetuate negative impacts (e.g. peak seasons leading to over-crowding or the desire to go off-trail) and understanding them would provide managers and policy-makers with better knowledge of the conditions under which human-wildlife problems and conflicts are most likely to emerge.

While there is some evidence relating to the direct effects of site information ('interpretation') on recreationists' behaviour, much more work is required to explore how fundamental social and cultural norms, and understandings of rights and responsibilities, influence how users act in forests and their consequent impact on wildlife.

For more details visit www.forestry.gov.uk/fr/INFD-8LBE9P. Alternatively, contact Norman Dandy (Norman.dandy@forestry.gsi.gov.uk) or Mariella Marzano (mariella.marzano@forestry.gsi.gov.uk).

Reducing the impacts of pests and diseases in our forests

The establishment and spread of invasive species is linked to human behaviour in many ways, but how and to what extent is not well understood. Decisions and behaviour that affect biosecurity can be complex due to the involvement of multiple stakeholders, all with different norms, values, attitudes and capacities for action, often operating within different jurisdictions and with different legal frameworks. Thus, an interdisciplinary approach combining the knowledge and methods of natural and social scientists is necessary to identify key linkages between biological and human factors in the global movement of pests. 'PERMIT' is a new COST Action that focuses on improving understanding of the key pathways by which multiple pests are moved internationally (e.g. through trade or tourism).



SERG is leading one of the work groups (WG3) that will analyse the level of education and awareness of risks associated with different pathways, such as the trade in live ornamental plants and trees. This involves a literature review of knowledge, attitudes and behaviour in relation to tree health and biosecurity issues, and the role of risk communication and education in improving pest reduction and eradication. The review will be followed by primary research with a range of stakeholders involved in the movement of plants and trees, such as horticultural experts, landscape architects, nurseries, plant protection organisations, the 'buying public' and many more.

The participants in this four-year Action are primarily entomologists and pathologists, but social scientists will provide insights into the social, political and economic factors that influence pest risk pathways and management. WG3 will be working closely with other work groups examining the biological characteristics of pathways that facilitate global pest movements (e.g. which pests, the carrying capacity of pathways and how quickly they spread) and assessing current pest reduction strategies.

This COST Action will not only promote knowledge exchange among 32 countries across Europe and beyond, but also between the different disciplines involved. Here, there is a role for social science to help facilitate the interdisciplinary integration needed to develop policy recommendations and a decision-support system for improved pathway management.

For more details contact Mariella Marzano (mariella.marzano@forestry.gsi.gov.uk) or visit www.forestry.gov.uk/fr/permit.



Models to support forest landscape decision-making in Scotland

Over the past three years, Forest Research's social scientists have been working closely with their natural science colleagues, as well as policymakers and planners at both Forestry Commission Scotland and the Cairngorms National Park Authority, to assess the impacts of changes to the forestry-wood chain on the provision of ecosystem services. The work is part of 'Northern ToSIA', a project funded by the EU Northern Periphery Programme, which aimed to develop and apply a 'Tool for Sustainability Impact Assessment' (ToSIA).

The project comprised four case studies across northern Europe, one of which was in Scotland. In this case, the ToSIA approach was developed and used to analyse the impacts of two scenarios identified as priorities by our partners: a) woodland expansion in the Cairngorms National Park, and b) conversion to low impact silvicultural systems in Inshriach Forest inside the Park. The social research focused on 40 meetings and recorded semi-structured interviews across the Scottish forestry sector, in particular with the Forestry Commission, regional planning authorities, private landowners, forest management companies and wood processing industries. The central research question was: how can the ToSIA methodology improve existing planning and policymaking procedures of these potential end-user groups?

Notes, minutes and transcripts from encounters with stakeholders were used to construct a narrative to express how different partners experienced significant insights and learning during the project. These included:

- a) precise questions that would be of use to different end users;
- b) diverse ways in which the outputs would be used;
- c) processes through which scientific and lay knowledge and values may be brought together to make legitimate evidence-based decisions, and
- d) ways in which the models might be enhanced, e.g. by understanding how different landowners may become conducive to tree planting or woodland management.

A key theme that emerged was the extent to which different actors politicise knowledge during negotiations over land use change. Awareness of the political context can inform the way in which interdisciplinary research is conducted, disseminated and used to support the governance of multifunctional landscapes.

To find out more contact David Edwards (david.edwards@forestry.gsi.gov.uk).

Further details on Northern ToSIA can be found at: www.forestry.gov.uk/fr/INFD-82XHUD.

Assessing and communicating animal disease risks for countryside users

This Rural Economy and Land Use funded project first appeared in our autumn 2009 newsletter. Our research investigated the potential impact of a zoonotic disease (an infection transmitted between vertebrate animals and humans) on recreation in rural areas and identified appropriate responses in terms of communicating risk. The project was led by Forest Research and involved the Universities of Oxford, Brunel and Surrey. The team was interdisciplinary to address all the issues around Lyme disease (LD); researchers had backgrounds in ecology, zoology, psychology, sociology and anthropology. We also benefited from advisory and practitioner panels with medical, veterinary, policy and land management perspectives.

We used a wide range of methods to capture data, including interviews, focus groups, GPS tracking of site users, observations, photo elicitation, tick counting, weather data recording, surveys, and workshops. For example we explored:

- seasonal risk to humans of encountering ticks in different habitats;
- perspectives of people who had contracted LD – how they got the disease and how it has affected them;
- perceptions of how recreation patterns and land use will change over the next couple of decades, and how the risk of people encountering ticks may also change in the future;
- what information land use and management organisations include in communication about LD for their staff and visitors to recreation areas;
- perceptions of risk and what precautionary behaviour visitors and residents living near woods might undertake to reduce the risk of being bitten by a tick.

An important part of the project was building relationships and dialogue. Interdisciplinarity was encouraged by team members undertaking shared field activities, with lively discussions around different disciplinary assumptions and understanding. The team also worked together on joint publications that promoted new ways of thinking about zoonotic disease and human behaviour.



A tick (family Ixodidae) on a blade of grass.

A key outcome of the research was the development of a framework for risk communication (see framework table in RELU Policy and Practice Note 27 (2011), *Protecting countryside users against zoonotic disease by influencing their behaviour*, available at www.relu.ac.uk/news/policyandpracticenotes.htm). This provides a better understanding of different behaviours and will enable managers, practitioners and policy makers to strategically focus and target their communication and management practices.

For more information contact Liz O'Brien (liz.obrien@forestry.gsi.gov.uk).

If you need this publication in an alternative format, for example in large print or another language, please telephone us on **0131 314 6575** or send an e-mail request to: **diversity@forestry.gsi.gov.uk**

Recent SERG publications

Quine, C., Barnett, J., Dobson, A., Marcu, A., Marzano, M., Moseley, D., O'Brien, L., Randolph, J., Taylor, J. and Uzzell, D. (2011). Frameworks for risk communication and disease management: the case of Lyme disease and countryside users. *Philosophical Transactions of the Royal Society*. doi:10.1098/rstb.2010.0397

Edwards, D. (2011). Indicator 6.11: Cultural and Spiritual Values. pp 139–140 in: *State of Europe's Forests 2011. Status and Trends in Sustainable Forest Management in Europe*. FOREST EUROPE, UNECE and FAO.

Dandy, N., and R. Van der Wal. (2011). Shared appreciation of woodland landscapes by land management professionals and lay people: an exploration through field-based interactive photo-elicitation, *Landscape and Urban Planning*. **102** (1), 43–53.

O'Brien, L., Burls, A., Townsend, M. and Ebdon, M. (2011). Volunteering with nature as a way of enabling people to re-integrate into society. *Perspectives in Public Health*, **131** (2), 71–81.

Forestry Commission (2011). *Public Engagement in Forestry: A toolbox for public engagement in forest and woodland planning*. Forestry Commission, Edinburgh.

Morris, J., O'Brien, E., Ambrose-Oji, B., Lawrence, A., Carter, C., Peace, A. (2011) Access for all? Barriers to accessing woodlands and forests in Britain. *Local Environment* **16** (4), 375–396.

Where to find out about us:

What we do

www.forestry.gov.uk/fr/peopleandtrees

Who we are

www.forestry.gov.uk/fr/INFD-5XNATV

If you would like to receive future copies of our newsletter please email:

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