

# FIRES

## Fire Interdisciplinary Research on Ecosystem Services



*Fire and climate change in  
UK moorlands and heathlands*

**A series of four transdisciplinary seminars.  
March 2008 to June 2009.**

Organised by the University of Manchester in co-operation with the University of Edinburgh and Moors for the Future Partnership

<http://www.fires-seminars.org.uk>

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ECONOMIC  
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RESEARCH  
COUNCIL



### Context

Moorland and heathland ecosystems in the UK both sustain human use and are sustained by it. Fire plays a key but equivocal role, raising many controversies for management and policy making, especially under the threat of climate change.

The diverse environmental, social and cultural ecosystem services provided by moorlands and heathlands include carbon storage, biodiversity, water provision, flood protection, aesthetic/recreational value, and economic value from tourism, sporting enterprises and grazing.

Managed fire has traditionally played an important role in maintaining the landscape and biodiversity. For instance, rotational burning is used to maintain heather moors for grouse and grazing animals and contributes to floristic diversity.

In contrast, accidental or malicious wildfires increasingly threaten moorland and heathland ecosystem services and are likely to become more frequent and severe with climate change.

Managed fires and wildfires are linked. Managed fires can reduce wildfire risk by reducing fuel load and creating firebreaks, but, if poorly controlled, can result in wildfires themselves.

Research on wildfires in UK moorlands and heathlands is in its infancy and lacks co-ordination. This seminar series seeks to contribute to effective management of wildfire risk by identifying policy implications and developing a joined-up research agenda for the UK.

### Aims

- (i) To build capacity for inter-disciplinary research on fire and its impacts on ecosystem services of UK heathlands and moorlands;
- (ii) To establish a cross-cutting interdisciplinary research agenda on the relationships between ecosystem services, managed fire and wildfire, especially implications of increased wildfire risk under climate change scenarios;
- (iii) To incorporate the needs of policy makers, moorland managers and other stakeholders, facilitate knowledge transfer to policy makers and contribute to effective and responsive management.

### FIRES seminar series

A series of four seminars on the effects of moorland and heathland fires on ecosystem services will be held during 2008-2009. The seminars are funded jointly by ESRC and NERC as part of their transdisciplinary series on ecosystem services.

### Programme

1. The role of managed fire in ecosystem services of UK moorlands and heathlands.  
*Edinburgh, 31 March – 1 April 2008*
2. The impact of wildfire on ecosystem services: relationships between wildfire, climate and people.  
*Manchester, 24 June 2008*
3. Forecasting and modelling wildfire risk in UK moorlands and heathlands.  
*Manchester, 31 March – 1 April 2009*
4. Adaptive management to wildfire risk: implications for moorland and heathland ecosystem services.  
*Peak District National Park, 13 – 14 May 2009*

### Format

Keynote presentations and poster sessions will be followed by interdisciplinary round table discussions, breakout groups and plenary sessions.

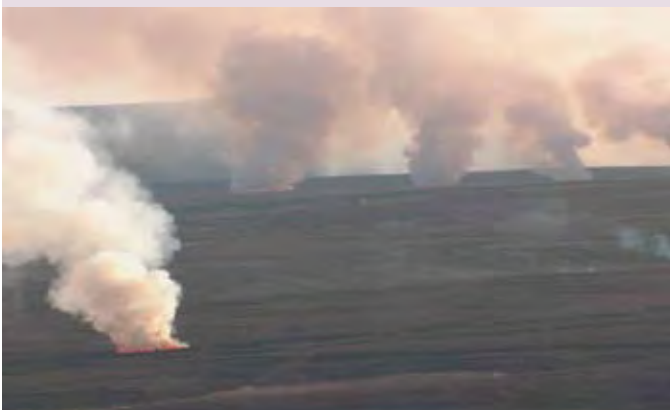


### Seminar 1:

#### The role of managed fire in ecosystem services of UK moorlands and heathlands

*Edinburgh, 31 March – 1 April 2008*

The seminar will review how fire has been used historically, and the role of managed burning today. We will identify the ecosystem services provided by UK moorlands and heathlands, including: biodiversity; carbon budget; water provision; rural livelihoods; landscape quality and recreational use. The focus for debate will be the extent to which managed fires contribute to the maintenance of these ecosystem services or pose threats to them, especially with changes in climate.



### Seminar 2:

#### The impact of wildfire on ecosystem services: relationships between wildfire, climate and people

*Manchester, 24 June 2008*

Relationships between people, climate, the environment and fire are complex. The seminar will review the frequency, timing and distribution of wildfires in the UK. We will examine UKCIP climate change scenarios and their implications for wildfire hazard and risk, and for managed burns. Critical questions to be addressed include how climate change will affect: vegetation vulnerability to fire; visitor pressure and potential sources of ignition; feedbacks between climate, vegetation and fire. We will discuss the economic costs of wildfire damage to ecosystem services, how they could be quantified and how they are likely to be affected by climate change.

### Seminar 3:

#### Forecasting and Modelling Wildfire Risk in UK moorlands and heathlands

*Manchester, 31 March – 1 April 2009*

This seminar will focus on three modelling tools used to minimise damage to ecosystems; forecasting timing and severity of wildfire hazard and risk; modelling the behaviour of active fires; and geospatial models to show how risk varies from place to place and investigate causes. Alternative conceptual and methodological approaches will be discussed. We will explore how mathematical and physical models of fire behaviour fit UK peatland fires, whether they could be improved with geospatial data and how they could improve fire-fighting strategies.



### Seminar 4:

#### Adaptive management to wildfire risk: implications for moorland and heathland ecosystem services

*Peak District National Park, 13 – 14 May 2009*

Management will need to respond to climate drivers, changing ecosystem vulnerability and human ignition sources. This seminar will identify alternative physical interventions for managing wildfire risk, including fire-fighting techniques and discuss their relative costs and benefits for ecosystem services. Political and institutional policy drivers will be discussed, including the role of national and international policies which may impact on fire risk by changing rural land use or level of visitor use. Potential conflicts between fire risk management and other environmental legislation will also be discussed.

### Target audience

The seminar series is aimed at academics, practitioners and stakeholders, including moorland managers, conservation and the Fire and Rescue Services. The events are intended to be transdisciplinary, with participants from across the natural, social and economic sciences. The main part of each event will be for an invited audience of around 30 people. Young academics will be particularly welcome to apply. Most seminars will also include a session that will be open to others. Please see the website for further information.

### Planned outputs

- Reports and keynote papers from each seminar published on the website <http://www.fires-seminars.org.uk>
- Non-technical summaries of key findings published in stakeholder journals and newsletters;
- A special issue of an academic journal;
- An interdisciplinary research agenda leading to grant and studentship applications.

### Steering committee

Julia McMorrow (University of Manchester)  
Colin Legg (University of Edinburgh)  
Jonathan Aylen (University of Manchester)  
Jon Walker (Moors for the Future Partnership)  
Klaus Hubacek (University of Leeds)  
Mark Jones (Chief Fire Officers' Association)  
Simon Thorp (Heather Trust)  
Claire Quinn (University of Leeds)  
Gina Cavan (University of Manchester)

### Further information

For further information about the FIRES seminar series please visit the website or contact:

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