

FIREMAN

Fire management to maintain biodiversity and mitigate economic loss

Fire is a natural disturbance agent of many forest and grassland ecosystems that contributes to species dynamics and diversity, physical structure and ecosystem function. Many European heathland systems owe their origin and maintenance to burning, and fire is a key disturbance agent in both Mediterranean and boreal biomes that impacts the biodiversity of ecosystems, species and genetic structure. Fire-ecosystem relationships are altered by changing climate and earlier European fire regimes are now heavily modified by human activities to generate both biological and socio-economic problems. Intense or inappropriate fire can wreak enormous damage and following recent extreme fire years in parts of Europe, there is an urgent need for a co-ordinated European policy on fire management.



Significant components of the biodiversity are adapted to a moderate fire and browsing regime, so the current build-up of fuel and development of woody successions is changing the fauna and flora.

FIREMAN's working hypothesis is that 'baseline' fire regimes in the three vegetation types (boreal forests, wet upland heathlands/moorlands, and Mediterranean shrub-forest) vary with climatic change but maximum 'authentic' species diversity is associated with 'intermediate' fire regimes.

FIREMAN plans to impact management and policy in three ways. Firstly through the well-established contact networks administered by our two private sector partners. Secondly, by incorporating results into European Environmental Agency biodiversity policy documents and thirdly by joining the EU FIRE PARADOX consortium FIREMAN will gain contact with the influential European stakeholder group organised in that project.

Research on past and future conditions, in collaboration with stakeholders, is needed to develop appropriate fire regimes that will reduce the risk of severe, uncontrolled damage and favour biodiversity with a long history.



Richard Bradshaw sampling soft sediments for fossils and charcoal to investigate species composition over time, Eriksberg Reserve, Sweden.

The main aim of FIREMAN is to generate policy guidance and management tools for the appropriate use of fire to foster biodiversity in three major European ecosystems.

Anticipated major outcomes will be characterised 'base-line' fire regimes, local and regional models of fire-biodiversity-climate relationships that are used to explore likely future scenarios and assessments of reactions of local communities to fire and biodiversity management. These tools will be developed in close conjunction with local managers and be used to impact policy to favour biodiversity.

Partners

University of Liverpool, UK - coordinator
Skogssällskapet (SSÅ), SWEDEN
Peak District National Park Authority, UK
CBAE, University of Montpellier, FRANCE
Universidade de Santiago de Compostela (USC), SPAIN
Lund University, SWEDEN

Duration: March 2009 – February 2013

Total Grant: 1,628,709 Euros

Further information: Dr. Richard Bradshaw

email: Richard.Bradshaw@liv.ac.uk

www.fireman-europe.com