

FR News

News from Forest Research, Summer 2012

FR News is a free quarterly newsletter that is distributed to a wide range of organisations and individuals who have interests in trees, woods and forests.



Public preferences for forests as sites for recreation: a pan-European study

Recently published research has provided one of the first pan-European assessments of preferences for a range of forest types as sites for recreation. The survey was conducted by a team of social scientists, led by Forest Research, as part of 'EFORWOOD', a major EU-funded project that developed new ways to assess the sustainability of the forestry-wood chain. The results were derived from panels of experts in landscape preference research in four contrasting regions – the UK, the Nordic region, central Europe, and Iberia – who were asked to make judgements on behalf of the visiting public.

Throughout Europe, the size of trees made the greatest contribution to the recreational value of forest stands – the bigger the trees, the greater their perceived recreational value.

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Public preferences for forests as sites for recreation: a pan-European study (cont.)

The intensity of management – assessed along a continuum from ‘forest nature reserves’ to ‘woody biomass production’ – made less of a contribution, while the tree species type – i.e. whether the stand was conifer, broadleaved or mixed – was relatively unimportant. The findings suggest that attitudes towards conifer plantations in upland UK are shaped more by the management regime and their design within the landscape rather than the tree species type. They also suggest a preference for continuous cover forestry over intensive even-aged forestry. The data were later adopted by the Food and Agriculture Organisation/United Nations Economic Commission for Europe European Forest Sector Outlook Study 2011 to quantify the impacts of a range of long-term forest management scenarios on the potential recreational value of forests.

More information, can be found at www.forestry.gov.uk/fr/INFD-6LEKA9 or by contacting **David Edwards**.

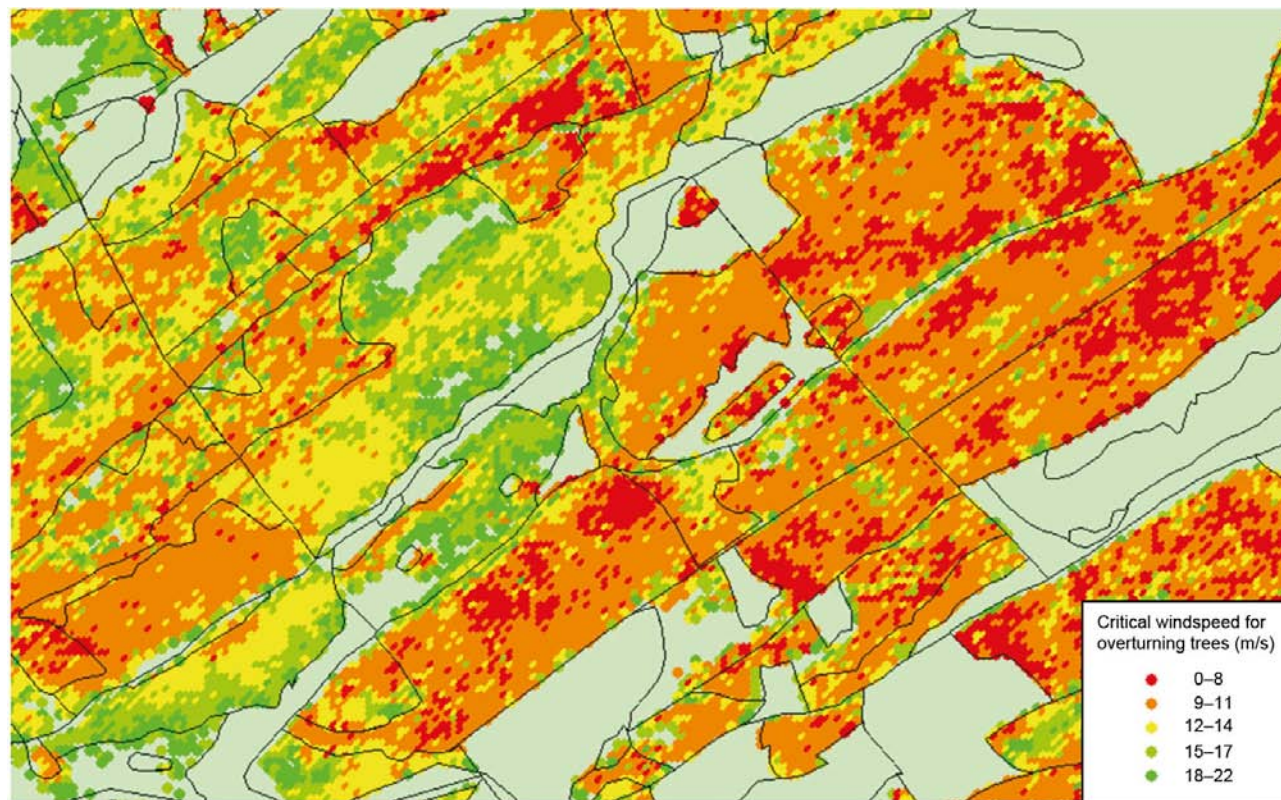


Underpinning a move to precision forestry

A new tool has been designed that will allow forest practitioners to create very detailed maps of current woodland on the public forest estate. Developed by Forest Research (FR), the application integrates airborne LiDAR – an optical remote sensing technology that measures distance using laser pulses – with a suite of models developed at FR. The aim is to develop a method of estimating woodland properties at a very fine scale. The information arising from this work could, for example, allow forest practitioners to implement alternative silviculture methods and therefore manage forest resources in a more sustainable and precise manner.

As an example, the Forestry Commission's growth models for Sitka spruce have been reengineered using this approach to estimate site index, mean diameter, basal area, volume and total number of trees, based on top height (extracted from LiDAR). Estimates are normalised by the percentage of canopy cover, also calculated from LiDAR. When presented as forest maps, the information is very detailed (the results are at a scale of 10 x 10 m²) and provide a greater understanding of the differing dynamics and characteristics within woodland areas.

For more information contact [Juan Suárez](#).



Advances in estimating forest production

Did you know that Britain's forests contain an estimated 336 million cubic metres of coniferous timber or that forests managed by the Forestry Commission contain just over one-third of this volume, at 125 million cubic metres, while forests in private and other forms of ownership contain about 211 million cubic metres? These are just some facts contained within the *Standing Timber Volume for Coniferous Trees in Britain* report, published recently by the Forestry Commission.

Forest Research's multidisciplinary work underpins this report, involving specialist biometricians, statisticians, forest surveyors, climate change and timber property scientists, who have all worked to develop and deliver a new Forecast System. The new system uses the National Forest Inventory dataset generated from field surveys. These estimates are then 'bulked up' to produce an output on GB and country scales for the private sector. For the first time, standard errors have been calculated to indicate confidence in the estimates. Another new feature of the forecast system

is that it can produce estimates of biomass and carbon. For Sitka spruce, one of the most important commercial species in forestry, it also provides a report of the felled volume divided into stem straightness categories – this data is hugely significant for the timber processing industries as it shows what volumes of timber are expected for different product types and their respective markets.

The accurate quantification of UK forests is an essential part of planning for a range of interests, including industry development, biodiversity and climate change. Further reports to be published later this year will explore the implications of these figures with particular reference to potential timber availability and carbon sequestration. The report can be downloaded from www.forestry.gov.uk/inventory



Research students investigate timber quality

Timber quality is an issue of considerable commercial importance to the construction sector. Building on a well-established history of timber quality research and expertise, Forest Research has recently taken the opportunity to support further work in this area while at the same time encouraging new scientists of the future.

Greg Searles, a student at Edinburgh Napier University's Forest Products Research Institute (FPRI) has been awarded a PhD on 'Acoustic segregation and structural timber production'. This work, funded by the Scottish Forestry Trust, investigated ways of increasing yields of Sitka spruce structural timber through the segregation of raw material by acoustic techniques and the implementation of alternative sawmill cutting patterns.

Tom Drewett started working with Forest Research as part of his Masters degree, assessing the growth and timber quality of Douglas fir. Now, with additional funding from the Forestry Commission, and as part of an ongoing partnership with Forest Research, his work has been extended into a PhD. While originally focusing his research on stands growing in Scotland, Tom will now be widening his work to include two forest sites in Wales. He will be comparing the timber properties of Douglas fir from these different locations with data from samples from the south-west of England gathered in a project at the University of Bath. By comparing timber from forests across the length and breadth of the country, Tom will investigate if climatic conditions, such as accumulated temperature and moisture deficit, have a discernable impact on the wood properties and growth of Douglas fir.



(Cont.)

Research students investigate timber quality (cont.)

James Ramsay is investigating the timber quality of larch in a PhD project funded by FPRI, Forestry Commission Scotland and Forest Research. His research evaluating the timber quality of plantation larch aims to help improve the use of this widely used, and commercially important, species. One focus of this work will be the dimensional stability of sawn larch timber during the drying process, a known limitation with this species. Both James and Tom are expected to complete their research by the end of 2012.

FPRI Assistant Director Alastair Stupart commented “The level of external support for these three pieces of research has been tremendous, and we are grateful for the assistance and involvement of the sawmilling industry. We look forward to the research being completed and the results and significance being disseminated widely in the research and forest industry communities”.

For more detail on any of these projects contact

Elsbeth Macdonald.

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Forest Research's chemical analysis laboratory shows its quality

Recent results from inter-laboratory comparison exercises run across Europe show the excellence of analyses generated by the chemical analysis laboratory at Forest Research (FR). As part of the European Monitoring and Evaluation Programme (EMEP), the laboratory is one of sixty-one laboratories from thirty-three countries that annually process and analyse samples. Results are compared so that laboratories with very different results can improve their quality control procedures. The FR laboratory's results in the last exercise were excellent, achieving the highest level of accuracy in 82% of the tests. Very similar results were obtained in a recent inter-laboratory test of foliar analyses in which sixty European laboratories took part.

For further information on the analyses offered by the laboratories at Forest Research, go to www.forestry.gov.uk/fr/INFD-5V2D9C or email [François Bochereau](mailto:Francois.Bochereau@forestry.gov.uk).



Specialist chemical analysis equipment.

New publications

Forest Research's Social and Economic Research Group were asked to undertake rapid evidence reviews for the Independent Panel on Forestry that was set up in March 2011 to advise government on the future direction of forestry and woodland policy in England. These major pieces of research work have now been published online.

○ *Public access to woodlands and forests*

Star Molteno, Jake Morris and Liz O'Brien

A review of existing literature on public access carried out by Forest Research.

www.defra.gov.uk/forestrypanel/files/Public-Access-RER1.pdf

○ *Community forest governance: a rapid evidence review*

Anna Lawrence and Star Molteno

A review of existing literature and research evidence on the range of existing community engagement, governance and ownership arrangements for managing forests in England, and more widely carried out by Forest Research.

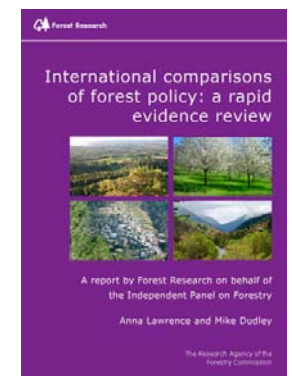
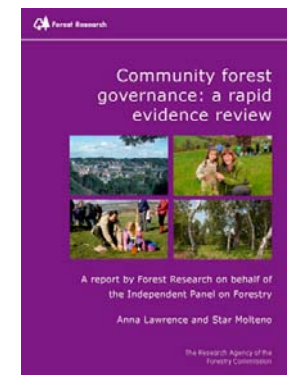
www.defra.gov.uk/forestrypanel/files/Community-forest-governance-RER.pdf

○ *International comparisons of forest policy*

Anna Lawrence and Mike Dudley

A review of forest policy and instruments in five countries carried out by Forest Research.

www.defra.gov.uk/forestrypanel/files/International-policy-RER.pdf



(Cont.)

New publications (cont.)

The Social and Economic Research Group's online Research Summaries are brief notes (two pages) on recent and current research work and are only published online:

The impact of legislation on collaborative management: the case of wild deer

which looks in particular at the historical changes in deer legislation.

[www.forestry.gov.uk/pdf/SERG_Legislation_wild_deer_research_summary.pdf/\\$FILE/SERG_Legislation_wild_deer_research_summary.pdf](http://www.forestry.gov.uk/pdf/SERG_Legislation_wild_deer_research_summary.pdf/$FILE/SERG_Legislation_wild_deer_research_summary.pdf)

Key ingredients of collaborative management

which takes deer management as a case study.

[www.forestry.gov.uk/pdf/SERG_Collaborative_deer_management.pdf/\\$FILE/SERG_Collaborative_deer_management.pdf](http://www.forestry.gov.uk/pdf/SERG_Collaborative_deer_management.pdf/$FILE/SERG_Collaborative_deer_management.pdf)

Future research requirements for forestry in England

Conclusions from a workshop organised by Forest Research to identify the strengths and opportunities of the current research programmes and make recommendations for future research priorities.

www.defra.gov.uk/forestrypanel/files/Future-Research-Requirements-for-Forestry-in-England.pdf

The FC Field Guide: The identification of soils for forest management

by Fiona Kennedy has recently been reprinted with an updated reading list. It is priced at £17.00, stock code FCFG001.

A full list of **FC publications** is available online.

Our other newsletters:

Our scientists carry out research into many different aspects of forestry and land use. Some of their work is highlighted in our more-specific newsletters:

Path News

The Pathology bulletin.

Latest issue covers:

- Summary of enquiries 2011-2012
- Biotic damage
- Abiotic damage
- Chestnut blight

www.forestry.gov.uk/fr/pathnews



Ecotype

The biodiversity and conservation newsletter from the Centre for Human and Ecological Sciences.

Latest issue covers:

- Giant Panda Conservation and Forest Landscape Restoration
- Participation of FR staff in EUFORGEN Phase IV
- A new woodland resilience indicator for FC England
- Climate change adaption - Assessing the implications of assisted migration of tree provenances on associated biodiversity
- Assessing grey squirrel movement with GPS technology
- News and conferences

www.forestry.gov.uk/fr/ecotype



Events

Full details of FR's events are available from the FR website: www.forestry.gov.uk/fr/events

Alternatively, an email service providing details of newly announced events and other events that are organised or sponsored by Forest Research, or where Forest Research is participating. If you would like to receive this e-newsletter, please send your contact details to: fr.events@forestry.gsi.gov.uk

28 August –1 September 2012

3rd European Congress of Conservation Biology 2012

Congress to explore the conservation of terrestrial, marine and coastal habitats in Europe.

Glasgow

Organised by: European Section of the Society for Conservation Biology.

6 September 2012

Continuous Cover Forestry Group (CCFG) annual Scottish site visit

View Continuous Cover systems and practices in Scottish forests.

Nairn

Organised by: CCFG, Forest Research and Forestry Commission Scotland.

8–11 October 2012

Managing forests for ecosystem services: can spruce forests show the way?

Conference examining how best to translate the concepts promulgated by the Millennium Ecosystem Assessment (MEA) and successor documents into strategic, tactical and operational management regimes that will help adapt forests to meet changes in climate and in societal demands.

The provisional programme for this IUFRO Conference is now available on the conference website www.forestry.gov.uk/fr/iufro2012.

Early Bird registration closes on June 29, so those wanting to take advantage of the booking discount are advised to fill in the registration forms (also on the conference website) as soon as possible.

Edinburgh

Organised by: Forest Research and IUFRO.

www.forestry.gov.uk/fr/infid-64eavk

8 November 2012

Forest Research - research update (Autumn 2012)

An update on selected research being performed by Forest Research.

Advance notice

Birnam, Dunkeld

Organised by: Forest Research.

What's new on our website

Research projects

Relationships between peri-urban woodlands and people's health and well-being

Research focusing on experiences in and perceptions of the physical environment; motivations for visiting woodlands, activities and benefits; social experiences in woodlands; and identifying what is special about trees and woodlands

www.forestry.gov.uk/fr/INFD-8RPCTE

Development of improved methods for detection, control and eradication of pine wood nematodes in support of EU Plant Health Policy (REPHRAME)

Research extending the capability of existing models to identify the risk posed by pine wood nematodes to the rest of Europe and the possible impact of climate change on its spread. This is a continuation of the previous EU PHRAME project.

www.forestry.gov.uk/fr/rephrame

Woodland structure and birds – effects of woodland management and deer browsing

Research that aims to investigate how habitat quality for woodland birds is affected by woodland management and deer browsing by undertaking a large-scale survey of lowland broadleaved woodland in the UK. This will be complemented by a reference survey of upland conifer woodlands where populations of the target bird species have remained more stable.

www.forestry.gov.uk/fr/woodlandbirds

Services

Dyfi Catchment and Woodland Research Platform

This new Research Platform supports the study of multi-functional landscapes at a catchment scale where the relative roles of biodiversity, geology, hydrology, geomorphology, soils, vegetation, climate and human activities can be examined in an integrated research and monitoring programme.

www.forestry.gov.uk/fr/dyficatchment

Woodland-related social enterprises: enabling factors and barriers to success

Examining the barriers and challenges facing different types and models of woodland-related social enterprise, and investigating the critical enabling factors affecting them.

www.forestry.gov.uk/fr/INFD-84JD86

Pests and diseases

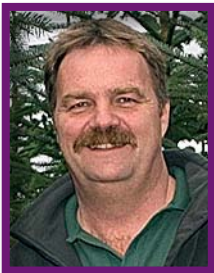
Two Spotted Oak Buprestid

Information on *Agrilus biguttatus*, one of the biotic factors that contributes to oak decline (this species of jewel beetle was formerly known as *Agrilus pannonicus*).

www.forestry.gov.uk/fr/INFD-7B3D3R

Contact details

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