

FR News

News from Forest Research, March 2010

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.



The science behind the National Assessment of Forestry's role in combating climate change

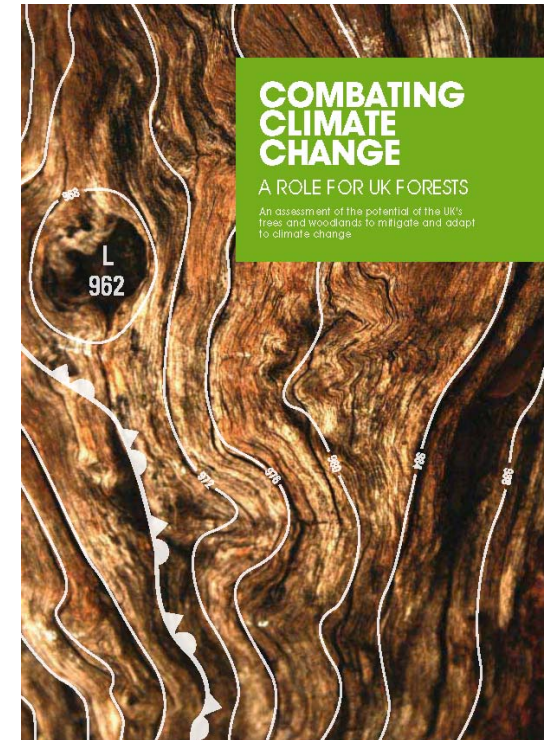
Forest Research has played an important role in writing and delivering the recently launched first National Assessment of Forestry and Climate Change, believed to be the first national study of its type.

The report, entitled *Combating Climate Change – A Role for UK Forests*, provides peer-reviewed information at the national level following on from the recommendations of the global evaluation provided by the Intergovernmental Panel on Climate Change (IPCC).

A panel of national and international authors and reviewers prepared the report, chaired by Professor Sir David Read, Professor of Plant Sciences at the University of Sheffield and Chair of the Advisory Committee on Forestry Research. The Rt. Hon Hilary Benn MP, Secretary of State for Environment, Food and Rural Affairs launched the report on 25 November.

A number of Forest Research scientists participated as steering group members, editors and authors, together with other leading independent scientists. Our research has contributed to a better understanding of climate change impacts, adaptation, and the role of UK forests in mitigation (including abatement of UK greenhouse gas emissions).

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The science behind the National Assessment of Forestry's role in combating climate change (cont.)

The Assessment also supports our increasing knowledge on biomass energy and forest products, the urban environment and socio-economics of forestry and climate change.

The Assessment provides an authoritative review of the current state of knowledge of the interactions between forests and the atmosphere, and the role of forestry in helping to mitigate climate change and adapt to the likely impacts. It is comprehensive, giving firm views on both future priorities for UK forestry and forestry research, and the priority for different actions by the UK forestry sector. The Assessment shows that if an extra four per cent of the UK's land were planted with new woodland over the next 40 years, it could lock up ten per cent of the nation's target CO₂ emissions by the 2050s.

In presenting the report Professor Sir David Read FRS, said: "All our research points to the fact that forestry can make a significant and cost-effective contribution to meeting the UK's challenging emissions reduction targets."

His key message was "Plant now and use sustainably."



Left to right: Professor Peter Freer-Smith (Forestry Commission Chief Scientist), Sir David Read, Dr Suzanne Martin (FR Research Liaison Officer for England).

Both the report and a summary document are published by The Stationery Office and are available at: www.tsoshop.co.uk
 Main report: ***Combating Climate Change – A Role for UK Forests*** (240pp, £30 hardcopy or free PDF; ISBN: 9780114973513)
 Summary document: ***Combating Climate Change – A Role for UK Forests: The Synthesis report*** (20pp, free; ISBN: 9780114973520)

Examining the benefits of green infrastructure

Forest Research (FR) has recently won a contract to examine the benefits of green infrastructure for the Department for Environment, Food and Rural Affairs (Defra). This research will build on a significant foundation of work that FR scientists have already carried out in this area.

Green infrastructure includes things such as allotments, cemeteries, golf courses, canals, city farms, community woodlands and gardens. Often these areas are neglected, but when planned and managed appropriately they can have widespread and profoundly positive impacts on society.

At present there is no clear, simply structured information to show planners and policy-makers how green infrastructure can help deliver local, regional and national policy objectives. Past studies have considered the benefits of green infrastructure one scientific discipline at a time, but few have brought the evidence on benefits together into a single place or examined the relationships between them in an integrated way.

“Green infrastructure touches on many different government policies, and the impacts of its management are influenced by many stakeholders,” explains Tony Hutchings, Head of Land Regeneration and Urban Greenspace at Forest Research. “However, implementation and delivery is predominantly through local planners and developers. This project will bring together sound scientific evidence and communicate it in a simple, clear and consistent way.”

The project will produce comprehensive evidence of the benefits and costs of green infrastructure, supporting decision making and highlighting cost-effective opportunities to achieve central and local government green infrastructure goals.



For more information contact [Tony Hutchings](#).

The carbon in this piece of wood is equivalent to...

'How much carbon is in a tree?' is a common question and not one that's easy to answer in a way most of us can relate to. Recent work by Forest Research sought not only to answer this, but to go one stage further by equating specific amounts of wood to everyday activities that use energy.

Based on Sitka spruce timber, the following comparisons show how much carbon we can store in wood to balance out the carbon emitted by energy usage:



A 5 cm x 5 cm x 5 cm block of wood contains the same amount of carbon as would be emitted by **boiling a kettle of water or driving a moped 1 km.**

One cubic metre of timber compares to **two return flights to the Mediterranean or driving an HGV from London to Edinburgh.**

Six cubic metres of timber (i.e. a timber-framed house) is equivalent to **driving an average petrol car for a year (11,000 miles).**

These examples show how forestry can help mitigate climate change by storing the same amount of carbon in trees as is emitted through energy usage. They also make it easier to visualise energy use and potential savings, such as only boiling as much water as you need or driving less. This work was recently presented to Members of Scottish Parliament at Holyrood in Edinburgh by Forestry Commission Scotland as part of their 'Forestry Matters' event.

Forestry Matters is published by Forestry Commission Scotland – for details, contact **Steve Penny**, Research Liaison Officer (Scotland).

Tim Randle

Eforwood – Sustainability of the European forestry–wood chain

This January saw the end of the largest forest science project ever funded by the European Union. Involving 38 partners from 21 countries, the Eforwood project aimed to assess the sustainability of the European forest-based sector and the impacts of various policy measures or technological developments.

The project analysed the sustainability of the forestry–wood chain by dividing it into six separate processes. Forest Research was involved with the first two – forest resources and their management, and harvesting and transport – while other partners tackled primary processing, secondary processing and production, and recycling. Information was collected on representative wood chains across Europe; prototype models were developed with stakeholders to simulate the forestry–wood chain at regional level, and various tools were combined to represent the entire European chain to create a system to evaluate future scenarios.

One major benefit is the improved understanding between European researchers working in different parts of the chain and to see, for example, how changes in the quality and quantity of raw material can affect the competitiveness of European forest industries in 10–20 years' time.

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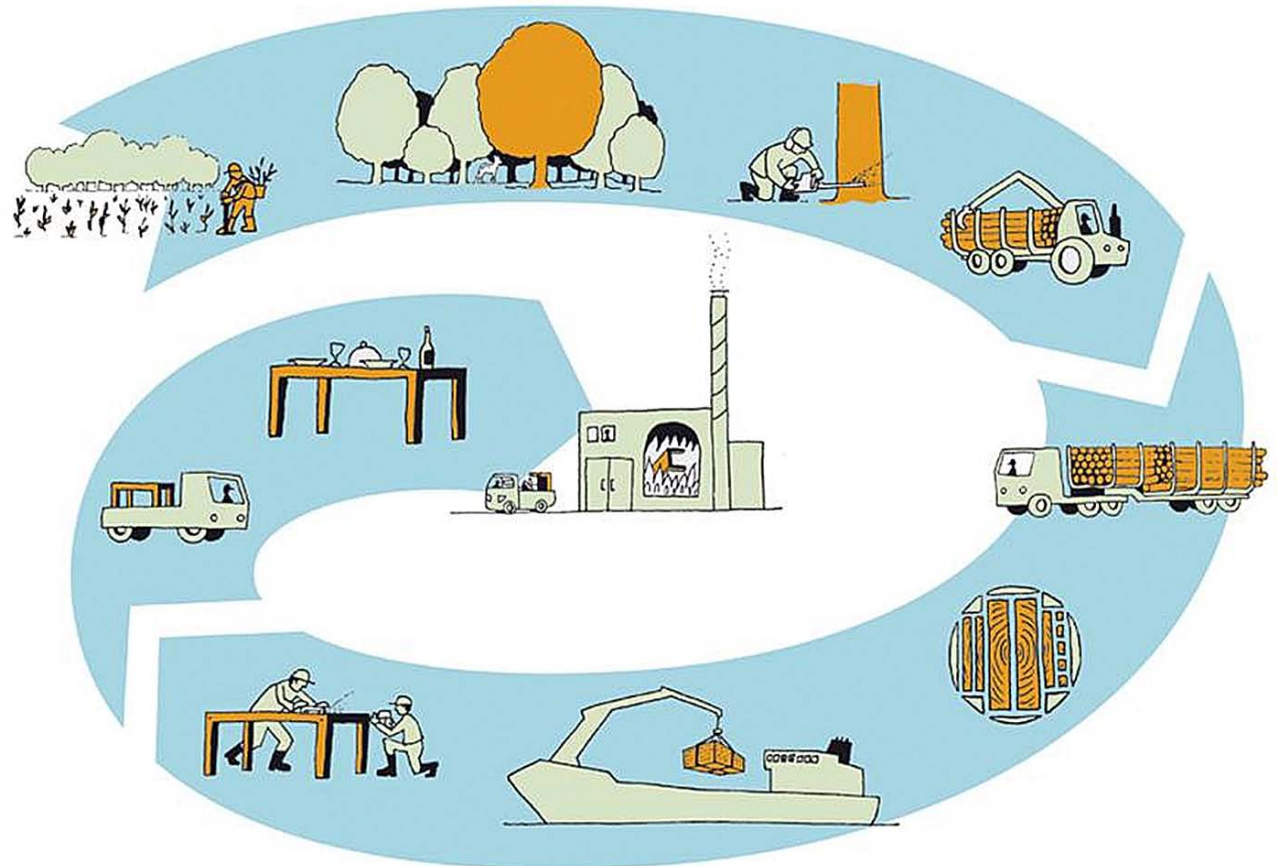


Eforwood – Sustainability of the European forestry–wood chain (cont.)

As part of our work we proposed a pan-European methodology for classifying different types of forest management. This can be linked to both recreational and biodiversity benefits accruing from forests, and was also used in the report *Combating Climate Change – A Role for UK Forests* to explore implications for carbon management. In addition, a risk analysis of the interaction between forest management and a range of abiotic and biotic threats has been carried out in a number of representative European forest types, including Sitka spruce and Scots pine in Britain. We have been able to explore the effects of different end-uses (e.g. woodfuel versus sawlog production) on various sustainability indicators such as employment and gross value added.

Among the lessons learnt is the need for better data on various aspects of the forestry–wood chain, one example being the lack of reliable costs for a range of forest operations, prices paid for timber and other products. This integrated approach to analysing the European chain has led to our involvement in three further projects looking at more detailed aspects of the chain (Motive: www.motive-project.net, NorTosia: www.northerntosia.org/portal and ForestClim: www.forestclim.eu).

Bill Mason



The forestry–wood chain

Conserving endangered conifers

Forest Research scientist Matt Parratt recently visited Vietnam to assist in a global conservation project aimed at saving five threatened conifer species. The species under threat include the recently discovered *Xanthocyparis vietnamensis* and *Cupressus tonkinensis*, located in the karst limestone mountains of north-eastern Vietnam.

During his visit to the Bat Dai Son Nature Reserve in Ha Giang Province, Matt gave a presentation on the propagation of rare and endangered conifers. He also visited nurseries and met with local communities involved in the project to discuss and advise on propagation problems and techniques.

On his return, Matt brought back some *Xanthocyparis vietnamensis* seeds to the UK for examination and germination. It is hoped that this research, along with the guidance provided during the trip, will lead to more successful propagation and re-introduction of the endangered species in the wild.

Funded by the Friends of Bedgebury Pinetum, Matt's trip in December 2009 was part of a project run by The Global Trees Campaign (under the charity Fauna and Flora International) and the Centre for Plant Conservation in Ha Noi, Vietnam.

Forest Research is contributing to a specialist advisory role offered by the Forestry Commission's National Pinetum at Bedgebury in England. Matt was able to provide expert knowledge on seed propagation based on FR's seed and seedling biology research, as well as experience gained at the National Pinetum of propagating rare and endangered conifers.



For more information contact [Chris Reynolds](#) or [Matt Parratt](#), or visit www.forestresearch.gov.uk/seedbiology

Events

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

Alternatively, a weekly email service provides 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

17 March 2010

Forest Research update seminar (Spring 2010)

An opportunity to update forestry colleagues in the industry on a number of current topics of interest to the practitioner, to share information and gain feedback. We include topics of practical relevance as well as topics that are current in the development and support of policy.

Northern Research Station, Roslin

www.forestresearch.gov.uk/fr/INFD-7YSBYF

31 March–1 April 2010

Climate, water and soil: science, policy and practice

Addressing our current understanding of the management of climate, water and soils in a rapidly changing economic and natural environment.

Edinburgh

www.forestresearch.gov.uk/fr/INFD-7NPCHD

13–15 April 2010

Trees and forests in British society

Conference to explore the demands that society places on forestry and the role it is expected to play.

Heriot-Watt University, Edinburgh

www.forestresearch.gov.uk/fr/INFD-7RXCBA

21 April 2010

Royal Forestry Society Tree Diseases Conference

Organised by the Royal Forestry Society (RFS), the Royal Agricultural Society of England (RASE), and in association with the Forestry Commission, the conference will discuss the challenges posed by tree diseases, in the context of conservation, economic and societal implications of epidemics and how we might tackle them. Forest Research scientists will be giving a number of presentations.

Stoneleigh Park, Warwickshire

www.forestresearch.gov.uk/fr/INFD-7ZQC8G

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Events (continued)

20–21 May 2010

Assessing the sustainability impacts of forest management in Northern Europe – a Scottish perspective

Exploring how impact assessment can be incorporated into regional and business planning in the forestry sector.

Macdonald Aviemore Highland Resort, Aviemore

www.forestresearch.gov.uk/fr/INFD-7YTJEC

13–16 September 2010

Future Landscape Ecology ialeuk 2010 Annual Conference

The conference will bring together scientists from many fields in landscape ecology (marine, freshwater and terrestrial) with policy makers, planners and practitioners interested in developing future landscapes that function for both biodiversity and people.

There will be a number of presentations from a variety of research fields, plus workshops and field trips, including the Knepp estate and one focusing on deforestation.

Brighton

www.iale.org.uk

English Forest Health Days

Forest Research is organising two Forest Health Days for England in 2010. One is to be held in the Midlands on 8 June at Wyre Forest, Worcestershire. The other will be 22 June at Grizedale Forest, Cumbria. At the events Forest Research pathologists and entomologists will provide an update on the latest information about tree pests and diseases. The format for the day will be a morning session of indoor presentations, followed by an afternoon outside where we will look at and discuss symptoms of pests and diseases.

Please contact **Suzanne Martin**, Research Liaison Officer (England) for further details.

What's new on our website

Forest management decision support systems (FORSYS)

EU COST Action FP0804 research project defining a European-wide framework with core processes and information standards for decision making in a sustainable multifunctional forest management environment.

www.forestresearch.gov.uk/fr/INFD-7YKJP5

Forest models for research and decision support in sustainable forest management

EU COST Action FP0603 research project promoting the development of methodologies to improve forest models to support the sustainable management of forests.

www.forestresearch.gov.uk/fr/INFD-7YMC6X

Green networks and people

Research project aiming to develop, test and disseminate new approaches to planning and delivering green networks in and around towns and cities that will deliver benefits to people and the environment.

www.forestresearch.gov.uk/fr/INFD-7YCHCS

Management of multifunctional forests (MULTIFOR)

EU-funded research project to understand the climate change responses, multifunctional value and adaptation capacity of forest ecosystems commonly found in the south of England and north-east of France.

www.forestresearch.gov.uk/multifor

MOTIVE – Managing multiple-objective forestry in a changing climate

EU-funded environmental research project addressing forest management and climate change aiming to provide insights, data and tools to improve policy making and adaptive forest resource management in the face of rapidly changing climatic and land-use conditions.

www.forestresearch.gov.uk/motive

Non-chemical protection against conifer root and butt rot

Expert support of chemical (urea) and biological (PG Suspension) stump treatment products and exploring alternative biological control agents for use on Sitka spruce.

www.forestresearch.gov.uk/fr/INFD-7YAJ3Y

Northern ToSIA (Tool for Sustainability Impact Assessment)

EU research project to assess the sustainability of forest-based activities in the Northern European region.

www.forestresearch.gov.uk/fr/INFD-82XHUD

Public Forest Estate: social study

Research project to understand people's perceptions and expectations of the Forestry Commission Public Forest Estate in England, and to compare these with those of woods and forests in other forms of ownership.

www.forestresearch.gov.uk/pfesocialstudy

REsource INFrastructure for monitoring and adapting European Atlantic FORests under Changing climatE (REINFFORCE)

EU research project to set up tools for monitoring climate change and its impact on the Atlantic coast and test the efficiency of adaptive measures.

www.forestresearch.gov.uk/fr/INFD-7YTC93

Slowing the Flow at Pickering

Project exploring a new approach to flood management by working with nature to try and store more water in the landscape and slow its passage downstream.

www.forestresearch.gov.uk/slowngtheflow