



Annual Report and Accounts 2009–2010



Forest Research

Annual Report and Accounts 2009–2010

Together with the Comptroller and Auditor General's Report on the Accounts

Presented to the House of Commons pursuant to Section 7
of The Government Resources and Accounts Act 2000

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Chief Executive's Introduction

This has been another busy year for Forest Research, with a number of notable firsts for the organisation. I would like to begin by congratulating Professor Peter Freer-Smith on becoming the first Chief Scientist for the Forestry Commission. This greatly strengthens our links with other government research bodies and provides a professional focus for our staff.

This year Forest Research (FR) also launched its first spin-out company, C-Cure Solutions Ltd, in partnership with the University of Surrey. C-Cure Solutions Ltd will offer new charcoal-based methods of land remediation, which are more effective than the methods currently used. I am very pleased to see that our Public Sector Research Exploitation funding, used to improve our commercialisation skills, is now helping us launch such businesses and develop other opportunities. This funding has also enabled our Business and Innovation Team to arrange a number of courses on commercialising technology in conjunction with HM Treasury and the Environment Agency, and these have been very well received by all of those who have participated to date.

We are, as ever, grateful for the ongoing support and cooperation of our partners and collaborators both in the UK and further afield. These include the Forestry Commission, central government, the devolved administrations in Wales, Scotland and Northern Ireland, the wider public sector, universities, research institutes, environmental non-governmental organisations (NGOs), the private sector and the Commission of the European Union.



I would particularly like to express our sincere thanks to the members of our Advisory Committee on Forestry Research for their sage advice and independent assessment of the quality and relevance of the science we undertake. I would also like to thank the members of FR's Audit and Risk Committee for their hard work and commitment in advising on financial-management risk control and governance and the members of our Intellectual Property (IP) Steering Group for their ongoing help in protecting and commercialising our knowledge.

Perhaps the most important scientific achievement of the year was the contribution our staff made to what is now widely referred to as the Read report, *Combating climate change – a role for UK forests: An assessment of the potential of the UK's trees and woodlands to mitigate and adapt to climate change*. The review was led by Professor Sir David Read from Sheffield University and it brought together experts from across the UK on the subject of climate change and forestry. Our staff played a key role in the preparation and delivery of the report, which was launched by the Minister for State, Hilary Benn last November. Forest Research also helped to supply background information for the UK

negotiators at the climate-change talks in Copenhagen, and one of our experts, Robert Matthews, accompanied the Department of Energy and Climate Change (DECC) negotiating team in Copenhagen.

The research undertaken by FR underpins the UK Forestry Standard and the guidelines that support it, and our work is pivotal in determining the standards that define sustainable forestry. Forestry is a long-term business and thus has the potential to make a significant and cost-effective contribution to adaptation to and mitigation of climate change. Forest Research has been actively undertaking research into the role of forestry in reducing impacts, and thus informing policy makers and growers on sensible risk-reduction strategies that will create resilient forests and woodlands for the future. Our research is directly supporting policy development and practical guidance across the UK, for example, on species choice and management including soil management. We also provided advice on stump harvesting to minimise soil damage and maximise soil-carbon stocks, and our research underpinned the Land Use and Climate Change Report that went to the Welsh Assembly Government.

While we are rightly placing much emphasis on future-proofing our forests and woodlands, the protection of what we already have is an increasing priority. Forest Research, in conjunction with private-sector growers, environmental NGOs, arboriculturalists, scientific colleagues in the devolved administrations and the Department for Environment Food and Rural Affairs (Defra), is working on a range of forest pests, from *Phytophthora* to red band needle blight, oak processionary moth and acute oak decline. This apparent increase in biosecurity problems may be linked in part to a changing climate, but is almost certainly a function of the international plant trade.

Our use of the latest genetic sequencing technology has unravelled the genome of the bacterium that causes horse chestnut bleeding canker, and Dr Sandra Denman and her team are at the forefront of research into acute oak decline, having identified those bacterial agents that have a key role. This is particularly exciting since one species, which has been obtained consistently from affected trees, is new to science. Forest Research also plays a key role in the new GB Biosecurity Programme Board and our tree-health experts are involved with supporting this group as they try to deal

with the new and emerging threats to British Forestry such as pine tree lappet moth. I foresee that this is an area that will be of increasing concern for some time to come.

We are also working more closely with Defra and have a number of projects funded by them. This includes a project involving our hydrologists looking at a new approach to flood management by working with natural processes to slow the flow of water and thus reduce the risk of flooding in Pickering. Another example is our work on urban greening and our team has been awarded Defra funding to collate information on the benefits, costs and current status of green infrastructure. This will build upon a significant amount of foundation work that FR has already undertaken in this area.

We already have strong links with the devolved administrations as research providers and through staff secondments. For example, I am very pleased that one of our staff, Stefania Pizzirani, is currently on a part-time secondment to the Scottish Government's Renewable Strategy and Onshore Renewables Team. Our presence in Wales has also been strengthened by our new Head of Forest Research in Wales, Dr Hugh Evans, who is actively working with a range of partners to realise our ambition for a research forest as part of a wider landscape-scale research capability.

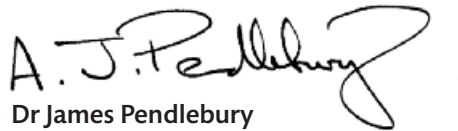
One of the best indicators of a scientific institute's standing and quality is who wants to work with it. The fact that we have strong international links, and are particularly active in Europe, is a testament to the quality of our staff and their work. Forest Research is a member of the European Forest Institute (EFI) Atlantic Regional Centre and our staff are active within the International Union of Forest Research Organisations (IUFRO). We are involved with 12 large-scale European-funded projects and four bilateral international projects; a list of these and our other GB projects is included in this report. The lengthening list of external projects is not only a testament to our expertise; these contracts are also a vital source of additional income for the organisation. I am particularly pleased that, despite the difficult general financial situation, we increased our external income by over £400,000 compared to 2008–09 and significantly reduced our deficit. I would like to thank all FR's staff for the efforts they have made in this regard over the past year.

Communicating our research continues to be important to us and we serve a wide range of audiences. I would particularly like to congratulate Bruce Nicol and Alexis Achim (who used to work for FR), for winning the *Forestry Journal's* annual Silviculture prize for the best article in the journal. A full list of publications and major events that FR has organised, or been part of, is included in this report, demonstrating our commitment to ensuring that our science is both of the highest quality and of practical use to the industry.

As an organisation we are also committed to the health and well-being of our staff and to investing in their skills. To this end we have invested a considerable amount of time and effort in management training over the past year for staff at all levels, and will continue to do so over the coming few years. In addition, as a means of reducing the risk of serious accidents, we recently conducted a review

of staff certified to use chainsaws on a regular or occasional basis in order to reduce the number and to ensure that those who continue to use chainsaws have regular refresher/update training, work to industry best practice and maintain their levels of competence. It was very encouraging to see from an internal organisational survey that our staff recognise that FR takes health and safety seriously.

This report shows that FR staff have been extremely productive and successful over the past year across a wide array of scientific disciplines. We look forward to similar success in the year ahead.


Dr James Pendlebury
Chief Executive



FR Corporate Plan Key Performance Indicators – Progress Report

Key Performance Indicator (KPI)	Commentary
<p>1. FR will restructure to operate as three new research centres entitled the Centre for Forestry and Climate Change, the Centre for Forest Resources and Management and the Centre for Human and Ecological Sciences. FR will establish and develop a profile for each centre as part of its overall science and business development plans.</p>	<p>The three new Centres became officially operational on 2 April 2009 and a series of country-specific targeted launches were undertaken, such as the one held at Defra on 14 January 2010, which was attended and well received by nearly 60 members of staff from Defra, DECC and the Department for Business, Innovation and Skills (BIS).</p>
<p>2. During 2009–10, FR will develop new science and business plans. The latter are to be endorsed by the Forestry Commission Executive Board (FCEB) by 31 March 2010.</p>	<p>A draft science strategy was produced by the end of March 2010 and is being finalised for publication in the autumn. Investment plans were produced for both Alice Holt and the Northern Research Station. Work on revising the Framework Agreement between the Department and Agency is ongoing and, as this will affect how the business may run in future, a new business plan for the Agency may be delayed into early 2010–11.</p>
<p>3. During 2009–10, FR will complete the work to establish internal finance and project management systems in support of its new organisational structure. By 30 September 2009, FR's QA system will be fully integrated with its project management and will be extended by a review of data-management procedures.</p>	<p>The electronic time recording system (TRS) was finally implemented during the year and has run successfully for a number of months. A new business-planning platform was developed in conjunction with the TRS and is being implemented for the 2010–11 financial year. The review of data-management procedures has been completed and a number of actions identified. FR's fairly comprehensive QA system is in place as required.</p>
<p>4. During 2009–10, FR will participate in the FC corporate programmes, in particular Business Sustainability, Investors in People, and Equality and Diversity.</p>	<p>With the exception of staff on maternity or long-term sick leave, all staff have undergone diversity training. FR has also been actively involved in business sustainability planning and is one of the first parts of the FC due to be submitted for ISO 14001 accreditation in 2010–11.</p>
<p>5. FR will continue to improve its business processes and infrastructure in line with the key recommendations from the Efficiency and Delivery Review and produce a comprehensive investment strategy for the organisation by 31 March 2010.</p>	<p>FR has produced investment plans for both sites and has invested a considerable amount in repairing the Alice Holt science-block roof. FR also secured support from DECC's Low Carbon Technology Programme to install 185 photovoltaic panels on the Alice Holt science-block roof, which will generate a minimum of 24,056 kWh of renewable electricity per annum.</p>
<p>6. FR will meet its annual business plan and deliver its agreed outputs to customers.</p>	<p>FR delivered its agreed outputs to customers, increased its external income by over £400,000 compared to 2008–09 and significantly reduced its deficit below the target level agreed in its corporate plan.</p>

About Forest Research

Forest Research is the Forestry Commission's Research Agency and is the UK's foremost body for forest and tree related research.

Background

The overall objective of the Forestry Commission (FC) is to lead the development and promotion of sustainable forest management and to support its achievement internationally. Forest Research (FR) provides research, technical development, monitoring, surveying and advice to support this objective.

FR's Aim

To be a robust, market-relevant and flexible research organisation with a reputation for innovative applied science.

FR's Strategic Objectives

1. To provide robust science to inform the development and delivery of policies of the UK Government and devolved administrations.
2. To provide innovative applied research, development and monitoring services to UK and European forestry stakeholders.
3. To transfer research knowledge directly, or in partnership with others, to UK and international audiences.
4. To deliver research under the seven themes of the Forestry Commission's Science and Innovation Strategy for British Forestry 2010–13.

Research funding

Much of FR's work is funded by the FC with Corporate and Forestry Support acting as purchaser of research and other services in support of the forestry policies of the UK government and the devolved administrations of Scotland, Wales and Northern Ireland. In addition, FC England, Scotland and Wales purchase research, development and surveys specifically related to their respective forest estates.

FR has also been increasingly successful in securing funding from other government departments, the European Union, UK research councils, commercial organisations, private individuals and charities. Collaborative bids with other research providers and consortium funding have become increasingly important, placing emphasis on effective partnership working.

Activities

Research and development are essential components in delivery of the benefits of sustainable forestry in a multifunctional landscape. FR's research, surveys and related scientific services address the social, economic and environmental components of sustainability. There is a focus on providing knowledge and practical solutions based on high-quality science. Our projects provide understanding, policy advice and guidelines on the implementation of best practice (on issues such as forest hydrology, continuous cover forestry, timber quality, land reclamation and the restoration of native woodlands). Much of the research is directed at increasing the many benefits of woodlands. The protection of woodlands from pests and diseases, and predicting the impacts of environmental change are also overarching themes. FR works closely with the FC, the Commission of the European Communities and other international bodies to ensure compliance with international agreements on the sustainable management of forests and the consideration of social and economic issues. The Agency also carries out work on genetic conservation, tree improvement, seed testing, method studies, product evaluation, crop inventory, surveys and monitoring.

Resources

FR currently employs 250 (full-time equivalent) staff at Alice Holt Lodge in Hampshire, the Northern Research Station near Edinburgh, the FC Wales National Office in Aberystwyth and at field stations across England, Scotland and Wales. Contact information is given on the back cover. FR has published a Corporate Plan for the period 2010–11 and copies are available to download from www.forestry.gov.uk/fr/corporateplans

Advisory Committee on Forestry Research

Chairman

PROFESSOR SIR DAVID J. READ, FRS

Professor of Plant Sciences, University of Sheffield and formerly Biological Secretary and Vice-President Royal Society

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Director OPENSpace Research Centre and Research Professor of Landscape Architecture Edinburgh College of Art/ Heriot-Watt University

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Consultant in the field of novel crop management solutions Farnham, Surrey

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Chief Executive, Forest Research

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School of Environment, Natural Resources and Geography Bangor University

Secretary

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Chief Scientist Forest Research

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Emeritus Professor of Forestry and Natural Resources Institute of Atmospheric and Environmental Sciences School of GeoSciences University of Edinburgh

MRS W. HARPER

Forestry Commission Secretary to The Forestry Commissioners and Head of Corporate and Forestry Support

DR K. J. KIRBY

Forestry and Woodland Officer Natural England Peterborough

PROFESSOR C. A. GILLIGAN

Professor of Mathematical Biology and Fellow King's College Department of Plant Sciences University of Cambridge

The Advisory Committee provides guidance for the Agency and the Forestry Commission on the quality and direction of FR's research. The Committee also supports FR staff, by alerting us to new opportunities and by networking to raise FR's profile. Meetings allow Committee members to keep up-to-date with FR's work; focus is usually on those research programmes to which Visiting Groups have been appointed in the year.

The Advisory Committee met in June 2009 at Alice Holt Lodge to provide advice on FR's new organisational structure and on the ongoing review of the Forestry Commission's Science and Innovation Strategy. This Strategy has subsequently been completed, agreed by Forestry Ministers and published. The Committee considered the feedback from its foresighting event held in November 2008 and discussed the key strategic issues

facing FR. In addition to Committee business, Professor Read, Professor Jarvis and Dr Kirby made substantial inputs to the first national UK assessment of forestry and climate change which was published by The Stationery Office in November 2009 (entitled *Combating Climate Change, A role for UK Forests*, available from www.tsoshop.co.uk). Professor Read chaired the climate change review and continues to chair the Advisory Committee. This was the last year of the current Committee membership and departing Committee members have been closely involved in FR's development over the past five years or more. The FC and FR are very grateful to Committee members for their time and wide range of contributions. During 2010-11 a new Committee will be established with similar terms of reference.