Forestry and Wood Update

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# Three new COFORD publications launched

On 15 April 2004, David Nevins, Chairman COFORD, launched three new COFORD publications:

* *Opportunities for biodiversity enhancement in plantation forests*. Proceedings of the COFORD seminar held on 24 October 2002, Cork - Edited by Lauren MacLennan
* *The improvement of Irish birch. Phase I: Selection of individuals and populations* - Niamh O'Dowd
* *Managing our broadleaf resource to produce* Joe O’Carroll (COFORD) with Prof. Paul Giller (UCC) and Prof. John O’Halloran (UCC) at the launch of the biodiversity seminar proceedings. *quality hardwood timber*. Proceedings of the COFORD seminar, 10-11 October 2002, Carrick-on-Shannon - Edited by John Fennessy and Lauren MacLennan

The publications can be obtained from COFORD (tel: 01 716 7700; email: info@coford.ie) at a cost of €8 for *Opportunities for biodiversity enhancement in plantation forests*; €6 for *The improvement of Irish birch. Phase I: Selection of individuals and populations;* and €5 for *Managing our broadleaf resource to produce quality hardwood timber,* (plus postage)*.*

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# New wood energy website in preparation

Given the growing interest in wood energy and a huge increase in the number of calls on this subject being dealt with by COFORD, we have decided to create a dedicated website on the subject. Designing has started and the site will go live very soon. Details about the launch date will be given in the next newsletter. The site will be hosted at [www.woodenergy.ie](http://www.woodenergy.ie), with a link from the COFORD homepage.

The site will cover items such as resource inventory, combustion technologies, a unit conversion calculator, support measures, international updates, wood energy case studies, supplier lists and a wood biomass brokerage area to bring suppliers and users together.

If you have any suggestions on other issues that we should address or features that we should add, please drop an email to info@coford.ie with ‘woodenergy.ie’ in the subject field.

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# COFORD to develop a hardwood sales system

At the recent COFORD event in Co Cork on *Managing our Broadleaf Resource to Produce Quality Hardwood Timber*, Joe O’Carroll, Operations Manager with COFORD, outlined a draft hardwood sales system which we propose to introduce in the autumn. The proposal will involve a quarterly catalogue of hardwood timber lots and listings of qualified service providers such as foresters (for sales preparation and mensuration) and harvesting contractors. To ensure the information provided is in a consistent and accurate format, COFORD will produce a guidance note for all potential sellers of hardwood.

We would like to hear from those of you who have views on this matter and/or suggestions on how this service could be optimised. Please email your comments to info@coford.ie with ‘hardwood sales’ in the subject field.

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# Wood Energy 2004

COFORD will join forces with the Renewable Energy Information Office of Sustainable Energy Ireland once again this autumn to bring you Wood Energy 2004. This will be the third annual conference in this series and will be held in the Rochestown Park Hotel, Cork, on 7 and 8 October. The agenda is being finalised at present and the topics to be covered include:

* Production, distribution and storage of wood pellets;
* Biomass drying technology;
* Heat contracting models;
* Energy service companies;
* Fuel standardisation;
* Combined heat and power;
* Wood chip production and supply chain.

The programme will include field visits to wood energy sites and a forest residue chipping demonstration.

More details will follow as they are finalised over the coming months.

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# CARBON CORNER

## Buying time – the main role for sinks?

Scientific and policy opinion are at one that the only realistic way to stabilise the levels of greenhouse gases in the atmosphere is to control and reduce the level of emissions. The Kyoto Protocol is a first, modest step in that direction. However, to significantly impact on greenhouse gases levels, reductions far in excess of Kyoto’s 5% (based on 1990 emissions) are needed, and will be a key element of negotiations on the post Kyoto climate package.

While emissions from fossil fuel account for 75% of the estimated current annual global emissions of 7,900 million tonnes of carbon, the balance comes from terrestrial sources, mainly from tropical deforestation. In fact, in the period before the 1940s the main source of greenhouse gas emissions was deforestation and associated land use change. And there is no doubt that deforestation continues to be a major challenge. Latest estimates, based on satellite imagery, show an increase in the rate of clearance of the Amazonian rainforest, with some 25,000 square kilometres destroyed in 2003 (about 30% of the area of the island of Ireland). Clearance for cattle production is now the main cause of destruction. Such patterns of course merely repeat what happened in Europe during the millennium or so leading up to the 20th century. As a consequence of all these practices the terrestrial carbon store is now well below capacity. The potential increase in the store could be close to some 180,000 million tonnes of carbon, based on the estimates of Intergovernmental Panel on Climate Change (IPCC). Partial restoration of this store, and the consequent removal of carbon from the atmosphere, is the main scientific rationale behind the use of afforestation and other land use practices in the Kyoto Protocol.

It is almost certain, however, that the terrestrial carbon stock will never recover with a human population now well over 6 billion, almost 4 times the level in 1900. Agriculture will continue to expand to feed this ever-increasing population, and this will be the main driver of land use change over the next two to three decades. However, as we well know in Ireland, food production is in surplus in many parts of the world, mainly as a result of subsidies to agriculture. The EU is attempting to tackle this issue though the phasing out of production based subsidies, and of course forestry is one of the policies the EU is using to reduce surplus production.

A policy that makes sense in climate change terms therefore is to partly restore the terrestrial carbon store through measures such as afforestation, agricultural systems that reduce losses of soil carbon, and the use of biomass to substitute for fossil fuels. Economic, social and political constraints will undoubtedly limit the level of restoration of the sink that may occur. Recent estimates put this at about 10%, or, in round figures, about 870 million tonnes carbon per year. Even this level is highly significant in climate change terms and under greatly expanded levels of global afforestation, improved use of existing forest resources, ecosystem restoration and changes in agricultural practices it could be achieved. Over a period of 40 to 50 years this would enable the necessary technologies to develop, and reduction commitments to be put in place for them to significantly reduce emissions to a sustainable level. In effect sinks would enable the global community to buy time and introduce emission reductions in an economically feasible timeframe.

Over time sinks become saturated and lose their ability to store further carbon; under some climate change scenarios existing sinks will even begin to lose carbon. So clearly the only sustainable long-term way to tackle global warming is to reduce emissions. Unless this is the main policy focus the use of sinks will make little or no difference to global warming.

Carbon corner is grateful to Dr Pete Smith of the University of Aberdeen for the use of data, projections and hypotheses associated with this article.

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# The grey squirrel threat - time for action

*Dr Michael Carey, a forestry and management consultant, has written this article for the COFORD Newsletter. He is Chairman of the British and Irish Hardwoods Improvement Programme (BIHIP) Sycamore Group and can be contacted at* *careyml@eircom.net**.*

The protection of woodland in Europe, especially in Britain and Ireland, against the ravages of the grey squirrel, is far more serious than most will appreciate. Introduced into Ireland in 1911, the pest, frequently and rightly referred to as the wood rat, now represents a major threat to the government’s plans to increase the proportion of broadleaves in the afforestation programme. (An account of the grey squirrel in Ireland is given in COFORD Connects, Silviculture/Management No. 7 2003: *Controlling Grey Squirrel damage in Irish Broadleaved Woodlands –* available on the COFORD web site <http://www.coford.ie/reports/acrobat-pdfs/GreySquirrel.pdf>).

The grey squirrel has spread at a rate of about 3 km per annum since its introduction to Ireland and, besides displacing the native red squirrel, is now the cause of serious damage to sycamore, beech and oak, in particular in forest areas east of the Shannon. However, it is also damaging many other broadleaf and coniferous species. Many plantations are so badly damaged as to place a serious question mark over their future. The implications are serious for woodland owners and others who have invested in broadleaf plantations. What if nothing of commercial value will be left after some 20 years of carefully growing a broadleaf plantation? The pest is also known to cause serious damage to woodland biodiversity through preying on a wide range of birds’ nests both on the ground and in the tree canopy. In a nutshell, it undermines the whole concept of sustainable forest management.

Outside of Britain and Ireland, the only other country affected in Europe so far by the grey squirrel is Italy. The pest has a strong presence in the Turin area and is the cause of serious damage to broadleaf woodland and is spreading rapidly.

The European Squirrel Initiative (ESI) originated in London in 2002 at a meeting to discuss the havoc being caused by the grey squirrel in Britain. The meeting, attended by foresters, conservationists and landowners concerned by the damage being done to the environment by the grey squirrel, concluded that there was only one way to protect woodland and its wildlife: the total removal of the animal. Control methods developed over the last 50 years have failed to prevent the spread of the pest and are seriously limited in their potential to reduce damage to a tolerable level.

Because the pest is common to three EU nations it was realised that a European solution is needed to deal with the problem and in consequence the group assumed the name *European Squirrel Initiative*.

With the help of the European Landowners’ Association, the group arranged a meeting in Brussels at the end of March 2004. The speakers described the threat to European forests to a group of foresters, conservationists, landowners and officials. Ms Louise Huxley, a conservation advisor in Britain who has carried out a detailed review of the pest, and I showed the damaging consequences to forests and forest wildlife in the UK and Ireland caused by allowing the grey squirrel to establish itself. An Italian speaker outlined the problems being encountered in northern Italy with the pest and the difficulties in persuading the public on actions needed to bring about control and eradication.

The meeting, which was well attended by representatives of other EU countries, agreed that there is an urgent need to raise public awareness in relation to the threat presented by the pest. This is necessary before commencing any extensive eradication programmes. The first initiative has been the recent publication of an excellent “*Grey Squirrel Review*” which can now be assessed on the group’s website ([www.europeansquirrelinitiative.org](http://www.europeansquirrelinitiative.org)). Other initiatives are being planned, and the public and national and European politicians and other interest groups are being targeted as part of the overall awareness programme.

ESI became a company limited by guarantee last December and has since applied to the Charity Commission for registration. So far it is receiving funding from landowners, foresters, conservationists, families, individuals and Charitable trusts from all over the UK.

It is time that Ireland played its role in removing this pest from our midst. It is naïve, to say the least, for the country to continue to attempt to increase its level of broadleaf woodland without dealing effectively with the grey squirrel. We are dealing with what is essentially a rat epidemic in many of our woodlands which is causing havoc and spreading by the day. A serious debate and a well thought-out action plan is required. Who will take the initiative?

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# New website for non-timber forest products

[www.forestharvest.org.uk](http://www.forestharvest.org.uk) is a new website which has been launched to provide information about the diversity of non-timber forest products (NTFPs) available from Scotland’s woodlands.

NTFPs are all materials supplied by forests, except timber, including wild and managed game, edible and medicinal plants and mushrooms, foliage, seeds, bark, resins, dyes and craft materials.

The site has been set up with funding from Scottish Enterprise through the Scottish Forest Industries Cluster by a group of organisations and individuals with an interest in developing the untapped market potential of these many products.

www.forestharvest.org.ukprovides easy-to-use access to information about the gathering, management and trading of NTFPs, including a database of buyers and case studies of operating businesses. Recognising the increasing number of initiatives and research projects related to NTFPs, the site also has a database of publications, as well as a directory of web links.

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# Space and forests

*Space and forests* is the title of a workshop on revitalising forest products with space technology to be held on 10 and 11 May 2004 at the Foresta Hotel and Conference Centre, Stockholm, Sweden.

The European Space Agency’s Technology Transfer and Promotion Office (ESA-TTPO) is responsible for transferring technologies developed for space activities to non-space sectors and applications. Commercialisation of the space technologies is a central objective, with an emphasis on improving every day life. In order to achieve its aims, the ESA-TTPO is holding a series of workshops in various sectors aimed at identifying the needs and requirements and major problems and issues faced by those sectors and then finding opportunities for adapting space technologies to help meet these needs. Space technologies may be unfamiliar to such industries and thus might be able to offer novel and innovative ideas or solutions.

The workshops anticipate establishing several project groups which will pursue further some of the challenges or problem areas identified. Projects initiated as a result of a workshop typically involve several partners from organisations throughout Europe, with funding from a variety of sources in addition to an ESA-TTPO contribution. The measure of success will be the implementation of elements of space technology to help solve real problems identified by experts in the various industrial sectors.

Workshops have already been held in the areas of offshore oil and gas platforms; mining and tunnelling; the Arctic and Alpine environments; textiles; and automotive engineering.

The forest industry covers a wide range, from sawmills and wood manufacturing industries, to pulp and paper industry. The technical level and production conditions also differ a lot.

The common denominator is wood as the raw material. Within this great variety, there are many opportunities to revitalise the timber processing and manufacturing industry in order to make its products more attractive, economic and appealing. New ways and designs must be sought which will bring innovations, quality and added value to forestry products (including engineered wood, paperboard etc) and it is believed that a marriage of traditional forest products with space-age materials and technologies might benefit the industry as a whole.

This workshop is intended to be a creative and intensive brainstorming session with the aim of generating project ideas where space technologies might provide effective solutions for the challenges identified in activities undertaken within the forest products industry, such as:

* What materials and fibres could be added to wood to make it lighter, stronger, more durable, or more capable of absorbing energy impacts?
* How can intelligence be incorporated into designs to make ‘smart’ wood, paper and board products?
* What technologies are needed to make the forestry manufacturing and production processes more sustainable, energy efficient and environmentally acceptable?
* What can new coatings coming from space offer wood, paper and board products?
* Are better sensors, instruments and software required for measuring timber geometry, properties and defects or for (remotely) monitoring humidity, temperature and moisture content of forest products?

The focus of the workshop is not so much on scientific research and investigation, but rather on coming up with features, designs and applications having a more practical and broader appeal where advanced technologies can play a role.

At the end of the workshop it is anticipated that a number of operational concepts or projects relating to an actual problem or requirement within the scope of improving forestry products or structures will have been defined and that partnership groups consisting of several companies will be established to work on conceptual solutions.

The topics of the workshop will include applications in the following areas, considered to cover the most important topics for discussion:

* DESIGN: What are consumers looking for from forest products? What innovative features can be designed into wooden furniture and other forest products to make them more desirable, attractive and sellable? How can forest products be made easier to use?
* BUILDING AND CONSTRUCTION:What are the problems relating to wood used in architecture, building and construction, e.g. floors, panelling, joists, roofing, frames, doors? What new technologies or materials could be employed to reinforce wood or enable timber to better withstand loads or fire or have increased functionality?
* NEW MATERIALS: How can forestry products be made, for example, lighter, stronger, tougher, more durable, more flexible, better protected, less combustible? Is there a need for new, less toxic paints and coatings for treating timber?
* SUSTAINABLE MANUFACTURING: Can improvements be made to the processes relating to the production or manufacture of forest products, recycling and reducing wastage, treatment of waste water (e.g. in pulp and paper industry), computerised sawmill operations, wood storage etc?

For further information, email h.persson@ytterborn-fuentes.com

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# The Forestry Woodchain

## Quantifying and forecasting quality from forest to end product

This event will take place from 28 to 30 September 2004 at the Heriot-Watt University, Edinburgh, Scotland.

Forestry in Europe is evolving a multi-purpose role in which concerns over the environment, biodiversity and the provision of amenity and recreational facilities match the more traditional requirements of timber production. As this policy evolves and the impact of diversifying management practice becomes apparent, the demand for forecasting and decision-support systems to inform the management of multi-purpose forests and its effects on the forestry woodchain also increases.

Knowledge of the quality of standing timber and its impacts on production, processing and design throughout the forestry woodchain are emerging issues of growing concern. If timber is not to lose its current market share, valued at €15–20 million for softwood materials in Europe alone, new and existing material must be to the correct specification standard and fit for purpose.

The wood processing industries therefore require detailed knowledge of product properties to compete with other materials.

The conference objectives are to bring together the latest international research throughout the forestry woodchain. Every stage in the woodchain will be explored, with the emphasis on quantifying and predicting quality.

The conference organising committee welcomes papers and posters on all subjects encompassing the forestry woodchain, with a particular focus on the following topics:

* Evaluating the quality of standing timber;
* Laboratory and industrial measurement of wood properties;
* Improved and innovative drying and processing techniques;
* Forecasting quality;
* Predicting the impact of climate change;
* New measurement technologies.

For further information, consult the websites forestrywoodchain@forestry.gsi.gov.uk and [www.forestry.gov.uk/forestrywoodchain](http://www.forestry.gov.uk/forestrywoodchain)

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# IEMA Ireland Regional

The Institute of Environmental Management and Assessment (IEMA) will be hosting the Ireland Regional Event on 4 May 2004 at the Great Southern Hotel, Eyre Square, Galway. The topic is *What you need to know about the EU Water Framework Directive.*

The Water Framework Directive (200/60/EC) sets a framework for comprehensive management of water resources in the European Community, within a common approach and with common objectives, principles and basic measures. It addresses inland surface waters, estuarine and coastal waters and groundwater. The fundamental objective of the Water Framework Directive is to maintain “high status” of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least “good status” in relation to all waters by 2015. Since 1977, Ireland has promoted a catchment-based national strategy to combat eutrophication of rivers and lakes and as such is some way down the road towards implementing this objective. This seminar aims to take a look at what has been done to date in implementing this directive, what lessons have been learned so far and what is still left to do.

For further information, email events@iema.net or consult the website [www.iema.net](http://www.iema.net)

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# Off-site Construction Conference 2004

## Greater profits through off-site construction

This conference will take place at the Leopardstown Pavillion, Sandyford, Dublin on 20 May 2004.

Off-site construction is a fast growing form of building in Ireland. Integrating the maximum degree of off-site construction into the design and building process can yield signification cost savings, which improving efficiency and quality. This seminar will provide information on how various forms of off-site construction can work for building projects, large and small, public and private sector. Using case studies, best practice projects, discussions and presentations from a panel of international experts, this conference will demonstrate how off-site construction can deliver across the board.

For further information, email cmcgahern@irishconstruction.com or visit [www.irishconstruction.com](http://www.irishconstruction.com)

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# Access to technical information online and e-Learning

*This article was provided by Charles Harper of the InnovaWood Secretariat*

The term e-Learning refers to the use of computer-based technologies to deliver a range of solutions that enhance knowledge. Often e-Learning is used in the context of acquiring knowledge through the Internet. There are three characteristic features of e-Learning:

1. it is networked and so may be easily kept updated, retrieved and distributed;
2. it is delivered to the end user via a computer using standard Internet technologies;
3. it goes beyond traditional training to include the delivery of information and the tools that assist in improving performance.

In many sectors, involvement with formal e-Learning tends to be work related and required by employers. Often the quality of the learning experience is rated higher for informal e-Learning, for example surfing the Internet, compared with formal methods. Many of the people who have participated in e-Learning expressed a need for learning support, such as access to a tutor or mentor.

Most providers and employers believe one of the main benefits of e-Learning is its accessibility. Providers see the benefit in reducing contact time with trainers and employers value e-Learning because it reduces time spent training away from work. One additional benefit of e-Learning is that the content may be structured into customized ‘chunks’ relevant to the learner’s needs, providing the right amount of training at a time.

Is it possible to learn as effectively through e-Learning as it is through traditional learning approaches? Does e-Learning have the potential to complement existing forms of learning in forestry - as a sector we need to find out more about the possibilities and then decide. Please click on this [link to a short questionnaire](http://www.coford.ie/newsletter/questionnaire.doc) about access to information and e-Learning. Please complete the questionnaire and return it to Charles Harper at InnovaWood (email: office @innovawood.com).

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