

COFORD Forestry and Wood Update

May, 2001 Volume 1 Issue 2

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### Thanks for the support

Issue One of Forestry and Wood Update was circulated on April 3rd. We have received numerous messages of support for this initiative. Thanks to all those who have taken the time to offer support, articles and suggestions. If anyone has items of news they would like us to include in later issues of this newsletter please email it to info@coford.ie. Further suggestions are always welcome.

Previous issues of the newsletter will be archived on our website and can either be downloaded, or viewed on screen.

### 2. www.coford.ie

COFORD have had a web presence for several years now and the latest update of our website has just been completed. The site can be accessed at <http://www.coford.ie/>.

New features include a vacancies section where all employment opportunities that arise out of COFORD funded projects will be advertised. <http://www.coford.ie/frames/vacancies.html>

The COFORD Irish Forestry Calendar lists forestry and wood related events in Ireland and abroad. It can be accessed at <http://www.coford.ie/frames/news.html>

All of our funding programmes are also described. All application documentation is downloadable from the site.

The site hosts information on all projects funded by COFORD since 1994, all seminars and workshops hosted and planned, contact details for all staff members and various other information.

### 3. Funding programmes – FINAL REMINDER

Funding is currently available for both applied and strategic research projects.

We are now calling for research and development proposals in the following areas:

Research programme – New Areas

1. Renewable energy and biomass
2. Non-wood forest products
3. Nursery research and development
4. Socio-economic aspects of forestry

Research programme – Second Call – Previously advertised but no contract awarded

1. Forest operations – Quantification and management of erosion and siltation *(co-funded with EPA)*
2. Tree Selection and Improvement – Broadleaves
3. Vegetation management

Desk Study Programme

Tenders are requested from suitably qualified individuals or organisations to conduct desk studies on a range of forestry and wood related topics. A full list of desk studies is available on our website ([www.coford.ie](http://www.coford.ie)), or from the address below.

The closing date for receipt of proposals in the areas outlined above is Tuesday May 11th, 2001 at 5:00 pm. Contracts will be awarded for research work as described in the project specifications and scoping documents. Interested parties should contact COFORD requesting the project specification and other relevant documentation by post, fax or email. Alternatively, all documents and applicant forms can be downloaded from our website.

Applied programme – Open Call

1. Communications and Information Technology
2. Mechanisation (Harvesting and Silviculture)
3. Product and Process Development

Our applied research programme is open for receipt of proposals, in any of these three areas, at any time from now to the end of 2006.

### 4. Research Projects

Under our new 2000-2006 programme we have already launched two major projects and are in negotiations with eight other projects teams.

*BIOFOREST (Co-funded with EPA)*

The first meeting has taken place of the project steering committee of this forest biodiversity project. Site selection is now taking place for the part of the project that looks at biodiversity at the various stages of the forest rotation. Stands of pure Sitka spruce, a conifer mixture and a broadleaf forest will be studied.

Further progress reports will be detailed in subsequent issues of this newsletter. A website is being developed and will be accessible at <http://www.coford.ie/frames/research.html> in the near future.

BOGFOR

The BOGFOR team recently advertised for a Project Manager and are in the process of recruiting this person. Once appointed the project manager will be busy making up for time lost due to restrictions put in place as a result of the Foot & Mouth Disease crisis. Fieldwork has been postponed as a result of these restrictions.

The BOGFOR project had been running successfully for several years before COFORD recently agreed to co-fund the current phase of the project with Bord na Móna and Coillte. The project first began in 1994 with a survey of afforested cutaway bog. This was funded by the Forest Service. The area was re-surveyed in 1997 and in 1998 a collaborative research programme was initiated and co-funded by the Forest Service, Bord na Móna and Coillte. The BOGFOR website can be accessed via the COFORD site at: <http://www.coford.ie/frames/research.html>

Other Projects

We are currently negotiating with project teams on eight additional projects. These projects relate to the following areas:

* Acidification;
* Eutrophication;
* Continuous cover forestry;
* Biological control of pine weevil;
* Broadleaved silviculture;
* Management options for low productivity forests on peatlands;
* Somatic embryogenesis;
* Carbon sequestration.

Further details of these projects will follow in later issues of this newsletter, following successful negotiations over the coming months.

### 5. Short-term Research Mission (STRM)

One of COFORD’s funding programme, STRM, is aimed at improved researcher training. This programme has been established by COFORD as part of its overall programme of forest research under the National Development Plan 2000-2006. It is aimed at research organisations and companies where academic or geographical isolation impedes research competence, capacity or performance. The primary objective of the programme is to allow researchers gain additional skills that will be used in forest research. Allied to this objective is the need to build on existing research networks and create new ones, in order to facilitate Irish participation in EU funded research and help in technology transfer and scientific interchange.

The applicant should be involved in research, preferably on a full-time basis. However, consideration will be given to those employed in, for example, companies where product or process research is a part of their work. Funding is not available for market research. The host institution(s) should be a recognised research organisation or company that has a demonstrable track record in research.

Reports on each mission funded by COFORD are available from our office. A list of previously funded missions is available at our website.

### 6. Publications

A full list of all of COFORD’s publication is available at <http://www.coford.ie/frames/bookshop.html>

 Recent additions include the *Forecast of Roundwood Production from the Forests of Ireland, 2001-2015* and *COFORD Connects* – a purpose made folder and practice notes series. These and other publications may be ordered online, or by calling the COFORD office at the number below.

Three further publications will be launched in May. These are detailed in the [Forthcoming Initiatives](#_11._Forthcoming_initiatives) section below.

### 7.. National Forest Inventory

One of our recent publications, *Forecast of Roundwood Production from the Forests of Ireland, 2001-2015* outlined the need for a National Forest Inventory. The present Forest Inventory and Planning System (FIPS) was developed by the Forest Service and gives locational data for all forest properties in Ireland. A Forest Classification System has categorised the forest estate into 21 species and age classes.

Even though this is a very thorough GIS-based system, its database does not include crop data, other than the classes referred to. A ground survey is needed to quantify the growing stock. This is a necessity for a number of reasons. Not only will it enable accurate production forecasting to allow for better strategic planning by the industry, it will also provide data for carbon reporting requirements.

Readers will be kept up to date on developments under this initiative over the coming months.

###  Carbon Corner

The Environmental Institute at UCD has recently completed a study co-funded by Coillte and COFORD. Entitled Carbon Credits in Ireland Issues and Potentials it sets out the issues involved in carbon trading and gives some projections of market prices if carbon trading ever becomes a reality. Prices are very tentative and cover a wide range from €1 to over € 80/tonne of CO2. COFORD will publish the study in the near future.

The government has established an interdepartmental climate change team under the leadership of the Department of the Environment and Local Government to oversee the implementation of the national climate change strategy. The Department of the Marine and Natural Resources (DMNR) has established a forestry climate change team of which COFORD is a member. The team’s work covers a number of areas: to monitor the achievement of forest sequestration targets set out in the National Climate Change Strategy, to coordinate data input to national and international change processes, to liaise with COFORD-funded and other national research on carbon on forestry related carbon sequestration and to advise the DMNR on economic aspects of carbon sequestration in forests. Members of the team will also be members of a number of sub-groups, which will report to the national climate change team. The team has just had its first meeting under the chairmanship of Diarmuid McAree, the Chief Forestry Inspector.

Meanwhile international developments continue with the recent publication of the new COP Presidency Paper (‘Pronk Paper’). The paper is available for download at the UNFCCC site <<http://www.unfccc.de/sessions/cop6_2/unfccc_np.html>>. Forest and other sinks are dealt with in paragraph 5, headed LULUCF (land use, land-use change and forestry). There are significant changes proposed in the paper on how sinks would feature in any agreement. There is a position that forest management activities since 1990 would be eligible for accounting – under article 3.4 - up to certain limits. If the EU were to agree to this it would bring state forests in Ireland more into the reckoning as far as carbon credits are concerned.

Also recently, and as all are aware, President Bush has made the announcement that the US will not ratify the Kyoto Protocol. Some of the background to the US decision and the likely consequences are set-out in an article in *The Economist* of the 7th of April. In the article the writer is disingenuous when dealing with some of the reasons for the failure of the talks at COP6 when he states that the ‘Europeans …as their blindly rigid approach [to sinks] in The Hague showed…’. This simply was not the case; in fact there was considerable movement in the European position in the final days of the COP.

It is very difficult to predict what will happen at the resumed COP6 in Bonn in July. An agreement could emerge that will allow parties to ratify without the US. The protocol enters into force and is legally binding when either 55% of the parties, or parities with 55% of base year greenhouse gas emissions, ratify it. Taken together the EU, Russia, Japan and the economies in transition have more than 55% of 1990 base year emissions – and if they all ratify the Protocol it will enter into force. There will be costs of achieving compliance and this may well deter Parties from ratifying. Nevertheless the EU is strongly committed to action on climate change and is proposing to ratify the Protocol next year.

### 9. COST

COST (Co-operation in Science and Technology) was established in 1971 by European Governments to encourage and foster co-operation in the areas of science and technology. Membership has now extended to 31 countries in Europe. Forests and Forestry Products is one of 16 domain areas within COST. During 1998 Forestry became the third largest domain within the COST process having about 10% of all COST Actions. Within the Forestry and Forest Products domain, COST co-ordinates research to the value of €60 million per annum.

The COST Technical Committee on Forests and Forestry Products was set up in 1990. The committee is chaired by Fergal Mulloy, former Director of COFORD. The committee has three other members from Ireland – Eugene Hendrick (Forestry), Jos Evertsen (Pulp and Paper) and Joe O’ Carroll (Wood Technology).

Over the coming issues of this newsletter we will update you on the COST actions which have an Irish involvement.

### 10. Fifth Framework Projects

A number of Irish researchers and organisations are also involved in projects funded through the Fifth EC Framework Programme for Research and Technological Development. We will update you on these projects in subsequent issues of this newsletter.

### 11. Water Quality Update

COFORD, through its Short Term Scientific Mission Programme, supported the recent attendance of Dr Norman Allott, Trinity College Dublin at a seminar organised by the EU life project *'Demonstration of Sustainable Forestry to protect water quality and aquatic biodiversity*' in Örby, Sweden. The project aims to demonstrate best management practices for the protection of water quality and aquatic biodiversity in forested watersheds. In both Scotland (Galloway) and Sweden (Götaland) demonstration areas are being prepared. They will cover the entire rotation and will include examples of ditching, road design, buffer zones, soil liming, final felling and stand tending. The Royal Swedish Academy of Agriculture and Forestry will publish the proceedings of the meeting. A report on Dr Allott’s mission is available from the COFORD office.

### 12. Pilot Study for the Improvement of Irish Birch

The aim of this COFORD-funded project was to identify superior phenotypes of birch and test them for productivity, form and phenology. To this end, three x 3 hectare field trials of selected material were planted in Spring 2001. Twenty-seven *Betula pubescens* (downy birch) and 16 *B. pendula* (silver birch) provenances were planted, representing 95 *B. pubescens* and 27 *B. pendula* families. Thirty-seven families from crosses between superior phenotypes of Irish *B. pubescens*, two *in vitro* produced clones and seven Scottish provenances [supplied by the UK Forestry Commission] were also included.

The experimental design is single tree plot within incomplete, randomised blocks. Spacing is 1.5 x 2.0 m. The two species were not planted intimately but as two adjacent areas on the site. Ten families, each represented by five individuals, have been included at the sites for demonstration purposes. A double guard row of birch reduces edge effect. The Tipperary North site is a moderately drained, moderately exposed, basic mineral soil. The Carlow site is a well-drained, moderately sheltered, acid mineral soil and the Offaly site is on a Bord na Mona cut-away peat.

### 13. Irish Birch Group

The Irish Birch Group has been formed to provide a focus for all birch-related work/ research activities in the Republic and North of

Ireland. In essence, this group will act as a forum for the exchange of information. It is intended to provide encouragement for interested parties and to enable better use of resources and will lead to opportunities for co-operation among those involved in the area.

There are many groups and individuals in Ireland involved with birch at many different levels. These activities span a range of activities including genetic research, selecting, testing, surveying, seed collecting, propagating, planting and management. Your experiences and contacts could be helpful to someone and you can benefit too by joining this group.

Interested parties should contact Dr. Niamh O’Dowd at nodowd@kinsealy.teagasc.ie

Tel: 01-8460644

### 14. The Potential Impact of Climate Change on Irish Forestry

Under the Environmental RTDI research programme, the Environmental Protection Agency (EPA) is currently funding a large research project co-ordinated by NUI Maynooth (Geography Dept.) into the potential impacts of climate change on various aspects of the Irish environment. Purser Tarleton Russell Ltd. have been contracted to carry out the forestry section of this project and this will take the form of a paper to be concluded in the summer of this year. Dr. Ken Byrne and Prof. Ted Farrell of the Forest Ecosystem Research Group (FERG) in UCD are assisting with this work which it is hoped will be published early in 2002. The last such review was carried out by Coillte Research & Development Division, almost 10 years ago. The long-term nature of forestry means that decisions made by foresters today have consequences 30 or 40 years later. With such time scales it is imperative that foresters have access to any available knowledge of potential climate or environmental change and their potential impacts on decisions such as species and provenance choice. Climate change may also have implications for the *Strategic Plan for the Development of Forestry in Ireland* and these will be highlighted by this research. Any queries or contributions to this research should be sent to Paddy Purser of Purser Tarleton Russell Ltd. at ptr@eircom.net.

### 15. Wood for Energy

Over the past five years COFORD has funded a number of projects and seminars on wood energy. Work by Pearse Buckley (published as *Survey of the Market Potential for Small Scale applications of Short Rotation Forestry for Energy in Ireland*) and Seamus Hoyne in collaboration with Adrian Thomas (to be published shortly as *Forest Residues: Harvesting, storage and fuel value*) has clearly identified wood energy, either grown in bespoke biomass crops, or from harvesting residues and thinnings as having a future in the supply of energy for heating and power generation in Ireland.

 On the global scale energy policy is an important national and international issue. When the European Commission published its 1997 White Paper: *Energy for the Future: Renewable Sources of Energy* it set out three principles of Community Energy Policy: competitiveness, environmental protection and security of supply. It set a target to double the contribution of renewable energy from 6 to 12 percent of total energy consumption within the Union by the year 2010. This policy is reflected at national level in the government’s Green Paper on Sustainable Energy, published by the Department of Public Enterprise. It proposes 500 MWe of additional renewable electricity generating capacity over the period by 2000-2005, mainly from wind. Even this target, while it represents a threefold increase on the existing target, is relatively modest, especially when one considers that Ireland has one of the lowest uses of renewable energy in the Union, at just 2%. Fossil fuels accounted for 88% of Ireland’s total primary energy requirement (TPER) in 1996, 75% of which was imported. It has been estimated in one of the COFORD seminar papers (Buckley, 1998 - *Forest Residues in Ireland – Harvesting, Logistics and Markets*, COFORD) that, if current trends continue, 93% of TPER would be imported by 2010. This is not a sustainable policy, as in many cases these fuels are sourced in politically and socially unstable regions. In contrast, in other EU countries, such as Austria, Finland and Sweden renewable energy accounts for more than 20% of total consumption and, in the Swedish case, half is derived from biomass. This enhanced and growing use of renewables is driven by a number of tax and other incentives, which vary from country to country. In Ireland and the UK the approach has been to allocate ‘a quota at governmental level, and via a competition-based mechanism, to ensure that this quota is filled through competition between different renewables suppliers’[[1]](#footnote-1). While this system has been reasonably successful in the UK and in some sectors here (notably wind) it has not resulted in a single biomass based energy generation plant, although there is a project currently under discussion with the Department of Public Enterprise. As pointed out work in previous COFORD-funded research (mainly by Buckley and Hoyne) has shown that there is a potential market for harvesting residues, grown biomass and small diameter thinnings in energy generation. There is a growing use in Scandinavia of small diameter thinnings for energy generation (*Forest Residues in Ireland – Harvesting, Logistics and Markets*, COFORD, 1998).

 One of the main environmental drivers for the use of renewables is compliance with the targets for greenhouse gas emissions set out in the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). The Irish strategy is set out in the National Greenhouse Gas Abatement Strategy. This envisages combined heat and power (CHP) contributing a fairly modest 0.25 Mt CO2 equivalent per year to the reduction in greenhouse gas emissions. While natural gas CHP will form the bulk of this reduction there is scope for the increased use of renewables. The strategy (p 33) foresees that “The cost of renewable energy compared with the cost of energy derived from fossil fuels will fall with the introduction of carbon/energy taxes and the emissions trading system, under both of which renewable energies would not suffer any price impact. The market for renewable energy is being improved further by the development of a market for ‘Green Electricity’ open to all purchasers of electricity, who will be able to purchase electricity which is produced using renewable forms of energy as its primary source”.

 One of the main aims of the forestry element of the CAP Rural Development Plan (2000-2006) is to promote “the maintenance of a viable rural community” (p 14 summary). Income from grants and premiums and from wood and other product sales are the main means to ensure that forestry will contribute towards this goal. The use of wood biomass for CHP generation has the potential to create additional markets for wood energy while at the same time stimulating additional employment in harvesting, haulage and energy generation. There are three main potential biomass sources: early thinnings, forest harvesting residues and grown biomass. There may also be potential to use untreated waste wood, and, in some circumstances, waste paper.

COFORD has identified wood energy as a priority R&D area and is now seeking proposals under its April 2001 call in this area. One of the key factors is the price that growers can command for wood fuels. It is estimated that at current productivity levels, and using available harvesting and transport technology, a price of at least 5.5 p/kWhe is necessary for CHP generation from biomass based renewables. Such a price would enable growers to obtain a delivered-in price of around £25/cubic metre (at 55% moisture content) for wood chips. Research and development will therefore be targeted at seeking lower costs of production and harvesting as well as examining costs in transport and marketing, in order to make renewables more competitive and improve returns to the grower. Further details on the call are available at the COFORD web site.

### 16. Forthcoming initiatives

COFORD are currently finalising three new publications that will be launched during May.

***Forest residues: Handling, storage and fuel value***

This publication describes a COFORD-funded project which sought to develop a method for the harvesting of forest residues left on the forest floor following harvesting. The project also looked at other important issues such as the handling, drying and storage of residue bundles. The authors of the publication are Seamus Hoyne and Adrian Thomas.

***Intensive monitoring of an oak woodland in western Ireland***

This report by Declan Little, Jill Boyle, Dermot Ryan and Ted Farrell details a number of monitoring programmes at Brackloon Wood, Westport, Co Mayo. It specifies the results of monitoring activities on vegetation, birds, mammals and soil fauna. The work was funded by COFORD and carried out by the Forest Ecosystem Research Group in UCD

***Carbon sequestration: Policy, science and economics – Proceedings of a COFORD seminar on Carbon Sequestration and Irish Forests.***

This publication presents the papers from the well-attended seminar hosted by COFORD in 2000.

Further details on these publications will follow in the next newsletter, following their official launching.

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1. Working Paper of the European Commission: Electricity from renewable energy sources and the

 internal electricity market (1999) http://europa.eu.int/en/comm/dg17/reselecen.pdf [↑](#footnote-ref-1)