



Edited by our new Communications Officer, Stephanie Hayes, this newsletter summarises the main activities of our unit and network, and includes an article about the management of carbon in planted forest soils.

Since the beginning of the year, alongside the current ongoing projects, [EFIATLANTIC](#) has also been very active in the domain of risk management. Since January, a new addition to our team, Margot Régolini - jointly employed by INRA and EFIATLANTIC - has been carrying out the modelisation and economical evaluation of the biotic risks in cultivated forests. The Nematode group is creating links with the [REPHRAME](#) project and the project on integrated forest risk management which was recently submitted to [INTERREG SUDOE](#) was one of the 21 projects (out of 319 proposals) to be selected to go forward to the second phase. Finally, our network is actively contributing to the writing of a feasibility study in order to set up a European risk management facility. The productive forests of the Atlantic region being subject to storms, fires, the nematode, insect pests and parasitic fungi, we would be able to contribute significantly to such a risk facility, thereby making good use of all the information and experience we possess and providing our partners with sound and practical information related to forest risk management.

Christophe Orazio, Head of Office, EFIATLANTIC

## EFI GENERAL NEWS

### IEFC/EFIATLANTIC Annual meeting, Furnas, São Miguel, Portugal. 2-3 May 2012

*This annual event was organised with the support of CMIF (Centro de Monitorização e Investigação das Furnas), which is responsible for setting up two of the three REINFFORCE arboreta in the Azores, the third one being set up by the Forest Service.*

Thirty attendees, representing more than half of the EFIATLANTIC network and [IEFC](#) members enjoyed the venue and the dynamism of the Scientific Advisory Group chairman, Ted Farrell, the IEFC President.

The first day was dedicated to launching the Nematode group and to identifying the first task that should be implemented by this group. This was followed by a meeting of the [REINFFORCE](#) management council, which asked for a prolongation of the project until the end of 2013, giving time to produce the missing seedlings requested for the arboreta.

On the second day, after a presentation of regional activities in forestry and research, the formal IEFC/EFIATLANTIC annual meeting took place. Following a welcome by Chairman Ted Farrell and an update of important changes within [EFI](#) given by Gert-Jan Nabuurs (Assistant Director of EFI), the meeting proceeded with presentations of ongoing and future activities, the budget and the EFIATLANTIC plan and its network.

Important outcomes of this meeting included the decision to create a group that will work on the EFIATLANTIC work plan update, having received a positive evaluation for the first 5 years; the conclusion that efforts to get someone working on forest profitability should be maintained; and that the next annual meeting will be held in conjunction with the [3rd ICPF plenary congress](#) (in Lisbon in May next year).

This meeting was also the opportunity to highlight the role of IEFC as a support network for EFIATLANTIC by channeling funds, maintaining close contact with the forest sector and small research units, and providing advisory group members with its board.

On the last day, the participants visited two of the REINFFORCE arboreta being established in the Azores.



## EVENTS SUPPORTED BY EFIATLANTIC

### 09-12/10/2012: [Genetics of Fagaceae Symposium](#).

Presenting new scientific findings in the area of genetics of Fagaceae and Nothofagaceae. Talence (Bordeaux, France).

19/10/2012: [EVOLTREE Annual Meeting](#). Satellite meeting of the [NovelTree Final Conference](#) in Vantaa (Helsinki, Finland).

### 16-21/05/2013: [3rd International Congress on Planted Forests](#).

Plenary meeting at Estoril (Portugal) preceded by scientific workshops in Bordeaux (France), Dublin (Ireland), Porto (Portugal), Bilbao (Spain) and Edinburgh (UK).



## Risto Päivinen comes to EFIATLANTIC, 25-28 June 2012

In June, Risto Päivinen, director of EFI, embarked on a European tour of EFI Regional Offices. The idea behind this professional road trip is for Risto to learn more about Regional Office activities, partnerships and working methods by meeting the teams, partners and stakeholders and visiting their related sites and establishments.

**Day 1, 25<sup>th</sup> June:** We have the pleasure of welcoming Risto to our offices on Monday afternoon. This is spent in a meeting with EFIATLANTIC head of office Christophe Orazio in order to discuss risk management within the unit and prepare the meetings of the days to come.

**Day 2, 26<sup>th</sup> June:** In the morning, Risto meets representatives of three regional organisational bodies in the "House of Agriculture and Forest" ([Maison de l'Agriculture et de la Forêt](#)) in Bordeaux in order to gain a deeper insight into Aquitaine forests, forestry and fire prevention: the [CRPF](#) (Aquitaine Regional Centre for Forest Owners), the [SSSO](#) (Union for Foresters in the South West of France), and the [ARDFCI](#) (Forest Fire Protection Federation). The opportunity is taken for Risto to sign the PIGMA consortium agreement to share regional data with other regional public organizations.

In the afternoon, Risto returns to the INRA Pierroton centre to have a discussion with Antoine Kremer (Coordinator of the network of excellence [EVOLTREE](#)) about EVOLTREE developments and possible synergies with EFI. This is followed by a visit to the nearby [FCBA](#) (Technological Institute for Forest, and supply of wood for construction and Furnishing), which focuses on improving the growth and quality of French cultivated forests.

**Day 3, 27<sup>th</sup> June:** Risto talks to each team member to find out more about their role within EFIATLANTIC. Then it's down to a [REINFFORCE](#) arboretum close to Mont-de-Marsan in the Landes; a visit hosted by the [Jacques et Françoise Lescouzères Foundation](#).

**Day 4, 28<sup>th</sup> June:** First, Risto goes to the [Navarre government](#) offices to talk with Fermín Olabe Velasco, in charge of forest administration. Then, moving on to Vitoria, Risto meets local Basque government donors and representatives from the provinces of Álava, Gipuzkoa and Biscay at the premises of the Basque Institute for Agricultural Research and Development, [NEIKER](#). He then receives a presentation from another historical EFIATLANTIC Basque partner, [HAZI](#) (formerly IKT; Basque Government Cooperation for the Food Sector and Rural Environment) and NEIKER. The day ends with a visit to another REINFFORCE arboretum located in the property of the regional forest service of Biscay (DFB) close to Bilbao. The arboretum is managed jointly by DFB and NEIKER and is under NEIKER scientific supervision.

**Day 5, 29<sup>th</sup> June:** The magnificent Barazar forests of diverse conifers and broadleaved trees planted in 1930 is the inspiring setting for the last morning's discussions with the representatives of the regional cluster associations [Habic](#) (Cluster Association of the Habitat, Wood, Office and Hospitality Sector) and [MIME](#) (Intersectoral Roundtable for Basque Wood) and the forest owner association, [USSE](#). In the afternoon, Risto heads back northwards in the direction of his next stop: the [EFICENT-OEF](#) office in Freiburg.



## INTERNATIONAL EVENTS

28-31/08/2012: [Second International Conference on Biodiversity in Forest Ecosystems and Landscapes](#) in Cork, Ireland.

4-5/10/2012: [Scientific Seminar in connection with the EFI Annual Conference in Istanbul, Turkey](#). This year the scientific seminar will concentrate on social dimensions of forests.

8-11/10/2012: [Managing forests for ecosystem services: can spruce forests show the way?](#) In Edinburgh, Scotland.

4/12/2012: [RoK-FOR Final Conference: Green Growth from Forests](#) in Brussels, Belgium.

## 3rd International Congress for Planted Forests, 16 - 21 May 2013

Five of the major Atlantic countries of Europe (France, Ireland, Portugal, Spain and the United Kingdom) have large areas of planted forests. They will join forces under the coordination of the European Forest Institute's Atlantic Regional Office (EFIATLANTIC), the Food and Agriculture Organization of the United Nations ([FAO](#)) and the Union for Foresters of Southern Europe ([USSE](#)) to organize this congress with potential support from EU and other countries with large estates of planted forests from around the globe.

Scientific satellite workshops will be organised with 'INRA, UCD, UCP, ISA, FR (16-17 May) in five cities on the Atlantic Arc (Bordeaux, Dublin, Porto, Bilbao and Edinburgh), each followed by a field excursion. The plenary meeting will then take place in Estoril (Portugal) on 20-21 May. The second call for papers will be made in October this year.

Abstracts can be submitted using the online tool on the [ICPF web pages](#).

You can find more information about the congress and download the first call [here](#).

## EFIATLANTIC PROJECT LIFE

### **COST FP0603 Final meeting, Pierroton (Bordeaux), France, 1-2 March 2012. *Forest models for research and decision support in sustainable forest management.***

The main objective of the COST FP0603 Action was to promote the development of methodologies for improving such forest growth models, in order to support and improve the sustainable management of forests. The Action aimed to enhance the quality and consistency of forest growth models, to simulate the responses of forests to alternative managerial and climate scenarios, and to demonstrate variations in regional concepts as they evolved. An additional benefit has also been the advancement of forest science in Europe.

With 90 attendees, 38 presentations and more than 20 posters, the final meeting, held at INRA in Pierroton near Bordeaux, targeted researchers and stakeholders. It gave an overview of the current state of knowledge regarding existing forest model types available on the European level and their use in supporting decision making in sustainable forest management. It highlighted the work done and results of the COST Action FP0603 and discussed them in the context of the world research on this topic.

Christophe Orazio took advantage of the occasion to remind everyone that the FOREMODEL database listing forest models is now available on the EFIATLANTIC [website](#) and that any modelers can add a description of his/her model online.

COST Action FP0603 entered into force on 25/04/2007 and ended on 11/12/2011.

The presentations from this conference can be consulted on the [COST website](#)



### **Aquitaine-Basque RoK-FOR Joint Activities**

#### **Innovative and Sustainable Wooden Architecture and Construction, Basque Country, Spain, 22-23 February 2012.**

*With a display of cross-border cooperation, the third RoK-FOR Conference aimed at supporting research-driven clusters and potential activities and challenges in the wood construction sector of the host region, Aquitaine-Basque Country.*

Focusing on wood as a resource-efficient and innovative building material, this international conference brought together experts and practitioners from the RoK-FOR regions and from related international projects. It was hosted by Mr. Jon Azkue, Basque Government Vice-minister of [Environment, Territorial Planning, Agriculture and Fisheries](#) and Mr. François Maïtia, [Aquitaine Regional Council](#), Vice-President, Europe and Cross-Border Cooperation.

The first day took place in Hondarriba and the theme was Cooperation Support for Innovation in the Forest Sector. It comprised a series of presentations, dealing largely with the objectives, cross-border cooperation activities, and future of RoK-FOR, as well as the financing of priority areas in the Aquitaine-Basque Country cross-border region. A panel discussion then took place on trans-boundary cooperation, highlighting viewpoints of forest owners, industries and R&D units. Parallel group sessions then further elaborated Joint Action activities in Aquitaine-Basque Country.



In Bilbao, on the second day, the focus was on Innovative and Sustainable Wood Architecture and Construction. This was a full day of presentations and discussions all related to wood for construction (e.g., carbon efficient wood construction, key properties of wood for construction, wood in architecture and public procurement and promotion of wood use) and to research in the area (the role of joint research agendas, process of building a European forest research agenda and action plan, Horizon 2020).

**RoK-FOR at FOREXPO 2012, Mimizan, France, 8<sup>th</sup> June.  
« New Business Models for Forest Management ».**

*Within the setting of the European trade fair for forestry and logging (FOREXPO) this RoK-FOR conference brought together a variety of organisational bodies from France, Spain and Portugal. It aimed at sharing knowledge and different experiences of new business models in planted forest business management, and at illustrating successful practices and sustainable development participation by forest owners.*

The welcoming address on behalf of the [RoK-FOR](#) project was given by Christophe Orazio, head of EFIATLANTIC, and the conference was led by Inazio Martinez de Araño, President of the [USSE](#) (Union of Foresters in Southern Europe). The first part of the event explored examples of best practice and initiatives for working together in the value chain.

The director of the [CFPV](#) (Federation of Foresters in the Basque Country), Fernando Azurmendi, explained how Basque forest owners combat the decreasing market for wood in the Spanish Basque Country via three initiatives: sale of wood for bioenergy purposes, sale of modified wood and joint marketing. Sebastien Cavnac from [FCBA](#) (Technological Forest Institute for the Supply of Wood for Construction and Furnishing) tackled the current disturbance-induced (e.g., 2009 Klaus storm) problem of imbalance and low growing stock in cultivated forests by putting forward reversible property-scale management solutions and demonstrating the importance of industrial innovations. Regarding the current large variability of wood prices, Henri Chaperon from [CAFSA](#) (Agriculture and Forest Cooperative of the South Atlantic) explained the importance of securing owner investments that depend on the forestry itinerary choice and the type of pre-sale contract with a 10 year term for biomass. Christian Pinaudeau from [SSSO](#) (Union for Forest Owners in the the South-West of France) gave an overview of the role of the [GPBS](#) (Wood Producers in the South) group, which helps owners buy wood 5 or 10 years before the final clearcut, securing income for the owners.

The conference then moved on to explore different environmental services pertaining to forest management. Nicolas Szczepan from the Aquitaine regional council explained how the structure Association Carbone Aquitaine is contributing to the reforestation of 200,000 ha of forest via carbon fixation and a carbon credit system through institutional certification processes (5 to 15 euros/tonne of stocked carbon). Amélie Castro, from the [CRPF](#) (Regional Centre of Forest Owners), discussed the implementation of the “biodiversity clause” in post Klaus action plans for forest restoration. Nuno Calado from [UNAC](#) (Union of the Meditarrenian forest), Portugal, then described the problems in Portuguese forests related to climate change and went on to present a vegetation management project involving carbon sequestration, an initiative originating from an association of forest owners.



## EFIATLANTIC ADVISORY GROUP

An Advisory Group enhances the networking of EFIATLANTIC. It advises the EFIATLANTIC secretariat on ideas and topics to be developed and promoted, as well as supporting dissemination and networking activities.

Its members are:

Ted Farrel, Chairman, Ireland  
Yves Lesgourgues, France  
Margarida Tomé, Portugal  
Christian Pinaudeau, France  
Julio Diez, Spain  
Jean-Michel Carnus, France  
Peter Freer-Smith, UK  
Fermin Olabe, Spain  
Agustin Merino, Spain  
Inazio Martinez, Spain

## INTERNATIONAL EVENTS

**Tours conference, France, 23 May 2012**

**Tackling climate change: the contribution of forest scientific knowledge**

This international conference looked at how forests can help tackle climate change. The conference allowed participants to take stock of the scientific knowledge about present and expected impacts of climate change on forestry. It also discussed potential adaptation and mitigation measures, and the trade-offs between adaptation, mitigation and sustainable forest management.

The opening session of the scientific conference was held on 21 May, with short talks by partners of the event about their projects, including Christophe Orazio on behalf of REINFFORCE. One of the keynote addresses in this session was made by **Dr. Gert-Jan Nabuurs**, Assistant Director of the European Forest Institute, who gave an overview of new perspectives for the role of European forests in carbon sequestration. The conference focused mainly on Europe, with some benchmarking regarding other continents such as North America and Oceania. Scientists and stakeholders attended 18 sessions, including over 100 oral and poster presentations. There were also three parallel field trips in the surrounding area of Tours. The conference was jointly organised by the European research project MOTIVE, the European intergovernmental COST Action ECHOES, the European research project BACCARA, the Interreg European project REINFFORCE, the international research project TRANZFOR and a new IUFRO working group on adaptation to climate change.

During the conference, Christophe Orazio gave an overview of the tree species selection process for the REINFFORCE arboreta, which tries to combine past experiments from long term monitoring trials (see [database](#)), expert knowledge and available literature. A detailed report of this procedure can be downloaded on the [REINFFORCE](#) project website.

More information on the conference is available [here](#).

## PARTNERS, NETWORKING

**Potential sequestration of carbon in Basque Forest Soils**

*Nahia Gartzia Bengoetxea and Ander González Arias*

*Forestry Unit, Basque Institute for Agricultural Research and Development, Neiker-Tecnalia. Berrega Kalea, 1. Derio 48160.*

The amount of carbon sequestered by Basque forest soils could be increased by changing forest management practices, thus helping to mitigate global warming. This is the main conclusion of a study carried out at the Basque Institute for Agricultural Research and Development, [Neiker-Tecnalia](#). More than one thousand soil samples from representative forest stands in Euskadi, comprising eucalyptus, radiate pine, Douglas fir and beech, were analyzed as part of the study.

Soil is the main sink for organic carbon in the biosphere, and thus it constitutes a key component in the movement of carbon between the atmosphere and the Earth's crust. At present, forest soils in temperate climates act as carbon sinks, because they absorb more carbon from the atmosphere than they emit. However, the new environmental conditions resulting from climate change may alter this situation. Taking this into account, it is important to



## PUBLICATIONS

**Materials** are available for download from the [EFIATLANTIC website](#): EFIATLANTIC brochure in English and French, EFIATLANTIC poster in French and in English.

**EFI Discussion Paper 16, 2011** [Are MCPFE Indicators suitable for planted forests?](#) by Jean-Louis Martres, Jean-Michel Carnus, and Christophe Orazio is available to download as a pdf. It is now available in French.

**Technical report:** [Species and Genetic Units Selection Process for REINFFORCE ARBORETA](#) by Christophe Orazio, Francisco Ureña Lara, Luisa Di Lucchio. Available on REINFFORCE web pages.

undertake research activities to measure the amounts of carbon stored in forest soils and to identify means of increasing their carbon storage potential.

Between 2005 and 2010, 1180 samples of forest soils were analyzed as part of the Programme for the Endorsement of Forest Certification (PEFC). All of them were representative of forest stands in the Atlantic area of the Basque Autonomous Community.

The results revealed that the existing stocks of carbon in the sampled stands varied between 57 and 100 tonnes of carbon per hectare in the upper 25 cm of soil. These figures are similar to those published in a recent report on this topic by the European Commission. However, the values are far from the amounts of carbon that could potentially be sequestered by these soils. Moreover, in many of the forest stands, the values did not even reach the protective carbon stabilization capacity. The lowest carbon stocks were found in the soils under eucalyptus forest, and were less than 25% of the carbon sequestration potential. In the soils under radiate pine forest, the carbon contents were between 67 and 74 tonnes of carbon per hectare, depending on the age of the stands. The carbon stocks in these soils are between 75% and 90% of the protective capacity, and this implies that the soils are exhibiting between 22% and 28% of the carbon sequestration potential, depending on the growth stage of the trees.

The soil carbon stocks were highest in the beech and Douglas fir plantations, being on average 80 and 82 tonnes of carbon per hectare. However, these figures represent between 30 and 40 % of the carbon sequestration potential.

The low percentages of carbon sequestration potential may be explained by past management regimes that did not guarantee the persistence of the forest, and by abusive use of forest products (firewood, charcoal and mulch, and the use of shrubs as livestock bedding, etc.). In light of the results obtained, modern silvicultural management practices do not appear to have reversed this situation. However, this could change if carbon sequestration were to be considered as a management goal.

### Measures for increasing storage potential

All of the forest soils exhibited less than 40% of their carbon sequestration potential and the soils under eucalyptus and pine exhibited less than 30%, showing how important management regimes are for them. The rational and appropriate use of machinery adapted to the Basque mountainous orography, during felling, clearing and land preparation would help to raise the C content of soils.

Forest management proposals involving the felling of remains to be used to produce energy should take into account increasing carbon stocks in the soils.

In order to provide an objective assessment of any changes in forest management directed at increasing the C stock in soils, the rates of carbon storage in forest soils should be monitored and quantified. In this way, these measures would comply with the Kyoto Protocol and the Land Use, Land Use Change and Forestry (LULUCF) activities.

However, forests are much more than systems for storing carbon and mitigating climate change. They cannot merely be considered as bargaining chips in carbon markets for greenhouse gas inventory reporting by the Kyoto Protocol signatories. Forests shelter two thirds of the biological diversity in the world, provide vital services such as supplying water and protecting soils, and also sustain the cultural and economic identities of many people. We must therefore establish sustainable, multifunctional uses for our forests.

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The EFIATLANTIC team thanks all  
the people who helped for the  
translations and sent some articles.

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