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EFI *news*



European Diversity Explored PAGE 3

Who's Counting Dead Wood? PAGE 12



Editorial

A major challenge for the future of EFI is establishing Regional Offices. After the first Regional Office in Barcelona (EFIMED) in 2007, four out of five new Regional Office proposals were accepted at the Annual Conference in Orvieto, Italy in 2008. The four new regional offices are EFIATLANTIC in Bordeaux, EFICEEC in Vienna, EFICENT in Freiburg, Nancy and Zürich, and EFISEE in Varaždin, Croatia. Since its establishment in 1993 EFI has never gone through such an important but also fascinating move in getting closer to its member organisations, indicating that the EFI idea and spirit is developing strongly.

The ten members of the Scientific Advisory Board (SAB) carefully assessed each application, including a serious discussion concerning the scientific mission of the

Regional Offices. This discussion also included the required standalone criteria to justify the existence of those offices. Within the SAB, we have a mutual understanding that Regional Offices should have a regional focus, tackling region-specific problems not covered by any other forestry network or member organisation. A Regional Office should cover broader regional forestry related areas ranging from natural to social sciences and must have the support of the member organisations in the region to strengthen the local EFI network.

Regional Offices are first established for a pilot period of 5 years, with a mid-term review organised by the SAB. Such a mid-term review is currently underway for EFIMED. In addition we have selected one SAB member to follow and support the work progress of each regional office.

The SAB believes that monitoring the scientific development of the regional offices will help to promote the prosperous development of the growing EFI family. There are, however, potential risks associated with this development because having offices distributed across Europe will make EFI a more complex organisation. It is greatly appreciated that the position of an Assistant Director was created to support the additional coordination needs expected. We are confident that the recently selected new Assistant Director Dr. *Gert-Jan Nabuurs*, a young but experienced EFI insider, will successfully coordinate the Regional Office research activities and help to bring the EFI spirit closer to its Associated Members.

Hubert Hasenauer
Chairman of the Scientific Advisory Board



Network Speaks

Is there a need for European research network on wooden construction?

In many different parts of Europe we find a growing interest for 'green building', a concept where wooden construction takes a definite role. In the meetings of 'Forest Week' organised by FAO in October 20–24 2008, one of the days was dedicated to "Green building". During that day several of the speakers presented wood building activities in countries such as Italy, England, Switzerland and Wales. This indicates that wooden construction is increasing its market share all over Europe – not only in countries where wooden construction is already important.

The consequences of such an observation are that there may be a need for communicating the current status of wooden construction allowing countries with less experience to draw on the experiences of countries with long tradition in timber construction. The basic idea would be to set up a research network that covers this topic. Before establishing such an institutional setting one should have a three-year project where the objective would be to find support for the idea, to search for partners and find financial support for the office.

The place that finally would be the seat of the office would be investigated in this process. For the planning project a place is needed where there is a close cooperation between university and industry and

a backup from the public sector. One such place is the city of Växjö, recently elected the 'greenest' city in Europe, with a university having five professors in wooden construction, a large construction programme for high-rise wooden housing defined by the city council and many established wooden industries around the city.

I would like to invite you all to discuss this proposal; the need for the research network and the benefits of it.

Anders Baudin
Professor Forest Product Market Analysis
School of Technology and Design
Växjö University



European Diversity Explored

Guest editor Gert-Jan Nabuurs | EFI

Although the world is increasingly characterized by globalism and the European integration is becoming stronger and stronger, we must not forget that Europe's forests and forest management are characterized by a huge diversity. This diversity has evolved from ecological diversity, but also from the highly varying forest management that has taken place over the past centuries. It is only by this variety that the local demands could be met, and the most adapted species chosen.

Also in the future, this variety needs to be there if we want to be able to tackle the challenges on e.g. forest fires, biodiversity conservation and survival of the industry. This was the reason for EFI to establish Regional Offices at different locations in Europe. These Regional Offices will tap into the current network of EFI, and mobilize the Member Organizations regionally. In this way, hopefully, we are better able to deal with regional multi-national issues than when done by national institutes on their own.

This EFI News addresses the regional issues in Europe:

- pro-active measures against fire risks in the south;
- capacity building for nature conservation in the southeast;
- private forest owners facing multiple demands in Central Europe;
- current downturn in pulp production in the north; and
- wood quality issues in plantations in the Atlantic region

European research stands at the beginning of large changes. Research needs to be regionally specific and address the local issues as good as possible. In order to do so, research institutes in the past have collaborated under EU programmes in various ways. Now, more stable forms of collaboration have to be developed.

Living with Wildfires: What Science Can Tell Us

Contrary to other natural hazards, wildfires are certainly among the most predictable ones. Therefore, it is a phenomenon which, in principle, should leave modern societies some freedom and margins of manoeuvre for implementing efficient counteracting strategies. However, this opportunity has not been properly used. Over the past decades, wildfires have proven to be a subject of growing concern for the Mediterranean region. Woodlands, rangelands, maquis and garrigues in rural areas or at the interface with urban areas still continue to burn with significant environmental, social and economic impacts, in particular in case of increased frequencies of fires.

Science's traditional mission has been – and still is – to advance knowledge as a support to innovation. Today, the mission is also to provide expertise in policy making processes. The science community feels that it can and should contribute to feed the debate on wildfire by providing research results and ideas as background

material for future options in strategies and policies. Wildfire related research has been very active in Europe over the last two decades, in particular thanks to a number of EU funded projects (Framework Programmes for RTD), so that a structured research community and new expertise and competence have emerged. EFIMED in collaboration with PHOENIX has taken steps for making this knowledge more digestible and available to policy and decision mak-

ers, and beyond to the whole society, in the form of a recent EFI Discussion Paper “Living with Wildfires: What Science Can Tell Us”, as well as a specialized course Forest Fires: Impacts and Post-Fire Management organized in Turkey in spring 2009 hosted by South West Anatolia Forest Research Institute, SAFRI.

The Discussion Paper was presented on 6 May, 2009 to the Standing Forestry Committee to the EC and member countries representatives. It has already had an impact among the stakeholders, in particular forest owners. The Southern Europe Forest Owners union, USSE, has decided to provide a French and Spanish version to reach their members.

We hope that the voice of experienced scientists will be listened to by decision-makers and society at large.

The three following articles express the views of three stakeholders working on wildfire issues at different scales: the EU, national (Spain), and sub-national (regional: Castilla-Leon).

Further information:

EFIMED: www.efi.int/portal/about_efi/organisation/regional_offices/efimed/

PHOENIX: www.phoenixefi.org/

Download the Discussion Paper: www.efi.int/files/attachments/publications/efi_discussion_paper_15.pdf



Ernst Schulte | Head of Forest Sector,
European Commission, DG Environment

Forest Fires in the European Union

For more than 30 years, the European Commission has supported the Member States in their efforts against forest fires. The existing European legislation supports a series of measures amongst which fire prevention and restoration measures after fires are the most commonly carried out ones. Of course, the effectiveness of these measures depends on the Member States' will to put them into their rural development programmes and implement them efficiently. But we have to realize that strong socio-economic forces and severe weather conditions are often the cause for forest fires and these cannot be easily changed. EU forests need to be protected against fires more than ever.

Since 1998, the group of experts on forest fires of the European Commission is actively contributing to the European Forest Fire Information System EFFIS. EFFIS is a system for on-line information on forest fires intended to provide support to national forest and civil protection services. Never before have European forests been monitored so intensively with regard to their vulnerability to fires, the daily forecast of fire risks, the assessment of damages caused by them or the underlying causes.

Still in case of damage, important support to the Member States is given by the Regional and Cohesion funds. And it is not only the ecosystem we try to protect, but the population as well through the Community Mechanism for civil protection. This facilitates and co-ordinates the civil protection response of participating states to disasters. The Commission intends to reinforce this Mechanism in the short term.

The EFI Discussion Paper "Living with Wildfires" draws up the latest scientific evidence by stressing the importance of fire prevention. One of the preconditions for effective fire management is solid scientific and technical knowledge to which the European Forest Institute is contributing. This knowledge needs continuous investment, since the socio-economic and climatic conditions are continuously changing and thus, we stand for large challenges still in the future.

Ricardo Velez | Head of Forest Fires in Spain,
Ministry of Environment, Spain

Forest Fire Management in Spain

Over the few past decades, the area burnt annually in Spain has decreased. The current average is 0.5 % of the total surface covered by forests, bushes, shrub and grazing lands in Spain, while in the peak years the burnt area was more than 1%.

The decrease is the result of a long-term process started in 1968 with a Forest Fire Law and the creation of a standardized Forest Fire Date Base (EGIF) as a main national level coordination tool. EGIF is used for defining danger zones and analysing the structural causes of fire as well as the strengths and weaknesses of the related services. Prevention strategies have been developed during the last decades based on the detailed information provided by the EGIF as well as special programs targeting the structural causes of forest fires and the main actors in different contexts (e.g. farmers, shepherds and livestock breeders). All those programs have been designed and started by the Central Government services and the Regions adopted them considering their own specific circumstances.

Preventive silviculture has been a main strategy in Spain for reducing both flammability and combustibility in the forest. However, the budget allocated for this objective could never cope with the total surface at risk, which is more than 25 millions hectares. Nowadays, a recent new forest use; providing biomass to produce energy, offers new opportunities as supplementary economical sources for preventive silviculture.

Finally, it is also important to mention that suppression activities, which nowadays involved 30 000 people every summer and more than 250 aircrafts and helicopters has played an important role in reducing the impact and occurrence of forest fires. However, recent studies like the EFI Discussion Paper "Living with Wildfires" show that we need to start anticipating the impacts of climate changes and other socio-economic changes, as well as provide new cost-effective strategies to further minimize the risk of forest fires.

fafoutis / www.forolia.com





Laqui / www.fotolia.com

Mariano Torre and Alvaro Picardo | Junta de Castilla y León,
Departamento de Medio Ambiente, Spain

Preventing Wildfires Requires a Change of Vegetation Structure

The EFI Discussion Paper “Living with Wildfires” reaffirms our belief that wildfire policies are not correctly focused due to the lack of fire prevention programs and the predominance of the extinction approach. Huge resources (2.5 billion euro) are invested annually in fire fighting in Europe, mostly in personnel and very expensive equipment for suppression. Resources that are “blown out” every year and reduce the resources available for forest management to minimum levels, are the ones that could change the situation. However, while the paper analyzes and reflects upon the causes of forest fires, in our opinion, it does not provide a clear and integrated explanation.

One of the key problems is the current vegetation model that is like a barrel of gunpowder, with vertical and horizontal continuity of fuels. This model results from the sudden development of natural vegetation brought in by the abandonment of traditional management practices fifty years ago. The gunpowder explodes every summer because of the different uses of the areas. Grazing is the main traditional use,

and with agricultural uses responsible for 75% of forest fires in Spain. We think that a large number of stockfarmers ignores or despises wildfire effects and that a new model of extensive grazing is needed for the Mediterranean. There are also new elements that add to the risks of fire, namely the increasing recreational use of forests and urbanisation.

In response to the current needs, rural people clear the vegetation. Since alternative tools are expensive and there is no support offered for their use, they use fire. Governments, which have the urban perspective, penalise this, while what really would be needed is establishing educational programs and grants for brush clearing.

Breaking the vicious circle requires a change in the vegetation structure. We are in a dangerous transition stage where most forests are dense young thickets in a matrix of brushland. To change this model we need a large program of vegetation manage-



Facts and figures about wildfires in Europe

- On average, 500 000 ha of forest burn every year in Europe.
- Large fires (>50 ha) account for 75% of total burnt area while they represent only 2.6 % of the total number of fires.
- The number of very large fires (>500 ha) remains stable.
- In more than 90% of cases, people are responsible for the ignition of fire.
- Wild-land/rural and wild-land/urban interfaces are exposed to high fire risk.
- In the future, climate change will increase fire risk (frequency and intensity) in the current Mediterranean area, but also in adjacent areas where Mediterranean climatic conditions will appear.

Andrzej Tokarski / www.fotolia.com

ment, using thinning, pruning and brush clearing. This program would also provide employment, thus contributing to the main objective of forest management.

Value of forest spaces

Only a few decades ago, thousands of people made their living from the Mediterranean woodlands. They depended on extensive grazing, resin, chestnuts, fuelwood – an old intensive culture that found value in almost every corner of the land. Now, all this is abandoned.

Therefore, the first objective is to provide direct value to the forest land. The value depends on employment coming from labour in the forests: an employment that will reduce another problem of the Mediterranean areas: depopulation resulting from migration to coastal areas. In addition to direct employment, income can be derived

from forest products (wood, cork, resin, chestnuts and mushrooms) and services.

In our opinion, the lack of competitiveness in the Mediterranean forestry is the main reason for forest fires. In order to solve this situation new opportunities are needed, like bioenergy, and an integrated accountability that would consider other benefits or function of the forests: water production, landscape conservation, biodiversity.

In areas, where forests are seen as a richness, contributing to the development of rural communities, like in Urbión (in the Spanish provinces of Burgos and Soria), fires are not a problem. People are careful with their use of fire and respect the forest as a resource. This attitude has developed over the past hundred years. The history shows a considerable forest fire problem in the area, which was beaten by sound and good forest management. If new management regimes can be introduced, forest

fires will remain as a phenomena, but may seize to be a major problem.

Support in training and introducing new methods demands resources, but resources are sequestered in fire suppression programs that are not going to break through the vicious circle we have described. While the EFI Discussion Paper “Living with Wildfires” appeals for the coordination of forest policy with fire fighting policies, it does not describe the situation of forest policy in the Mediterranean, a poorly developed policy, which is generally deprived of the resources needed. We can protect our territories against wildfires. We need to make our forests valuable and appreciated by people, we need them to provide employment through a vegetation management program that will change the powder keg that our landscape is, and we need to work with rural people through education and economic support. All this can be done, but we need a different policy to support the development.



Tomi Tuomasjukka | EFI

Dijana Vuletic and Igor Kolar | Forest Research Institute, Jastrebarsko, Croatia

Creating Forest Conservation Policies in the South-East Europe

South-East Europe (SEE) is one of the richest areas in Europe in terms of forest biodiversity. The vegetation varies from the Mediterranean and Central-European to Euro-Siberian and steppe ecosystems. The diversity of forest types is high, including forests on floodplains and in lowlands. The mountain forests which spread over the karst-area of the Dinarids are characteristic to the region. While all countries in the region have areas of protected forests, at the regional level, the responsibilities of different actors remain unclear.

The successful conservation of forest biodiversity in the SEE region faces, however, several challenges. Though all the countries have protected areas, the related institutional responsibilities remain unclear. Recent research on forest-related conflicts revealed that protected areas are a frequent scene for conflicts, which could be managed better. National forest inventories are not up to date in all countries and may not provide sufficiently detailed information on the existing forest biodiversity. In 2005, EFI carried out a training needs assessment which revealed that there is a limited capacity to manage national parks and other protected areas. This was recognized from symptoms like unregulated exploitation of forest resources in national parks and coordination problems related to park management.

Such problems arise at least partly from inadequate forest conservation policies. Policy objectives may not be in harmony with other sectoral policies or policy instruments are lacking adequacy. This suggests that there are limited capacities in analyzing, creating and implementation of forest conservation policies at the practical level. Capacity

building related to policies and practices of forest biodiversity conservation is a clear need.

Currently the research on policies and socio-economics related to national parks and forest conservation in general is scarce in the SEE-region. Further research is needed, for example, on the overall societal role of forests in nature conservation, multiple service functions of forests, practical implementation of Natura 2000 program in forest areas, just to mention a few. When scientific findings on such issues become available, they can be used to improve policies and their implementation, provided that related capacities and communication across the science-policy interface are increased.

Capacity building in forest policy and forest economics has been a major strategy by EFI in the SEE-region over the recent years through the FOPER¹ project. This line of action is being continued with a second phase in which is likely to contribute towards improving the forest biodiversity conservation capacities in the medium to long run.

¹ <http://www.efi.int/portal/projects/foper/>

Andreas Schuck | EFICENT

Private Forest Owners Facing Multiple Demands

According to the Confederation of European Forest Owners (CEPF), there are approximately 16 million forest owners in Europe. The highest percentages of forest area in private ownership are found especially in Central and North Western Europe, the Western Mediterranean and the Nordic countries. In the majority of cases these forests are owned by private individuals and families with small scale properties. Jointly private forest owners constitute to more than half of Europe's forest area. Through implementing sustainable forest management and making a balancing act to address economic, ecological and social values private forest owners provide raw material for the forest industry sector constituting about 9% of the total GDP in Europe. They provide a broad array of ecosystem services including the preservation of habitats and biodiversity, protection of soil and water, a place for recreation and mitigation of noise pollution.

In an interview, the Secretary General of CEPF, Mr *Morten Thorøe*, provided his views on the challenges facing in particular Central European private forest owners in the context of multiple and changing demands.

Wood production remains the main source of income for private forest owners in Central Europe, which in this context refers specifically to France, Germany, Belgium, Netherlands, Switzerland and Austria. Prices for harvested wood, however, have not been highly competitive and thus affecting owners' revenues. The current economic crisis, strongly affecting the forest industry sector, has amplified this situation. This stands in contrast to the political demand for the mobilisation of wood as laid out in the EU Forest Strategy and the Forest Action Plan.

Ownership fragmentation continues to occur also in Central European forests. Inheritance taxes contribute to such developments as do changes in owner profiles and low revenues. Such continuing fragmentation of properties may add to hampering wood mobilisation and the adequate provision of other forests goods and services.

Biodiversity protection, recreation and tourism, carbon sequestration, watershed services and protective functions are main non-market forest goods and services in Central Europe. Artificial water purification, for example, is a costly process which forests provide as a service for free. Such services need to be more visibly recognised and properly valued while putting in place adequate compensation schemes.

More dialogue needed

Private forest owners are affected by the designation of Natura 2000 sites having to cope with the consequences of this legislation in practice. Sufficient involvement of land owners, NGOs and public authorities will need to be guaranteed to build confidence and trust between the different stakeholders. This applies especially for the development of management plans and associated compensation schemes. Also appropriate public funding of the management of the Natura 2000 areas is crucial as

some of the management actions requires significant extra investments from the forest owner – to deliver a public good.

In conclusion, wood is to date the main source of income for forest owners in Central Europe although it is diminishing annually. Thus the role of wood products and wood for energy needs to be more emphasised in order for the political demand for wood mobilisation to take effect. Increased attention will need to be given to linking goods and services other than wood production to new markets while ensuring an adequate compensation of forest owners for making such services available. To ensure this, forest owner associations will play yet an even more central role by building bridges and enhancing dialogue between private forest owners and policy making at the European, regional and national levels. As a result, private forest owners, sustainably managing their forests with commitment and strong personal attachment, will be given a strengthened position when it comes to timber pricing and the recognition and valuation of non-wood goods and services.

Marilyn Barbone / www.fotolia.com

Decline in Forest Industries Initiates New Developments

In the northern part of Europe, the current economic crisis is hitting forest industries hard. The production and deliveries of sawnwood, plywood and pulp and paper in Finland, for example, have fallen with some 20–40% compared last year due to permanent capacity closures and production curtailments at running mills. It is evident that this is not only a short term decline in relation to economic cycles but a sign of longer term structural change where some parts of the traditional forest industries have turned to a downward trend. Obviously the change will be the most beneficial for those actors in industry who can adjust their operations to be a part of the developing demand structure for the forest-based products. Thus, the need to find new products, new type of production processes and business concepts is a leading issue for industry.

As one response, Finland's leading wood products corporations have established a broad-based research organisation, Finnish Wood Research Ltd, to boost the renewal of the industry. The concept where research is implemented for developing new products and businesses for wood products industries is similar to pulp and paper sector, which established Forestcluster Ltd together with forest sector related chemical and machinery industries already in 2007.

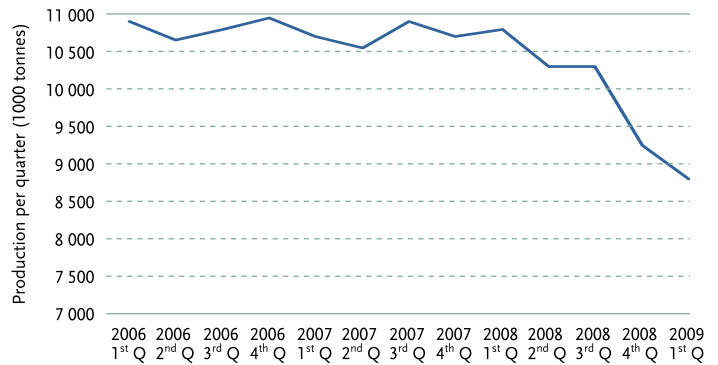
“Wood products that serve the needs of customers and consumers together with the services associated with these products provide unprecedented opportunities for the Finnish wood products cluster at a time when wood products companies are undergoing powerful changes. Refocusing research and innovation activities and promoting cooperation between industry companies is one way to respond to the challenges of the operating environment,” says Mr *Matti Mikkola*, Chairman of the Board of Directors of Finnish Wood Research Ltd.

“To remain successful in the long run and to be able to find new openings, the Finnish forest sector will need to diversify

its economic structure”, say Dr *Anssi Niskanen* and Ms *Saija Miina* from the Forest Foresight Unit of the University of Joensuu. This market driven process can be promoted by public-private research partnerships, other market-led instruments and even by political steering. Although the need of new openings is largely recognised, traditional products like sawnwood and different pulp and paper grades will remain an integral part of Finnish forest sector years to come and one of the most promising new sector – bioenergy – is still strongly connected to material flows of these traditional industries.

In the future some breakthrough innovations may revolutionise the product portfolio and production processes of forest based industries, but the lesson from the history is that this path takes time and is full of drawbacks and failures which are an integral part of any innovation process. However, these innovations may increase the forest sector's attractiveness to new capital investments, acceptability among the general public and appeal as a prospective career option for next generation Europeans.

The quarterly production of total pulp in all CEPI countries, in 1000 tons. Source: CEPI.



Barry Gardiner | Forest Research, Northern Research Station, Roslin, Scotland
Christophe Orazio | EFIATLANTIC
Margarida Tomé | Universidade Técnica de Lisboa, Lisboa, Portugal

Wood Quality in Planted Forests in the Atlantic Region

The planted forests of the Atlantic coast of Europe are some of the most productive and intensively manipulated in Europe. They include Eucalyptus plantations in Portugal, Radiata and Maritime pine in Northern Spain, Maritime pine in south western France and Sitka spruce forests in the west of the British Isles. The forests have in common the fact that they are planted, even-aged and generally have a high management input in the form of cultivation, drainage and sometimes fertiliser application.

These forests face a number of challenges in the future. These include the need for management adaptation in the face of climate change, the increasing competitiveness of the world bulk wood market, increasing social expectations, pressure to manage forests in order to maximise carbon sequestration and changes in risk from insects, pathogens and fire. Furthermore, we have already seen the possible impact of a changing climate in the devastating storms of January 1999 and

2009, which did extensive damage to forests in south-western France and northern Spain.

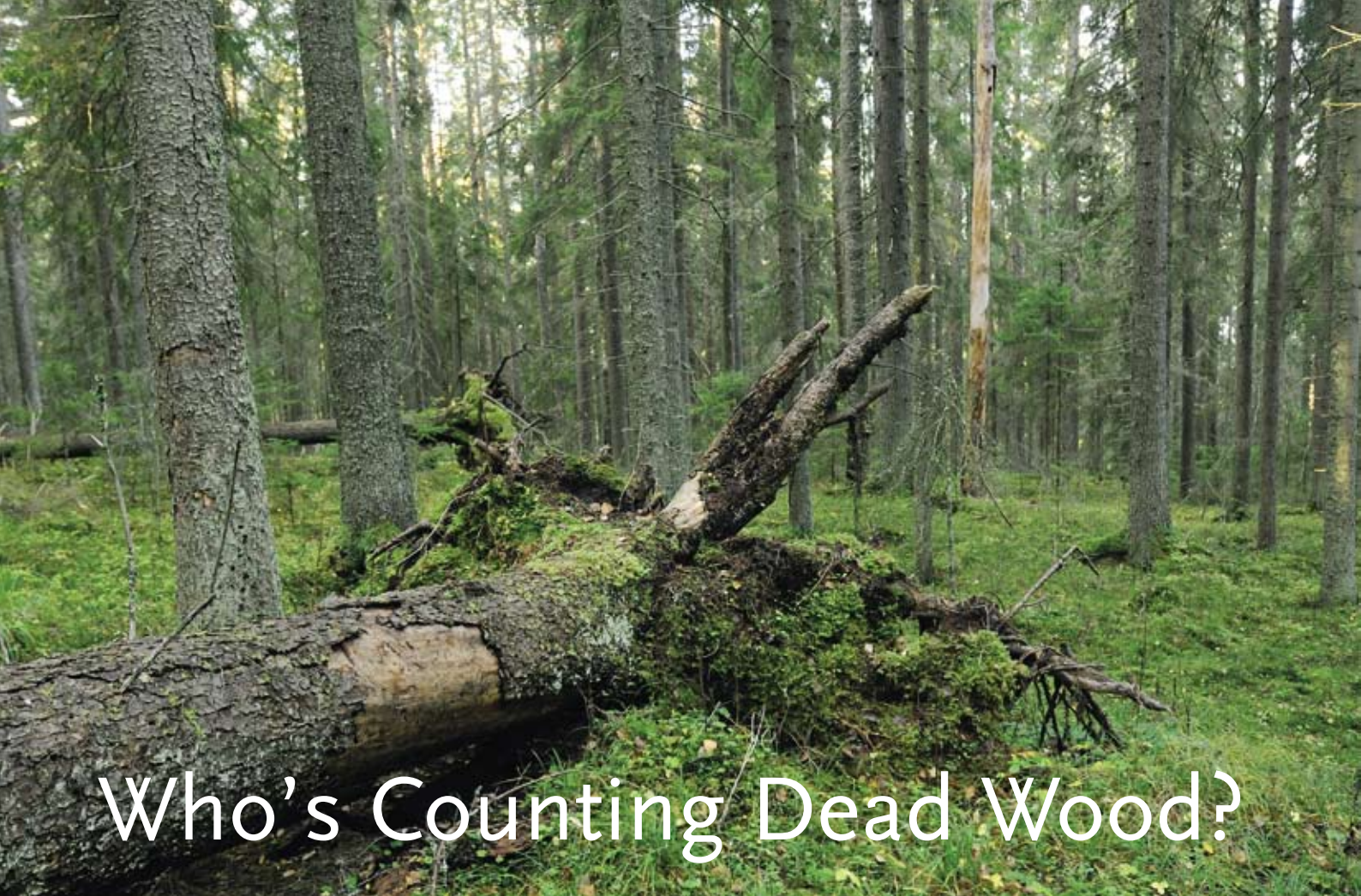
Managing these forests to ensure that timber products remain competitive and of sufficient quality as well as ensuring the forests are flexible enough to meet changing requirements will be a challenge to foresters. Initially, due to warmer temperatures, growth rates will be faster with a tendency for wood density and stiffness to decrease but this is likely to be followed

by a period of decreased growth rates due to the increasingly dry summers. The increased risk of summer droughts could lead to sudden growth arrest, drought cracks and the production of resin pockets. Choice of species and provenance best suited to individual sites will be crucial. The increasing pressure to fell at younger ages for economic reasons leads to an increased percentage of juvenile wood with poorer wood properties for solid timber products and this could easily be exacerbated with faster growth rates. Therefore, careful attention to thinning will be very important in order to ensure continued solid wood timber quality. The impact of a changing climate on fibre properties and pulp quality is likely to be very different but equally complicated. Consideration will also need to be given to species mixtures or low-impact silvicultural systems to spread abiotic and biotic risks within forests.

The challenges are large but need to be tackled by growers, processors and researchers to help ensure that one of the most productive forest regions in Europe continues to provide the quality and quantity of timber required to meet the increasing demand for wood within the global economy.



David Woods / www.fotolia.com



Who's Counting Dead Wood?

Christopher W. Woodall | U.S. Department of Agriculture, Forest Service
Hans Verkerk | EFI
Jacques Rondeux | Gembloux Agricultural University, Belgium
Göran Ståhl | Swedish University of Agricultural Sciences

Dead wood in forests is a critical component of biodiversity, carbon and nutrient cycles, stand structure, and fuel loadings. Until recently, very few countries have conducted systematic inventories of dead wood resources across their forest lands. This may be changing as an increasing number of countries implement dead wood inventories. A recent survey looks at the status and attributes of forest dead wood inventories in over 60 countries. About 13 percent of countries inventory dead wood globally and most of these countries have initiated large-scale inventories of forest dead wood only recently (< 10 years). Given the growing importance of forest dead wood resources to many countries, globally harmonizing dead wood inventories helps everyone reach a common language in an era of climate change.

Dead wood can be defined as all non-living tree biomass (excluding organic soils and litter), including woody debris that is standing or lying along with stumps. Dead wood is increasingly being included in national forest inventories around the world for three broad pursuits. Firstly, dead wood is an important food source and serves as habitat for many plant, animal and fungal species and serves therefore as a good indicator for biodiversity. Secondly, to limit

the impacts of human activities on climate change, 186 countries have ratified the Kyoto protocol. Carbon sequestration in dead wood is becoming an increasingly important estimate derived from national forest inventories because of its potential to sequester and emit carbon. Even so, estimates of dead wood have been omitted from some large-scale carbon assessments due to the lack of sufficient inventory data. Thirdly, concerns over the increase of forest fire occurrences have brought attention to the critical role that dead wood plays in large-scale fire hazards. Given the importance of national inventories of dead wood, the goal of the recent study was to survey over 60 countries around the world regarding their dead wood inventories and broadly summarize their dead wood inventory programs and suggest opportunities for harmonization.

Current Status of Forest Dead Wood National Inventories

Out of the hundreds of countries around the world, only a handful (≈ 30) currently inventory dead wood. However, these countries include over a third of the world's

Most countries that inventory dead wood include both standing and down dead trees. Comparison of the amount of deadwood between countries can be difficult because different diameter and length thresholds are applied; e.g. 42% of the countries have a diameter threshold of 10 cm or more for both standing and down dead trees.



Saku Ruusila

forestland. Despite encompassing a wide array of forest ecosystems, conditions, and ownerships, there are surprising similarities among many of the countries that inventory dead wood. First, most countries recently initiated dead wood inventories since 2000. Second, the sample intensity (number of forested hectares in any country divided by the number of dead wood inventory plots) was typically greater than one plot per 10,000 forested ha. Almost all countries remeasure plots at an interval of less than or equal to 10 years. Third, almost all countries that had a dead wood inventory compiled information on both standing dead and down dead trees. Of countries that had a dead wood inventory, 60% inventoried stumps, 73% inventoried residue piles, and 47% inventoried small woody pieces. Fourth, most countries measured the species and decay class of dead wood with 68% of countries having a four or five decay class rating system for dead wood. Fifth, almost all countries used fixed-area plots for inventorying standing dead trees, but sample methods for downed dead wood were more varied. 63% of countries used fixed-area plots for CWD and 19% used line-intersect sampling. Finally, one of the few attributes that widely varied among countries that inventory dead wood was that of dead wood component definitions. At what point does a standing dead tree become a down dead tree? How small does a piece of downed, dead wood need to be in order to be considered part of the litter layer? It was found that measurement threshold variations distinguished definitions among countries. There was considerable variety in minimum diameters coun-

tries use to define both standing dead and dead wood populations. Minimum heights/lengths for standing and dead downed trees were overwhelmingly either 1 or 1.3 m. Overall, the thresholds for dead wood components appear in most cases to be based on the relationship between sampling efficiency and the relative contribution of the dead wood component to overall stand biomass/carbon. Because the sampling of standing dead trees is probably the most efficient, along with being a major contributor to stand biomass, the population definition was the most inclusive (i.e., smallest minimum diameter). In contrast, either small woody pieces (i.e., fine woody debris) were often not measured or its population was narrowly defined.

Opportunities to Harmonize Global Dead Wood Inventories

Dead wood national forest inventories have numerous similarities. First, standing dead and downed trees are often measured in unison. Rarely does a country inventory standing dead trees, but not downed trees. Second, the size, species, and decay class of dead trees are often measured. Most countries recognize the need to measure these parameters in order to more accurately estimate dead tree attributes such as volume, biomass, or carbon. Third, most countries have only recently started inventorying dead wood. Fourth, fixed-radius sampling techniques were the most common technique for inventories of both standing and downed dead trees. Despite the broad similarities among countries that inven-

tory dead wood, even slight differences can cause problems with combining and comparing estimates in a regional/global context such as those required by global greenhouse gas offset accounting programs.

The most prominent difference that can inhibit dead wood estimate comparison among countries is the use of separate minimum diameters for either standing or downed dead trees. Possible solutions to this problem and others include: 1) increasing the estimation flexibility to accommodate comparison of different components with varying measurement thresholds, 2) developing common dimensional thresholds of dead wood components, 3) widely publishing inventory procedures/protocols, 4) releasing inventory data/reports to international peer review, and 5) increasing communication (e.g., workshops, Cost Actions) among countries inventorying dead wood. Given the substantial progress with dead wood inventories during recent years, there is little doubt that with more effort and communication, these inventories can be more closely harmonized in the future.

Further information

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The complete results are currently in review with the journal *Environmental Management*.

The authors would like to thank all NFI correspondents that provided us information on dead wood inventory methods. Additionally, some survey responses were based on surveys already conducted by COST Action E43: "Harmonization of National Forest Inventories in Europe: Techniques for Common Reporting." Hans Verkerk was financially supported by the EU 6th Framework Programme as part of the SENSOR project.

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Greece and Italy Ratified the EFI Convention

Greece and Italy have both ratified the Convention on the European Forest Institute. The Convention on EFI has now been ratified by a total of 19 European countries. The ratifying countries are now Austria, Bulgaria, Croatia, Czech Republic, Denmark, Finland, Germany, Greece, Italy, Latvia, the Netherlands, Norway, Portugal, Romania, Slovenia, Spain, Sweden, Turkey and the UK.

The ratifying countries meet every three years in EFI Council. The next Council meeting is scheduled for 2011 and it will be held in Croatia. Also the chairmanship of the Council will shift from Spain to Croatia.

Welcome to New Associate Members

The Board of EFI accepted four new Associate Member organisations at its meeting in March. We welcome the following organisations to the EFI network!

- Forest Research and Management Institute, Moldova
- Faculty of Forestry, University of Belgrade, Serbia
- Università degli Studi del Molise, Italy
- Istanbul University, Faculty of Forestry, Turkey



Social Impacts of EU FLEGT Voluntary Partnership Agreements Need Monitoring

Sabaheta Ramcilovic | EFI

The main objective of the EU FLEGT (Forest Law Enforcement Governance and Trade Action Plan) is to exclude illegally logged timber products from the EU markets. Voluntary Partnership Agreements (VPAs) with wood producing countries are the key instrument of the Action Plan. The FLEGT VPAs have a wide scope and set of aims concerning the trade of illegal timber. Along the trade dimensions and markets, it also deals with social aspects, such as poverty alleviation and minimising of social consequences.

The current study aims to develop a framework for monitoring of social aspects of the VPAs. It will draw on the case studies from Ghana, which is the only country that has so far signed the EU FLEGT-VPA. The main research question is: What are the social issues and parameters to monitor in the VPA and how they can be monitored? The study has two main parts. First, it sets up the basis of a monitoring system of the VPA social aspects. This includes the clarification of purpose and objectives of the monitoring system, and the identification of specific social issues to be monitored within the VPA process (e.g.

participation, livelihoods). It thus deals with monitoring needs and requirements, as well as defining specific aims against which the progress should be measured.

The second part focuses on the development of a monitoring system that can measure the relevant social issues and respond to the monitoring needs. This includes the evaluation of the potentials of existing monitoring initiatives and set of social indicators from different monitoring and assessment processes (global, regional and civil society ones). In addition, a set of specific social indicators will be suggested and their use

tested. Finally, the study will provide policy relevant conclusions related to potentials and shortcomings of different monitoring initiatives and indicators, as well as indicate directions development of VPA specific social monitoring programme.

The methods chosen for the study are: (i) literature review (ii) comparative analysis of 'social aspects' in different contexts and within the FLEGT-VPA context, (iii) survey among stakeholders and (iv) case study where the set of indicators would be tested.

The study is organized as a four-year PhD project, to be conducted at the European Forest Institute (EFI) and the University of Joensuu, Finland under the supervision of Ilpo Tikkanen and Olli Saastamoinen, and in cooperation with EU FLEGT Facility coordinated by EFI. The study is supported by the Foundation for European Forest Research (FEFR) and EFI.



Risto Päivinen and Roberto Ridolfi, Head of Unit in EuropeAid-F-3, countersigned a new grant agreement contract between EFI and the European Commission (EC) this month in Brussels. This brings the EC contribution to EFI's EU FLEGT Facility to a total of € 12,800,000. The Facility trust fund is also supported by growing contributions from DFID and the Finnish Government. Other EU Member States may soon contribute, too. The FLEGT Facility was set up to support the implementation of the EU FLEGT Action Plan and currently focuses

on two main programme areas: It supports the negotiation and implementation of Voluntary Partnership Agreements (VPAs), bilateral trade agreements between the EU and timber product exporting countries to improve forest governance in partner countries while reducing the import of illegal timber products into the EU. Furthermore the Facility is starting the execution of the regional Asia FLEGT support programme, fostering good governance and legal timber trade in a range of countries in South East Asia and China.



Gerhard Weiss,
Katrine Hahn Kristensen,
Päivi Pelli, Karoline Öhler



Saku Ruusijä

Diana Vuletic, Miroslav Benko,
Fikret Ahmetovic, Kristina Kozar Perez

Bernhard Wolfslehner, Gerhard Weiss



Andreas Schuck, Aljoscha Requardt, Karoline Öhler



Doni Blagojevic, Margaret Shannon, Ilpo Tikkanen,
Claudia Antoniotti



Francisco Ureña Lara,
Claudia Antoniotti,
Christophe Orazio

EFI Regional Office Week – a get-together of the growing EFI

EFI's Regional Offices (RO) joined the Headquarters' staff for a week of co-ordination, planning, and learning the EFI procedures and practices for the first week of June. In addition to joint sessions and workshops on issues such as R&D, administration and communication, the programme included social events.

Meeting each other helped the management and staff to delineate the next steps for actions related to the smooth start of new Regional Offices as well as the establishment of

those Regional Offices which have not been launched yet. It is clear there are a lot of synergies between the ROs and the HQ Research Programmes, and we have a great opportunity here to make the most of it. Having common procedures in administration and communication will also help the ROs a great deal. A lot has been done and a lot remains to be done, but the spirit is certainly motivating and positive. Warm thanks to all who helped, participated, inspired and jointly planned this event!

New Head of Forest Resources and Information

Dr. *Tuula Nuutinen* has been appointed Head of Research Programme 'Forest Resources and Information'. She will start her five-year term in the beginning of August. Dr. Nuutinen holds a Ph.D. from the Department of Geography, University of Edinburgh and a M.Sc. and Lic.Sc. (For.) from the University of Joensuu. She moves to EFI from her position of Professor in Forest Planning and Director of Research and Development Programme on Forest Resource Information Systems and Forest Planning at the Finnish Forest Research Institute (Metla). EFI News met Dr. Nuutinen for a short interview:

What are your main aims in your new post?

'The expansion of EFI with Regional Offices will increase the potential for both enhancing existing information services and creating new services. In this work, the responsibility of our research programme is to deepen the networking within EFI, between its member organisations, other collaborators (e.g. NFIs) and forest sector decision makers. Together with the network we shall develop, maintain and offer technical support, different types of tools, frameworks and platforms for sharing re-usable components where and when researchers find it feasible. The objective is to have a lively family of adaptive EFI Tools e.g. for different types of forest modelling and analysis tasks used actively by the EFI network.'

What, in particular, do you see as the upcoming issues in the field of forest resources and information?

'In recent years, there has been a shift in land-use planning paradigm. The traditional "command and control" regulation is increasingly replaced with voluntary, community and market instruments such as certification, trading nature values, or



renting landscape. Luckily, information and communication technology (ICT) offers effective means to integrate multiple disciplines needed when responding to these market-driven information needs.

Via the collaboration, I am looking forward to improving understanding about the role of Europe in the era of global change and increasing world population, the scope of EU policies and practices, and the characteristics and value of European bio- and sociodiversity. In my future work, I hope to develop methods, tools and Good Practices that take into account the diversity both in forests and in societies applying the methods and tools.'

Appointments



Dr. *Christophe Orazio* has been appointed Head of EFI Atlantic Regional Office – EFIATLANTIC located in Bordeaux, France.



Dr. *Aljoscha Requardt* has been appointed Manager of the EFICIENT Observatory for European Forests located in Nancy, France.



Prof. Dr. *Margaret Shannon* has been appointed Coordinator and Mr. *Doni Blagojevic* as Project Officer of FOPER II project.

Saku Ruusila

Event Calendar

EFI Events

- **EFI 2009 Annual Conference**
3 September 2009
Dublin, Ireland
- **Shape Your Sustainability Tools – and Let Your Tools Shape You (EFORWOOD – final conference)**
23–24 September 2009
Uppsala, Sweden
- **Scientific Seminar in the connection to the EFI Annual Conference: Forest Ecosystem Management in the 21st Century**
4 September 2009
Dublin, Ireland
- **Forest Based Sector – Towards Progressive Future**
8–10 October 2009
Krtiny, Brno, Czech Republic
- **EFORWOOD Week, autumn 2009**
21–22 September 2009
Uppsala, Sweden
(open only to project partners by invitation)
- **1st Koli Forum on Natural Resources**
22–24 October 2009
Koli, Finland

Further information

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Brita Pajari, EFI's Conference Manager is on sabbatical leave until 12 January, 2010.

International Conference Future Forest Monitoring in the European Union – Providing Information for Multifunctional Forest Management

11–12 November 2009
Uppsala, Sweden

The conference will be held in association with the Swedish EU presidency in autumn 2009, with the objective to promote a streamlined European forest monitoring programme capable of delivering the necessary information in support of EU and member states policies of relevance for the European forest ecosystems.

A vision for a cost-efficient European Forest Monitoring Program will build of participants contributions in working groups on landscape and land-use, wood and non-wood resources, forest health and damages and monitoring of biodiversity.

Bringing together national, EU and international bodies involved in forest monitoring, assessment and policy as well as scientists will create an opportunity to identify monitoring activities which must be maintained and strengthened, including legislative measures and financial support.

Open for registration from 15 June 2009.

Further information
www.slu.se/environ/futformon

International conference

Forest Based Sector – Towards Progressive Future

8–10 October 2009
Krtiny, Brno Czech Republic

The conference will bring together researchers, policy makers, environmentalists and experienced persons from all over world in discussion about Forest Based Sector. The aim is also to present recent advances and to review the state-of-the-art, techniques and methods related to the Forest Based Sector. The management of forests influences carbon sequestration and the production of biomass that can be used for substitution of fossil fuels. Additionally, climate change may affect future management practices. Site requirements for certain species may shift and new potential risks may have to be considered when designing future management programs.

The conference will focus on a wide range of issues and areas relating to all aspects of the Forest Based Sector. These include Role of Forestry in Management of Natural Resources: Wood as a Raw Material – Forests in Sustainable Environmental Development, Interaction between Forestry and Environment: Timber Supply, Bioenergy and Carbon Sequestration, Forest and Society Needs: Social and Ethical aspects of Forest Operations and Management and Biodiversity and Forests: Strategies, Principles and Approaches. Scientists, forest managers and policy makers will present their experience and seek answers for specific issues. The organizers therefore call for presentations.

Further information
<http://www.fbs-brno.eu/>



The Joensuu Forestry Networking Week 2009 Succeeded in Connecting Young European Experts on Climate Change Issues

The first Joensuu Forestry Networking Week promoted and enhanced discussions on science and policy in the field of climate change and forestry for decision making on the role of forests by combating and mitigating the expected change. The event brought together over 50 participants including young and experienced scientists, professionals and stakeholders in forestry as well as people working in research, education, consultancy and business; forest

owners and forest managers; representatives of forest-based industries, as well as policy- and other decision makers.

During the one week event at the end of May 2009, the participants were engaged in lectures, discussions, group work and excursions; and broadened their own expertise and contacts through active participation and networking.

The event was organised in co-operation with the COST Action: Expected Cli-

mate Change and Options for European Silviculture (ECHOES) jointly by the Finnish Forest Research Institute, the European Forest Institute and the University of Joensuu. The Joensuu Forestry Networking Week features timely and important issues connected to forests and the environment with the topics for forthcoming events in 2010 and 2011: "Forests and Waters" and "Forests and Energy".



Markus Lier / Metla

During the week, group work focused on how climate change issues such as impacts and adaptation, uncertainties and risks and mitigation should be considered in the formulation of forest policy, forest management, forest research and forest extension work. The main findings will be published in a joint Discussion Paper in early autumn.

The Role of Forests in a Changing Climate – news from the Climate Change Congress in Copenhagen 10–12 March 2009

Niels Elers Koch | Danish Centre for Forest, Landscape and Planning, University of Copenhagen

March 10–12, 2009 the University of Copenhagen hosted a successful international scientific congress on climate change under the heading "Climate Change: Global Risks, Challenges and Decisions".

The congress was attended by more than 2,500 delegates from nearly 80 countries.

Six key messages from the findings were delivered by the Congress' Scientific

Writing Team (http://climatecongress.ku.dk/newsroom/congress_key_messages/). The conclusions will by June 2009 be published in a synthesis report which will be handed over to policy makers ahead of the COP15 in Copenhagen in December 2009. Finally, all findings will be compiled in a book on climate change to be published in 2010.

The climate congress covered forest in three separate sessions out of 58 sessions:

- The Role of Forests in Climate Change Mitigation chaired by Dr. *Frances Seymour*, Director General of CIFOR
- Adapting Forests to Climate Change chaired by Professor *Niels Elers Koch*, Vice President of IUFRO
- Avoiding Land-Cover Change to Reduce Carbon Emissions chaired by Professor *Mark Ashton*, Yale University

Abstracts of the more than 1,000 presentations can be found on: <http://www.iop.org/EJ/volume/1755-1315/6>

Biorefineries

– Large Potential for Parts of the European Forest-based Sector

Saku Ruusila

Andreas Kleinschmit von Lengefeld | FTP Manager

As climate change is adding to the demand to store CO₂ and to increase its sequestration and the upcoming shortage of fossil fuels will put pressure on the coming energy demand, biorefineries are a key area in which the European forest-based sector will play a major role. A wide range of products that are based on non-sustainable resources will be produced on renewable sources in the future. The sustainable management of these resources will be a key criteria to transform Europe into the most competitive sustainable economy in the world.

Since its official start that was marked by the launching event of the Vision 2030 document on 15 February 2005, the Forest-Based Sector Technology Platform (FTP) has developed itself to a research and innovation platform with a unique European coverage. Today 25 National Support Groups (NSGs) are active and contacts are established to all other regions in the world, e.g. North-America, South-America, China, Oceania.

Already in 2006, FTP set up a taskforce for biorefineries and its report, titled “A Bio-solution to Climate Change” was published

in April 2007. The report describes the status of biorefinery in Europe and suggests five main directions for future research:

1. selective and efficient separation and conversion processes
2. biorefinery as source for wood-based solid and liquid biofuels
3. recycled fibre biorefinery
4. above-sector synergies with the agricultural and chemical sector
5. socio-economic impacts of biorefinery development.

FTP’s biorefinery task force had the aim to create a network of leading forest-based sector experts within the domain of “wood-based” biorefinery. Stimulated by the results of this group, FTP Management approached four other European Technology Platforms (ETPs), which also have a strong interest in biorefineries: SUSCHEM, Plants ETP, Biofuels and Manufuture. FTP together with these sister ETPs collaborates in the area of biorefineries to reflect the whole value chain and to gain a critical mass for potential breakthroughs in research and development activities. New biorefinery concepts can provide the European forest-based sector with the opportunity to diversify its product range, while using the components of the forest-based biomass in much more efficient way as it takes place today.

The report of the FTP Biorefinery Task Force is available at www.forestplatform.org

Biorefinery: Efficient use of the entire potential of raw materials and by-streams of the forest-based sector towards a broad range of high added value products (by co-operation in and between chains).

Source: A Bio-solution to Climate Change, 2007, p. 3.



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The European Forest Institute is the leading forest research network in Europe. It is an international organisation established by European States to conduct and advocate for forest research, and advance forest research networking across the whole of Europe. It is an acknowledged contact point for unbiased, policy-relevant information on forests and forestry.

