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Chairman's Column

Our Global challenges

In the last few decades social and demographic developments and their impacts on natural resources, the pressure on water supply, the threat of climate change and the search for the right way towards sustainable development are the main global challenges that society has to solve. The concept of a green economy in its various forms, which is focused primarily on the crossroads between environment and economy, appears to be one of the answers for these challenges, as long as its function is not simply to act as a fig leaf for an "ultra-liberal" capitalistic approach.

The increasing demand for a sustainable supply of food, raw materials and fuels, together with scientific progress, are the major economic driving forces behind the growth of the bio-economy. The bio-economy

can play an important role in both creating economic growth, and in formulating effective responses to current pressing global challenges. Forests have huge potential for the bio-economy because it is the most biodiverse ecosystem and important green infrastructure in the biosphere, but the complex relationship between forests, climate and other land uses require significant engagement with other issues such as energy, environment, trade, climate change, health, agriculture and water. Forest resources and the forest-based sector are strategic in a transition towards a green bio-economy which is low carbon, water saving, resource-efficient, socially inclusive and it operates to prevent the loss of biodiversity and ecosystem services.

As it has been stressed in several high-level events, including the recent Think-Forest- a European high-level forum on

the future of forests, it is important to improve the cross-sectoral approaches and comprehensive policies to unlock the full potential of forests and the forest-wood chain in building a green economy. To reach these goals, there is a need to communicate both our knowledge and the 'forest spirit'. Furthermore we must also disseminate our culture into the new markets, products and services thereby increasing the green added value of the forest, without compromising ecosystem services, and maintaining the safeguard of biodiversity, which is an important prerequisite for human wellbeing.

Marco Marchetti
Chairman of the Scientific Advisory Board (SAB)



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In 2013 EFI celebrates its 20th anniversary!

Various activities and products will be launched in 2013 to highlight the work EFI has done throughout the last two decades. Bookmark www.efi20.efi.int now!

Following Rio +20:

European Forests and the Green Economy

This year's EFI Annual Conference focused on forests and the green economy. Wide-ranging discussions took place on the huge potential the forest sector can offer and the challenges it faces. The participants agreed that we need to raise awareness of the forest sector at a policy level in order to reach its prospective input to the green economy.





Ms. Paola Deda, from UNECE/FAO Forestry and Timber Section, called for EFI and its members to participate in discussions on an FAO Action Plan for the Forest Sector in the Green Economy. Her message was that the green economy was underway, but its full potential had not yet been achieved. (You can read more about Forest Sector in Bio-Economy on page 9)

Ms. Veerle Dossche, Forest and the European Union Resource Network (FERN), looked at woody biomass and resource efficiency in Europe, raising the issue of demand management, and how we can make the best use of scarce resources. She called for discussions on resource efficiency, making the point that the EU Resource Efficiency Initiative, which began in 2011, does not currently contain enough information about the forest sector.

Mr. Stefan Sundman, UPM-Kymmene Corporation looked at the role of the fibre industry in the green economy (read more on page 8). The panel discus-

sion continued to look at the huge potential for the forest sector, pointing out that it was important to learn from other sectors (for example the organic food sector), and to raising awareness of the forest sector at a policy level has become a vital factor.

In the second session, Mr. Chris Beaton from the International Institute for Sustainable Development, delved into subsidies, giving a brief overview of some of the issues affecting biofuel subsidies and exploring some of the practical problems involved in subsidy reform.

Mr. Bas Eickhout, Member of the European Parliament, spoke of the challenges and legislative initiatives related to a green European economy. He brought three main challenges to the table: climate (a transition in the energy system as part of the climate agenda), a circular economy in a resource constrained Europe, and a bio-based economy (particularly the challenge of moving to high value-added uses). He reiterated that



Maria Jalavisto



Maria Jalavisto



Başar Uzun

“the EU Resource Use Efficiency Roadmap does not really mention the forestry sector”, and urged EFI and its members to work on and participate in this area.

Dr. *Martin Greimel*, COST FPS, presented the ERANET proposal: Sustainable Forest Management and Multifunctional Forestry. It aims to reduce fragmentation in research, and to demonstrate innovation potential.

A lively panel discussion followed, which focused on the allocation challenge of balancing the different uses of wood. Panel chair Prof. Dr. *Bart Muys* drew interesting parallels with ice cream flavours as he summed up the main challenges of allocation (who decides, what should the decision be based on, and how is it implemented (eg subsidies)). It was pointed out that policy design was very important, and that it was also important to look at the volumes of allocation, and how energy has a tendency to be the driving agenda, rather than other uses such as biochemicals. Finally, it was reiterated that it was important to push

the scientific agenda at a policy level, to promote the forestry sector in a fragmented policy environment.

The Annual Conference took place in Istanbul, Turkey with the Istanbul University, Faculty of Forestry and Poplar and Fast Growing Forest Trees Institute hosting the event. The EFI Bazaar in the afternoon proved to be a great success. It presented various EFI activities and those of EFI member organisations. The day was closed by the official decision-making session on EFI affairs with EFI member organisations taking their positions on issues such as the new EFI strategy. Based on the feedback received, more time will be given in the future for discussions with the member organisations on joint activities and mutual benefits.

All presentations are now available here:
http://www.efi.int/portal/members/annual_conferences/2012/programme/

Social dimensions of forests

The scientific seminar ranged widely within its theme of the social aspects of forestry, focusing on environmental and ecological economics, rural and regional economics and society, and institutions and governance. Speakers touched on the involvement of local communities and the issue of forest ownership, conflicts over use, and forest governance challenges such as illegal logging. The main theme that emerged from all of the speakers was that the social aspects of forestry had gained in importance in recent years, that forestry problems were global and international collaboration is vitally important for sharing information and lessons learned.

Setting the scene

The seminar began with a look at forestry in Turkey, its milestones of nature conservation, and the latest projects aiming to combat desertification. The challenges and benefits of traditional land use methods were also considered. The spotlight then moved to Eastern Europe, an area in transition where forest resources are subject to increasing interests and potential conflicts. There are new policies, new demands and changing demography, and now also new directives and regulations from the EU. Here, the issue of forest ownership was considered crucial.

The issue of evolving ownership changes and reform, and the policy implications of these changes and how they are implemented was also discussed in a wide-ranging presentation on forestland tenure and global resource sustainability.

The seminar also discussed current issues in environmental economics of forests, and in particular a key question from a policy angle – how can we ensure we manage our forests to provide us with the best mix of the various ecosystem services they can provide? This covered topics, such as the value of forest externalities, the cost of provision and the design of regulation and market-based instruments.

Social and political issues

Non-timber forest products and services were also discussed in the context of Mediterranean countries, as one of the two paradoxes in governance of Mediterranean forestry (the targets of policy actions and the instruments used for implementation). The real innovative and crucial aspects of the green economy for the Mediterranean forestry sector are related to equity, social inclusiveness, tenure security and employment, i.e. to social and political issues, more than technological ones.

Social and political issues were raised again in relation to the Balkans and illegal logging, where the drivers depend not only on the socioeconomic context but also on the political stability of the region and the effectiveness of public administration. Preventive measures include forest certification, improving transparency and communication, national forest programmes, local community participation and transboundary cooperation.



New Board and SAB members

The EFI Annual Conference re-elected Prof. *Jørgen Bo Larsen* (Denmark) to the EFI Board for the period 2012–2015. Prof. Larsen remains the current Chairman of the Board. In addition, Prof. *Tomasz Zawila-Niedzwiecki*, Director, Forest Research Institute (Poland) was elected as a new Board member for the period 2012–2015.

The EFI Board appointed Prof. Dr. *Karl Hög* from the University of Natural Resources and Life Sciences, Department of Economics and Social Sciences, Austria and Prof. Dr. *Markku Kanninen* from the University of Helsinki, Viikki Tropical Resources Institute, Finland as the new Scientific Advisory Board (SAB) members for the period of 1.1.2013–31.12.2017.

EFI warmly thanks outgoing Board member Prof. *Jim Lynch* OBE (UK), SAB members Prof. *Leena Paavilainen*, Finland and Prof. *Jean-Luc Peyron*, France for their invaluable contributions and commitment to EFI's activities during their time in office.



Frank Krumm



Hubert Inthaler

Experienced eyes were on Istanbul Forests

H. Barış Tecimen | Istanbul University
Faculty of Forestry Soil Science and Ecology Dept.

Istanbul – ‘little Turkey’- has an amazingly crowded population and a fast developing economy. Urbanisation and sprawl add further pressure on the city’s natural resources and its forest ‘lungs’. Forest management policies face not only ecological challenges, but also social ones. Legislation restricts the overutilization of natural resources, but Istanbul’s overloaded capacity forces managers to create instant solutions, which may at the same time, be the source of other unexpected environmental problems.

The field trip took 60 participants to visit the results of 50 years of sand dune stabilization in Terkos

Lake (a major water source for Istanbul), reclamation activities at an open coal mine, a sample of severe urbanization and historical dams in Belgrade Forest and the campus of the Istanbul University Faculty of Forestry.

The natural/artificial regeneration costs for the sand dunes, the backfilled lakes reclaimed from the abandoned coal mining site, re-afforested coal mine residuals on privatized reclamation land and the reaction of the public to mining activities in Turkey were questioned on the field trip, and the priorities of government, enterprises and the public examined.

The field trip organisation committee would like to thank EFI participants for the opportunity to host the trip and for their discussions and analysis of the decisions and criteria in Turkish forestry.



Saku Ruusila

Role of the Fibre Based Industry in a Bio-Economy

Stefan Sundman | UPM-Kymmene Corporation

The world around us is changing; the global population is growing and wealth is increasing. At the same time the challenges of combating climate change and resource scarcity become more and more evident. One part of the solution to these challenges is to increase sustainable consumption of reusable and recyclable products based on renewable raw materials. It is also self-evident that whatever is produced or consumed the focus needs to be on material and energy efficiency. We need to create more with less.

Consumer and producer behavior is crucial

We are living in the middle of the sixth industrial revolution. This revolution is bio-based. It means that now new disciplines and motives steer the behavior of people. Today people justify their purchasing decisions on totally new grounds. The key word is sustainability – sustainability understood in a rather wide context.

Sustainable bio-economy means that people prefer renewable energy, renewable raw materials and recyclable products. For the manufacturing industry, it means the

demand for industrial ecology with sustainable combinations of environment, economy and technology.

Long term commitment a key to success

Wood provides many opportunities in a multitude of uses, such as biofuels, bio fibrils and new bio-based chemicals, in addition to printing, packaging and construction. Exploitation of new opportunities also requires good supporting policies and competitive companies.

UPM is committed to constantly developing more efficient uses of renewable raw material, various CO₂ binding recyclable bio-products, more sustainable forest management and new biomass based technologies. A prerequisite for success is that society and decision-makers are committed to the same targets.

A forest of new opportunities

As the Biofore Company, UPM's vision is to integrate the bio and forest industries. Our target is to create value from renew-

able and recyclable materials by combining expertise and technologies within fibre-based, energy-related and engineered materials businesses. For us, cost leadership, change readiness and innovations are the important factors needed to strengthen our competitive position, create new markets and to increase shareholder value in the long term.

One concrete example is UPM's recent biorefinery investment in Finland. By 2014 the Lappeenranta biorefinery will be producing 100 000 tonnes of advanced second generation biodiesel from wood based tall oil, which is a residue from chemical wood pulping. The biodiesel, UPM BioVerno, is an innovation which will decrease greenhouse gas emissions of transport up to 80% in comparison to fossil fuels. Still the product's characteristics correspond to those of the traditional oil-based fuels and highly complement today's vehicles and fuel distribution systems.

Future orientation, innovation and sustainability are the key ingredients for the development of the bio-economy. It requires commitment to efficient operations, a more sustainable future and profitable business demonstrated through concrete actions and a string of R&D success.

Forest Sector in a Bio-Economy

Paola Deda | UNECE/FAO Forestry and Timber Section

Nearly \$300 billion of economic activity in the ECE region depends on the forest for its main raw material. Taken together, the economic activities of the forest sector, including forest management, the wood-processing industry and the pulp and paper industry account for about 1% of GDP in Europe and North America, and 0.8% in Russia. In a few countries, such as Finland, Sweden, Canada and Austria, the share of the forest sector GDP is much higher than the average. The value added by the ECE region forest sector is about \$285 billion, of which the great majority – \$233 billion – is by the wood and paper industries. However, the recorded figures are probably underestimated as they do not include value added in forest-related activities, such as tourism and biodiversity conservation. Furthermore many of the goods and services supplied by forests are not assigned a monetary value and do not enter the systems of national accounts. Given its scope, the forest sector therefore has excellent potential of being a forerunner in the bio-economy.

The emerging green economy thus represents a major opportunity for the ECE region forest sector, which must not be missed. In this context, an Action Plan for the forest sector in a green economy is being developed by ECE and FAO to support the forest sector in the UNECE region so that it can make the greatest possible contribution to the emerging green economy by improving human well-being and social equity while significantly reducing environmental risks. A forest sector in a green economy uses all its resources wisely and economically, minimising waste, recovering, reusing and recycling as much as possible. It consumes only wood from sustainably managed forests. It contributes to climate change mitigation by sequestration of carbon in forests and products and by substitution of non-renewable products and fuels by renewable wood-based products and fuels.

However, to achieve the ambitious goals of the Action Plan, business as usual in the forest sector is not sufficient and would lead to missed opportunities, and a

possible decline in the relative importance of the sector. All actors and stakeholders, public and private, national and international, should work together to address the challenges identified, in a flexible way, sharing resources and experience, developing innovative approaches, and communicating much better inside the sector, with other sectors and with the general public and policy makers. In this way, the ECE region forest sector can truly achieve its potential contribution to the bio-economy.

UNECE Region covers more than 47 million square kilometres. Its Member States include the countries of Europe, but also countries in North America (Canada and United States) Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Western Asia (Israel)

ECE: Economic Commission for Europe

The emerging green economy thus represents a major opportunity for the ECE forest sector, which must not be missed.





Saku Ruusila

Aiming high with STAR TREE

Robert Mavsar works as Deputy Head of Office and as a Senior Researcher at the Mediterranean Regional Office – EFIMED. He is originally from Slovenia, but he has been living more than 7 years in Barcelona. His research mainly focuses on socio-economic aspects of forests, such as economic and institutional aspects of the provision of forest goods and services.

How long have you been with EFI and how did you end up here?

My involvement with EFI began in the previous century when I started to attend the EFI Annual Conferences as the representative of the Slovenian Forestry Institute. It continued and intensified when I moved to Barcelona and started to work in the MED-FOREX Project center, and in 2007 I started working at EFIMED.

You will be coordinating STAR TREE project. What is it about and what is the aim of the project?

Up to now the forest-based sector has been mainly built around wood based products because of the economic importance of wood, and the well-structured and competitive wood value chains (e.g., pulp and paper, bio-energy). However, there are also other products, like non-wood forest products (NWFP) (e.g., forest fruits, mushrooms, cork, medicinal herbs, essential oils, chestnuts) that could offer opportunities for a more sustainable development of our societies and increased competitiveness of rural economies. This is the case in regions where wood is not the most important or profitable forest product (e.g., Southern Europe). However, to unlock the full potential of these “alternative” products we have to optimise their sustainable provision, and better understand the potentials of markets and customer needs.

The STAR TREE project aims to provide better understanding, knowledge, guidance and tools to support relevant stake-

holders (e.g., forest owners, resource managers, enterprises, decision makers) in optimising the management of NWFP and developing innovative approaches for increasing the marketability and profitability of NWFP.

What are your expectations for the project?

In my opinion natural resources are a key element for the European and the global economy, and for the quality of our life. This was finally also realised at higher political levels, which triggered that “bio-based products”, “green economy”, “smart and sustainable growth” suddenly became “buzz words of the hour” (e.g., the Europe 2020 strategy is built around these keywords). Parts of these “new” concepts foresee the sustainable production and conversion of renewable biomass, for a wide range of things such as food, health, fibre, industrial products and energy. In this framework, European forests should play an important role by providing multiple goods and services. However, the forest-based sector is still struggling to fully overcome the traditional “wood based” thinking, and to show to the rest of the sectors that it actually embraced these concepts decades ago, and that it can provide a whole set of solutions that can be used as models for other sectors. In this respect, STAR TREE project should show that forests and the forest-based sector can provide multiple opportunities for a sustainable and green development based on innovative bio-based products.

What are the current hot topics regarding forest issues within the Mediterranean?

Although the total area of Mediterranean forests is below the order of magnitude of other forest types (e.g., temperate, boreal), they have specific features, which make them unique. For example, around 25,000 vascular plant species can be found in the Mediterranean area. However, the complex climate and socio-economic conditions (e.g., drought, forest fires, urbanisation, land abandonment, low economic importance) pose significant challenges to the sustainability of these forests. Thus, it is of utmost importance to, on one hand, ensure the stability of Mediterranean forest ecosystems by better understanding the drivers, indicators and impacts of global change, and by fostering their resilience while on the other hand, it is important to make them economically viable by providing incentives for forest owners to invest into forest management (e.g., by developing and promoting innovative management practices and products, like non-wood forest products or agro-forestry systems, support for provision of environmental services).

Is there anything else you would like to share?

Foresters should understand that the sustainability of European forests can not only be ensured from the inside of the forest, but that it significantly depends on our ability to communicate and interact with other stakeholders, sectors and the public in general.



Happy retirement!

Ilpo Tikkanen is the Head of Programme for the Policy and Governance Unit. He will retire officially on 31 December 2012, but due to his annual holidays, as well as FLEX hours, he will actually leave sometime in early December, around Finnish Independence Day.



Saku Ruusila

How long have you been with EFI and how did you end up here?

I was hired on a full time basis as the Programme Manager in December 1998, but I took a leave of absence of two years in early 1999 to work as the Senior Forest Policy Adviser at the World Bank, contributing to the Forest Strategy development of the Bank. But, various short-term missions I had from the early stages of the establishment of EFI included the design of the research programme structures and their profiles. Before EFI I worked several terms of office as IUFRO Working Party Chairman and Subject Group Leader since the late 1970's and developed policy analysis and evaluation capacities and networks worldwide. These networks were very valuable when joining EFI. In a way EFI was a natural next step.

Can you tell me your most memorable thing/event taking place at EFI or somewhere else while working here?

There are so many memorable things that happened during the last 12 years, and it is difficult to rank them in any "most mem-

orable" order. Maybe those moments that you realize that new and strategic ideas start flying and become successfully implemented, such as EFFE, FOPER and Think-Forest. Also, it has been memorable to represent an international institute in pan-European forest policy processes and platforms, and that EFI has been recognized by key policy actors and institutions. EFI is now participating in implementing the Forest Europe work programme, is part of the Intergovernmental Negotiating Committee (INC) Secretariat, and has been active in developing the New EU Forest Strategy. We work in good collaboration with the Commission, FAO, UNECE and key forest related stakeholders. One single comment given by a high representative of the Swiss government at the Expert Level Meeting of Forest Europe can be an example: "EFI is no more a silent observer at the corner of pan-European processes."

What are your views of the future of the European Forest Policy?

European forest policies are now under-

going strategic and fundamental deliberations. Parallel to voluntary process of Forest Europe the Intergovernmental Negotiating Committee is making good progress towards legally binding agreement on all forests in Europe, and the EU is revising its Forest Strategy. Common tendency is also the call for more coherent policies. From the scientific community point of view, the good news is that the role of science is recognized as an important part of policy formulation processes and good governance.

What is the first thing you plan to do after you have retired?

I will enjoy the freedom! And, I will have finally more time with my family and friends in Espoo, Nice and Helsinki. No more postponing my adventures to forests, lakes and rivers.

Anything else you want to share

I will warmly thank all of you in the EFI family throughout Europe who have supported and helped me during these years! *Memento mori, memento vivere!*



Russia's WTO Membership and the European Forest Sector

Lauri Hetemäki & Elias Hurmekoski | EFI

Russia joined the World Trade Organization (WTO) in August 2012. The accession will have varied and mostly positive impacts on the European and Russian forest sectors. Gradual long-run institutional impacts are likely to outweigh the short-run effects of tariff reductions. The membership is a most welcome boost to the European and Russian economies and forest sectors, yet dramatic overnight impacts cannot be expected.

What changes?

Russia is the ninth largest economy and the largest exporter of industrial roundwood in the world. In 2011, it exported 20.4 mil. m³ of roundwood that corresponds to around 16% of the world total. Russia is also the most significant trade partner of the EU. Now that Russia became a WTO member, it is important to ask how this will impact the EU's forest sector.

By joining the WTO, Russia agrees on binding tariff levels, measures regarding non-discriminatory treatment of imports of goods and services, transparency in trade measures, limiting agriculture subsidies, enforcing intellectual property rights for foreigners, abandoning the use of local content requirements, and justifying trade measures on scientifically sound grounds. Around one third of the tariff reductions, e.g. for industrial roundwood exports, are

implemented immediately, while the rest are allowed to undergo a 1–7 year transitional period. Similarly, the other market opening measures are subject to transitional periods of up to nine years.

The Short-Run Tariff Reduction Impacts

The Russian export tariffs for industrial roundwood were lowered on the accession by about half for coniferous wood and by one-quarter for non-coniferous wood. However, coniferous roundwood exports will remain subject to quotas, i.e., tariff rates will be considerably higher on the share that exceeds the quota. The quotas for the EU region have been set to 6 mil. m³ for spruce and 3.4 for pine. Although Russian wood exports to the EU exceeded these quotas before the latest economic downturn, for the

last several years the imports to the EU have remained at considerably lower levels (see Figure 1). However, the quotas for the non-EU countries will restrict further increases of Russian roundwood exports to China.

Russia's decision to increase the roundwood export tariffs in 2007 from 6.5% to 20% and further in 2008 to 25%, gives an idea of the possible effects of the opposite development as well. The drop in the EU's import quantity of industrial roundwood from Russia between 2006 and 2008 was over 16 million m³ or 61 % (Figure 1). The economic downturn could not have been the reason, as the EU's economy (GDP) was still growing rather solidly in 2007 and 2008. Now that the tariffs have been significantly lowered, one would expect positive impacts on the trade, production capacity, and employment that were suffering from the trade restriction measures.

In terms of EU level economic impacts, the gradual import tariff reduction for pulp and paper products is probably going to be of much more significance than the reduction in export tariffs for roundwood. The value of paper exports from the EU to Russia has increased almost 5-fold from 2000 to 2008. In the past five years, the EU has exported paper and paperboard products to Russia annually worth €2.1 billion, on average. A simple calculation shows that the di-

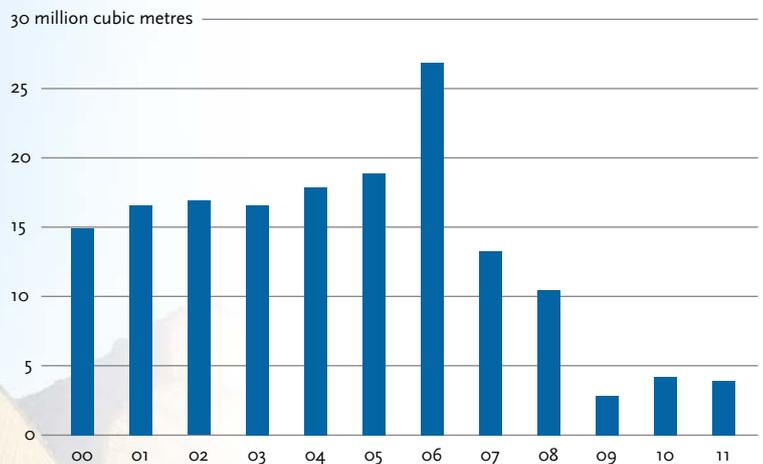


Figure 1. EU industrial roundwood imports (quantity) from Russia in 2000–2011

rect income increase for the EU countries would be about 115 million € annually, given the level of recent exports, and assuming an average tariff reduction of 5.4 % (from 13.4 % to 8 %) for paper products exports from the EU to Russia. Recently, however, an EU committee has identified hundreds of commodity groups, including some paper grades, where Russia has not been able to implement all the agreements on the tariff reductions, referring to technical errors in the documents. Yet, the prospective tariff reduction also increases the EU's forest products export incentives and efforts, not only from the traditionally significant exporters (Finland, Baltic countries, Sweden), but also from Central Europe, e.g. through Hamburg and Rotterdam ports. These indirect impacts are difficult to quantify, but they could be at least as important as the direct cost reduction impacts.

The expectations of the impacts to the Russian forest industry are more cautious than to the EU. There are concerns related to growing imports, reduced product prices, increased stumpage prices, and diminishing income. However, the permanently reduced tariffs could also result in the return of the logging and wood procurement activities that were abolished due to the tariffs in 2007–2011, which would also benefit the Russian forest industry.

In summary, in the short-run, the impacts of Russia's WTO membership to the EU's forest sector culminate to the reduced import tariffs for forest products and reduced export tariffs for industrial roundwood. The Russian sawnwood imports are of only very minor importance. Thus, even in the forest sector where the tariff reductions are more significant than on average (average reduction is 2.2 %), in terms of direct economic value, these impacts are rather moderate. However, the indirect institutional impacts may be of much more significance in the next few coming years.

The Long-Run Business Environment Impacts

Overall, the Russian WTO membership has a positive impact on the predictability and transparency of the Russian business environment. A number of experts regard the Russia's WTO accession as merely a single step in a longer term process where Russia integrates itself increasingly to the rules and business practices of the global economy. For example, one possible step could very well be the OECD membership.

In the medium- to long-term, the membership has the potential to contribute to

faster GDP growth and welfare gains across much of the Russian economy. For example, some economists point to the possibility of a 3.3% average annual increase in the Russian GDP in the long run. However, for the WTO accession to have a significant transformative effect on the Russian economy, it will have to be a part of a much broader and ambitious reform process.

In summary, the direct short-run gains for the EU from Russia's WTO accession are likely to be relatively modest. The EU's forest sector will gain from enhanced trade relationships with Russia, tariff reductions, and the increased predictability of the business and investment environment in Russia. Regionally, some EU countries can gain significantly from the reductions of Russian industrial roundwood tariffs, mainly Finland. If Russia's WTO accession is accompanied with positive developments in the country's forest sector institutions and infrastructure (e.g. forest road development, reduced corruption, etc.), the positive impacts are likely to be significant in the long run. The Russian WTO membership is undoubtedly a positive boost for the forest sectors of both the EU and Russia, and hopefully will prove to be a stepping stone towards further positive developments in the international trade relationships.



Living with forest disturbances – towards a European Forest Risk Facility

Marc Palahi and Gert-Jan Nabuurs | EFI
Christophe Orazio | EFIATLANTIC
Alexander Held and Andreas Schuck | EFICENT-OEF
Guy Landmann | ECOFOR

European forests have always been exposed to various disturbances which can be of abiotic or biotic nature. Insects and diseases, storms, wildfires, drought and damages caused by wildlife, affect to various extents different European regions. From an ecological perspective the related disturbances are part of natural development cycles of forests thus playing key roles in forest ecosystem dynamics. When events of a more 'catastrophic' nature affect whole landscapes and habitats, they can strongly disrupt targeted forest management goals, have severe consequences to wood production and timber markets and may jeopardize the economic base of forest owners. The summer of 2012 vividly illustrated the devastating effects of wildfires in the Mediterranean region. Observations across Europe show that forest disturbance regimes have intensified in past decades, as has vulnerability.

Based on the above, in 2011 EFI reviewed, jointly with experts from its Member network, how policy processes and outcomes of research studies address the intensification of disturbances in European forests and the resulting recommendations. As example of key messages were, the communication of the EU Parliament in 2006 to the European Commission. The Commission recommended reviewing different factors affecting forest dieback in the EU and ways to evaluate the effectiveness of available EU legislations and instruments. Further, it noted a need to examine options for establishing a specialized entity for forest protection in the EU. The Ministerial Decisions (European Forests 2020) of FOREST EUROPE in 2011 gave clear reference towards the need to address climate-driven risks including storms, floods, fire, drought, pests and diseases in order to protect Eu-

ropean forests and their functions. Furthermore, biotic and abiotic risks have been a prominent issue in the ongoing discussions for preparing the new EU Forest Strategy. Research studies point towards needs in improving the monitoring of different hazards, ensuring up-to-date and harmonised information and the tools for supporting prevention and mitigation measures.

Using the results summarized in a brief concept note, discussions on the options for establishing a facilitation platform – 'European Forest Risk Facility' – were initiated with EFI member organizations and EFI Member countries. Based on positive signals, EFI took on the elaboration of a scoping study, which describes in more detail thematic areas and evaluates options for a set-up of a European Forest Risk Facility.

Aims of a facility should include:

- the development of conceptual frameworks for better understanding biotic and abiotic forest risks and their related consequences and risks
- the elaboration of added-value information products for the main forest risks



Daniel Kraus



Pavel Timofeev / www.fotolia.com

CASTLE – a project to structure training capacities

- support collaboration and coordination of relevant national bodies to develop joint actions and measures to prevent, mitigate and control risks
- the exchange of good practice examples, policy measures and procedures and to facilitate capacity building, networking and sharing experiences gathered in European countries
- the building of mechanisms for continuous learning across country borders
- communication of relevant information for target users.

In all, the above facility will ensure building upon ongoing initiatives at regional, national and European levels and the existing extensive expertise. The scoping study relies on a bottom-up approach involving experts and organisations from EFI's network, and has been planned to become available by the end of 2012. The document is intended to represent a sound basis for further exchange with policy and research, and to excel towards building an operational plan for a European Forest Risk Facility and initiation of its first concrete actions.

By 2020, the increasing demand for biomass as a feedstock for fuel, fibre and food will have measurable economic, environmental and social effects. The forest-based sector is responding to the competition for biomass with innovative products, such as renewable chemicals produced in biorefineries. The agricultural sector is also reinforcing innovations based on fast growing biomass crops. Such innovations may bear completely new bio-based production systems, the long-term impact of which on environment, economic viability and social cohesion is difficult to foresee. Policy makers, business and civil society organisations urge to safeguard the sustainability of new production systems. Hence, sustainability assessment methods that quantify environmental, economic and social impacts are needed for the bio-based economy.

However, so far academic training insufficiently reflects the relevance of sustainability impact assessment in business and policy making. "Careers in Sustainability Excellence" (CASTLE) closes this gap as it combines scientific innovative problem-oriented research and practical training of young academics on methods used for sustainability impact assessments in the bioenergy and forest-based sector in Europe. CASTLE educates sustainability experts for the broader bio-based economy.

The scientific program of CASTLE refines and improves state-of-the art sustainability assessment methods and applies them to current sustainability challenges in industry and policy making. With its training program, CASTLE imparts a wide range of methods and skills. It covers, among other topics, assessments of direct environmental, economic and social sustainability impacts like GHG emissions, carbon footprint, structures beneficial for biological diversity, water consumption and pollution, land use and the value added.

CASTLE is a Marie Curie Initial Training Network coordinated by EFI and it started on November 1st 2012. The CASTLE consortium invites applications for 14 full time research vacancies for Early Stage Researchers (ESR). The positions will be located at 9 partner institutes in 5 different countries. Selected researchers are expected to undertake transnational mobility in order to implement an individual research project at one of the consortium partner institutions, as well as to participate in a joint network training programme. The vacancies opened in October and deadline for applications is December 31st, 2012. For more information, please send an email to castle.hr@efi.int.

How to manage private forests efficiently

Stjepan Posavec | University of Zagreb
Dane Marčeta | University of Banja Luka

The small size and fragmentation of the private forests makes it difficult for individual owners to manage them efficiently in a sustainable way. Relevance and impact of using renewable energy such as biomass from the private forests has never been analysed in the South-East European (SEE) region. There is a need to mobilise the large biomass potential from fragmented privately owned forests by increasing the co-operation among forest owners. Their limited financial, human and physical resources and lack of knowledge and skills for sustainable management of their forests are impediments for improving efficiency.

Opportunities for Wood Energy Production from Small Scale Forests in the South-East Europe Region – WESSPROFOR project is tackling these issues.

Main project objectives are:

- Primary energy production in SEE countries
- Wood energy: objectives and challenges for Private Forest Owners (PFOs)
- Potentials of the PFO for the production of energy
- To estimate how many forestlands may be available for the production of woody biomass according to the owner's willingness.

The research started in 2010 and will finish in 2012, with a sample of 350 questionnaires per country. The project will accompany and enrich the ongoing political and institutional activities regarding the bio-

mass production stakeholders in the four SEE countries: Bosnia and Herzegovina, Croatia, Macedonia and Serbia.

As the project proposal has arisen in the context of the EFI FOPER project "Forest Policy Education and Research in the Western Balkan Region", it is carried out in collaboration with FOPER masters' students and will be presented in one PhD and two masters' theses.

Most of the private forest owners are using forest for firewood and NWFP, and biomass production hasn't been founded. Serbia has the highest annual cut of 180,64 m³/ha and Macedonia the lowest at 31,34 m³/ha. Typical impeding factors for sustainable management are due to the

lack of forest roads and small property size. The majority of Macedonian's PFO are willing to produce woody biomass from their forest properties, but they need subsidies and more information about legislation. In other countries less than 50% of owners expressed interest in biomass production. Media is the most frequent source of information about biomass. The typical PFO is male, 50 years old, sole holder with high school education and has no interest in forest management due to the lack of sources. The average forest size is 3,5 ha.

Integration of private forest owners from the forestry sector into the energy market supplier should be the next step for future research.



Christopher Hall / www.foclia.com

Expertise, services and data offered by Trees4Future – free of charge!



Trees4Future offers 28 different research infrastructures such as laboratories, analysis device, models, databanks, biobanks etc. throughout Europe, from the molecular to landscape levels. If you find a research infrastructure offered by Trees4Future that is useful for your work, you can visit the site and carry out needed analyses assisted by experts at the site, and have the costs of your travel and subsistence covered by the Trees4Future project!

The Call for Access for Trees4Future facilities opened in June 2012 and will last until 2015. There is a simple application procedure for site visits. Please see the Trees4Future website at www.trees4future.eu/transnational-accesses.html

More information on transnational accesses:
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More information on Trees4Future:
gert-jan.nabuurs@efi.int



Opportunities and challenges for Green Growth from Forests

Päivi Pelli | EFI

Sustainable forest management providing renewable energy, sustainable construction and bio-based products – RoK-FOR projects final conference on 4 December in Brussels will gather an audience from regional, national and EU levels to learn about regions' innovative solutions to green growth from forests. The project work on research-driven clusters will continue in the participating regions of Baden-Württemberg, North Karelia, Catalonia, and the cross-border clusters Croatia-Serbia and Aquitaine-Basque Country until the project conclusion in January 2013, and the follow-up ideas are already looking beyond that.

Regions in focus for innovative solutions

The past year has been active for knowledge-sharing in the project network. Several benchmarking and study tours have been arranged to learn about regional wood clusters, forest bioenergy and the wood construction sector. Expertise, ideas and contacts were brought to home organisations for developing forest-based sector activities and clustering in the regions.

A study on innovative business models for private forest owners was introduced during the FOREXPO trade fair in Aquitaine, France in June. The investigation is still continuing together with collection of good practices in adaptation to climate change and in bioenergy sector development.

Furthermore, the partner regions were interested in ways to assess impacts of different uses of forest biomass and how to assess different actions aimed at mitigating climate change. In ToSIA "Tool for Sustainability Impact Assessment" they found a readily available framework for indicator-based scenario assessments.

The December conference will summarise the key lessons learned during the RoK-FOR project: what challenges and opportunities do regions have when striving for the targets set at the EU level? How do regions connect forestry to regional development strategies, climate and energy programmes, research and innovation agendas and development of bio-economy clusters?

Smart specialisation: speeding-up research and innovation leverage to economy

The Europe2020 goals for smart, sustainable and inclusive growth are paving the way towards a low-carbon and energy-efficient Europe. This offers the forest-based sector both opportunities and challenges. We are facing the complex issue of making more with less, while creating something totally new.

The EU FP7 Regions of knowledge programme has been a good opportunity to seek new openings and to develop research-driven clusters for cooperation between research, administration and businesses. In addition to the RoK-FOR project, the IN2WOOD and BIOCLUS projects have also worked on forest-sector topics. In the forthcoming EU financing period 2014–2020, this type of cooperation supporting smart specialisation across Europe will be pursued under the Cohesion Policy. It is worth checking these opportunities out because Research and Innovation Strategies for smart specialisation are taking shape!

Further information on RoK-FOR: www.rokfor.eu





Elena Corriz

AGORA Improved Forest Research Capacities in Morocco and Tunisia



The AGORA project aimed to advance forest research capacities in North Africa based on dynamic and transnational research partnerships, networking, targeted capacity building and knowledge transfer.

AGORA – Advancing Capacities in Mediterranean Forestry Research – was a three-year project which aimed to advance scientific knowledge on the sustainable management of forests in Tunisia and Morocco. It did this via Euro-Mediterranean scientific cooperation, networking and targeted capacity building, using the existing multidisciplinary knowledge available in different European forest research institutions.

Twinning action plan

AGORA implemented an international twinning action plan to exchange know-how and experiences between selected forest research organisations. The twinning resulted in scientific workshops and joint research papers, but perhaps more importantly in mobility measures enabled more than 100 scientists from Morocco and Tunisia to visit their colleagues in Spain, Italy, France, Portugal and Turkey. This was a unique opportunity for the younger scientists.

Follow-up via MEDFOR and FORESTERRA

AGORA also contributed to the development of an Erasmus Mundus Master Course MEDFOR – Mediterranean Forestry and Natural Resources (www.medfor.eu). A new ERA-net scheme, FORESTERRA (Enhancing forest research in the Mediterranean through improved coordination and integration), began in 2012 as a follow-up to the AGORA project.

AGORA Making the Difference

AGORA's main results and recommendations for the future are now compiled in an EFI Policy Brief. "AGORA has established solid and durable links between southern and northern Mediterranean forest scientists. It has also opened an unprecedented dialogue between policy makers and scientists in the southern Mediterranean region", says Marc Palahí.

EFI Policy Brief 8: AGORA Making the Difference: Towards a Mediterranean Forest Research Area by Marc Palahí, Davide Pettenella, José G. Borges, Fouad Mounir, Hamed Daly, François Lefèvre and Emin Baskent is available as a pdf-file at www.efi.int, under Virtual Library.

Further information on the AGORA project: www.efimed.efi.int

Enhancing forest research in the Mediterranean



The FORESTERRA project aims to reinforce the scientific coordination and integration of Mediterranean forest research programmes as well as scientific cooperation with Mediterranean-area countries and with countries from other Mediterranean climate areas, or in this case, Australia, South Africa, Chile and California.

Since its start in January 2012, the project is already well on its way to identifying strategic research themes that serve as the basis for the forthcoming call for research proposals for transnational funding in 2013. The stakeholder consultation process started with a call for research ideas, which brought in 28 ideas involving 150 forest research organisations in 26 countries.

These ideas were further discussed in smaller working groups during the EFIMED Week in June under four main themes: global change, biodiversity, water and multipurpose landscapes. After the workshop, the draft strategic plan was sent to over 800 stakeholders that form EFIMED's network for further comments. Currently, EFIMED Advisory Group has been elaborating the research background, scope, objectives, impacts (of research) for the four cross-cutting themes to form the basis of the FORESTERRA Scientific plan, leading to a call for research in 2013.

FORESTERRA – Enhancing Forest Research in the Mediterranean through improved coordination and integration – is part of the ERA-NET initiative. The project's expected impacts include better coordination and integration of forest research in the Mediterranean region, advancement and integration of scientific knowledge, improved partnerships and networking and the establishing of trans-continental scientific partnerships.

Further information: www.foresterra.eu

What are ERA-Nets?

ERA Nets are instruments to coordinate research programmes in the European Research Area (ERA) and beyond and will involve the systematic exchange of information and best practice, the definition, preparation and implementation of joint activities leading to the funding of transnational research.



William McKehe / www.fotolia.com



Daniel Kraus

Bees and forestry in Europe

Frank Krumm, Daniel Kraus, Andreas Schuck, Alexander Held | EFICENT-OEF
Gert-Jan Nabuurs | EFI

The importance of bees within our agricultural and cultural system is well known. Although bees sustain our agriculture by pollinating crops and thereby increasing yields of seeds and fruits, most of their activities are located within forests and tree dominated ecosystems. While products from bees such as honey and beeswax are well known, the main service provided by bees – pollination – remains poorly appreciated and underestimated. There are several studies that have calculated the economic value of bees for regions and countries. In the United States, scientists have attempted to measure the value of increased yield and quality of crops achieved by honeybee pollination: for the year 2000 in the USA, the economic value was set at \$ 14.6 billion. It is estimated that one third of the human food supply depends on insect pollination, most of which is accomplished by bees, especially the domesticated European honey bee.

However, over the past decades we have observed a dramatic reduction in the number of both domesticated and feral bees in Europe.

Colonies at threat

There has been a gradual decline in the number of colonies maintained by beekeepers. This decline includes the cumulative losses from factors, such as pesticide use, tracheal and Varroa mites, and commercial beekeepers retiring or businesses becoming non-profitable. Beekeeping in Europe most often is a “hobby-business” and beekeepers are usually organized locally. Therefore, large scale contract pollination such as in many overseas countries is not practiced by beekeepers in Europe, where honey production remains the main economic driver. Consequently, bee ma-

agement on a landscape level remains a difficult task.

Forests provide excellent resources for bees and beekeeping, and bees are a vital part of forest ecosystems. Bees and trees are interdependent, and have been perfecting their relationship for over 50 million years. Trees do not just need bees for their own reproduction, but for the whole system in which trees exist. The more species of fruit and seed are generated within a system, the more extensive is its biodiversity and the larger its life-carrying and life-enhancing capacity. However, the impact of bee keeping on forest ecosystems and vice versa is not well recognized and may vary due to different local conditions and traditions.

Therefore, it seems overly important to understand the driving factors behind bee decline and the services bees provide across European countries, and how forest management can contribute to maintain and increase these services. Additionally, targeted forest management measures may provide valuable contributions to bee conservation at a landscape scale.



Tomas Sereda / www.fotolia.com

Forest research collaboration in the Carpathian Mountains

Bernhard Wolfslehner | EFICEEC-EFISEE
Zuzana Sarvašová | NFC Zvolen and
William Keeton | University of Vermont

In June a network of scientists called, “Science for the Carpathians” arranged the 2nd Forum Carpaticum, providing a platform for presentations of research on ecology, communities, and sustainable management of the Carpathian Mountain region. Themes explored at the Forum harmonized goals of the Carpathian Convention, a pan-regional agreement ratified in 2003, including a recently disseminated forest protocol calling for conservation and sustainable forestry practices. At the Forum Carpaticum, Central-East Regional Office – EFICEEC organized a workshop focused on identifying central challenges in Europe’s largest mountain range, the Carpathians. The event brought together 27 participants from 10 countries.

Workshop participants agreed that, beyond the challenges caused by economic transition in formerly socialistic nations, the opening up of forest resources in Central and Eastern Europe will increase scrutiny of their use. This will impose new pressures on Carpathian forests, including

accelerating demands for biomass energy, recreational development and sprawl, and new societal demands and high accessibility of formerly remote areas. On the other hand, opportunities for nature conservation and novel value chains may strengthen the forest sector as a player in a bio-based economy and contribute to sustainable rural development, but it needs to be coordinated. Forest research and management capacities will play key roles in balancing multiple demands, but requires increased emphasis in transboundary collaboration and research within the region.

An initiative demonstrating the potential for common European research activities is the FP7 project called “Advanced multifunctional management of European mountain ranges” ARANGE (<http://www.arange-project.eu/>). Presented at the workshop, ARANGE is evaluating the capacity of current forest management regimes and possible alternative future management to provide portfolios of ecosystem services generated by mountain forests. Among the major European mountain ranges, the Carpathians are represented by a case study in the Low Tatras, organised by the National Forest Centre in Zvolen, Slovakia. The case

study evaluates trade-offs between timber production, nature conservation, and protective functions with a special focus on disturbances, such as storms and insect outbreaks in coniferous forests.

Prior to the Forum, a technical workshop on capacity building for forest carbon projects convened May 28–29 in Uzhgorod, Ukraine, coordinated by Prof. *William Keeton*, from the University of Vermont, and supported by EFICEEC. The objective was to investigate the potential for carbon projects and multiple co-benefits in the Carpathian region, including climate mitigation, biodiversity conservation, and watershed protection. Types of carbon projects considered include both improved forest management, as well as avoided forest deforestation/degradation, primarily under international voluntary carbon market mechanisms. Several important transboundary areas, including montane corridors linking Ukraine and Romania as well as Poland-Ukraine-Slovakia, are of particular interest for forest carbon projects. These could help build international collaboration around cultural preservation, security, and ecosystem management, thereby complementing the goals of the bioregional Carpathian Convention multilateral accord.

Forest sector getting ready for Horizon 2020

Since last year, the Forest-based sector Technology Platform (FTP) has been revising its Vision and Strategic Research Agenda (SRA) to better address research needs of the future, not least with the view of how the forest-based sector can contribute to the needs and societal challenges emerging from Horizon2020.

To complement the FTP SRA, EFI has recently initiated a process of coming up with a European Forest Research Plan. It will be a document which will complement the FTP SRA especially regarding topics of relevance to the forestry value chain. It will cover a wide range of topics from “Forests and human health & well being” to “Tree physiology, genetics & breeding & Wood quality”, and will focus on the many ways how the forest sector can contribute e.g. to bioeconomy.

Full consultation rounds took place during November. The aim is to have the European Forest Research Plan ready in spring 2013, at which point it will be communicated to the Commission and other stakeholders.

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Forest-based sector Technology Platform FTP

(<http://forestplatform.org/>)

Horizon2020

(http://ec.europa.eu/research/horizon2020/index_en.cfm)

Bioeconomy

(<http://ec.europa.eu/research/bioeconomy/>)

Project Office – at your service!



Saku Ruusila

Project Office was established in late 2011 and it serves all EFI Units, both at Headquarters and Regional Offices, in project cycle management. This includes a wide range of tasks from facilitating R&D agenda building, information on funding opportunities, support in the preparation of project proposals and tenders, expertise in EU project administration, to contract issues, project portfolio tools and information systems, internal processes and capacity building and sharing of project results.

“It is vitally important for a distributed organization like EFI to have the Project Office as a focal point to turn to for support and guidance in project issues”, says

Leena Salminen, manager of the Project Office. “We have quite a solid experience on EU Framework Programmes for Research, as EFI has participated in them since the 4th one, which was almost 20 years ago! It is also very useful for us in the Project Office to work in individual EFI projects and thereby gain valuable experience for developing our support services. At the moment our clients are the researchers and experts employed by EFI, but who knows, may be in a not too distant future we could also serve the EFI network, including the Associate Members, in project facilitation”, she concludes.

EFICEEC-EFISEE opened their doors in November

During this summer EFI increased its activities in South-East Europe by taking steps towards the establishment of the EFI South-East European Office, EFISEE, in Croatia. For the first two years EFISEE operates jointly with the EFI Central-East European Regional Office, EFICEEC, forming the Central-East and South-East European Regional Office – EFICEEC- EFISEE. The opening event of the South-East European Office (EFISEE) took place on 21 November 2012, in Varaždin, Croatia.

The office opening event's goal was to involve and connect partners within South-Eastern Europe by in-

troducing them to the future plans of the office and invite their ideas and suggestions for collaboration possibilities. The event was launched with an official opening followed by a plenary session. The afternoon session was divided into several parallel sessions, which focused on different research cooperation opportunities.

Further information:

*Marko Lovrić (marko.lovric@efi.int) and
Bernhard Wolfslehner (bernhard.wolfslehner@efi.int)*

Mission to research and communicate with civil society

The Advisory Group of the Central European Regional Office and the Observatory for the European Forests – EFICIENT-OEF suggested that the Observatory for European Forests (OEF) give more importance to economics information and research. In the new Business Plan for the Observatory, it is stated that the mission of OEF is to research and communicate with civil society emphasizing the political economy of the European forest sector. The aim is to induce proper decision-making and actions conducive to sustainable economic development in Europe. The Observatory will implement this mission by:

- Collaborating with EFI Units on economic information and research;
- Providing European citizenry with science-based information on the forest sector and joint natural resources issues;
- Communicating in a non-partisan way with civil society and enticing European citizens into participatory research.

The OEF overall objective is to bring neutral and easily understandable information to civil society to bear on the decision making processes and the representatives regarding the future direction of the forest sector at the pan-European, national and local levels. Three main programmes are identified to reach that objective:

- Macroeconomics: forest sector analysis including Criteria and Indicators for Sustainable Forest Management;
- Microeconomics: forest investment analysis including environmental valuation and indicators;
- Observatory: communication and participatory research with civil society.

These programs (see www.eficient.efi.int/portal/oef/) will be implemented with local, national and European partners. Two round tables took place last June at the Biennial of the Laboratory of Forest Economics (LEF) conference, a mix research unit of INRA/Agro-Paris-Tech located in Nancy, France to generate some research ideas for the two economics programmes. The debates and



Douglas Freer / www.fotolia.com

research papers presented at that conference should be published in a special issue of two different Journals at the beginning of 2013.

Regarding the Observatory programme, two actions will be pursued: a collaboration with a civil society initiative on continuous forest management, AFI (Association Irregular Forest) in November 2012 and contribution to a conference on corridors of biodiversity in the fall 2013. Both conferences will be announced on the EFICIENT-OEF website shortly and should provide some direction for two participatory research activities in the future.

Further information:

Patrice Harou (patrice.harou@efi.int)

INFRES – We keep the EU's Forest Energy Promises



The European Commission, as well as countries outside the EU, has set ambitious targets to increase the share of renewable energy sources, which are known as the 20/20/20 targets to combat climate change. The newly launched project “Innovative and effective technology and logistics for forest residual biomass supply in the EU – INFRES” (www.infres.eu), aims at practical technological and strategic improvements of biomass procurement and usage. The project's results are expected to provide solutions that help to keep the EU's forest energy promises.

The “directive for renewable energy” promotes the use of forest biomass for energy purposes. A sustainable and reliable supply of feedstock will be a critical success factor for the long-term perspective of biomass-based technologies on a large scale and competitiveness of the European economy. INFRES aims to accelerate the technological development in cooperation between research and industry, particularly in small and medium enterprises (SMEs). With this, INFRES opens new paths to the EU's renewable targets by producing research-based knowledge, tested technological solutions and service innovations for SMEs for sustainable forest residue feedstock supplies.

INFRES also aims to advance the competitive integration of forest residue and conventional industrial round-wood recovery. Finally, the project promotes high efficiency and precise deliveries of woody feedstock to heat, power and the bio-refining industries.

The project consortium has 23 partners, including nine leading forest energy research organisations, accompanied by 14 SMEs throughout the supply chain. The duration of the project is three years, with a total budget of around € 4.2 million. The project is co-ordinated by the Finnish Forest Research Institute.

ToSIA tool used in INFRES

EFI will be responsible for the assessment of economic, environmental and social sustainability impacts for these innovative demonstration cases by quantifying changes caused by new technologies and selected scenarios compared to business-as-usual operations. The tool used will be ToSIA, Tool for Sustainability Impact Assessment (<http://tosia.efi.int>).

“INFRES has a large number of concrete technology development targets for improved forest biomass supply. And with ToSIA their improvements on various aspects of sustainability can be assessed.” says the project co-ordinator Antti Asikainen from the Finnish Forest Research Institute.

New website for implementing C&I for sustainable forest management in Europe



Criteria and indicators (C&I) have emerged as a powerful tool in promoting sustainable forest management (SFM). Since Rio in 1992, several international processes and initiatives have developed criteria and indicators as a policy instrument to evaluate and report progress towards sustainable forest management. The FOREST EUROPE process has developed a pan-European set. By now, this set has served as the basis for State of Europe's Forests assessments in 2003, 2007 and 2011, and provided the basis for regional and national policy formulation, analysis and monitoring.

The newly launched website on implementing criteria and indicators for sustainable forest management in Europe gathers together information from a recent pro-

ject, which analyses their implementation in the 46 signatory states of the FOREST EUROPE process. The project also aims to strengthen the process and the use of criteria and indicators, not only as a tool for monitoring and reporting, but also for policy making at the national and European levels.

The project is coordinated and conducted by the European Forest Institute (EFI), in close cooperation with FOREST EUROPE Liaison Unit, UNECE/FAO, Finnish Forest Research Institute and relevant experts.

Bookmark www.ci-sfm.org now!

Further information:
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Volga region controlled from space

Eldar Kurbanov



Eldar Kurbanov, Oleg Vorobyev | Volga State University of Technology

The NASA science meeting, joint Global Observations of Forest and Land Cover Dynamics (GOF-C-GOLD) and the Northern Eurasia Earth Science Partnership Initiative (NEESPI) workshop and regional conference “Impacts of extreme weather on natural, socio-economic, and land-use systems: Focus on the 2010 summer anomaly in the Volga region”, was organized in the Volga State University of Technology on 17–22 June. The extreme drought and forest fires, which occurred over most of European Russia in the summer of 2010, were the main topics of the meeting.

The conference showed a good example of how the scientists and decision makers can come together to evaluate the consequences and impacts of the extreme drought events on the forest ecosystems and society at large. Participants of the conference paid great attention to the forest fires, which accompanied the 2010 drought in the Povolgie region of Russia, due to their spatial extent and impact on the rural areas and ecosystems. In this respect, availability of Landsat imagery and Global MODIS fire detections and burned area products are of high importance for the researchers, NGOs and Russian fire management services to monitor forest fires in Russia. Meanwhile the Fire Management agency of the Mari El Republic Ministry of Forestry indicated that the frequency of observations from satellites is not enough

to control the fire situation during the summer time. Therefore, traditional monitoring forms like air patrol and fire towers with video cameras to support early warning systems are still important elements of the forest fire prevention and localization.

In addition to a scientific agenda of presentations and training of young researchers in satellite image analysis several site visits to the burnt forest areas and abandoned agricultural lands took place during the conference. Participants were acquainted with the young pure and mixed forest stands formed after the severe forest fires of 1972 in different parts of the Republic Mari El.

Conference participants concluded that it is important to develop a regional strategy for the adaptation of forest and agricultural sectors to the extreme drought events, and more widely use the GIS and satellite images for estimation and monitoring of the direct impact of the drought on forest ecosystems.

The event brought together about 80 scientists from the US, Europe, Russia, and Kazakhstan, and was supported by the Global Change System for Analysis Research and Training (START) program, ScanEx Research and Development Center, EFI and the IUFRO.

http://csfm.marstu.net/nasa_conference/Index.html

ThinkForest Seminar: European Forest Governance – Issues at Stake and the Way Forward



Frank Boston / www.fotolia.com



THINKFOREST

The ThinkForest organises an open seminar on European Forest Governance: Issues at Stake and the Way Forward on 9 January 2013 at 13:00–15:30.

The seminar aims to present and discuss the legal, policy and political chal-

lenges for forest policy-making in the EU and at the Pan-European level.

Please pencil in this date to your calendar now, registration will open soon!

More information at the ThinkForest website:

<http://www.thinkforest.efi.int/portal/events/?bid=864>

8th FTP conference

12–13 March 2013, Barcelona

– *Inspiring Horizons* –

A new Strategic Research and Innovation Agenda for the Forest-based Sector

The 8th FTP conference – Inspiring Horizons – will take place on 12–13 March 2013, in Barcelona and present FTP with the opportunity to officially launch its revised Vision 2030 and Strategic Research and Innovation Agenda 2020. These renewed and updated documents will help set the course for the forest-based sector over the coming years.

More information:

<http://www.forestplatform.org/en/calendar-events/ftp-conferences/barcelona-2013>



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EUFORMAG is the European network of forest sector magazines. At the moment, it gathers 8 magazines from 5 different countries and reaches regularly more than 10 000 forest owners, engineers and forest agents. EUFORMAG aims to disseminate some practical and useful knowledge at a concrete forest management level. It is an efficient tool to circulate the results produced by forest projects of European interest.

www.euformag.eu

Winter-Summer School 2013

Making values work – ‘sustaining multiple values in managed forests’

The EFI Winter-Summer School (WSS) II will take place at two different forest management situations – industrial forests in the Aquitaine region around Bordeaux, France (WEEK 1; March 2013), and the alpine forests in Austria (WEEK 2; September 2013). Students will explore these two forest management types based on different cultural histories, socio-economic characteristics and environmental conditions. For more information and application, please visit the link on EFICENT-OEF website http://www.eficent.efi.int/portal/events/efi_winter___summer_school_2013/.



zorandim75 / www.fotolia.com

Planted Forests on the Globe

Renewable Resources for the Future

The 3rd International Congress on Planted Forests, 16th–21st May 2013, Portugal, France, Ireland, Spain, UK

The congress will investigate the sustainability of planted forests in the context of changing climates and the future role of planted forests in environmental protec-

tion and REDD+. It will comprise a plenary meeting held near Lisbon, Portugal, which will be preceded by five parallel scientific workshops, each held in a European Atlantic city (Bordeaux, Dublin, Porto, Bilbao and Edinburgh), and a field excursion. The congress is jointly coordinated and organised by EFI's Atlantic Regional Office –EFIATLANTIC, the Food and Agriculture

Organization of the United Nations (FAO) and the Union for Foresters of Southern Europe (USSE), and is sponsored by IEFCA and IUFRO.

More information and the second call:
http://www.efiatlantic.efi.int/portal/events/2013_icpf/

EFI events in autumn 2012 – March 2013

■ **RoK-FOR Final Conference:**
Green Growth from Forests
4 December 2012
Brussels, Belgium

■ **Illegal logging and legality verification**
– the FLEGT/VPA as new modes of governance
6–7 December 2012
Copenhagen, Denmark

■ **4th International Conference:**
Strategies on Forest Fire Prevention in the Southern European Forests
7–9 January 2013
Bordeaux, France

■ **ThinkForest Seminar:**
European Forest Governance – Issues at Stake and the Way Forward
9 January 2013
Brussels, Belgium

■ **MEDFOR Winter School & International Students Event**
14 January – 8 February 2013
Palencia, Spain

■ **Integrate Symposium**
23–25 January 2013
Freiburg, Germany

■ **III Mediterranean Forest Week**
17–21 March 2013
Tlemcen, Algeria

■ **EFI Winter Summer School**
1st week: 17–22 March 2012, Belin-Beliet, France
2nd week: 8–13 September 2013, Gmunden, Austria

Further information: Ms. Ulla Vanttinen | E-mail: ulla.vanttinen@efi.int | www.efi.int, under News and Events

Severe economic loss for European forest land expected by 2100

Based on the Motive project, a paper published recently in *Nature Climate Change* portrays that by 2100 climate change is expected to reduce the economic value of forest land by 14 to 50 %. This is the conclusion of the first pan-European study on the economic effects of climate change on forest land.

The study finds that cold-adapted species such as the Norway spruce, which to date contributes to a large part to the economic value in European forests will experience large range contraction over the years. It is likely to lose large parts of its current range in Central, Eastern and Western Europe (figure 1). On the other hand, more drought-adapted but slow-growing Mediterranean species like oaks (i.e. Cork oak and Holm oak) may benefit from climate changes and expand their ranges much further north than today. In the long run, these species may increase to, on average, more than 32 % of the forest land in Europe.

Unless the climatic impact is compensated with countermeasures, Europe will have to cope with forests of less economic value, and with less contribution to climate change mitigation than today's more productive forests. At a minimum, adaptive management actions may be necessary, but even the introduction of more productive species from outside Europe such as Douglas Fir, Atlas Cedar, Pine or Eucalyptus species might have to be considered.

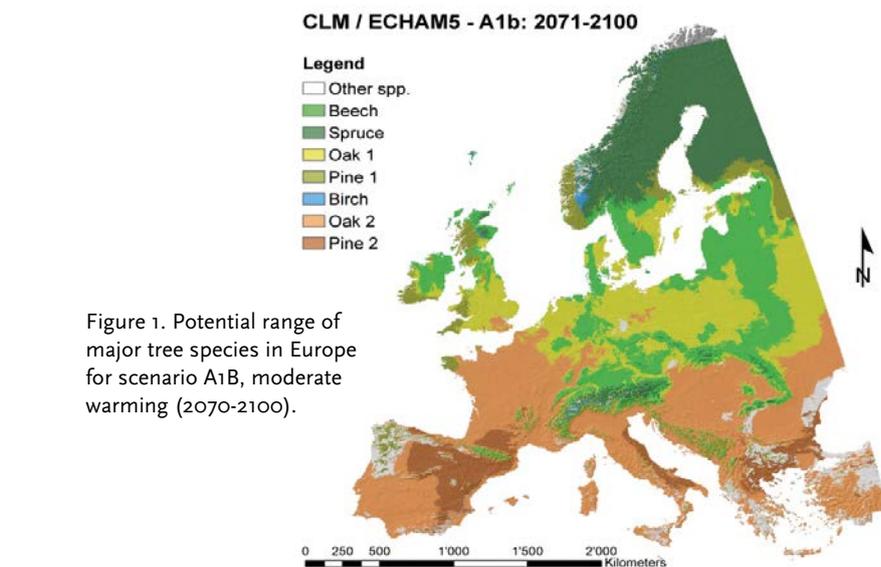


Figure 1. Potential range of major tree species in Europe for scenario A1B, moderate warming (2070-2100).

This study combines for the first time biological insights with economic insights at a pan European level. However, the biological model, the resource model and the economic calculations are only offline connected. Furthermore, the economic calculations do not take into account any dynamic responses of the forest sector or the forest owners. This shows that in this area we can still make large progress when at a pan European level, climate impacts studies, European forest resource modelling and European forest sector modelling, are dynamically linked with adaptation options. This would lift the research field to a new generation of connected models under more permanent structures of collaboration.

Reference

Climate change may cause severe loss in the economic value of European forest land. By Marc Hanewinkel, Dominik A. Cullmann, Mart-Jan Schelhaas, Gert-Jan Nabuurs, Niklaus E. Zimmermann. *Nature Climate Change* 23 Sep 2012

The study was done by scientists from the Swiss Federal Institute for Forest, Snow and Landscape Research WSL, the Forest Research Institute of Baden-Wuerttemberg (Germany), Alterra/Wageningen University and Research Centre (The Netherlands), the European Forest Institute and the University of Freiburg (Germany)

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