

# EFI *news*

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# Forests are at the core of sustainable Europe

My first year as Director of EFI is drawing to a close. The time has been exciting, challenging and above all very rewarding! My ambition, which I shared with our network during our Annual Conference in St Petersburg, is to position EFI as a science-policy platform that generates and connects knowledge, and also puts that knowledge into action.

The dynamics of supply and demand for water, food, energy, fibre and land will be drastically altered due to major environmental, economic and social changes. This will increase tensions over access to global renewable natural resources, but will also stimulate new business opportunities.

This means that the multifunctional role of forests will become increasingly important as competition for land and natural resources continue to rise. Furthermore, forest management and forest policy will be in the core of any long-term framework that addresses the three most influential "green-related" policy areas: climate change, biodiversity and the bioeconomy. This is due to the fact that European forests deliver renewable resources to build the bioeconomy, and to

provide crucial services regarding biodiversity, the carbon and water cycle and other climate-related benefits.

Therefore, forests will continue to rise in prominence throughout the political, scientific and business debate.

To capture the opportunities resulting from such an increased "centrality", we need new partnerships across countries, disciplines, policy areas and sectors. This means that EFI needs to expand its branches out of its comfort zone, while maintaining solid roots in the soils of "forest science", which has developed concepts that are now crucial in the wider sustainability discussions.

In a demanding policy environment, the role of science in policy making is and will be more important than ever. Therefore, to increase our impact, we need to understand the process of policy making better and the type of information policy makers need. In that respect, the synthesis and contextualisation of scientific information, bringing together scientists from different disciplines and building appropriate national to international science-policy interfaces is crucial.

In the rapidly changing operating environment I have described, I look forward to building a new strategy for EFI with our network. It will allow us to confront the unprecedented challenges, but also embrace the opportunities in front of us.

MARC PALAHÍ  
DIRECTOR

## EFI news

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The European Forest Institute (EFI) is an international organisation established by European States. EFI conducts research and provides policy support on forest related issues. EFI facilitates and stimulates forest related networking, as well as promotes the supply of unbiased and policy relevant information on forests and forestry. It also advocates for forest research and for scientifically sound information as a basis for policy-making on forests.



EUROPEAN FOREST INSTITUTE

Yliopistokatu 6, 80100 Joensuu, Finland  
Tel. +358 10 773 4300, Fax. +358 10 773 4377  
[communications@efi.int](mailto:communications@efi.int), [www.efi.int](http://www.efi.int)



Simon Pugh



Georgy Shablovsky

# "Reaching outside of the forest community"

Reaching out of the forest community is vital for building new partnerships related to forests and forest research. This was one of the main points from the Annual Conference in late September in St Petersburg, Russia. This said, however, the forest community should use its expertise and strong network as a selling point in the European policy making and research arenas. This was echoed by **Esko Aho**,

Strategic Advisor on Russia-Europe cooperation for the EFI, and a former Prime Minister of Finland: "Looking at the role of EFI, I am fully confident that bio-sector and forests will be key components of global solutions. But our concepts are old fashioned and they need to be changed. Science can play a critical role in that and it is a role that cannot be compensated by others."

*"We need more visibility for our high quality science."*

*"Work with young people."*





◀ The Annual Conference elected Prof. Dr. Christine Farcy from the University of Louvain, Belgium, as a new Board member.



◀ Giuseppe Scarascia-Mugnozza from Italy is the new Chair of the EFI Board.

*"Expand the cake of funding, don't fight over the last slice"*



◀ The Conference bid a warm farewell to the outgoing Board Chairman Jørgen Bo Larsen (left) from Denmark. Risto Päivinen (right) was awarded EFI Fellowship for his long-standing contribution to EFI.



Georgy Shablovsky



The annual conference and a scientific seminar brought together over 100 European and Russian forest scientists and experts for decision making and networking. A big thanks goes to our collaborators at St Petersburg State Forest Technical University and the City of St Petersburg!

Sharing, discussing and decision making were the core focus of the events. **Doru-Leonard Irimie** from DG Research and Innovation gave an update on opportunities in the role of forest research within European Commission's Horizon 2020

programme. His advice for successful proposal writing was to "Think of impact first, science second and implementation third". EFI's Policy Support activities and the new Multi-donor Trust Fund mechanism were also discussed. Through the EFI policy support activities, the member organizations can reach European policy makers more effectively, by bringing visibility to their science within the European policy making arenas.

The role of EFI in supporting its member organizations was seen two-fold. First,

support and facilitate networking and research consortia building among the member organizations at the European level. Secondly, have a strong research component at EFI that builds partnerships in research with members.

*Next year's conference will be held in Vienna, Austria on 19–23.9. welcome!*

*The 2017 Annual Conference will be held in Oslo, Norway.*

## SEARCHING FOR A SYSTEMATIC APPROACH

There are a lot of good opportunities, knowledge, experience, and willingness to share all of this information, from science to policy. This was one of the conclusions of the EFI scientific seminar "Forest policy research from theory to practice" held on 1 October.

### ROOM FOR IMPROVEMENT IN BOTH EUROPE AND RUSSIA

Collaboration, participation and learning are the key ingredients of successful forest policies and their implementation. In Europe, the involvement of stakeholders is more common, but it was noted that such involvement is not always systematic. For example, stakeholder consultations may sometimes start with good coverage, but due to lack of systematic approach they diminish during a long policy development process.

What is missing in Russia is a systematic approach to involve the public in forest management. The policy processes are not transparent and there is no legislation for stakeholder and public involvement. This approach is possibly reflected by the fact that the social role of forests is not considered of key relevance and more understanding of what kind of role forests play in e.g. rural development is needed.

*The seminar was dedicated to the memory of Prof. Dr. **Peter Glück**, a scientist and lecturer from Austria who was an early advocate for science-policy interface nationally and at the pan-European level. "His scientific legacy lives in the spirit of this seminar," stated **Ilpo Tikkanen**, a long-time colleague of Professor Glück and one of the moderators at the seminar.*



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In the panel discussion on 'Science meets Practice' Dr. Natalia Lukina talked about a stakeholder forum established by the Russian Academy of Sciences for discussing forest policies.

## SUCCESS CAN ONLY BE ACHIEVED THROUGH COOPERATION BETWEEN BUSINESS, GOVERNMENT AND ACADEMIA

"This conference was an excellent opportunity to network with Russian and European colleagues – what could be more beneficial for all involved parties," stated **Kenneth Munson**, Director of Global operations at International Paper. Below he tells EFI News readers his thoughts on challenges and opportunities in applying science to practice.

Today, when we say 'modern forestry practices', we really mean Sustainable Forest Management (SFM). Russia is beginning to develop the framework to implement sustainable forestry management practices. Making the transition to a new model is a significant and important change. There is a lot of hard work ahead to promote and implement it. There is also a strong need for education systems and

training for the next generation of forestry specialists and forestry contractors who will become part of the planning and execution of SFM at the field level. Strong and sustainable support from business is required to implement the SFM model in practice, and we strongly believe that SFM will help Russia realize its forest potential consistent with global best practices.

The Russian timber industry's tremendous potential is clear and should be further systematically unlocked. The optimal approach to achieving these goals is Sustainable Forestry Management, which provides a balance between social, environmental and economic factors.

For example, a recent research evaluation of the potential benefits of SFM in the Leningrad region was carried out by the



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Green Forest Fund and commissioned by International Paper. Early indications of the social benefits of SFM include rising employment rates in forest and rural communities. From an economic perspective, SFM could boost the timber sector's efficiency. By increasing forest yields, it reduces the pressure on high conservation value forests.

# Russia:

## *From petrol to bio*

Since the beginning of this year, former Prime Minister of Finland, Mr **Esko Aho**, has been EFI's strategic advisor on Europe-Russia cooperation. He sees that the time has come for Russia to take on the bioeconomy as a serious option for an economy built on fossil based fuels.

### **What is your view on the outlook for Russia in respect of the bioeconomy?**

In simple terms it can be said that Russia is a 'petro-economy'. And it has increased this profile for the past 15 years very heavily. For example, in 2000, 10% of the government expenditure was covered by income from oil. In the recent years the figure has been 50%. The situation gets very challenging for Russia when the price of oil goes down. This has led to weakening of the Russian Ruble, and to a halt of the economic growth.

So, what are the alternatives? One option – preferred by some in Russia – is to close up. Another option is to stay as a 'petro-economy', as I call it, and believe that oil and gas prices will eventually rise. The

third option, and the preferred one, is that Russia decides to modernise itself. It needs significant structural reforms, including long-term policies and investments in research, education, innovation and infrastructure. These should focus on forests! In this respect bioeconomy is a fantastic solution.

After all, Russia has vast natural resources, and it has potential partners in Europe. The bioeconomy offers Europe and Russia a strategic area for long-term co-operation.

### **The current political situation is challenging. How do you see that effecting such collaboration?**

I believe that cross-border bioeconomy partnerships at scientific, policy, economic and business levels should be brought to the European and Russian agendas. We can do this despite the current political situation. Science is among those fields where collaboration should continue. In fact, it is a great form of diplomacy we should utilise more.

### **How do you see EFI's role this respect?**

This is where EFI comes in! EFI's role here is unique since it provides a Pan-European science-policy platform, which is unbiased. And it can support knowledge transfer based on the latest scientific knowledge and experiences from other countries. Already EFI has an extensive network of member organisations in Russia. It has also consistently developed its activities towards 'bridge-building': creating neutral forums where collaboration between Russian and European scientists and experts can be formed. One of these forums is the Young Leadership Programme, which will take place in December. There emerging leaders from Russia and Europe will learn about the opportunities and challenges facing the forest-based bioeconomy in Russia, and above all, interact and form liaisons for the future!

Mr Aho served as Prime Minister of Finland during 1991–1995, and as Member of the Parliament between 1983–2003. Mr Aho's experience goes much beyond the policy making arena. He is currently Executive Chairman of East Office of Finnish Industries representing the leading Finnish corporations in Russia, Chairman of the Board of the Skolkava Foundation in Moscow and Executive in Residence of Aalto University in Helsinki.



# EFI NETWORK ALL THE WAY FROM FP6 TO H2020

MARKO LOVRIC & ROBERT MAVSAR, EFI

Horizon 2020 is the biggest EU Research and Innovation programme ever started in 2014. It was preceded by the 6<sup>th</sup> and 7<sup>th</sup> Framework Programmes. These European Commission funded framework programmes are the most important international framework behind forest research in Europe.

In order to assess the success of its Associate and Affiliate members within this framework, EFI conducted a survey among its member organisations and analysed the Commission's databases on all FP6, FP7 and H2020 projects.

The preliminary results of the survey show that the most popular priority areas in H2020 were *Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy, followed by Climate action, environment, resource efficiency and raw materials*. EFI member organisations had an average

success rate of 22% with proposals within these areas. Most organisations submitted one or two proposals per each priority area. For most that did not participate in the H2020 calls, not being able to find appropriate partners was one of the main obstacles.

The success rate of the member organisations was lower in the Horizon2020 than in the 7<sup>th</sup> Framework Programme. In order to be more successful, EFI's member organisations discussed at the Annual Conference opportunities for improved collaboration. It was also agreed that EFI will increasingly inform the network about funding possibilities, and serve as a networking hub, both inside and outside of the forestry sector.

EFI's analysis of EC's databases on FP6, FP7 and H2020 shows an increase in the annual number of projects co-financed by the European Commission. The analysis also shows an increase in



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organisations outside traditional forestry and forest research, and a thematic shift towards bioeconomy and industry-related topics.

## A BUSY YEAR FOR EVOLTREE

STEPHANIE HAYES, EFIATLANTIC

2015 has been an eventful year for the EVOLTREE network, with twelve new partners joining (bringing the consortium to 32 partners in 24 European countries) and the undertaking of a general renewal process for the new four-year term.

The new open-access project for collecting tree phenotype data from wild populations, TreeType, was successfully launched with a dedicated website. Furthermore, the new Ten Grant Initiative that was implemented this year has proved to be popular, with a number of grants being awarded to member students for their participation in relevant international scientific events.

The EVOLTREE annual meeting was held at the IUFRO Tree Technology Conference in Florence in June, including an open workshop on the Metagenomics of the Tree Microbiome. EVOLTREE partners have also been busy organising a number of training courses on subjects as wide as Ecology and Society (LabEx COTE), to more technical ones on specific tools like Approximate Bayesian Computation (Uppsala University).

Now EVOLTREE is looking forward to entering its 10th year in 2016, a landmark that will be celebrated at the IUFRO Genomics and Tree Genetics Conference organised by INRA in Arcachon, France, at the end of May.

*EVOLTREE is a European network facilitated by EFI and coordinated by EFIATLANTIC.*



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### EVOLTREE =

A network of excellence linking four major disciplines, Ecology, Genetics, Genomics and Evolution, to address global issues that European forests are currently facing, such as environmental changes and the erosion of biodiversity.

<http://www.evoltree.eu/>

# Old and new geography

## in the European forest research landscape

To join forces for a more efficient European Forest Research Area, we need to know what the current research capacities across Europe are. In this respect there has been a knowledge gap especially related to the EU neighbouring regions: Russia, Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine. The capacities as well as strategic forest research priorities in these countries have been mapped for the first time.

Results from the scoping have now also been compared with information from the EU countries. What are the differences in the priorities between the EU countries and the neighbouring regions? And where do they share common goals and interests?

The work was conducted within a transnational ERA-NET project SUMFOREST with the aim of reinforcing scientific cooperation on European forests. The SUMFOREST project also creates new ways of cooperation with the EU neighbouring regions, aiming at a reduced fragmentation and strong impact of research activities on sustainable forest management and multifunctional forestry. In this project EFI has led a mapping exercise of forest research capacities in Russia and in the Eastern Partnership (EaP) countries.

### HISTORY REFLECTED IN THE RESULTS

The capacity mapping has been done for the first time. Starting from the late 1980s, Russia and EaP countries went through deep political and economic reforms which are reflected also in the forest research sector. For example, a number of scientific institutions were closed down or diminished and financing was reduced and currently the average age of staff is high. Many organizations lost international connections almost completely, both in project work and publishing. Consequently there is now an urgent need to stimulate and enhance the international cooperation and to provide networking and coordination opportunities for Russia and EaP countries.

**SUMFOREST** stands for SUsustainable forest management; Multifunctional Forestry, European Forest Policy, more information [www.sumforest.org](http://www.sumforest.org)

**The Eastern Partnership (EaP)** is a joint initiative between the European Union, EU countries, and the eastern European partner countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine). Source: [http://eeas.europa.eu/eastern/index\\_en.htm](http://eeas.europa.eu/eastern/index_en.htm).

### PIONEERING WORK

The mapping exercise included a high number of organisations that conduct or finance research on forest issues: academic and applied research, higher education, business, governmental funds, ministries and agencies. The mapping results summarise existing forest research capacities, infrastructures and programmes. "Thanks to the scoping, we were able to build new connections in Russia and the EaP countries, and now they form an active network of over 100 individuals and organisations," rejoices leader of the scoping work, Dr. Elena Kulikova from EFI.

Followed by the mapping, workshops held in Kazan (2014) and Minsk (2015) demonstrated the unique character of the project. For the first time scientists and scientific managers from Russia, all six Eastern Partnership Countries and the EU got together to discuss transnational forest research cooperation at the Pan-European level. The next step is to identify possibilities for cooperation.

### SHARED PRIORITIES

While the current status and resources in forest research vary between the countries, the topics high on the agendas include both traditional – such as silviculture, sustainable forest management, monitoring and inventory. However, also more recent topics such as bioeconomy and bioenergy are a priority. One of the most complex areas are the support and financial mechanisms for forest research in the EU, Russia and EaP countries. These financial mechanisms are often new to the partners and it is a new area SUMFOREST has to explore, in order to find solutions. If the project succeeds in this, it can be used in a possible joint Call for proposals targeted at EU and Russia/EaP countries on related to SFM research.

# New IUFRO Task force on

# *sustainability of planted forests*

JEAN-MICHEL CARNUS, INRA  
CHRISTOPHE ORAZIO AND STEPHANIE HAYES, EFIATLANTIC

In May this year, EFIATLANTIC received good news from IUFRO that its proposal for a Task Force focusing on the Sustainable Management of Planted Forests for a Greener Future had been accepted. The Task Force is an outcome of the 3rd International Congress on Planted Forests 2013, held to discuss the current state of knowledge on planted forests globally and regionally.

Amongst a number of findings, the congress noted that the areas of planted forest are continuing to increase and that the goods and services provided by these forests are becoming increasingly diverse. The interaction of planted forests with other land uses within landscapes and their contribution to poverty alleviation and food security was identified, and the risks to planted forests from climate change, socio-economic pressures and responses to these risks were seen as important.

Among several recommendations, the congress called for increased international scientific cooperation to strengthen the commitment to research and development and considered such efforts as being critical to the sustainable management of planted forests.

## AIMING TO ADDRESS RESEARCH NEEDS

The Task Force has been set up to address research needs concerning issues of major significance to global forest policy and sustainable development goals. These relate to thematic areas such as vulnerability and risk management, sustainable intensification, governance and socio-economic viability, ecosystem services and landscape restoration.

It is composed of an international team of experts from various countries and continents covering different fields of knowledge and studying complementary aspects of planted forests among the world's regions.

Reflecting increased pressure on forest resources, the Task Force will focus in its first term of two years on key issues related to the intensification of planted forest management in order to meet the increasing demand for forest products from growing populations and green economies, and doing this sustainably to reflect the changing global environment.

## TARGETS

The overall outcomes of the Task Force will be an enduring multidisciplinary platform for international and pan IUFRO scientific collaborations based on the task force themes; an improved interface between IUFRO science activities and wider society and policy initiatives related to planted forests; and internationally coordinated research programmes that will take forward the research needs on the sustainability of planted forests.

The task force activities will include networking via the organisation of specific sessions in scientific events; enhancing science and research collaboration via the publication of joint papers; and fostering science – society/policy interface through specific workshops and side-events in international congresses.



Jim Carle / FAO

METODI SOTIROV, ALU-FR/UNIQUE  
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ELMAR SCHÜLL, FHS

ANNAMARIA RIEMER FHG-MOEZ  
CHRISTOPHE ORAZIO AND REBECA CORDERO, EFIATLANTIC  
OLA SALLNÄS AND OLA ERIKSSON, SLU

# Shaping the future of sustainable forest management

Forests cover more than one third of the total land area of the European Union (EU). They are a key natural resource, which has been managed for decades to meet growing societal demands for diverse forest ecosystem goods and services, including wood production for material and energy use, biodiversity conservation, water and soil protection and recreation.

The increasing demand for ecosystem goods and services is actually managed at the landscape level where conflicts between the needs of a large diversity of land uses and stakeholders have to be solved.

## THROUGH ANALYSING AND MODELLING

The INTEGRAL project combined forest policy analysis and forest modelling with exploratory scenario development and backcasting in an inter- and trans-disciplinary approach.

First, key factors in the domains of society, technology, economy, ecology and policy currently having an influence on sustainable forest management (SFM) in the EU countries were identified. Second, exploratory

scenarios were constructed that consisted of coherent storylines about possible and alternative developments of influencing factors and their possible impacts in the future. Lastly, scenario-specific backcastings were generated to link desired future end-points in terms of forest ecosystem goods and services with the current situation.

## FINDINGS

First, the results reveal common patterns across Europe despite different case studies and countries. It is strikingly evident that in most future scenarios, the increased supply of a mix of forest ecosystem goods and services (“more-of-everything”) is expected and desired by stakeholders in all

countries. At the same time, the results point to future challenges associated with managing trade-offs between timber production, biodiversity conservation, carbon sequestration, and recreation.

Second, the findings show that the desired provision of forest ecosystem goods and services can be reached in the future through a variety of actions (regulation, finances, information) that depend on the different European regions. However, across all countries and regions, policy and institutional changes, followed by forest management practices, were identified as the most appropriate means. Other influencing factors such as ‘Global timber markets’, ‘Population’ or ‘Climate change’ are also important for SFM in the future, but they can hardly be influenced by actors at the landscape level alone.

Third, public organisations and institutions at the national level are considered to be of key importance when addressing current and future forest management in all EU countries under study.



Finally, preferences for multiple forest land use at the landscape level through both integrative and segregative forest management were found in most countries under study.

Read more about upcoming outputs in the project's website: <http://www.integral-project.eu/>

### PONTENX CASE STUDY AREA

As part of the INTEGRAL consortium, EFIATLANTIC was in charge of the Pontenx case study area, located in the Aquitaine region in France and comprising 13 municipalities.

This 101,000 ha area is extremely representative of the maritime pine forest sector in south-west France called "Massif landais". It is defined by administrative boundaries representing all issues related to planted maritime pine forests, which integrate the following regional features: coastal dunes, three common forest soil types (dry, humid and mesophilic 'landes')

and the protection and/or conservation status of the natural zones.

### NEW TOOL

EFIATLANTIC has contributed to the design of a new landscape tool for assessing the evolution of ecosystem goods and services according to various policy scenarios. While relying on good quality models and data being provided by the Associate members, this work is a first step towards applying integrative approaches at the landscape level that can be re-used in many contexts.

The work carried out during the project demonstrates the added value of using landscape approaches when analysing ecosystem services.

It was illustrated that even when using a conservative approach, due to ecological constraints and forest owner behavior, we can strongly influence the trajectory of many ecosystem services, such as timber production and biodiversity, as well as that of risk susceptibility, as shown with the fire and wind indices.

The FP-7 funded large-scale research project INTEGRAL "Future-oriented and integrated management of forest landscapes in Europe" (2011–2015, [www.integral-project.eu](http://www.integral-project.eu)) has dealt with these topics within twenty case studies in ten European countries (BG, DE, FR, IT, IRL, LIT, NL, SE, SLK, PT), comparative cross-country syntheses and specific EU-level studies.

INTEGRAL aims to contribute to a better understanding of forest land-use trade-offs in Europe, and to explore future pathways and approaches for the governance of integrated forest management at the landscape level.



# Can wood construction live up to the *positive expectations?*

ELIAS HURMEKOSKI, EFI

## LARGE POTENTIAL, LARGELY UNNOTICED

The Finnish housing fair in 2015 showcased ecological building. Among others, it featured a multi-story building, named simply the eco house, with a 20 % smaller carbon footprint compared to a typical concrete-frame building. This was accomplished by a hemp fiber concrete composite frame and a partly recycled wood façade.

Right next to the eco house lies another modest-looking wooden façade, the veil of Europe's largest wood-frame multi-story building. The wood-frame building did not receive similar publicity, even though wood-based off-site construction could reach at least similar reductions in GHG emissions, while improving the productivity of construction by one third. Many further advantages include the positive effects on the health and comfort of residents.

Apart from a few hotspots where the sector is beginning to meet the positive expectations, the overall market share of wood in residential construction in Europe has not changed much from the current state of below 10 % on average during recent decades, despite the large potential.

## CHANGE-RESISTANT SECTOR

The construction sector serves as the very definition for the concept of path dependency. Accustomed building practices are favored over alternatives due to existing norms and institutions and investments in the existing infrastructure, know-how, and capital intensive machinery. Due to the lack of permanent networks, the actors are tied to short-term decision making and competitive tendering, i.e., pursuing lowest costs. The established value chains based on cost competition encourage incremental improvements only and easily make the actors

unwilling to accept new practices that are perceived to cause extra work and high associated costs.

## WHAT CAN BE DONE?

It is not that the structural hindrances could not be affected. Rather, the wood product firms have understandably been cautious of trying to influence the established practices. Yet accessing the markets might require rethinking the industry boundaries and the roles of different actors in the construction value chain. For example, wood product supplier firms could establish a common developer firm specializing in wood construction. Similarly, the large forest industry corporations could incorporate spin off construction units from the inflexible large business units. This way, supply and demand would be made more elastic and thereby increasingly likely to meet each other.



As can be seen from the housing fair example, information on the environmental and functional performance of buildings is currently scattered and inconsistent. Issuing product declarations could inflict more competition and thereby increase the credibility of wood-based building practices. However, measures based on information alone might not be influential enough.

Since costs often matter the most in decision-making, the public sector could aim to affect relative prices in a more ambitious way compared to the emission trading scheme in force today, on account of the climate and energy objectives. However, policies distorting the markets in favor of single practices may have undesired consequences and even turn against themselves. For example, in a recent case from Joensuu, the city plan obligated having the frame built of wood in one single multi-story building in a new housing area. The plan

ignored the limited awareness and unwillingness of the industry to comply, resulting in abandoning the requirement and allowing a concrete frame to be built, which has most likely compromised the credibility of wood construction in the region. Instead of applying pressure, the public sector could enable and promote competition by revising the over scaled building regulations and addressing their inconsistent interpretation.

### MESSAGES FOR STAKEHOLDERS

The forest industries have set a target of tripling the market share of wood construction in Europe by 2030. Against this background, the target appears very ambitious, if not optimistic. Even if the steps above were taken, a large ship would take time to turn. For example, success in the wood-frame, multi-story building markets in Sweden in the 2010s was the result of

cooperation and R&D programmes from the early 1990s onwards. Moreover, the structure and culture dependence of the construction sector implies that the market potential of wood construction varies a lot by region and by sub-sector. Consequently, such targets should be more precise for single actors to assume liability for actions. Only determined work towards achievable targets can ultimately lead to the realization of the targets that many take for granted.

In order to contribute to the societal grand challenges, strong unforeseen policies, technologies and business models are needed, regardless of the market diffusion of wood-based practices. But, the forest-based sector could be the one to take the initiative.

*The article is based on a forthcoming PhD thesis.*



# Irish Sika Deer and the European Forest Risk Facility

Alexander von Dören / Fotolia

ALEXANDER HELD, EFICENT

Deer pose significant challenges to natural regeneration in mixed species forests through damage caused by their selective browsing and bark stripping. Management of their populations is essential for the development of resilient forests suitable for the changing climate, with increased storm and fire resilience, and improved biodiversity. As a result, in many areas of Europe, wildlife management is increasingly more of a silvicultural issue than a matter of hunting.

This topic was among topics addressed in the EFI's FRISK-GO project and was considered ideal for an Exchange of Experts between Germany and Ireland. Ireland has previously participated in successful professional exchanges for wildfire management support.

## IRISH WILDLIFE MANAGEMENT

Forests and woodlands in Ireland are home to the introduced sika deer (*Cervus nippon*), fallow deer (*Dama dama*) and the native red deer (*Cervus elaphus*). Population densities for all species vary greatly across the country, but have reached very high levels in some places. Within these areas, the level of damage to woodlands, conservation areas, forest plantations and agriculture is of concern to land users and forest managers.

These species are traditionally managed through hunting, with walk-and-stalk as the preferred method. However, this places a relatively high amount of stress, disturbance and pressure on the deer populations

relative to culling rates. This is due to wildlife populations responding by becoming shy and nocturnal, taking cover in woodlands and forests, where they cause high levels of damage and other management difficulties. Further to even more difficult hunting conditions, the reproduction rate of deer can even increase under such pressure.

The planned exchange visits to Baden-Württemberg will focus on silvicultural issues for various altitudes and forest types, from lowland riverine forest to mountain forests. The exchanges will greatly benefit German forest managers who will learn from the Irish expertise on Sika deer as well as on invasive plant (tree) species.

## GERMAN WILDLIFE MANAGEMENT

Forest managers in Germany and Baden-Württemberg in particular, have long-established expertise in wildlife management. For example, the adaption of deer policies over the past 15 years resulted in the new

Wildlife Management Act of Baden-Württemberg (April 2015). Wildlife management techniques have been adapted to high-population densities, shooting seasons have been synchronized across a range of species to reduce hunting pressure (shooting seasons), and wildlife biology facts are increasingly being applied during the decision making process instead of animal trophy quality considerations.

German forest managers have a wealth of experience to share with their Irish counterparts. A great many issues will be considered, including deer census, hunting techniques, interval hunting, guided tourism, adapted silviculture practices, continuous cover forestry, etc. Special attention will be given to the relationship and mutual effects between wildlife population and silviculture and habitat management. The influence of deer species on natural tree regeneration and tree species composition is of absolute relevance, especially in light of climate change and the need to adapt and develop future resilient, robust, mixed forests.

The Exchange of Experts will begin in late 2015 and continue during 2016. It will involve mutual exchanges of forest managers and researchers to various regions where they will participate in a variety of activities such as training seminars, workshops and operational management.

# New boost with

# Exchange of Experts

ALEXANDER HELD, EFICENT

The concept of short-term exchanges of experts between European Union countries, known as an Exchange of Experts (EoEs), has been around for a number of years, with people in civil protection roles able to spend up to two weeks abroad sharing professional experience. This model has now been used for other roles in the forest sector, with positive results.

An EoE offers a wealth of opportunities, such as on-the-job training, new experiences, fast-tracking of expertise, shared lessons, inspiration for new research and a solid base for cooperation and assistance in times of crisis. Such an exchange can also help support existing networks, institutions and groups by providing more opportunities for cooperation and networking.

EFI's FRISK-GO project, which ran from 2013–mid 2015 to investigate the feasibility of the 'European Forest Risk Facility', arranged several EoEs. For this project, the EoE was widened to include forest managers and researchers that deal with forest risk, although the link to civil protection remained prominent, as required, and the exchanges focused on storm and fire-related

issues.

Feedback from participants and evaluation by the project team revealed that the EoE concept provided great value. The exchanges were cost-effective and the return on investment has been manifold for FRISK-GO and its network, as well as for participants. The networking aspect proved to be particularly valuable, since forest risk management teams across Europe were otherwise only meeting by chance.

When possible, FRISK-GO also used other funding sources to complement the EU-funded EoE. This created the opportunity to host exchanges on forest risk topics unrelated to civil protection, which has been named 'EoE Forest'.

## EoE FOREST

EoE Forest has now been used successfully as a cooperation and exchange tool in other EFI projects, namely the INTEGRATE + and In-Tree projects.

These exchanges are very flexible and can serve an array of topics and purposes, from fire and storm risk management to biotic risks and drought. They can cover

operational management or strategic and policy-relevant content, and can range from a purely political or scientific perspective down to practical training on chainsaw use for storm-felled timber.

Given the very positive results and developments so far, this exchange is likely to continue within the future European Forest Risk Facility.

EFIATLANTIC Regional Office and State Forest Administration of Baden-Wuerttemberg (ForstBW) and many others were instrumental in providing specialists and support for the EoE Forest. We sincerely thank them for their valued efforts!

The FRISK-GO project ended in July 2015. The Executive Summary, Business Plan, case studies and EoE reports are all available at [www.friskgo.org](http://www.friskgo.org). It is envisaged to have a FRISK Secretariat and FRISK Regional Nodes established and running by January 2017.



Alexander Held

# Social capital

## in forest governance

ELENA GÓRRIZ MIFSUD, EFIMED-CTFC  
LAURA SECCO & ELENA PISANI, UNIVERSITY OF PADOVA

Networks become a key aspect for environmental governance in the context of the increasing complexity of actors' interactions, with particular relevance for forestry. Nodes (individuals or organizations) and the fluxes among them -information, collaboration, trade flows, etc. constitute networks. The social structures of different communities constitute an asset for their development, coined as "Social Capital" by Putnam (1993). Social capital encompasses the structure of ties, trust and norms which facilitate collective action, so that actors are coordinated for a common goal. Social capital contributes to explain the behavior of community members beyond traditional individual incentives.

### WHY COORDINATE?

The forestry domain presents several aspects requiring land managers' coordination, in particular spatial spillovers, diffuse forest uses, upscaling of wood mobilization, and community forest management.

- From a landscape-scale management perspective, **spatial spillovers** represent ecological processes where land adjacency externalities occur, such as habitat corridors, the spread of wildfire or pests.
- **Diffuse forest uses** rely on non-organized, individual harvests of i.e. non-timber forest products, whose aggregated effect may have undesirable consequences -i.e. depletion.
- **Joint organization of forestry work** towards wood mobilization or optimized multifunctionality shows probable efficiency gains for landowners.
- Self-organization of local communities and their involvement in decision-making through bottom-up processes defines **community forestry**.

Nevertheless, foresters usually overlook social capital aspects, and the topic is in its infancy within the forestry research sphere.

### WHAT CAN SOCIAL CAPITAL OFFER?

Much can be learned by looking at forestry challenges through the lens of social capital. Recurrent relations in rural societies facilitate community incentives for good behavior based on the reciprocity principle. Economic theory models them as repeated games where players can observe others' actions, hence reducing information asymmetry problems and their consequent opportunities for free-riding behavior. The economic relevance of peers' backing relies on the reduction of transaction costs and on risk pooling, smoothing transactions and allowing community members to engage in more efficient, complex or innovative projects which potentially bring economic prosperity. Nevertheless, when strong bonding ties are reluctant to desirable changes they can result in blocking community development, representing the so-called "dark side of social capital".

This network perspective within forest governance is gaining attention in recent years (i.e. Giessen and Buttoud 2014), as shown by the number of publications. Specialized techniques, such as Social Network Analysis, permit the numerical quantification of network variables, as well as their graphic representation, which complement traditional qualitative analyses.

### FINDINGS

Adapting key social capital issues to the forestry domain, we draw attention to the following aspects:

#### The strength of weak ties

With this expression Granovetter (1973) referred to actors with bridging positions - connecting one community with another. These "brokers" act as innovation facilitators: they transfer knowledge from other sectors or regions to their community; moreover, they act as catalyzers of inter-community cooperation. Representatives in wood sector platforms, international networks (i.e. EFI, COST actions) or forest-sector federations could have that role.

#### Trust

Trust permits value chain transformations to crystallize, especially for the functioning of forest owners' associations and cooperatives. Trade analyses can be fine-tuned by including reliability of trade actors, such as perception of free-riders. Furthermore, willingness to cooperate among neighboring landowners creates synergies for effective policies tackling adjacency externalities (i.e. wildfire prevention).

#### Community self-regulation

When the spirit of a regulation is aligned with customary rules, peer control improves its enforcement. Hence, if poaching, arson, undeclared harvests, etc. are perceived as "bad behavior", informal sanctioning at community level is likely to induce community members to abide.

#### Power

Rural (and urban) community members holding symbolic power positions promote their paradigm, overshadowing alternative

voices. How those stances materialize in the political arena is reflected by coalitions: i.e. supporters of integrative vs. segregative conservation approaches, material vs. energetic wood use.

#### Politics of stakeholder interaction

Social capital also has a political element regarding stakeholders' interactions in forest decision making and policy implementation. Rural development projects have shown that overlooking inclusive network criteria risks benefits being captured by the elite, hence perpetuating or accentuating the marginalization of some subgroups.

#### Shared cognitive aspects

Collective knowledge becomes decisive in long-term contexts, such as forest cycles. Thus traditional ecological knowledge, combined with community cohesiveness, improve community risk prevention, and tend to maintain a broad portfolio of forest products' use, increasing overall resilience.

It is recommendable that policy-makers and practitioners take these factors into account, i.e. in policy instrument design. Capitalizing on positive features of local networks helps to leverage the potential of rural communities and their forest resources.

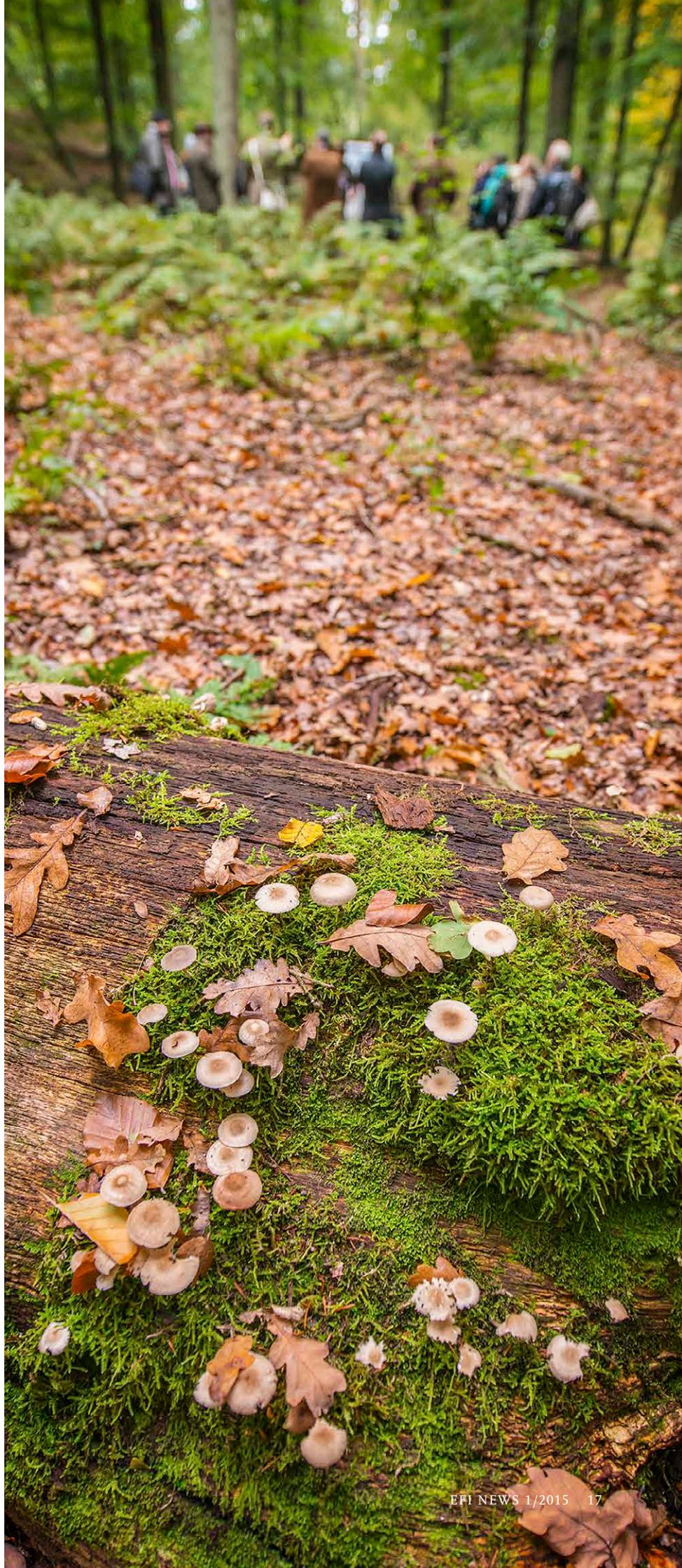
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www.simonpugh.com





# Learning lessons from virtual tools

– Integrating biodiversity into forest management

Stefan Thierfelder

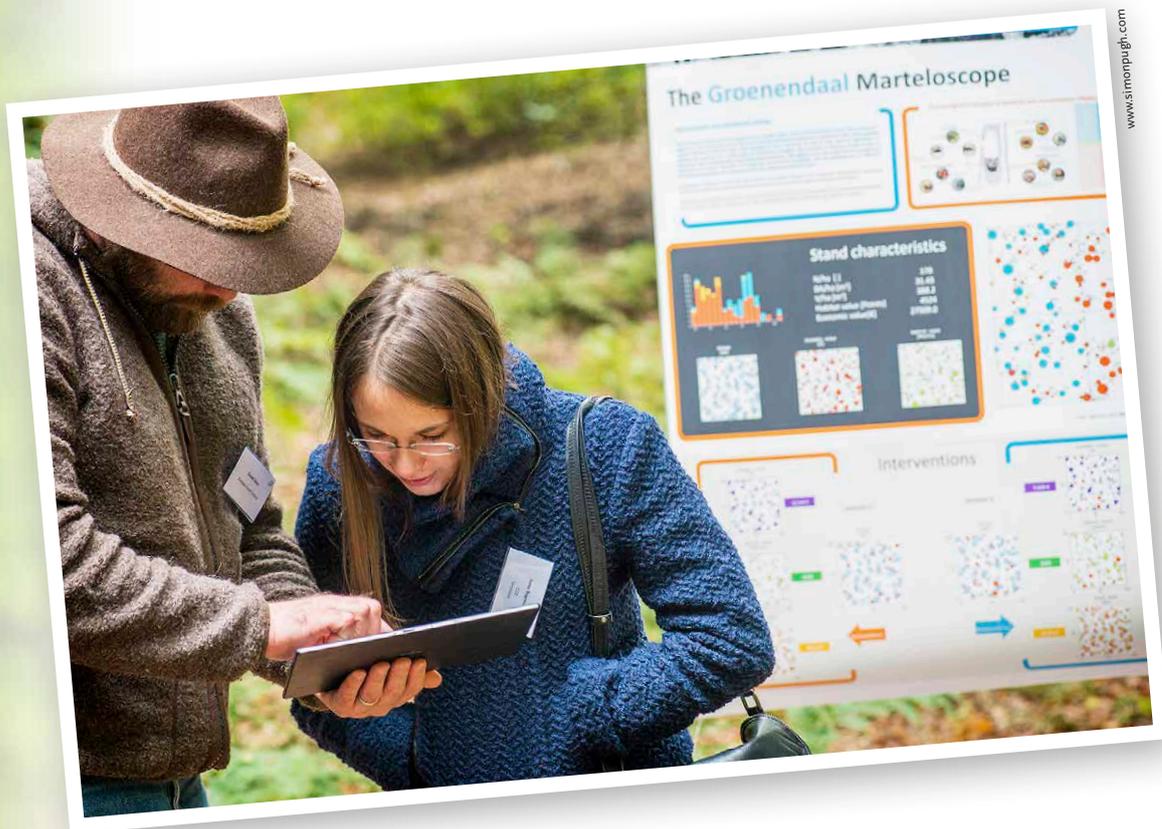
ANDREAS SCHUCK AND DANIEL KRAUS, EFICENT

Forest policies are manifold and originate from various sectors. They are informed by both research and practice and take into consideration the perspectives of stakeholders and interest groups. Forest management must put policy targets into practice by deciding where, when and what kind of interventions are applied for each forest stand. The Integrate+ project is establishing a European network of demonstration sites for the integration of biodiversity conservation into forest management. It aims to provide tools to help visualise the consequences of different silvicultural approaches, including their effect on biodiversity.

There is a wide range of theoretical strategies and concepts in forestry, which can result in differences when implementing certain silvicultural practices, even if clear forest management guidelines are in place. Thus, it is important to have a good understanding of the key factors influencing practitioners' decisions when applying silvicultural tools, including their levels of experience and knowledge on forest dynamics. Experimental silviculture (trial and error) will not provide answers. Simulating interventions applied by individual practitioners within the same stand, however, provides much insight. This is exactly what 'Marteloscopes' (*M-scopes*) do. The term is derived from French and describes a more detailed examination of tree selection and their consequences on the stand and its future development relating towards a particular management goal.

## MARTELOSOPES

M-scopes are the centerpiece of the Integrate+ demonstration site network that is currently being established throughout Europe. They serve for virtual tree selection exercises and act as showcases for field visits. The main goal of M-scopes is to train and eventually improve decision making capacities. In Integrate+ they are adapted to address the aspects of integrating biodiversity into forest management. An M-scope is a one-hectare, rectangular plot in which each individual tree is assessed for its location, height and diameter, economic value (stem quality, local timber price) and ecological parameters (microhabitats). Based on this dataset, tree selection exercises can be performed and displayed directly through software (known as 'I+' software) operating on mobile devices. 'I+' allows



Daniel Kraus and Andreas Schuck from EFICIENT presented the work of the Integrate+ project and the Sonian Forest Marteloscope in October, part of the ThinkForest Science-Policy in Action Day which focused on biodiversity and forest management.

for immediate feedback in the M-scope on the economic and ecological implications of the virtual selection. In this way, different management strategies and their consequences can be objectively discussed by the participants on site. These may include forest practitioners, decision makers, scientists, students or other interested groups.

### HABITAT STRUCTURES

Integrate+ gives particular attention to habitat structures in its M-scopes. Large quantities of deadwood and a high density of old microhabitat-bearing trees are characteristic elements of natural forests, in particular in old-growth phases. These phases are often absent or rare in managed forests, even in forests under close-to-nature management. In selective harvests and thinnings, 'defective' trees displaying or potentially

developing old-growth habitat structures are often removed. Yet, an important share of forest biodiversity is strictly or primarily dependent on such elements for their survival, especially those species that depend on deadwood. Conservation of biodiversity in commercial forest stands is thus linked to retaining such microhabitat structures. Identifying so called 'conflict trees' in terms of economic and ecological values expressed through such habitat structures allow initiating a constructive exchange amongst participants of the virtual tree selection exercises on management options and their trade-offs.

### WHAT DOES THE FUTURE HOLD?

The established M-scopes and the 'I+' software have already received considerable attention. The State Forest Administration of Baden-Wuerttemberg (ForstBW) expressed

interest to utilize the tools in support for their silvicultural trainer programme. The Bavarian Forest Enterprise (BaySF) visited an Integrate+ demonstration site in the course of a high level meeting in Bavaria. After having completed a virtual tree selection exercise as part of an M-Scope visit, a Georgian delegation accompanied by the Deputy Minister of Environment and Natural Resources stated that "such demonstration sites and the I+ software are highly useful training tools but also a vehicle for communication between research, policy and practice".

Further M-scopes are currently being established in many European countries including e.g. Belgium, the Czech Republic, Finland, France, Luxembourg, Poland, Slovenia, Spain, Sweden and Switzerland.

For more information:  
[www.integrateplus.org](http://www.integrateplus.org)

## NEW HEAD FOR FOREST FOR SOCIETY!

Dr. **Georg Winkel** started as Head of Research Programme “Forest for Society” in October 2015 at the EFI Headquarters in Joensuu, Finland.

Dr. Winkel holds an MSc degree in Forest Science and PhD and Habilitation in Forest and Environmental Policy. He has an extensive background in analysing forest policy in different regions of the world and drawing on a rich set of analytical approaches and methods. He has large-scale international research experience, with a vast focus on the interrelation of forest and environmental policy. He has published extensively and is a very sought after speaker. Previously he worked as a Senior Researcher in the Forest and Environmental Policy Group at the University of Freiburg.



## TWO NEW DOCTORS IN OUR STAFF!

- **Nataša Lovrić** successfully defended her PhD thesis: «*Stakeholder Participation in the Creation of Spatial Plan for Nature Park Medvednica*» on June, 2015. With that, Nataša has completed successfully her obligations within the Graduate School «Environment, Society and Global Change» (ESGC) at the Faculty of Environment and Natural Resources, Albert - Ludwig University in Freiburg.
- **Hans Verkerk** defended his doctoral thesis “*Assessing impacts of intensified biomass removal and biodiversity protection on European forests*” on June 2015 as well. University of Eastern Finland’s Faculty Council of the Faculty of Science and Forestry accepted his thesis with the grade approved with distinction.

Warm congratulations to both!



Saku Ruusija

### EVENT CALENDAR

#### ■ FORESTERRA ERA-NET Final Conference

24–25 November  
Lisbon, Portugal

#### ■ Climate policy targets: How can European forests contribute?

1 December  
Paris, France

#### Further information

Ms. Ulla Vanttinen  
Email: [ulla.vanttinen@efi.int](mailto:ulla.vanttinen@efi.int)  
[www.efi.int](http://www.efi.int), under News & Events

### CLIMATE POLICY TARGETS: HOW CAN EUROPEAN FORESTS CONTRIBUTE?

1 December 2015, Le Bourget, Paris

Join us at the COP21 climate talks in Paris to discover the potential of the forest-based sector in contributing to the climate negotiations and policy targets.

See the programme and latest updates:  
[http://www.efi.int/portal/policy\\_advice/thinkforest/cop21](http://www.efi.int/portal/policy_advice/thinkforest/cop21)



### THE UK WILDFIRE CONFERENCE: “WILDFIRE: PREVENTION IS BETTER THAN CURE”

The Scottish Wildfire Forum and the Scottish Fire and Rescue Service hosted this year’s conference on 10–11 November 2015 at the SFRS College, Cambuslang, Scotland.

This conference was aimed at land owners and managers, fire and rescue personnel and researchers and policy makers. The event included a range of poster presentations and workshop sessions. Further info: <http://www.firescotland.gov.uk/your-safety/wildfires/2015-uk-wildfire-conference.aspx>

EFI participation was in the frame of the FIREfficient project. <http://firefficient.ctfc.cat/>



# Sustainability of *forest biomass feedstocks*

DIANA TUOMASJUKKA, EFI

One of the challenges of the European Union renewable energy programme is to mobilize the existing forest biomass in a cost-efficient and sustainable way. The FP7-project “Innovative and effective technology and logistics for forest residual biomass supply in the EU” (INFRES), has supported the EU targets by seeking, studying, developing and transferring a multitude of technologies and methods to improve the efficiency, sustainability and quality of forest-based biomass supply for energy use and biorefining over the past three years.

One of the aims of the project was to study how biomass production could be made more sustainable. This was done by comparing the differences in economic, environmental and social impacts of the business-as-usual situation of current European biomass supply chains and technological innovation scenarios, based on recommended machines developed within INFRES. These innovative machines include multi-stem harvester heads, and improved chippers, a hybrid chipper, and trucks with improved loading space.

According to Eurostat, the net annual increment in EU28 was 779.15 million cubic meters over bark. Out of this, 62% was harvested with 11.5 % of fellings used for fuelwood. In its scenarios, INFRES focused on forest biomass for energy assortments, which are not in conflict with other higher value added wood products. It was assumed that out of the 90 million cubic meters of fuelwood, 25–30 million cubic meters came

from forest wood chips, e.g. from harvest residues and stumps. INFRES excluded traditional firewood in all calculations.

## HOW TO INCREASE FOREST BIOMASS?

The scenarios show that the amount of forest biomass for energy assortments could be considerably increased up to almost 170 million cubic meters by 2030. Sustainability would be supported by keeping cutting levels under the annual increment and avoiding nutrient reduction on poor sites; by making educated choices in harvesting systems; by using and further developing hybrid-engine technologies (e.g. for chippers) that use less fuel; improving transport methods that allow for optimized load volumes; by decreasing energy use and greenhouse gas emission while increasing energy generation; and increasing employment in all steps of the value chain.

## TECHNOLOGICAL AND LOGISTICAL SOLUTIONS

INFRES developed and demonstrated technological and logistical solutions that reduce the fossil energy input in the biomass supply by 20% and reduce the raw material losses by 15%. The cost of supply can be cut by 10–20%, and the CO<sub>2</sub> emissions of feedstock supply can diminish by 10%. With the novel technologies and efficient transfer of best practices between the countries in the consortium and other countries with similar natural conditions, the volume and value of forest biomass supply for energy and biorefining can be substantially higher in the future. And, these feedstocks can be harvested in an economic, environmental and socially viable manner.

*The summary of the INFRES project results “Innovative, effective and sustainable technology and logistics for forest residual biomass” is now available at [www.infres.eu/openfile/325](http://www.infres.eu/openfile/325)*

*The research of the INFRES project received funding from the European Union Seventh Framework Programme (FP7/2012–2015) under grant agreement n° 311881.*



## 85<sup>TH</sup> ANNIVERSARY OF THE FOREST RESEARCH INSTITUTE IN POLAND

MARTA PIWOWARSKA, IBL

On 17–18 June, 2015 the Forest Research Institute (IBL) in Poland celebrated its 85<sup>th</sup> anniversary. A jubilee party was held for staff, friends and well-wishers of the Institute.

IBL is one of the founding member organizations of EFI and has closely cooperated with EFI since the beginning, having its staff engaged in EFI Board and Regional Office activities.

The history of the Institute extends back to the year 1930, when the Experimental Department of the State Forests was organized. Four years later it was transformed into the Research Institute of the State Forests and after World War II the organization was reformed into the Forest Research Institute.

From the beginning, the Institute has consistently implemented its scientific mission to develop research programs that provide us with the necessary tools and knowledge required for managing forest resources. The Institute is also a place where past connects with present and science with practice, for the good of Polish forests. It has 6 scientific departments and 3 laboratories that carry out scientific research and developmental work in a range of: forest afforestations and reforestation, tending, utilization and protection, ecology, nature conservation, genetics, forest economics, policy and remote sensing.

The 85<sup>th</sup> anniversary provided the opportunity to summarize and reflect, draw up plans for the future and to set ambitious goals for the development of forest science.

During the celebrations, EFI's members from Poland expressed gratitude and recognition for accomplishments of Prof. Dr. **Risto Päivinen**, the former EFI Director. They particularly stressed his creative, generous and effective work while holding that position.

The event included an honorary session of the Scientific Board, as well as the international conference. "Challenges and opportunities of forestry in the 21<sup>st</sup> century" Dr. **Marc Palahi**, EFI's current Director, attended the celebrations and delivered a speech during the conference: "European forest research, basis for the bioeconomy".

More information about the Jubilee can be found at <http://www.jubileusz.ibles.pl>.

## OBSTACLES AND OPPORTUNITIES IN ENERGY WOOD PRODUCTION AND USE

FRANCESCA FERRANTI, NATURE&SOCIETY CONSULTANCY IN RESEARCH AND PUBLISHING

A recently released policy brief looks into national stakeholders' perspectives on actual conflicts and opportunities arising from the production and use of energy wood in Europe. The policy brief was produced by the team of the project "COOL". The publication is useful for decision makers at European, national and local levels with the goal of disseminating firsthand information collected from forest stakeholders to the policy arena.

Among the main obstacles identified by the policy brief:

- 1) misguided or absent policy measures, which hinder the promotion of energy wood production and use
- 2) mobilizing wood resources in the face of challenges like low profitability, difficult forest ownership structures and forest accessibility
- 3) trade-offs between energy wood production and ecological values emerging from forest ecosystem services
- 4) competition for wood between material and energetic uses which creates a competition between different wood-based industries. This competing climate is exacerbated by governmental provision of subsidies to the energy wood industry which causes market distortions.

Among the opportunities perceived was vast amount of wood resources available for energy wood and the increasing achievements of innovative technologies for energy wood use, which promote more efficient use of energy wood.

The COOL policy brief concludes with some recommendations:

- strengthening the policy framework of energy wood production and use in order to foster long-term political will and stable incentives,
- direct forest management for energy wood towards stronger wood mobilization, and
- increasing public awareness about environmental effects of energy wood use and the importance of saving energy.

READ More fodder for the oven? Dealing with forest related conflicts arising from the production and use of energy wood in Europe: national stakeholder perspectives here: [https://www.ifp.uni-freiburg.de/Forschung/abgeschlossene-projekte-contents/COOL%20brochure/at\\_download/file](https://www.ifp.uni-freiburg.de/Forschung/abgeschlossene-projekte-contents/COOL%20brochure/at_download/file)

The project COOL, (<https://www.ifp.uni-freiburg.de/Forschung/abgeschlossene-projekte-contents/Cool>) dealing with "COMpeting uses of fOREst Land" was carried out in 2012–2014. EFI's Regional Office EFICENT contributed to the project and to the comparative analysis of trade-offs and synergies arising from the production and use of energy wood conducted in Finland, Germany, Norway, Slovenia and Spain, which supported the drafting of the policy brief.

## SOCIALLY AND ECOLOGICALLY SUSTAINABLE FORESTRY FOR GUATEMALA

CHRISTIAN LACKNER, AUSTRIAN RESEARCH CENTRE FOR FORESTS

There are many theories about how Guatemala came by its name. One theory is that Guatemala means "land of mountains". This translation, which is relevant for forest science, is missing something substantial: the problematic forest and land use developments of the last decades; by which the violence against indigenous Mayan tribes, land theft, and slash-and-burn clearance for agricultural use has caused severe political and ecological problems in the region. Only in 1996, a peace treaty was signed between the Guatemalan government and representatives of the Indigenous people. Now, a project by the Rigoberta Menchú-Tum Foundation in cooperation with the BML-FUW and the Austrian Research Centre for Forests (BFW) is hoping to help in the establishment of a communal forest management concept for the indigenous people.

Dr. Peter Mayer, Director of the BFW, summarised the engagement in Guatemala: "Capacity building is one of the main reasons that the Austrian Research Centre

for Forests is engaging in this pilot project. The BFW deals with the Austrian forest, however it is just as important to us to help other countries in the development of a sustainable forest management, so that the local people can live off the forest and maintain it in a sustainable way."

### THE MOUNTAIN CLOUD FOREST OF LAI CHIMEL

In the central mountain range, which stands at between 2900 and 3400 meters altitude, warm humid air from the Caribbean meets cooler moist air from the Pacific. This is a combination which causes year-round heavy fog and accommodates unique moisture-loving flora and fauna. Many Epiphytes (air plants), orchid species, and potential medicinal plants represent a resource of which awareness should be raised and managed in an ecologically and socially sustainable way. Such an approach involves an estimation of standing

volume, carbon sequestration, and biodiversity; and also how this knowledge can be communicated to and applied by the local population.

### EROSION, NUTRIENT DEFICIENCY

Slash-and-burn as a simple land clearance method and uncoordinated fire wood extraction are the main management forms that are significant factors for erosion, nutrient deficiency, and a problematic water balance. The Austrian Research Centre for Forests is responsible for the documentation of the ecological and cartographic bases within the 1125 hectare project area, in order to derive the relevant usage types in cooperation with the indigenous people. This does not only concern itself with natural or forest-science relevant facts, but it is also a matter of finding out and formulating the identity-producing significance of the forest for the local people.

## New opportunities for forests to

# *tackle climate change*

The initial findings of a forthcoming EFI science-policy study were outlined at a ThinkForest seminar in Brussels on 13 October. According to Professor **Gert-Jan Nabuurs**, lead author of the study, there are new opportunities to enhance the role of forests and the forest sector in meeting EU climate targets. “However, no single sector can solve the whole problem, and no single sector can provide quick fixes”, he warned.

‘Towards Paris 2015: How can the forest sector contribute?’, brought together around 100 policymakers, scientists and stakeholders ahead of the COP21 climate negotiations in Paris in December 2015. Participants heard about current global climate policy and its challenges

and constraints, and discussed how best to include forest and forest sector emissions and removals in EU climate policy post-2020. In a lively panel discussion, panellists and the audience debated what incentives and tools could be used to increase the mitigation potential of the EU forest sector. Incentives are needed at regional and national levels because ‘one size does not fit all’ – the study points out that the variety amongst member states offers great opportunities for creating win-win situations through climate-smart forestry.

These discussions will continue at a ThinkForest COP21 side event ‘Climate policy targets: how can European forests contribute?’ in Paris on 1 December. The new EFI From Science to Policy study will be launched at the event, which will be

chaired by **Göran Persson**, ThinkForest president.

ThinkForest events are supported by EFI’s Multi-Donor Trust Fund (MDTF) for policy support. Since the beginning of 2015, EFI has scaled up its science-policy support activities through the MDTF. The fund enables EFI’s work as a pan-European science-policy platform, enhancing the dialogue between scientists and decision makers, increasing the impact of research and supporting evidence-based policy making. The MDTF is currently supported by eight Member Countries – Austria, Finland, France, Germany, Ireland, Italy, Norway and Sweden.

[http://www.efi.int/portal/policy\\_advice/thinkforest/cop21/](http://www.efi.int/portal/policy_advice/thinkforest/cop21/)

