



**EFORWOOD**

Sustainability Impact Assessment  
of the Forestry - Wood Chain



Project no. 518128

EFORWOOD

Tools for Sustainability Impact Assessment

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Thematic Priority: 6.3 Global Change and Ecosystems

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<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
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<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

## **Newsletter**

### **Printed external newsletter**

The printed newsletter is distributed occasionally to the project partners and broader to the forest based sector including sector key stakeholders. The newsletter dissemination contacts are mostly provided by the project partners. The objective is that newsletter shall always reach the maximum number of stakeholders from the sector .

# Newsletter 2007



## EFORWOOD

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## NEWSLETTER

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### AFTER 18 MONTHS OF THE PROJECT— MUCH DONE, MORE TO DO

**The first annual report of the project was positively evaluated by the EU Commission.**

The main message of the external evaluators was that the Consortium has, with minor deviation, met the objectives of the first year. Of particular mention was the development of the first prototype of the decision support tool ToSIA, the main deliverable of EFORWOOD.

The first year was also characterised by strong team-building, where 120 scientists from 38 internationally dispersed partner organisations developed and implemented effective methods of working, successfully collaborating together (e.g. establishment of the indicators discussion group, case study group etc.).

The second year of project brings the challenge of further development and improvement of the ToSIA tool. This will require close cooperation with all stakeholders involved in the forest-based sector, in particular those that represent the industry stakeholders, who are also users of the project results.

In the second year EFORWOOD will also develop active dialogue with different DGs of the European Commission as well as with other key players from society in general. The project success will depend on acceptance of its results by all stakeholders in the sector.

### WELCOME MESSAGE

The main focus of the EFORWOOD project is the development of a decision support tool for Sustainability Impact Assessment of the European Forestry-Wood Chain (ToSIA). However, its significance is much wider in understanding the impact of the global changes to the Forest based sector and the importance of the responsive decision making that will minimize the consequences of the new development scenarios.

After 18 months of the EFORWOOD project, achievements and deliverables are many. This newsletter provides an overview of some of them.

**Prof. Kaj Rosén**  
Coordinator of the EFORWOOD project



EFORWOOD partners, field trip (Edinburgh 2006)

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# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## MEET PROJECT MODULES

### MODULE 4: THE FOREST BASED INDUSTRIES

In the middle of the forestry-wood-chain, there is the forest based industry. This industry is not so obviously one single industrial sector, since many types of products and services are being produced from wood.



**Module 4 leader:**  
*Arie Hooimeijer*  
KCPK

In general we can say that the single-rooted forest based industry tree has 3 branches: the wood-products industry (sawn wood and wood based panels), the pulp and paper industry and, increasingly important, the (wood-based) bio-energy sector. Making it a little more complex, the production of bio-energy can be a stand-alone process, but in many cases it is a side-activity of the former two industrial sectors, where the energy that is generated can be either heat, electricity or bio-fuels (e.g. pellets) or a combination of these.

Being in the middle of the value chain, the wood-based industries are the link between the two ends which makes them also dependent on developments in both ends; on the customers' demand for wood based product and services on the one hand, and on the availability of the raw material on the other.



Besides, there are also close links and interdependencies between the 3 industrial branches as they use the same raw material.

The world is in constant change and we try to map some of these changes and their effects on the forest-based industries within the EFORWOOD project. We see a shift of manufacturing from west to east, while the position of the forests do not change. Due to its position in the middle of the chain, the forest based industries are affected by changes in both ends of the chain, besides, the effects can be different for the different industry branches. E.g. increasing energy prices might be stimulating bio-energy industry on the one hand and might be less favourable for the paper industry (seeing its energy and fibres bill go up simultaneously) on the other. These are just examples of the complex and dynamical interactions in this sector.

Within the EFORWOOD project, Module 4 contributes to the projects goals, by gathering data on the current (2005) sustainability performance of the forest-based industries. This will be done for different product groups and for different regions in Europe.

Moreover, we look at the major technical and technological developments in the industry, what is

their effect on the sustainability of the product, and what we can say about the implementation of these technologies, e.g. under what conditions and on what scale? The same goes for new policies, what can we expect to happen to the forest-based industry and its sustainability performance under different types of regulations, policy targets, taxes or subsidies?

These can be either direct or indirect effects as the policies might affect the industry directly or e.g. via its raw materials or (end)-consumers.



An analysis of the horizontal and vertical interdependence within the value chain is included, which is needed to learn how the chain might respond to changes.

The result of all these studies will also become visible in the EFORWOOD scenario's.





# EFORWOOD

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## EFORWOOD PEOPLE

### INTERVIEW WITH KAJ ROSEN



One year and half of the EFORWOOD project: Interview with Kaj Rosen, vice president of the Forestry Research Institute of Sweden (Skogforsk) and coordinator of the project.

#### 1. How would you characterize the first year and a half of the EFORWOOD project?

The project has developed far better than I ever hoped. It's amazing to notice how 38 partners from 21 countries working in 7 modules and 28 workpackages, can cooperate towards a common goal. The partners have adapted to the complex content and structure of the project surprisingly fast. What has been more difficult during the initial phase of the project are the external relations. We have had some problems in explaining and selling the project ideas to primarily the industrial stakeholders.

#### 2. What were the major project achievements in this time?

I think it is fair to say that a main achievement is that the project has been able to keep its time table. In line with this time table, we have launched the first prototype of the decision support model, ToSIA. Secondly we have been able to adapt our ways of working together, to meet the continuously changing

demands of the project development.

#### 3. What should be improved in the coming period?

A major effort must be made in order to improve our communication towards our stakeholders. This is crucial, since the success of EFORWOOD depends on the acceptance of the project ideas and results by the end users. Without users of ToSIA there is obviously no real benefit from the project. I'm less worried about the solutions of the scientific problems we meet as the project develops towards it's final results.

#### 4. Interaction with Stakeholders has significant importance for the project: How do you see the role of stakeholders in/around the project?

Despite the problems we have in our own communication with the stakeholders, we have difficulties concerning the engagement of the stakeholders in the project. This is a classical problem, related to stakeholders who do not have an immediate connection or perceive obvious benefits or threats from the project. Therefore, in the case of EFORWOOD we engaged some of the key stakeholders as project partners. So far we can conclude that we probably had too high expectations on stakeholder engagement.

#### 5. Why should policy makers be interested in EFORWOOD?

For the first time we will, as an outcome of EFORWOOD, produce a tool for integrated sustainability impact assessment of a complete industrial sector. This has never been done before, but such tool has been asked for by e.g. the European Commission.

#### 6. How significant is this project

#### in contributing towards the achievement of the Lisbon Agenda for FWC sector?

If we succeed in every respect of our overall objectives, EFORWOOD has the potential to contribute to both increased sustainability and to increased competitiveness of the forest-based sector.

However, to achieve those ambitions the project consortium, as well as politicians and the business sector, has to respect the different roles we play in striving towards a more sustainable society.

#### 7. What will be your message at this stage for EFORWOOD partners and also for people outside the project?

EFORWOOD is an ambitious project and has ambitious goals. Don't be disappointed if we don't see implementation of our results immediately after the project. We cannot expect to change how people act in the short term, but be sure, we will contribute to a change of the way people think!

#### 9. During the EFORVISION contest (project modules song competition) in the last EFORWOOD week in Zvolen, Slovakia, project partners demonstrated that they have significant musical talents aside from their professional skills. As contest winner, can you reveal what was the secret of "your success"?

First, the true secret is hidden in the minds of the organisers of the EFORWOOD song contest. Second, the talents of the my women staff. Third, an outstanding and professional jury with high integrity (meaning that they did not deviate an inch from what was agreed in advance).

## ToSIA - TOOL FOR SUSTAINABILITY IMPACT ASSESSMENT

### WHY WE NEED ToSIA?

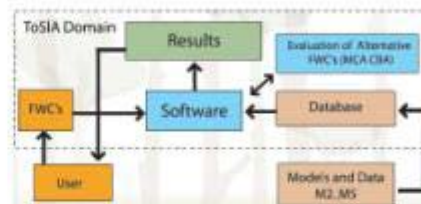
The prime purpose of EFORWOOD is to develop a Tool for Sustainability Impact Assessment (ToSIA) to be used for the evaluation of possible changes in the Forest Wood Chain (FWC).

The difference between ToSIA and other similar, already existing, tools is that none of them addresses all three sustainability dimensions (environmental, economical and social) along the whole FWC in a balanced way. It is developed to enable users to create and compare impacts of various potential decisions influencing the economic, social and environmental performance of the FBS. ToSIA is designed to give answers to What-if-questions such as:

What is the impact of a new, suggested EC- or national policy (e.g. on bio-energy, transport or environment)?

What is the impact of the implantation of a new technology?

What is the impact of specified changes in global market conditions?



Using ToSIA the users will be able to:

- ♦ compare two chains for differences in sustainability,
- ♦ compare the sustainability of the same chain at two different timesteps (timesteps predefined to 2005, 2015, 2025),
- ♦ compare the sustainability impacts of similar processes taking place in different geographical areas.

These are only some of the examples of ToSIA use.

### PROGRESS IN ToSIA

#### DEVELOPMENT

(BY MARCUS LINDNER AND TOMMI SUOMINEN)



Tommi Suominen, Joensuu workshop, 2007

We started the endeavour by defining the approximate scope and basic principles of the tool and by developing the approach how to allocate the sustainability impacts along the Forest-Wood Chain. Work started on the first prototype of ToSIA in late 2006 to validate the conceptual design, to explore technical implementation issues and to define the various data needs for performing the sustainability impact assessment.

ToSIA prototype 1 was completed in February 2007 and its documentation can be found in the Deliverables

1.4.3/1.4.5. At that stage the tool was still simple and the functionality constrained by limited data provided for test purposes.

In spring 2007 the tool development continued with work on a second ToSIA prototype with improved functionality. In parallel the EFORWOOD database went through intensive improvement and was complemented by a Database Client for data entry by project members. The data collection for three selected Forest-Wood Chains was also underway, and now, in summer 2007, the data collection is almost complete. The current focus lies on checking consistency of the reported information – both indicator values and other auxiliary information that is needed by ToSIA to calculate material flows along Forest-Wood Chains.

Next up is the processing of sustainability results in ToSIA prototype 2 into an aggregated form and analysing the results for the forest-defined Scots pine Forest-Wood Chain from Northern Sweden and the regionally-

defined Spruce chain from Baden-Württemberg, Germany. A new deliverable report describing these developments is scheduled for the end of September 2007. Validation of the second prototype will still continue later this year by analysing the results and by using external model outputs for comparison e.g. from LCA calculations focusing on carbon balances or wood optimization models describing material flows along the Forest-Wood Chain.

A new phase of ToSIA development began with an intensive programming workshop where we studied implementation of the final ToSIA software using the OpenMI (Open Modelling Interface and Environment) integration framework for software models.

A decision was taken that EFORWOOD will adopt this open source modelling standard, which is also used by the related projects for sustainability impact assessment in European land use (SENSOR) and in agriculture (SEAMLESS).





## EFORWOOD

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### SCENARIOS - WHAT FUTURE CAN WE EXPECT?

Changes in the sustainability of the FWC will be analysed using scenarios of future conditions.

Scenarios are based on contrasting storylines and can be used as a tool to explore the different ways the future and policies may develop and their impacts on the sustainability of the European Forestry Wood Chain (FWC). They are neither predictions nor forecasts, but are used to create a consistent image of how the future may be.

The scenarios will result in alternative FWCs with different sustainability impacts compared to the current FWCs.



EFORWOOD will focus on two baseline scenarios. The scenarios will be specified with detailed storylines, characterising the underlying assumptions of the scenarios about the development of key variables, both environmental (e.g. climate conditions) and socio-economic (e.g. GDP development, energy prices, wood product demand). The final selection of scenarios will be made after extensive stakeholder consultations, including the EC.

The examples of two baseline scenarios A1 and B2 (defined by IPCC Special Report on Emission Scenarios (SRES) as reference futures) for the future of FWC in 2030 are outlined below.

#### Two storylines at different ends of the spectrum

##### A1 Storyline

##### Forestry Sector developments

Forest functions are clearly spatially separated. The free trade of goods leads to cheap wood raw material (and commodities) being imported from outside Europe, and thus to less harvesting from European forests.

The rate of gain in market share by the wood based construction industry has slowed to almost 0% per annum. Since there is less focus on environmental issues and less pressure on wood prices, the recycling rate of paper products is not increasing above today's values.

The A1 storyline and scenario family describes a future world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies. Major underlying themes are convergence among regions, capacity building, and increased cultural and social interactions, with a substantial reduction in regional differences in per capita income. In general public awareness concerning environmental issues is low. (IPCC SRES)

##### Forest resource and forestry to industry

The forest owners remain in a difficult financial position with reduced supply potential and markets dominated by imports. Where the forestry industry survives, it invests a lot in technological innovation, mainly with the aim to increase cost efficiency.

The cheap woody raw material is being imported from plantations in tropical countries, Russia etc. This leads to little investment in forest management and low harvesting levels in Europe. However, the hardwood sector (and forest owners) is

doing relatively well because specific high quality assortments are very expensive and because high quality tropical hardwood resources are getting depleted.

##### Processing and manufacturing

Most of the heavy industries will move to Eastern Europe and the developing world where wages are still lower. However, in Western-Europe there are high levels of technical development, innovation and education with high rates of investment. Production will focus on a wider range of products and more on high-tech value added niche markets.



##### Industry to consumer

The paper industry has seen mergers into fewer and larger global multinationals and profits from the availability of a cheap woody fibre resource. The bulk of the paper, however, will be produced further away outside Europe, but transport costs are relatively low. The European paper industry focuses on innovative value added products. Industries meet consumers' needs regarding type and quality of paper and size of product.

The basis weight of the paper used in printing, publishing as well packaging sectors is half of that of today. The performance requirements of the printing technology have increased. Increasing education standards in the South will cause a growth in paper consumption of approximately 70% as a result of the necessary production of educational material.

There is an increase in packaging demand associated with this increase in smaller households and increased transportation of goods.



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**B2 Storyline**

The B2 storyline and scenario family describes a world in which the emphasis is on local solutions to economic, social, and environmental sustainability. It is a world with continuously increasing global population, intermediate levels of economic development, and less rapid and more diverse technological change than in A1 storylines. While the scenario is also oriented toward environmental protection and social equity, it focuses on local and regional levels. (IPCC SRES)

**Forestry Sector developments**

The slower economic growth leads to low overall consumption levels and a relatively large demand for lower quality furniture and finishing.



At the same time the emphasis on bio-energy, leads to a high rise in the use of woody biomass.

The high sustainability credentials of the forest industry attract high levels of political interest and support. Forestry is viewed globally as having a key role to play in this programme which leads to increased planting programmes for carbon sequestration (but in competition with demand for agricultural land). There is strong sup-

port for low carbon footprint homes, which benefits the forest industry.

**Forest resource and forestry to industry**

Reduced wood imports in combination with the high demand for wood products for building and biomass increases the demand for European wood (e.g. increase in fellings of 1.5% a<sup>-1</sup>). This is favourable for the forest owner who makes high profits from harvesting and who invests in his estate. Increased investment in IT infrastructure by forest industry companies has resulted in enhanced interaction in the value chain and in reduced costs and increased efficiency. The forest industry takes advantage of new multi-modal forms of transport to optimise its costs within this framework.



**Processing and manufacturing**

The demand for biomass for bio-energy has pushed raw material prices up. Because of the high environmental awareness and high raw material prices the recycling and recovery rates are higher than today and recycled material supply chains are very sophisticated. But there is also strong competition from the energy sector for supplies. The panel industry is strong but also sees increased competition from wood plastic composites as more plastics are recycled into environmentally friendly products.



Because of high raw material prices together with the high energy costs the paper industry is faced with high production costs.

**Industry to consumer**

The overall per capita consumption levels decreases and there is more demand for cheaper and lower quality goods. There is more emphasis on the full chain and re-use, recyclability and/or biodegradability are important trends. Products are locally produced and transport distances are limited. Lower wealth combined with high material costs will lead to lower consumption of paper for printing and publishing and paper for packaging. In the packaging sector, there is a trend for material reduction (lighter packaging) and the avoidance of redundant packaging.



Adapted from Report "Downscaling Reference futures A1 and B2 to the European FWC", written by Eric Arets, Gert-Jan Nabuurs, Dorothea Simani, Carl Olsmat, Jobien Laurijssen, Margarida Tomé, Bill Mason, Esa Puustjärvi, Denis McGowan, Diana Vötter





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD EVENTS



### EFORWOOD CONFERENCE BRUSSELS - PROJECT MEETS STAKEHOLDERS AND POLICY MAKERS (1-2 OCTOBER 2007)

The up-coming EFORWOOD Conference in Brussels, entitled "The Forest-based sector – Sustainability for Competitiveness" will take place on 1st and 2nd October 2007, hosted by the three confederation partners on the project, CEPI, Cei-Bois and CTFC.

The conference will provide an excellent opportunity for stakeholders in the Forest-Based Sector to learn about the project and about the challenges for the sector in Europe related to sustainability.

It will be a cooperative event between policy and scientific communities, which seeks to provide a forum to de-

bate the existing project achievements, the interaction between policy, economic and research communities, as well as the implementation of project results in the future.

The conference is expected to attract a large number of international participants from the sector and beyond, including: scientists and researchers from research organisations, universities and industry, political decision makers from national and EU Parliaments, industry decision makers from across the Forest-based sector, decision makers from EU Commission and related agencies, decision makers from national and regional ministries and administrations.

The conference programme will include a variety of topics presented by quality speakers, representing industry, politics, policy makers, NGOs, as well as members of partners organisations.

For more information, please visit:  
[www.eforwood.com](http://www.eforwood.com)

### EFORWOOD WEEK IN ZVOLEN - A CHANCE FOR RESULTS REVIEW AND TEAMBUILDING

The spring EFORWOOD week was held from 7th -10th May in Zvolen, Slovak Republic. More than 100 participants from 38 project organisations had a chance to review progress of the project and to exchange opinions and experiences.

This year the spring EFORWOOD week was held from 7-10 May in Zvolen, Slovak Republic. The picturesque Slovakian countryside and hospitality of the local partner's organisation, the Technical University of Zvolen, offered the perfect working environment for about 100 participants from 38 partners organisations. The main focus of the meeting were project progress and further planned actions.

Following the successful launch of the first prototype of the ToSIA tool in Joensuu, and its implementation as a proof-of concept, this event

provided another opportunity for the broader project community to review current achievements and discuss further development of the ToSIA tool (at present, ToSIA is able to calculate the individual indicator values for predefined forest wood chains).



Other issues discussed include the enhancement of the stakeholder interactions and relations between the industry stakeholders and the research community as an imperative in reaching a common approach to the implementation of the EFORWOOD concept.

The busy meeting agenda also included module meetings (focused

on realisation of concrete deliverables), the training sessions on the Client database (the main information input for future ToSIA tool), case studies and scenarios sessions.

One of the main messages of the EFORWOOD week was the importance of raising awareness about the project, its importance and its goals in the wider public domain, among policy makers, industry, forest owner federations and other key players from within and outside the sector. This EFORWOOD week was also an opportunity to strengthen the bonds among partners through some social activities. The successful EFORVISION song contest demonstrated that EFORWOOD partners have some significant musical talents aside from their professional skills. (more about EFORVISION in the PARTNER Corner section of this issue).

Although there are still a lot of challenges for EFORWOOD, it is now evident that this project will have a strong impact on the European FWC in general.



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**JOENSUU HOSTED FIRST TRAINING WORKSHOP ON TOSIA TOOL**

The first ToSIA training session was held on 23-24 April 2007 in Joensuu, Finland, hosted by EFI (European Forest Institute).

The training session highlighted different aspects of the ToSIA tool and gave the answers on questions such as: what does ToSIA do and how?, practical example of ToSIA for Scots Pine test chain, scenarios detailed data issues (M2 - M5).

outlook on further ToSIA development etc.

It was also a chance for the partners to become familiar with the functionality of the first ToSIA prototype and its use in calculation of the indicator values for a predefined chain structure.

Stimulating discussions demonstrated high interest in the tool and provided a critical examination of the concepts from project partners.



A DVD that includes all individual sessions from the training is now available. A copy will be sent to all partners by post.

**PARTNERS CORNER**

**EFORVISION**

The EFORVISION competition organised during the last EFORWOOD week in Zvolen this May showed that not everything in the EFORWOOD project is about research, work packages and deliverables.

The EFORWOOD partners competed for the best song performance in an effort to win the coveted prize of some local refreshment.

Some of the participants showed their great musical talent and ability to write interesting lyrics, others played more on their charm.

This was one of those events that confirmed the importance of the social side of research work.



Talent, charm, innovation and originality - Jean Michel Carnus (M3), Denis McGowan and Andreas Kleinschmit (M6), M5 with their version of the Pink Floyd song *Another brick in the wall*.



The winners with their dramatic rendition of the Swedish "Chicken song" - Module 0 team: Kaj, Gunilla, Maria and Nina.



All performances carefully followed by 'the expert jury' from the host organisation (TUZVO).

Comments, suggestions and article ideas from the project partner community are most welcome and should be sent to: [office@innovawood.com](mailto:office@innovawood.com)





# Newsletter February 2008



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## NEWSLETTER

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### WELCOME MESSAGE

We have an excellent project, recently proved during the two days discussions with the group of external evaluators appointed by the Commission. The positive spirit, high ambitions and loyalty towards our common objectives among the project partners is obvious from my horizon. Project activities are at full speed and I look forward to continuing to work with you all in striving towards a successful end result.

The sentiments expressed in the quotation below are appropriate for us on our EFORWOOD journey.

"I feel that you are justified in looking into the future with true assurance, because you have a mode of living in which we find the joy of life and the joy of work harmoniously combined. Added to this is the spirit of ambition which pervades your very being, and seems to make the day's work like a happy child at play." (Albert Einstein)

Prof. Kaj Rosén  
Coordinator of the EFORWOOD project







# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## MEET PROJECT MODULES

### MODULE 2:

The focus of this part of the EFORWOOD project is on the assessment of the sustainability of the management of forests in different parts of Europe.



**Module 2 leader:**  
Jean Michel Carnus  
INRA, France

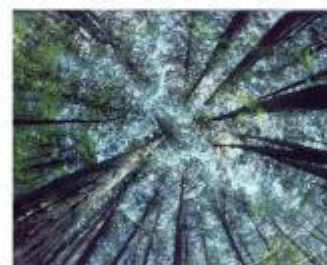
The emphasis is placed on types of forest where wood production is an important objective, so that the interactions between timber management and other services provided by forests (recreation, wildlife) can be explored. Forests included in this investigation range from boreal forests in northern Sweden through mixed conifer-broadleaved woodland in southern Germany to intensive Eucalyptus plantations in Portugal. Other examples include plantation forests in southern France and Scotland, and mixed forests in Catalonia, eastern France, Austria and Poland.

The overall objectives of this module are to characterise existing forest management strategies in the various countries and to consider how they affect the economic, environmental and social outputs from forests. A range of alternative management strategies will be developed and their potential impact upon the various outputs will be explored using models that predict the growth and development of for-

ests in the various regions. This will include examination of the risks that may be involved with different strategies. The risks covered may be due to climatic factors such as wind or fire, or to biological aspects such as insect pests or fungal diseases.

In order to achieve these objectives, our module is divided into five main work areas. The first deals with **forest management strategies** and has been developing a framework that can be used across all forest types to describe the different stages of forest development and the processes that are used to manage them. It is now seeking to articulate a common scheme for describing alternative approaches to management and, in the future, will be looking to explore the impact of these approaches upon chosen factors that are used to indicate sustainability. The second area of investigation considers the wide range of **environmental services** that are provided by forests (water quality, biodiversity, nutrient status of soils, carbon sequestration) and their sensitivity to forest management practices. A comprehensive review is being carried out which will inform the evaluation of alternative management approaches. The third work area covers a similar task, but with an emphasis upon the **social and cultural values** provided by forests. This covers aspects such as a range of non-timber products (mushrooms, fruits, hunting) and formal and informal recreation. This is a subject where information is quite limited and so the initial focus will be on recreational visits to forests and the interaction with management. The fourth topic covers **risk assessment** and the work recognises that European forests are vulnerable to a wide variety of hazards. The first task has been to synthesise the

extensive information on damage caused by various agents and relate these to different forest types and growth stages. By building on this synthesis it will be feasible to evaluate risks associated with different management approaches proposed elsewhere in this module. Lastly, work on **integrated modelling tools** will provide the means for exploring the effects of management strategies upon the multifunctional outputs provided by forests, taking into account variation over space and time. A benefit of this part of the module is allowing comparison between different modelling approaches used by the various partners and to see which are most appropriate for evaluation of multifunctional forest management.



Work in this module is undertaken in close collaboration with those working in module 3 (Forest to Industry Interaction) since forest management influences both the quality and quantity of wood produced. Information upon the effects of management on different indicators of sustainability is also provided to those groups working on the whole forestry wood chain. Finally, the various case studies in our module provide an invaluable means of testing the predictions from EFORWOOD at a regional or country level.



# EFORWOOD

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## EFORWOOD CONFERENCE OCTOBER 2007



**The first EFORWOOD Conference took place in Brussels on 1st and 2nd October 2007, hosted by three confederation partners in the project, CEPI, CEI-Bois and CEPF.**

The event attracted more than 100 participants from different spheres of the Forest Based Sector (FBS) and beyond: scientists and researchers from research organisations, universities, political decision makers from national, private and public funding institutions, decision makers from EU Commission and related agencies, decision makers from national and regional ministries and administrations, SMEs (Small and Medium Enterprises) and industry.

The aim of the conference was to transmit the global project message to those who should be the potential users of the project results and to position the EFORWOOD project as a possible instrument for increasing sustainability and competitiveness of the FBS.

It was a cooperative event between policy and scientific communities, which sought to provide a forum to debate

the existing project achievements, the interaction between policy, economic and research communities, as well as the implementation of project results in the future.

The first day of the conference offered the topics presented by external stakeholders - from industry to policy makers and sector's NGOs.

The keynote speakers, such as Maria Gafo Gómez-Zamalloa from EU Commission, Mikael Eliasson from CEI-Bois and Tamas Marghescu from IUCN, highlighted some of the top issues that FBS sector faces. Climate change, sustainability and competitiveness of the sector, importance of renewable energy use and recycling materials, biodiversity and conservation aspects, were just some of the topics discussed.

The overall conclusion of day one was that there is a significant need for more interaction between different stakeholders involved in FBS. More common approaches and initiatives should be adopted. It was concluded that the EFORWOOD project could offer the knowledge base needed to meet the competitiveness and sustainability challenges facing the sector.





Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD CONFERENCE OCTOBER 2007

### KEY SECTOR STAKE-HOLDERS VIEW

The first day of the conference included a general discussion on sustainability issues. The climate changes, conservation of biodiversity, the bio-economy perspectives, multifunctionality of the forest resource, its competitiveness and sustainability, were only some of the concepts that were discussed during the key note speakers sessions.

#### Maria Gafo Gómez-Zamalloa

talked about competitiveness and sustainability in the Forest based sector in the context of EU policy perspectives. She stressed how important it is to strengthen the efforts from the forest-based industry to be sustainable and competitive, and the role of the sector in the use of renewable and recycled raw materials.

She also pointed out that a new tool to assess the sustainability impact of the policy development in the sector will be extremely useful.



Maria Gafo Gómez-Zamalloa and Kaj Rosen



Mikael Eliasson and Kaj Rosen

**Mikael Eliasson**, Chairman of CEI-Bois, gave the view of industry on sustainability in the forest-based sector. He highlighted the key challenges that FBS faces today and its "unique" position (since the FBS is in the hot spot of climate change, energy and raw material related issues, the forest industry businesses represent a powerful tool in the work towards true sustainable development).

One of the vital factors that is going to influence the future development of the sector will be the changing of consumer attitudes.

In concluding his presentation Mr Eliasson summarises three points: "The forest sector is a vital part of a true sustainable development. The different value chains are in many cases integrated and eventual recycling adds interesting dimensions but brings complexity. It is important to have a holistic view on the sector when evaluating the "sustainability" performance. Measurements, indicators and analysis must all reflect this".

**Tamás Marghescu**, Regional Director of IUCN Regional Office for Europe, gave presented the NGO's perspective of the sustainability issues. He stated in his presentation that our actions should be quick and immediate.

Only the balance between all three sustainability factors could bring the improvement in conservation of natural resources. "Nature must have a price. The forest should be supplying what is in demand and not what it is used to supply", stressed Marghescu. Our actions should be coordinated and based on a more common approach .



Maria Gafo Gómez-Zamalloa and Tamás Marghescu

The conclusion of day 1 was that stakeholders expertise should be more taken on board in future decision making. Only a common strategy of all important players in the sector and beyond could give the positive movement towards the more sustainable society.







Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD PARTNERS IN ACTION

On the second day of the EFORWOOD conference the participants had a chance to hear more about project results and some key issues that the project is currently dealing with. The project module leaders and some of the leading experts in the EFORWOOD scientific team put significant effort into demonstrating the main project goals and achievements to the conference audience. Topics such as ToSIA tool development, scenarios and indicators attracted a lot of interest from the stakeholders present. They provided constructive feedback and recommendations on principal EFORWOOD developments and outcomes.



The debate provided a valuable experience for both the stakeholders and the project partners. More common actions and communication should be established in the future if the project results are to have the broader application and that is desired.



Carl Olsmats presenting the market perspectives on forestry-wood chain sustainability.



Frits Mohren (Expert Advisory Panel) and Gero Becker (Module 3)

One of the invited speakers on the second day was Karen Tscherning, leading scientist in the SENSOR project. (SENSOR is a FP6 Project that is working on sustainability assessment tools for multifunctional land use in European Regions). Her address was an opportunity for the EFORWOOD partners and other stakeholders to get know more about the SENSOR project in general but also to hear about indicators, designed SIA tool and project case studies.

## EFORWOOD WEEK



The traditional project partners gathering, EFORWOOD week was organised in conjunction with to the EFORWOOD conference. During the event the partners evaluated the conference results but also discussed the current progress of the project tasks and deliverables. The October EFORWOOD week mostly consisted of plenary sessions that gave partners an opportunity to get better overall picture of the project progress.

It has been announced that the next EFORWOOD meeting will take place in Vienna, hosted by BOKU.



# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## POSTER SESSION—EFORWOOD CONFERENCE



During the EFORWOOD conference the participants also had chance to see some project results presented through posters.

In total 18 posters from all EFORWOOD modules tried to communicate visually the up-to-date project achievements and some general project matters.



The visitors had an opportunity to get know more about the project structure and its main objectives and also about some specific content such as the Database Client; Harvesting system for specific test chains and its impact on environmental, social and economical aspects; Use of sustainability tool in wood fibre chain; Forest management alternatives; Marketing perspectives of the forest based sector.

## DATABASE CLIENT

The EFORWOOD Database Client is a tool designed to allow EFORWOOD partners to enter data into the common EFORWOOD database and to design chains.

The EFORWOOD database was built by work package **Data co-ordination and validation (WP1.2)**. It contains information describing forestry wood chains (FWC) provided by respective EFORWOOD modules and will be used by the ToSIA. The first version of its structure was designed in February 2006.



It is based on the client-server technology to enable multiple on-line access to the actual database that is maintained on a dedicated computer located in IFER (Institute of Forest Ecosystem Research). Currently the database is structured according to the specification of "single test chains".

The structure of the EFORWOOD database reflects informational content and logical relationships as they are formulated by respective EFORWOOD modules. The database describes both static and dynamic parts of the FWC. The use of client-server technology makes the process of data collection and database building as effective as possible and provides partners with instant access to the database.

To implement this solution, two new software applications in addition to an existing EFORWOOD database were developed. These applications are the EFORWOOD Application Server and the EFORWOOD Database Client.

It is planned to add more functionality to the database client when it is used for the Case studies; especially the possibility to provide authorized users with overviews of collected data. There is also a strong call for a function that would enable bulk import of the data. Taking into account various sources and formats it would be very difficult to implement this functionality.





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD EVENTS

### ISA LISBON HOSTED TRAINING SESSION ON INDICATORS

The Training session on indicators was held from 29-30 November 2007 in Lisbon Portugal. The event was hosted by ISA, Instituto Superior de Agronomia, one of the partners in the project. The aim of the session was to share experiences on best practices in data collection and to provide guidance on how to calculate/estimate indicator values for which data are not readily available.



Instituto Superior de Agronomia, ISA, Lisbon

Experiences from the indicator data collection for Single FWCs demonstrated that not in all cases the necessary indicator values are readily available per production process.



Partners during one of the sessions

There was a need, therefore for discussion and sharing the experience between partners especially now when the following step in data collection will be the data collection for Case Studies. The training session provided stimulating discussion in a very positive atmosphere. The timetable focused on general data collection issues but also on particular indicators (socio-economic, waste, energy and transport indicators). It was one day and a half of valuable experiences and progressive work. The event feedback showed partners interest in continuing of such events.



Speakers: Martina Roubalova and Marcus Lindner

A DVD including all individual sessions from the training will be available to all partners in February 2008.

### IN MEMORIAM CHRIS VAN RIET



At the start of 2008, we mourn the loss of our esteemed colleague and partner, Dr Chris Van Riet from CEI-Bois, who died on December 20<sup>th</sup> following a long illness.

Those of us who worked with Chris and all who met him will remember him as a competent, thorough individual who never left an important question un-explored and whose sharp wit often brought long-running discussions to an amusing end.

He will definitely not be forgotten.

May he rest in peace.





Sustainability Impact Assessment of the Forestry-Wood Chain

**PARTNERS CORNER**

**EFORWOOD  
INCO PARTNERS:  
FROM COSTA RICA TO  
INDONESIA**

By involving partners from developing countries (Costa Rica, Republic of Congo and Indonesia) in regional case testing, the SIA applications will also access global aspects of the impact of changes in the European FW. The INCO country partners, CATIE, UR2PI and CIFOR, contribute to the EFORWOOD objectives by bringing local and regional knowledge into the consortium.



CATIE's main building on the Turrialba campus, Costa Rica

CATIE's roots stretch back to 1942 with the founding of IICA in Turrialba, Costa Rica. In 1973, CATIE became a separate center with the mandate of research and education, especially in its member countries.

CATIE's Department of Natural Resources and Environment has been involved in research and implementation projects oriented to planning and monitoring of the use and conservation of natural tropical forests for more than 20 years. During this time it has contributed to data on dynamics of natural forests under different forest management regimes, using this information to promote reduced impact

logging techniques. It has developed strong capacities in the development and use of forest management standards and guidelines, playing an important role in the formulation of forest management norms and monitoring systems in several Central American countries. More recently it is using its expertise to study and promote forest management and its relation to forest value chains in a landscape context, aimed at increasing the contribution of forest management to local livelihoods and increasing the ability of rural populations to contribute to the mitigation of climate change (through less deforestation) and adapt to future changes in their natural environment (water, soils, vegetation) due to climate change.

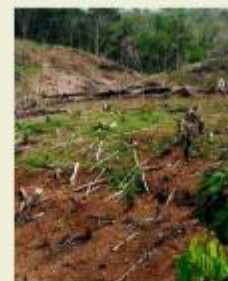
Through its participation in the EFORWOOD project, CATIE hopes to establish links with European partners that will lead to a study of forest value chains and their relation to forest policies and markets in the American tropics.



Collecting fruit from the forest, Brazil; photo Flavio Contente

Sustainable policies and technologies are crucial to ensuring forests continue to contribute to the well-being of

people in the tropics. CIFOR's forestry research provides the scientific knowledge needed to develop such policies and technologies. CIFOR has helped produce the standards used to certify 5.8 million hectares of forest and improved governance and livelihoods in 30 sites in 11 countries. Its findings have influenced the design of \$200 million in forestry projects and helped shaped forestry laws in Peru, Indonesia, Nicaragua and Mexico. As a 'centre without walls,' CIFOR conducts most of its work through a series of decentralized partnerships with key institutions and individuals in both developing and developed countries. CIFOR is committed to building the research capacity of developing country organizations and scientists so that they can formulate their own solutions to forest problems.



Land clearing for agriculture land in Kuantan Sengingi district, Riau - Indonesia, photo Rian Woo

Effective knowledge sharing is crucial to promoting the role of sustainable forest management in reducing poverty. CIFOR uses a range of communication strategies to deliver its findings to hundreds of thousands of stakeholders throughout the world.

Comments, suggestions and article ideas from the project partner community are most welcome and should be sent to: [office@innovawood.com](mailto:office@innovawood.com)







# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

# NEWSLETTER

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Tools - let your tools shape  
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Meet our Modules:  
**M3—From forestry to industry:  
Interactions between the  
forest resource and forest  
products**

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## EFORWOOD: Year 3 Evaluation

The last annual project evaluation (January 2009), carried out by independent evaluators appointed by the European Commission, scored the project 'good to excellent,' showing that EFORWOOD is well on track to delivering the expected results.

The Commission evaluation highlighted the positive impact the project will have on the development of the forest-based sector in the EU by providing policy makers, industry and stakeholders with a tool to strengthen the contribution of the forest-based sector to a more sustainable Europe. It will also provide new information necessary to bring together forest management and wood production with multiple wood processing flows, including wood energy, in a single, market-oriented value chain.

A minor recommendation made by the evaluators related to the provision of more detailed plan for post-project exploitation of the results and the presentation of more real user stories. This would give the EFORWOOD project every opportunity to contribute to the wider social and political objectives of the EU's sustainable development strategy.





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD FINAL CONFERENCE



### CONFERENCE AIM

The EFORWOOD Final Conference will be held in **Uppsala, Sweden, from 23-24 September 2009**. The conference will bring together researchers, policy makers and practitioners from all over the world to discuss Sustainability Impact Assessment for the forest-based sector. Across the globe, tools to analyse sustainability are being developed in order to help us make better choices.

One of the conference focus areas will be on the main EFORWOOD project outcome, the Tool for Sustainability Impact Assessment (ToSIA), a dynamic sustainability impact assessment model that analyses the environmental, economic, and social impacts of changes in forestry-wood production chains, using a consistent and harmonised framework from the forest to the end-of-life of final products.

It will also be an opportunity to combine the experiences and expertise of other integrated EU projects (SENSOR, SEAMLESS and PLUREL) that are developing similar tools to support decision making on policies related to various areas of science, such as land use, environmental economics, socio-economics and landscape research.

Welcome to Uppsala.

### CONFERENCE THEMES

**THEME 1 | SUSTAINABILITY IMPACT ASSESSMENT IN A KNOWLEDGE-BASED BIO-ECONOMY**

**THEME 2 | METHODS FOR EVALUATION OF SUSTAINABILITY IMPACT FROM PROCESS TO SECTOR LEVEL**

**THEME 3 | CASE STUDY APPLICATIONS IN SUSTAINABILITY IMPACT-ASSESSMENT**

**THEME 4 | GREENHOUSE GAS BALANCE OF THE FOREST-BASED SECTOR**

**THEME 5 | SCENARIO ANALYSIS OF THE FOREST-BASED SECTOR AND PARTS THEREOF**

### REGISTRATION

On line registration system will be available from **May 20, 2009**. ([visit www.eforwood.org](http://www.eforwood.org)).

#### Registration fee

Early-bird registration	€150.00
Regular registration	€200.00
Authors of papers	€150.00
Student registration	€95.00

### DATES AND DEADLINES

Abstract submission **April 30, 2009 (extended May 10)**

Abstract notification of acceptance **May 20, 2009**

Early registration **July 31, 2009**

Regular registration **August 21, 2009**

(including accommodation arrangements)

Regular registration **September 7, 2009**

(excluding accommodation arrangements)

Final programme announcement **July 31, 2009**

### VENUE

**Uppsala Concert & Congress Hall** (Uppsala Konsert & Kongress), Website: [www.ukk.se](http://www.ukk.se)

More information on conference on [www.eforwood.org](http://www.eforwood.org)  
Register your interest at [office@innovawood.com](mailto:office@innovawood.com)



# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

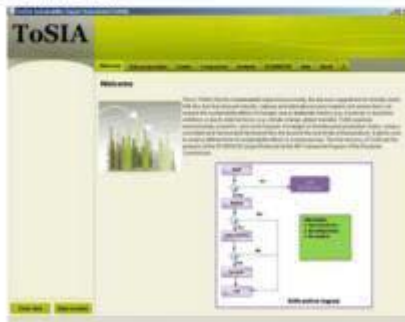
## LATEST ON PROJECT

### WebToSIA

The full version of the Tool for Sustainable Impact Assessment (ToSIA) is rather complex and not suitable for demonstration purposes. A lack of the simple but high quality data required can also make it difficult to understand the applicability of ToSIA and the niche it occupies. Therefore, a version designed to provide a clear and concise presentation of the ToSIA method is being developed for the benefit of unfamiliar users – WebToSIA.

The main purpose of WebToSIA is to provide potential users an understanding of how the full tool might be used, based on a presentation of a set of pre-designed example runs using simplified scenarios. WebToSIA will give users insights into how the comprehensive ToSIA works, and allow for an understanding of its potential applications, as well as its strengths and limitations.

WebToSIA will be comprised of the following components: support content – explaining what ToSIA is and providing a user guide; examples of simple forest-wood chains (FWCs) for demonstration purposes; including the topology and all required (realistic) data; predefined results of ToSIA runs for these FWCs; an online database to store predefined FWCs, scenarios and results of ToSIA calculations. Where resources allow, parts of ToSIA may also be converted to run within WebToSIA, enabling a more lively and interactive demonstration.



**Figure 1.** The first screen of ToSIA. From here the user can proceed to the desired functionality by clicking the appropriate tab.

WebToSIA will have two main applications:

i) to serve as 'marketing material' for the ToSIA approach, raising awareness and interest amongst prospective users. It is the intention of the EFORWOOD project that ToSIA will become a widely adopted cross-sectoral method and tool. In order to achieve

widespread acceptance, new users will need to be able to grasp the ToSIA concept readily and be convinced of its applicability to their specific needs.

ii) to be a user guide of sorts. In ToSIA the user is offered context-help, and a wealth of meta-information. However, as the data collection process can be a time consuming and costly task, the users should have the option to familiarise themselves with ToSIA and plan the analysis process prior to undertaking extensive data collection. In order to implement such a 'test phase,' user induction-type material is required. WebToSIA can be designed to accommodate this.



**Figure 2.** The results of an analysis can be displayed using different graphical visualizations.



**Figure 3.** Where visualisation is appropriate, multiple runs can be compared side-by-side using a table or graphic display.

The major task still to be addressed is how exactly to reduce the complexity and size of the application. Reducing the amount of indicators used in WebToSIA can be carried out as part of the work involved in specifying the sample chains. Cost benefit analysis and multi criteria analysis are likely to be employed using preset parameters and preference values.

The WebToSIA will be developed at EFI by a team composed of Tim Green, Tommi Suominen, Arttu Viljakainen and Sergey Zudin.





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD ROADSHOW

### EFORWOOD increasing interest: From Riga to Washington

In order for the EFORWOOD project to be successful, it is important that there is support for the results among industry and other stakeholders not responsible for the outcomes of the project, but who are sure to be the very people to use them in the future.



Fig. Map of stakeholders visited during the road shows.

Intensive dialogue with future users of the project results will open up the possibility for improvements and adjustments during the course of the project, but may also provide ideas for a continuation of the project in the future.

In the period from November 2007 to September 2008, the EFORWOOD team headed by project coordinator Kaj Rosen (Skogforsk), researcher Christian Gamborg (University of Copenhagen) and supported by other leading expert members of the project, ran the road show presentations, visiting approx. twenty stakeholder organisations in seven countries. The target groups of the road shows were the EU Commission, large industrial organisations, other industry and associations in the forest-based sector, decision/policy makers, as well significant non-industrial NGOs. The aim of the road show meetings was to increase awareness and understanding of project impacts, and get input/feedback on project developments (general and specific).

Some of the issues that commonly raised interest among stakeholders were the use of ToSIA and its limitations; data collection and the selection of indicators as input information for ToSIA; the design of the different levels the tool will operate on, from single forest-wood chains (FWC) to regional case studies; the selection of scenarios and development of modules designed to analyse impacts, such as multi-criteria analysis (MCA) and cost benefit analysis (CBA).

The stakeholders generally demonstrated an interest in the EFORWOOD project, but also expressed difficulties obtaining an overview of the project, and voiced some reservations regarding the use of the tool. The 'results' of the road show meetings are being put to use internally, as input and feedback to the project's expert teams, and externally, for example, as FAQs on the project portal. The redesigned FAQ section of the website now provides the answers to the many questions, issues and concerns that came up more or less consistently during the road show meetings. The general opinion is that the road show idea produced the desired outcome, which was to provide key target groups with a better understanding of the EFORWOOD project and its achievements, and to allow them to present their knowledge and views.

#### USA stakeholders

In addition to visits to European stakeholder organisations, EFORWOOD was also presented to and discussed with a number of American organisations to get a non-European view of the approach taken by EFORWOOD. The project was quite positively accepted by American stakeholders who showed particular interests in Multi criteria analysis (MCA) and its application.

It is hoped that as a result of the open consultations, potential users of the tool(s) developed by EFORWOOD will understand the limitations of the tool(s). The meetings with stakeholders have been successful in helping to (i) communicate the project to key stakeholders, (ii) explore concerns and views related to EFORWOOD, and (iii) get feedback on key project elements, in particular ToSIA, the indicators, MCA and the scenarios.



Sustainability Impact Assessment of the Forestry-Wood Chain

Topic	Questions, issues and concerns
ToSIA	<p>What will ToSIA look like – and what is it planned to do?</p> <p>Can you compare different chains?</p> <p>How well does ToSIA reflect reality?</p>
Indicators	<p>What kind of indicators are used?</p> <p>How does the indicator set used in EFORWOOD compare with other sets (e.g. MCPFE)?</p>
MCA	<p>How do you compare/aggregate different indicators?</p> <p>Who is determining the importance of indicator values?</p>
Scenarios	<p>What are scenarios, which areas?</p> <p>FBS is global, not only European, how to take into account?</p>
Other issues	<p>How is renewability reflected?</p> <p>Misuse of results to discredit FBS (e.g. by locating "hot spots")</p>

Fig. Examples of questions raised during the road shows

More information and answers to questions raised during the road shows can be found on the EFORWOOD portal [www.eforwood.org](http://www.eforwood.org) (particularly in the FAQ section).

### New possibilities for ToSIA application on local level in Latvia

At the end of August 2008, the EFORWOOD team organised an additional road show in Latvia, hosted by EFORWOOD partner SILAVA. The road show targeted the Latvian stakeholders, including certain key national players in the forest-based sector such as the Ministry of Agriculture (Forest Policy Department), forest owner associations, the state forest service, the Latvian forest industry federation, the Latvian University of Agriculture, the forest faculty and the Forest and Wood Products Research and Development Institute.

The event raised great interest amongst representatives of the Latvian forest sector, especially in relation to the potential application of ToSIA under Latvian conditions. It was agreed that SILAVA, in cooperation with and supported by EFI (Marcus Linder), would prepare a proposal for the application of ToSIA at the local level.

This proposed project will be funded by the Latvian Ministry of Agriculture. The evaluation of the proposal is ongoing and the partners are hoping to receive a positive answer in the near future.

## Northern ToSIA

A three year project in the northern periphery region (Northern ToSIA) started in November 2008, supported by the European Regional Development Fund (ERDF)



The 'Assessing the Sustainability of Forest-Based Activities in Rural Areas of the Northern Periphery (Northern ToSIA)' project will test and develop the applications of the Tool for Sustainability Impact Assessment (ToSIA) together with regional development bodies and forest industry companies in Finland, Sweden, Norway and Scotland. The project objective is to develop and disseminate the tool for use in the whole northern periphery region. This tool will enable public bodies and (private) companies from northern countries to improve their corporate social responsibility as a part of the whole forestry-wood value chain and improve business activities across the three dimensions of sustainability. The total project budget for the years 2008-2011 is €1.3 M, and the kick-off meeting took place at EFI in Joensuu in mid-November.

The Northern ToSIA project is led by EFI. The partners are Forest Research (FR), the Swedish University of Agricultural Sciences (SLU), the Forestry Centre of North Karelia in Finland and the County Governor of Nordland in Norway, as well as forest industry companies.

For additional information on Northern ToSIA contact [marcus.lindner@efi.int](mailto:marcus.lindner@efi.int)





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD EVENTS—WORKSHOPS

### EFORWOOD Workshop on Chain Designing , 24-26 September, Jilové u Prahy

The workshop on chain designing was held from 24-26 September 2008 at IFER, Jilové u Prahy, Czech Republic. The main purpose of the workshop was to build the topology of the European Forest Wood Chain (FWC) in the EFORWOOD database, using the EFORWOOD database client application. The EU-FWC chain includes 27 countries (EU-25 + Norway and Switzerland).

The workshop presentations included an overview of the database client chain designer and the topology parameters, working with the EFORWOOD database client and a short introduction to and demonstration of ToSIA.



The main workshop focus was on creating sub-chains for the EU-FWC. Several of the sub-chains created during the workshop will be merged into one big chain, and the country group sub-chains will be copied for each country.



The workshop also provided colleagues from the various modules with an opportunity to discuss a range of other scientific matters.

*Reported by Martina Roubalova, IFER*

More on this workshop can be found on [www.eforwood.org](http://www.eforwood.org), in the Project Meeting section of the restricted partner area.

### The European Forest Wood Chain meeting Espoo, Finland 12-13th January 2009

The main aims of the meeting were to accelerate the final phase of the work on chain topology, to discuss and clarify open questions and to plan the activities that should take place in the final months of the project. The meeting was for the benefit of all EFORWOOD partners actively involved in the EU-FWC.

Some of the main issues raised during this meeting related to the following: research questions identified by the EU-FWC task forces and the possibility to turn these questions into report chapters and scientific articles, scenario implementation (questions related to the implementation of Natura 2000), building of the chain topology (update and planning of the last steps), and material flow determination and its use in the EU-FWC.

It was agreed that a chapter dedicated to the research questions and goals will be added to the final document on the EU-FWC.



The EU-FWC Roadmap was fixed and an agreement on the procedure for deciding upon the titles and writing teams for scientific papers and report chapters was put in place.

During the questions and answers session, Jean-Baptiste Chesneau (FCBA) gave a presentation on a tool developed by FCBA to estimate various values for transport processes. This tool will be made available for registered project partners on the EFORWOOD portal.

*Reported by Taru Palosuo*



# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## EFORWOOD EVENTS



### EFORWOOD at The International Conference "The European Forest-Based Sector: Bio-Responses to Address New Climate and Energy Challenges?"

The EFORWOOD project was presented at the International Conference 'The European Forest-Based Sector: Bio-Responses to Address New Climate and Energy Challenges?' held from 6-8 November 2008, in Nancy, France. The conference brought together around 230 representatives of the forest-based sector, the European member states and the European Commission, as well as non-governmental organisations and academia.

The participants addressed the role of the forest-based sector in relation to two critical issues of our time: climate change and the energy crisis.

The conference aim was to provide information regarding the role of the forest-based sector in relation to the physical processes of the carbon cycle, the competition between wood and other materials, and the energy market.

The EFORWOOD project was presented by Kaj Rosen, who provided an outline of the Tool for Sustainability Impact Assessment (ToSIA). He emphasised that ToSIA deals with the entire sector, from production to end-use and recycling. It was also stressed that the tool serves as a decision-support tool for policy makers at EU and national level, and industry and non-governmental organisations.

### EVENTS OF INTEREST

**May 5-7, 2009: Forest Vegetation Management - Towards Environmental Sustainability: the Final Conference of COST-Action E47**  
Vejle, Denmark  
web: <http://www2.clermont.inra.fr/cost-e47/>

**May 18-22, 2009: LIGNA HANNOVER – World fair for the forestry and wood industries,**  
Hannover, Germany  
web: <http://www.ligna.de>

**May 20 2009: REINFFORCE seminar**  
Edinburgh, Scotland  
web: <http://www.iefc.net>

**May 24-29, 2009: Joensuu Forestry Networking Week • Connecting Young European Experts Topic 2009 • Fighting climate change: adapting forest policy and forest management in Europe**  
Joensuu, Finland  
web: <http://www.metla.fi>

**May 27-30 2009: 12th European Forum on Urban Forestry: "Working together for green city values"**  
Arnhem, The Netherlands  
web: <http://www.efuf.org/>

**May 28, 2009: The 4th ICFPA CEO's Roundtable**  
London, England  
web: <http://www.icfpa.org>

**June 29-30, 2009: International Conference on Continuous Cover Forestry in Europe,**  
University College Dublin, Ireland  
web: <http://www.ucd.ie/conforest/index.html>

**September 4, 2009: Creating a new prosperity: Fresh approaches to ecosystem services and human well-being - one day symposium,**  
London, England  
web: <http://www.nottingham.ac.uk/fresh>





# EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

## MEET PROJECT MODULES

### MODULE 3: FROM FORESTRY TO INDUSTRY - INTERACTIONS BETWEEN THE FOREST RESOURCE AND FOREST PRODUCTS

Module M3 of EFORWOOD deals with flows of materials between forest stands and the mill gate. Three main areas of activities can be identified: harvesting, transport and allocation.



All three areas have major implications in relation to the sustainability of the forest wood chain.

Harvesting begins with the decision to cut a tree, a group of trees or a whole stand in accordance with silvicultural, ecological and economic considerations. The appropriate harvesting systems are selected according to the physical conditions of a given stand (e.g., terrain, climate, soil conditions), and taking into account the socio-economic environment.

Transport involves a multitude of technical options, which differ in many ways and in the extent to which sustainability requirements are met. Off-road and road transport with different types of trucks, loading devices and logistical back up vary greatly in relation to the impacts they exert in ecological, economic and social terms.

The different harvesting and transport alternatives were evaluated against a set of commonly used indicators, allowing for a comparison of the different forestry-wood chains.

The third M3 activity is allocation, which is an often neglected aspect of the wood flow between the forest and the mill. Allocation means the optimal distribution of the wood coming from the forests to the respective mill.

Allocation decisions can be taken at various points along the forestry-wood chain. Selecting the stand, and the specific trees within this stand, are the first step, followed by intelligent bucking and cross cutting regimes applied by the harvesting machines in the forest and ending with laser or x-ray supported high-tech sorting equipment at the mill gate. Optimal allocation decisions have, as has been pointed out in the past, many technical advantages for production and for the product itself, but are linked to higher costs and very often to longer and more complex transport solutions. The alternative allocation decisions are quantified by sustainability-related social, economic and environmental parameters and are simultaneously evaluated using the related indicators.



Photo. Partners Members of M3 Module

One major objective of the module is to quantify the commonly agreed indicators to be used in ToSIA. A second objective is to develop module-specific models that allow for a more detailed technical, economic and environmental analysis of alternative harvesting, transport and allocation systems.

The results of this exercise will go directly to the decision makers responsible for harvesting, transport and allocation.

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Comments, suggestions and article ideas from the project partner community are most welcome and should be sent to: [office@innovawood.com](mailto:office@innovawood.com)

