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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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MEET PROJECT MODULES

MODULE 4: THE FOREST BASED INDUSTRIES

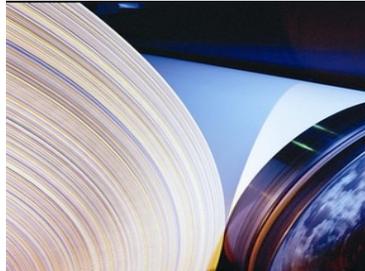
In the middle of the forestry-wood-chain, there is the forest based industry. This industry is not so obviously one single industrial sector, since many types of products and services are being produced from wood.



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 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).



TO SIA - TOOL FOR SUSTAINABILITY IMPACT ASSESSMENT

WHY WE NEED TO SIA?

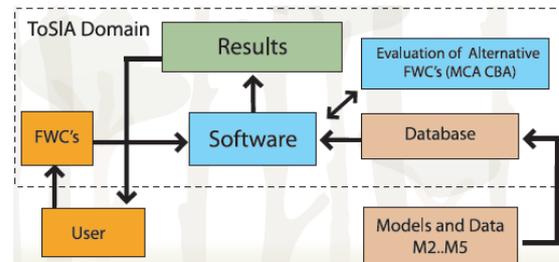
The prime purpose of EFORWOOD is to develop a Tool for Sustainability Impact Assessment (ToSIA) to be used for the evaluation of possible changes in the Forest Wood Chain (FWC).

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 TO SIA

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).



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.



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⁻¹). 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, Doro-tea Slimani, Carl Olsmat, Jobien Laurijssen, Margarida Tomé, Bill Mason, Esa Puustjärvi, Denis McGowan, Diana Vötter



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

EFORWOOD WEEK IN ZVOLEN - A CHANCE FOR RESULTS REVIEW AND TEAMBULIDING

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.



EFORWOOD

Sustainability Impact Assessment of the Forestry-Wood Chain

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 Niina.



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

