

**Project ID 518128**

**Thematic Priority:** Global Change and Ecosystems

**Duration:** November 2005 - October 2009 (4 years)

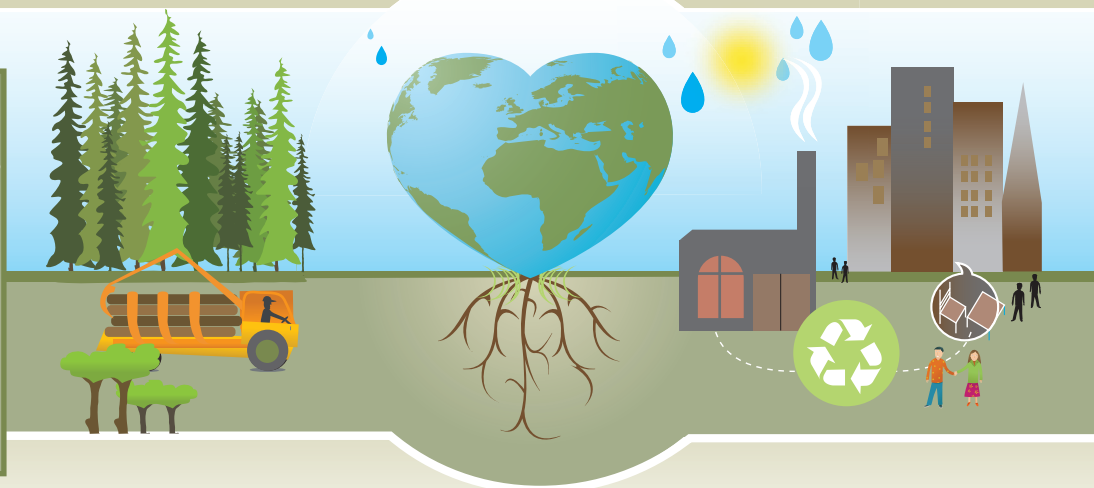
**Budget:** 20€ millions

**Partners:** 38 organisations

**Project Co-ordinator:**

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## THE FOREST-BASED SECTOR IN A CHANGING WORLD

Europe's forest-based sector faces major challenges.

Globalisation, changing trade relationships, as well as shifts in demography, lifestyles and consumption patterns have led to changing demands for forest products and services. Many of these factors challenge sustainable development.

Through current debates about issues such as climate change, renewable energy, biodiversity, competitiveness and people's wellbeing, European forest and forestry issues have once again moved up on the political agenda. Europe's increasing forest resource, for example, supplies a forest products industry which is a global technology leader and which provides employment to millions of Europeans. Forest biomass can contribute to meeting the European Union's goals for more renewable energy. On the other hand, the supply of raw material to paper, woodworking and other industries needs to be secured. Europe's forests also provide a wide range of essential ecosystem services, such as securing our drinking water, helping to mitigate climate change and providing settings for recreation and tourism.

Stakeholders in the European forest-based sector have one important thing in common – forests as a resource base. The sector is unique in providing a wide range of products and services in an environmentally-friendly way. Its raw material is grown in a biodiversity-rich, natural environment.

The forest-based sector is an example to other sectors when it comes to sustainable production processes.

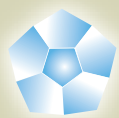
However, its character of being land-based and at the same time embodying a high-tech industry makes it a very complex sector. It requires a careful balancing act between economic, social and environmental sustainability.

## EFORWOOD - responding to changing demands



Decision makers dealing with forest-based sector issues, be it in government or industry, need comprehensive, reliable, timely and policy-relevant information to respond to changes and changing demands. The EFORWOOD project has set out to assist, enhancing understanding of how global changes impact the European forest-based sector. EFORWOOD will stress the importance of minimising the negative consequences of ongoing changes, and making full use of the opportunities that societal changes offer to the sector.

The main object of study of the EFORWOOD project is sustainability impact assessment of forestry-wood chains in Europe. All main components of these chains are in focus, from forest status and production to industry to consumer interactions.



## TOSIA TOOL

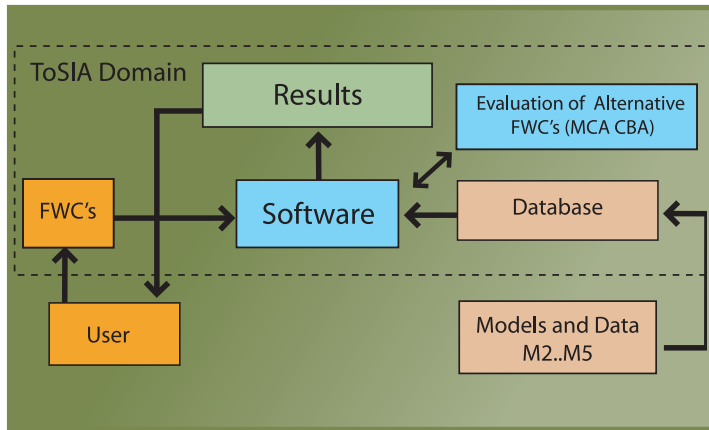


Fig.1 ToSIA Environment.

EFORWOOD will produce major product: a Tool for Sustainability Impact Assessment (ToSIA) for the forest-based sector. The ToSIA, in the form of a software package, will enable users to simulate and compare impacts of various potential decisions influencing the economic, social and environmental performance of the forest-based sector. The tool will be unique in addressing all sustainability dimensions (economic, social and environmental) for the entire forestry-wood chain in a balanced way.

When developing the tool the four main components of the forestry-wood chain to be considered are: Forest Resource Management, Forest to Industry Interactions, Processing Manufacturing and Converting, and Forest to Consumer Interactions. For each of the components, the current level of sustainability will be assessed. This provides the basis for an integrated sustainable impact assessment for the European forest-based sector.

**The ToSIA will be developed in close collaboration with end users representing industry and policy.**

There will be three different versions of the tool. The first can be used for assessment of processes along single or multiple forestry-wood chains. The second version of the tool can be used for integrated sustainability impact assessment of the entire forestry-wood chain. It will use cost-benefit and cost-efficiency assessments, as well as multi-criteria analysis. The third version will be a simplified demonstration version of the tool. This version will be especially important for promoting use of ToSIA amongst stakeholders, through a demonstration package with 'real-life' cases, as well as by means of training courses.

## EFORWOOD in Practice

How will EFORWOOD's results be used in the daily reality of forestry-wood chains? Imagine, for example, that five years from now, a new environmental policy goal arises. Public agencies and authorities start working on possible policy instruments, rules, regulations and so on to achieve this goal. Let us suppose that regulation of forestry practices in a large part of the Atlantic region's forests is also considered.

With EFORWOOD's ToSIA decision-support tool, stakeholders have a new, powerful instrument in their hands. They can – individually, through their European umbrella organisation, or in co-operation with others – use the tool for evaluating the possible impacts of various policy alternatives. Those making the assessment, such as independent experts, will be supplied with comprehensive and transparent information, for example on the proposed regulation and other policy instruments and key assumptions. The stakeholders will receive transparent results in return, for example about the direct impact of the regulation on selected indicators, as well as information about costs and benefits of this. Results can be provided at local, national and regional level. Stakeholders would have difficulty producing this type of comprehensive, policy-relevant information by themselves.

There are other benefits of using the tool, as its use will also level out the playing field, as stakeholders can join the policy debate with a sound information base. In this situation, stakeholders and authorities are on a more equal footing, discussing the assumptions made prior to the analyses. Discussions about the trade-offs of different policy alternatives will also be more transparent. For example, what are the consequences in terms of loss or gain of jobs in the sawmilling industry when the regulation is implemented? What does the regulation mean for the forest's environmental services?

Using independent experts for the analysis, as well as transparent information inputs, will raise the credibility of the analysis. Moreover, as the ToSIA is a state-of-the-art tool effectively endorsed by the European Union, its results cannot be easily ignored.



## PROJECT MAIN ELEMENTS

### Indicators, Scenarios, Case studies

In order to develop the ToSIA tool, the project team needs to identify indicators for sustainability that are valid for the entire forestry-wood chain. Only those indicators should be used that can capture the impacts of the chain on sustainability. The set of indicators used within the project first of all needs to cover economic, social and environmental dimensions. On the other hand, indicators should also be in line with needs from the international down to the local level of decision making.

The scenarios used in EFORWOOD lead to alternative forestry-wood chains with different sustainability impacts compared to current chains. Two baseline futures based on IPCC (Intergovernmental Panel on Climate Change) scenarios will be used, both specified with detailed, contrasting 'storylines' using different assumptions of environmental (e.g., climate conditions) and socio-economic (e.g., development of energy prices, demand for forest products and services) key variables.

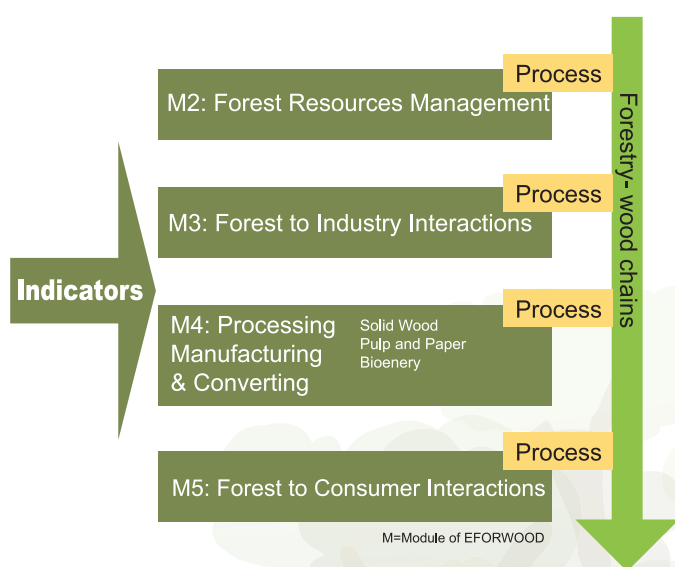
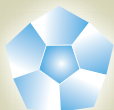


Fig. 2 Main components of the forestry-wood chain.

An important exercise within EFORWOOD will be identifying policy scenarios and their expected impacts on the economic, social and environment performance of forestry-wood chains. Scenarios 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 forestry-wood chain. Scenarios are neither predictions nor forecasts, but they are used to create a consistent image of how the future may look.

Indicators and scenarios will be tested for a series of case studies at different levels, namely those of selected single production chains, regional or country-scale case studies, and case studies at the European scale. Cases can be, for example, a Scandinavian production driven case, an Iberian product driven case, or a German regional case of both production and consumption. The case studies will also be used in the EFORWOOD's demonstration material and training courses.



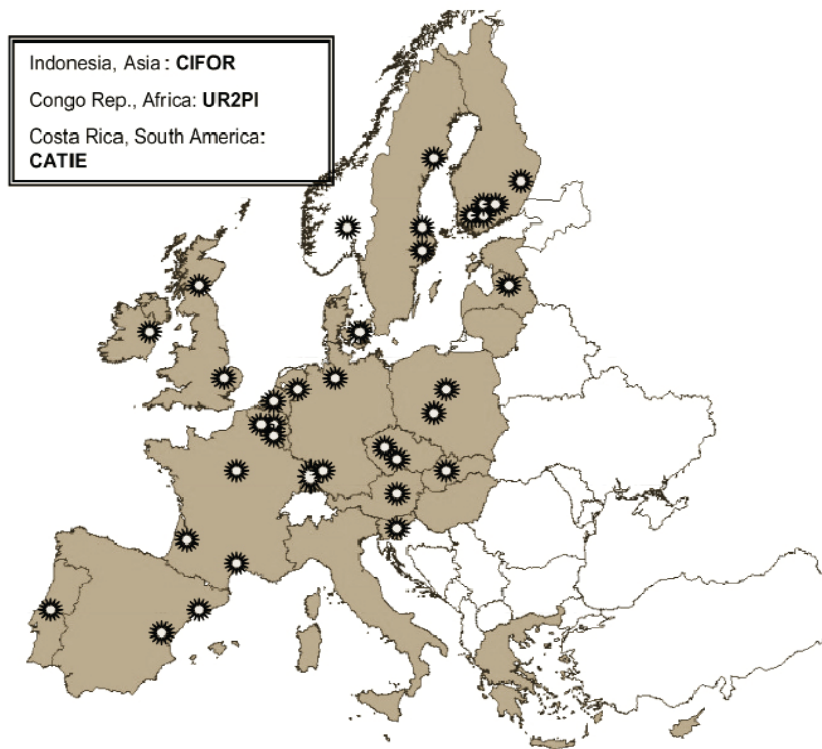


## PROJECT RESULTS SO FAR

The project is well on track. A strong project team was built, comprising of 120 scientists, experts and stakeholder representatives. The team regularly meets, for example during so-called 'EFORWOOD weeks' for the entire consortium, as well as during meetings of the different project modules.

The first prototypes of the ToSIA decision-support tool have been developed. An extensive database has been compiled for three case studies of selected forestry-wood chains. This information will be used for testing and improving the tool. The first case studies include the forest-defined Scots pine chain in northern Sweden and the regionally-defined spruce chain from Baden-Württemberg, Germany. A first ToSIA tool training session was held during April 2007. The training session highlighted different aspects of the tool, answering questions such as: what can ToSIA do for you? Based on the first case studies, the practical application of the tool was demonstrated to participants.

Intensive dialogue has taken place with industrial and other stakeholders, and especially with their European confederations. This dialogue will be strengthened further during the next project stages. This should ensure that EFORWOOD's work is well embedded in reality and will meet the needs of end users. An important event for interaction with stakeholders was the EFORWOOD conference in Brussels, held during 1-2 October 2007 under the title "The Forest-based sector – Sustainability for Competitiveness".



## PROJECT Consortium - An inclusive approach

The EFORWOOD consortium comprises 38 organisations from 21 countries. Partners represent some of the best scientific expertise in relevant fields, as well as key representatives from forest-based industry. By involving partners from developing countries in regional case testing, global aspects of the impacts of changes in European forestry-wood chains are also considered.

EFORWOOD is a truly joint effort of researchers, industry and policy makers. In order to deliver results that are valuable and applicable in daily life, close dialogue with stakeholders in the forest-based sector is an absolute necessity. Therefore stakeholders' views, feedback and recommendations will be incorporated at all stages of the project, including when developing the two baseline scenarios for analysing sustainability of the forestry-wood chains.

### Contact Information