

European Forest Sector Assessing its Sustainability

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In the Lisbon and Gothenburg processes, the European Union has chosen sustainability and competitiveness as its main objectives. Competitiveness will be assessed by comparing the performance of European industries to those outside of Europe. Assessing the sustainability performance is however, a much more complicated issue.

Sustainable development has three main pillars – economic, social and environmental. Within the forest sector those include income and employment, social activities, healthy and productive forests, clean water and clean air. All three pillars are needed to support each other. The forest-based sector needs to be economically strong so that part of the wealth generated can be used for forest conservation and other activities such as waste-water treatment. On the other hand, in the forest-based sector we need environmental (vitality of forests) and social sustainability in order to be able to ensure the economic viability of the sector in the long run.

The European Union has decided to finance a major research project – EFORWOOD – to assess the sustainability of the forest-based sector and the impacts of various policy measures or technological developments on its sustainability.

In the first phase of the project, the forest-based sector is described as a chain of production processes. The chain starts from planting trees, managing and using the forest (including recreational use), felling trees and transporting timber. It continues with various phases in manufacturing wood and fibre products, further refining and consumption, and ends with recycling of wood based materials.

In the second phase, each process is linked to sustainability indicators representing the three pillars of sustainability. Examples of the economic indicators are the costs of and the value added to the units produced in the process. Social sustainability is assessed by examining the recreational potential of the forests and by the impacts of employment, including that of female and youth employment. The environmental sustainability indicators include the impact of forestry activities on biodiversity, energy consumption, carbon balance and pollution produced in various manufacturing processes.

The essential research problem is to find the appropriate level of detail in which to describe the forest-wood chain and which sustainability indicators should be used. The aim is to create a simulation tool rather like a kind of computer game that will calculate impacts of new technologies or the implementation of new policy instruments on the sustainability of the forestbased sector. The simulation instrument is called ToSIA, Tool for Sustainability Impact Assessment.

Competitiveness and sustainability hand in hand

One of the main problems in assessing overall sustainability is the incompatibility of the indicators mentioned earlier. For example, it is difficult to say how many hectares of newly conserved forest equates to a certain number of wood processing job losses in rural areas, and how this might be balanced, for instance by new jobs in tourism. The answer will strongly depend on the personal values of individuals and interest groups. In this study, the problem is approached by calculating many alternative results, and in each calculation, emphasising any sense to try to conclude which aspects of sustainability are more important than others, as this would be a subjective assessment. However, the research can serve the industrial and political decision makers by clarifying the sustainability impacts of forest-based production chains under the assumption that the decision-maker has certain preferences towards the various pillars of sustainability.

Currently, the European forest-based sector employs close to four million people, there are 16 million private forest owners, and the share of the sector's production value is 8% of that of the European Union. Through this research, the forest-based sector will be in the front line in identifying means by which the strategic and political decisions on sustainable development currently being discussed all around Europe can be put into practice.

Competitiveness and sustainability are not exclusive of each other. Nowadays, the choices made by consumers are moving towards products certified as being part of a sustainable production process. One of the most interesting phases will follow after EFORWOOD, when the products of the forest-based sector can be compared with the alternative products in construction and packaging as well as other branches.

What is EFORWOOD?

- FP6 Integrated project 2005–2009
- Objective: Develop a tool for Sustainability Impact Assessment (SIA) for Forest Wood Chains in Europe
- Budget: 20 million euro, 13 million covered by FP6
- Consortium: 38 Partners in 21 countries
- Coordinator: Skogforsk, Sweden
- Consist of six modules: Sustainability Impact Assessment, Forest Resources Management, Forest to Industry, Processing and Manufacturing, Industry to Consumer and Knowledge Transfer
- www.eforwood.com/