

The forest-based sector in Europe on the move

– from recreation to smart materials

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The forest-based sector fulfils all the prerequisites for making important contributions to a sustainable and competitive European society. It provides economic, environmental and social benefits to the citizens, all based on a renewable resource. The forest-based sector in Europe is now taking a step into the future, broadening its range of activities into new market segments with development of new techniques, products and services. A strengthening of the knowledge-based character of the sector, and the development of high value-added products, will meet the competition from emerging economies elsewhere in the world. A broader use of forest-based products will help fulfil the ambitious environmental goals of Europe - by the replacement of for example plastics with fibre-based materials, the sector contributes to the transformation of a petroleum-based society into a sustainable one. Important contributions are also made through development of fully closed production processes with zero emissions and wastes.

Today's and tomorrow's forest-based sector offers much more than what is traditionally associated with its activities. European pulp mills are being developed into biorefineries, producing a range of utilisable chemicals out of sidestreams and wastes, while the paper industry is at the forefront of launching new composite materials and new applications for its products. The forestry-wood production chain is implementing new, more raw-material oriented, production strategies to increase the quality of wood products and minimise emissions of greenhouse gases. The multiple

demands on our forests are met by an advanced and careful forest management that is one of the best in the world. This secures the supply of raw-material to the industry as well as the maintenance of recreational environments for our populations and an improvement of biodiversity.

The visions and future priorities of the sector have been formulated by the Forest-based Sector Technology Platform (FTP, www.forestplatform.org). This platform assembles all stakeholders in the forest-based sector at national and pan-European level. Industry, academia and other stakeholders have all contributed to the publication of the platform's Strategic Research Agenda (SRA), which is the "roadmap" for future research and innovation within the sector.

In the transition of the European Union into a competitive, dynamic, knowledge-based economy (The Lisbon Agenda, 2000), the forest-based sector clearly has an important role to play. One way to really boost the innovations in the forest-based sector is through international collaboration supported by the Framework Programmes (FP) of the European Commission. Stakeholders in the sector are convinced that the research and development that is presently carried out under FP6 will create a solid basis for further expansion of the ideas and innovations into the newly started FP7.

Four of the largest EC-funded research and development projects within the forest-based sector, carried out to meet the challenges described above, are briefly summarized here.

SustainPack

(www.sustainpack.com)

The purpose of SustainPack is to establish fibre based packaging as a key player in the packaging area within a decade. The overall objective is to develop and implement a Sustainable Packaging Tool Platform based on renewable resources, giving innovative properties to packaging, thereby offering new value added packaging options for packaging users and consumers.

The Tool Platform comprises new innovative material properties, where nanotechnology is a vital element, and process developments to transform these materials into new packaging solutions. SustainPack is a 'pull driven' project, i.e. it focuses on consumer and downstream supply chain needs, identifies research requirements and integrates other key themes such as sustainable development, European competitiveness, EU directives, legislation and policy strongly into the structure of the project. The technology platform part will be a new way to identify the potential of renewable packaging in Europe.



Project title: SustainPack.
No. of partners: 35 from 13 countries.
Coordinator: STFI-Packforsk AB, Sweden.
Budget: 36 MEuro.
Duration: 2004-2008.

Indisputable Key

(www.indisputablekey.com)

Stopping the extensive resource waste during wood production is the main objective for the Indisputable key (IK) project. Wood users will experience higher and more even quality on wood products. Society will benefit by lower energy consumption and less impact on the environment per produced amount of wood. Indisputable key increases efficiency in wood production.

To achieve this aim, a new production method will be widely introduced along the forestry-wood production chain. The basic idea is to choose suitable raw-material and production means for a specific end product. Automatic traceability, the basis for the IK-method, will be developed and demonstrated at different installations in the project.



Project title: Indisputable Key.
No. of partners: 29 from 5 countries.
Coordinator: SP, Sweden.
Budget: 12 MEuros.
Duration: 2006-2009.

EFORWOOD (www.eforwood.com)

Tools for Sustainability Impact Assessment of the Forestry-Wood Chain

EFORWOOD develops a quantitative decision support tool, ToSIA, for sustainability impact assessment of the European forestry-wood chain. But EFORWOOD's significance is much wider than that, understanding the impact of global changes on the forest-based sector and the importance of responsive decision-making in answer to development scenarios. ToSIA is developed in close cooperation with forest-based sector stakeholders. An active dialogue with industry, different EC directorates and other key players from society is initiated to secure acceptance of project results. ToSIA users will e.g. be able to evaluate sustainability impact of production chains and analyse the sustainability impact within a chain at different process steps. The results of EFORWOOD offer new opportunities for the European forestry-wood chain to improve its sustainability and competitiveness.

Project title: EFORWOOD.
No. of partners: 38 from 21 countries, 35 of which in Europe plus Costa Rica, Congo and Indonesia.
Coordinator: Skogforsk, Sweden.
Budget: 20 MEuro.
Duration: 2005-2009.

ECOTARGET (www.ecotarget.com)

New and innovative processes for radical changes of the European pulp and paper industry

The aim of ECOTARGET is to develop innovative and new processes for the pulp and paper industry in Europe. The "red thread", binding all the ideas together, can be described as More from Less. This means producing more functionality using less resources. All ideas within ECOTARGET aim at a substantial reduction within at least one of the four target areas: Wood Raw Material, Energy, Water, Waste & Emissions. Each idea has a potential of a 20-30 % reduction in one or several of these target areas. One example of a newly developed process idea is the stratified forming concept, i.e. formation of a multi-ply sheet where different types of fibres can be put in specific layers in a paper sheet. This will enable development of new, tailor-made products, and a significant reduction in both the use of raw material and energy.

Project title: ECOTARGET.
No. of partners: 26 from 9 countries.
Coordinator: STFI-Packforsk AB, Sweden.
Budget: 17.9 MEuro
Duration: 2004-2008.

