For instance, good quality waste wood can better be used in the pulp and paper industry while darker fractions can still be used as core material in the particleboard industry. From an environmental point of view, the increased recycling of recovered wood can be seen as a positive evolution because this increases the total volume of CO₂ stored in wood-panels or in (mainly organized as SMEs), the amount of contaminants in waste wood will be drastically reduced. Therefore the acceptance of the larger organized paper mill and particleboard companies to take waste wood as a cheap alternative to fresh wood. With the success of the proposed new concepts and in cooperation with sorting and recycling companies the quality and the quantity of good wood without contaminations were largely extended. After finishing this project, there is an optimized end-of-life value chains such as pulp production for paper products, particle board production and large scale energy recovery systems: combustion plants and liquid biofuels production. This would help saving the forest resource, reducing the environmental impact of waste wood management, while contributing to the objectives of increasing the use of a renewable resource and reducing the greenhouse gases emissions in the materials and energy sectors.

In the last part of the project all works were finished and after a prolongation of the project the results were transferred by a final workshop and by DEMOWOOD homepage (www.wwnet-demowood.eu).

Application/Economic benefits

The results of this project have firstly given a realistic overview about the waste wood sources and paths in selected EU countries. With already existing and newly developed innovative detection and sorting techniques the quality and the quantity of good wood without contaminations were largely extended. After finishing this project, there is an optimized end-of-life concept for wood based products considering their total life cycle. For instance, good quality waste wood can better be used in the pulp and paper industry while darker fractions can still be used as core material in the particleboard industry. From an environmental point of view, the increased recycling of recovered wood can be seen as a positive evolution because this increases the total volume of CO₂ stored in wood-panels or in paper products for many years. However, a negative effect is that waste wood currently contains more contaminants than fresh wood. With the success of the proposed new concepts and in cooperation with sorting and recycling companies (mainly organized as SMEs), the amount of contaminants in waste wood will be drastically reduced. Therefore the acceptance of the larger organized paper mill and particleboard companies to take waste wood as a cheap alternative to fresh wood seems reasonable. The results of this project were disseminated and exploited to the different industrial branches in different way, either directly to the companies in conferences, symposia and on fairs.

Period of time: 01.01.2011 – 31.05.2014

Remarks

The research project DEMOWOOD was funded by the ERA-NET WoodWisdom Net, a network of European Funding Agencies (2nd Joint Call - 2009), and coordinated by Institut Technologique FCBA, France, in cooperation with leading European paper research institutes (PTS, Germany; CTP, France; WKI, Germany; VTT, Finland), and 10 industrial partners: Norske Skog, Golbey Mill, France; Entsorgungstechnik Bavaria GmbH, Germany; Lassila & Tikanoja Oyj, Finland; Finnish Wood Research, Finland; RTT Steinert GmbH, Germany; Schumann-Analytics, Germany; Pfleiderer Holzwerkstoffe GmbH, Germany; SITA Recyclage, France; VEOLIA, France and TITECH GmbH, Germany.