



Securing Sustainable Dendromass Production with Poplar Plantations in European Rural Areas

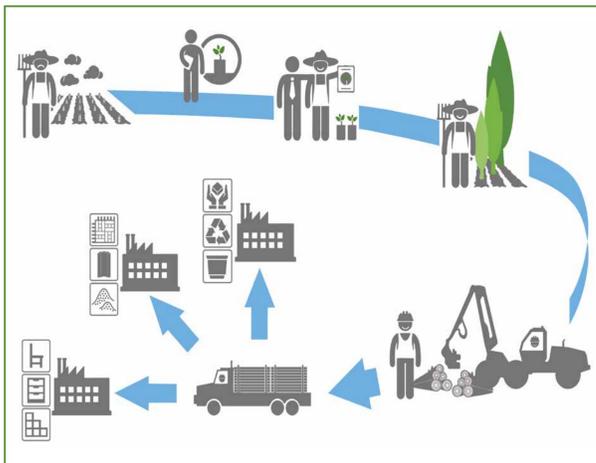
About the project

Dendromass4Europe (D4EU, 2017 – 2022) aims at establishing sustainable, Short Rotation Coppice (SRC)-based, regional cropping systems for woody biomass (dendromass) production on marginal agricultural land. This new agricultural cropping system combines the improvement of the landscape for maintaining biodiversity with a new source of income for farmers and for rural development. The dendromass produced in D4EU's poplar SRC (ligneous biomass, bark and wood) is supplied to dedicated bio-based value chains that create job opportunities in rural areas. The supply chains will be tailored for optimum efficiency of supply logistics and for reducing CO₂ emissions. Innovative bio-based materials such as lighter furniture, environmental friendly packaging and high-quality construction materials, will help to replace fossil-based materials.



New bio-based materials

Dendromass4Europe helps rethinking European wood and biomass production! Instead of increasing the utilization pressure on forests, D4EU uses marginal farmland for establishing SRC with poplars for an innovative biomass production. The various activities of the D4EU project consortium aim to generate profit for the rural economy through value adding processes and marketing activities that will allow access for innovative bio-based materials to specific consumer markets. As a wood based material, a functionally adapted lightweight board for furniture production has been developed. Three bark based materials, an eco-fungicidal moulded fibre pulp for packaging, bark enriched wood-plastic composite profiles and bark enriched wood-plastic composite granulates are produced. Through assessing the life cycles of our products, D4EU ensures sustainability along the entire value chain, from the plant to the consumer product.



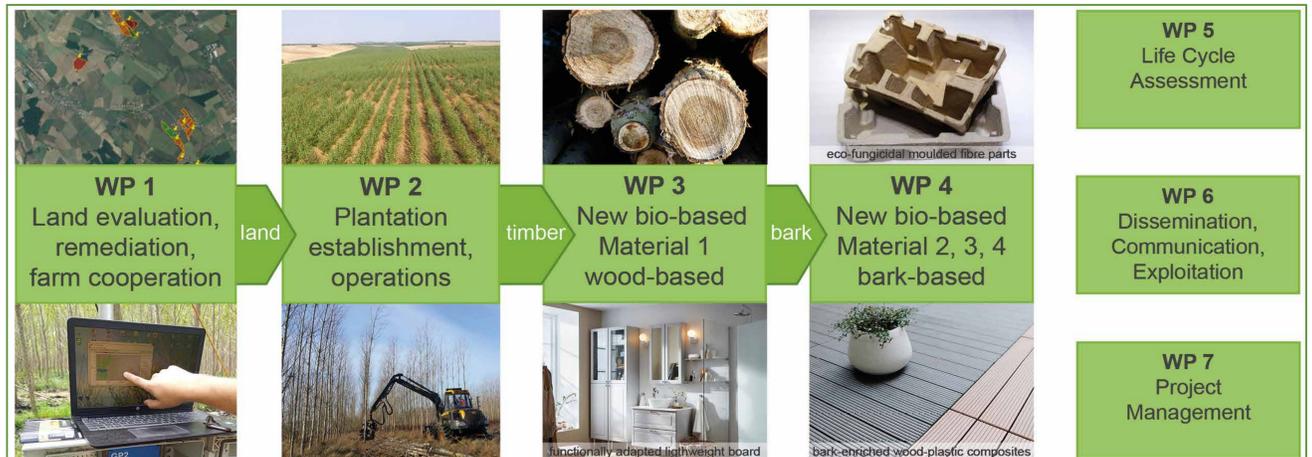
Benefits to society and the environment

- Improve landscape for maintaining biodiversity and protection against erosion
- Offer diversification of agricultural crops and improve economic safety for agricultural operations by different new contracting models adapted for perennial cropping
- Build up know-how and new green jobs in an innovative cross-sectoral industry cluster
- Mitigate climate change by active and long-term carbon dioxide sequestration and reduced energy consumption in optimized supply logistics
- Tackle plastic pollution by replacing fossil-based materials with recyclable, bio-based materials



Objectives

- Establishment and expansion of 2500 ha of short rotation poplar plantations on marginal or on currently unused agricultural land in rural areas
- Market introduction and application of four new bio-based materials linked to the establishment of four new bio-based value chains
- Reduction of dendromass costs through the adaptation and optimisation of innovative harvesting and storage systems
- Implementation of dedicated monitoring and applied-level research to ensure plantation quality, production stability, optimum poplar variety selection and risk avoidance
- Validation of the expected positive ecological impacts by assessing the life cycles of the new bio-based materials along the value chains



Partners

- Consiglio Nazionale Delle Ricerche (Italy)
- Daphne - Insitut of Applied Ecology (Slovakia)
- Ikea Industry Slovakia S.R.O. (Slovakia)
- Kompetenzzentrum Holz GmbH // WOOD K Plus (Austria)
- Ökoforestino KFT. (Hungary)
- Pulp-Tec GmbH & Co KG (Germany)
- Pulp-Tec Sp. z o. o. Sp. k. (Poland)
- Sveriges Lantbruksuniversitet (Sweden)
- Technische Universität Dresden (Germany)
- TerrainEco S.R.O. (Czech Republic)

