

FP1407

ModWoodLife

Waste wood management and processing - opportunities for reducing the environmental impact of ports



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Main aim

examine the environmental impacts of two possible scenarios for the treatment of **waste wood** in Port of Koper:

- the processing of waste wood into **particleboards** to extend its life cycle,
- the production of **wooden pellets**.



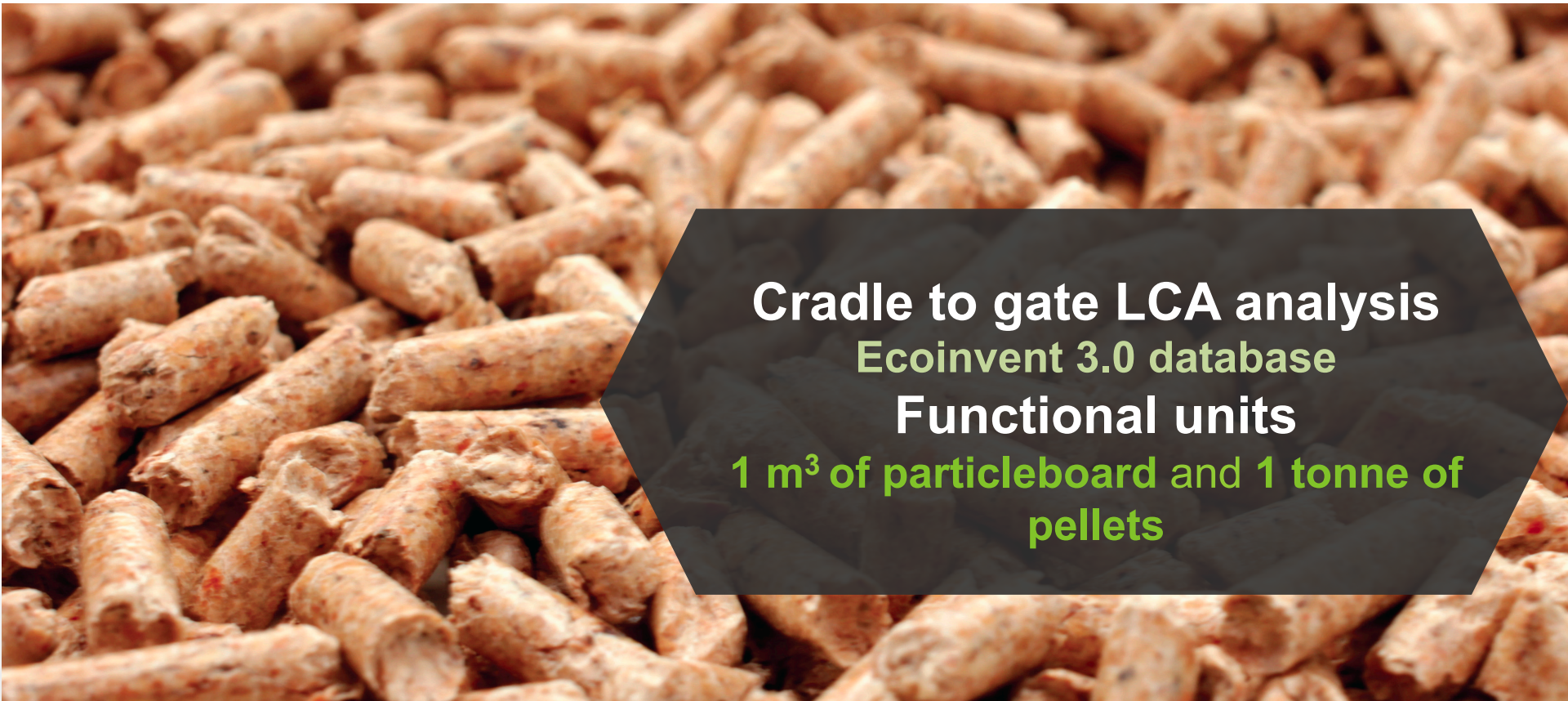


**Waste wood at Luka Koper
1,500 t – 2,000 t annually**

**Sawdust, shavings, wood chips and
wooden packaging**

Life cycle assessment (LCA), EN ISO 14044 (2006)

- environmental impacts of the product made **from raw materials** in comparison to the product **made from waste wood**.



Cradle to gate LCA analysis
Ecoinvent 3.0 database
Functional units
1 m³ of particleboard and 1 tonne of pellets

System Boundaries - defined in collaboration with **Port of Koper**, particleboard producer **Lesna TIP Otiški Vrh d.o.o.**, and producer of pellets **Biogen**, which also provided the data for the analysis.

Results

	Particleboard - waste wood	Particleboard - raw material	Pellets - waste wood	Pellets – raw material
Global warming (GWP 100) [kg CO ₂ e]	337,0	476,7	209,8	456,4
Ozone layer depletion [kg CFC-11e]	2,39E-05	2,85E-05	8,42E-06	1,47E-05
Photochemical oxidation [kg C ₂ H ₄ e]	0,608	0,729	0,5004	0,7682
Acidification [kg SO ₂ e]	2,21	2,59	2,06	4,91
Eutrophication [kg PO ₄ e]	0,514	0,658	0,776	1,92
Raw material use [MJe]	7239	8679	4002	8876

decreased environmental impacts due to reduced energy use for drying the material in the production of the products and closer transportation

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 - Port of Koper,
 - Lesna TIP Otiški Vrh d.o.o.,
 - Biogen



See you at the poster!