

Deliverable B2

PEF report summary

Company 3

Product 2: MDL Legno

Life Effige
Environmental Footprint
For Improving and
Growing Eco-efficiency



Pilot company description	
Productive field	Homeoffice product furniture
Number of employees	200
Turnover/year	62M/2017
Nation	Italy

1. Methodology

This Product Environmental Footprint (PEF) study has been performed as a supporting study in the framework of the Life EFFIGE Project with the main objective of testing the Product Environmental Footprint Category Rules (PEFCR) developed for the product category “Homeoffice desk”

This supporting study has been carried out in compliance the Draft PEFCR for office chair published on 27 July 2018, the requirements of the PEF Guide (Annex II to Recommendation 2013/179/EU) and the PEF Pilot Guidance v.6.3. Since some of the requirements of the latest PEF Guidance (i.e. Impact assessment method, default dataset, etc.) can only be applied within the EU PEF Pilot Phase on products category covered by existing PEFCR, some modelling choices that differ from requirement of Guidance v.6.3 have been made, based on older versions of the document and expert judgment.

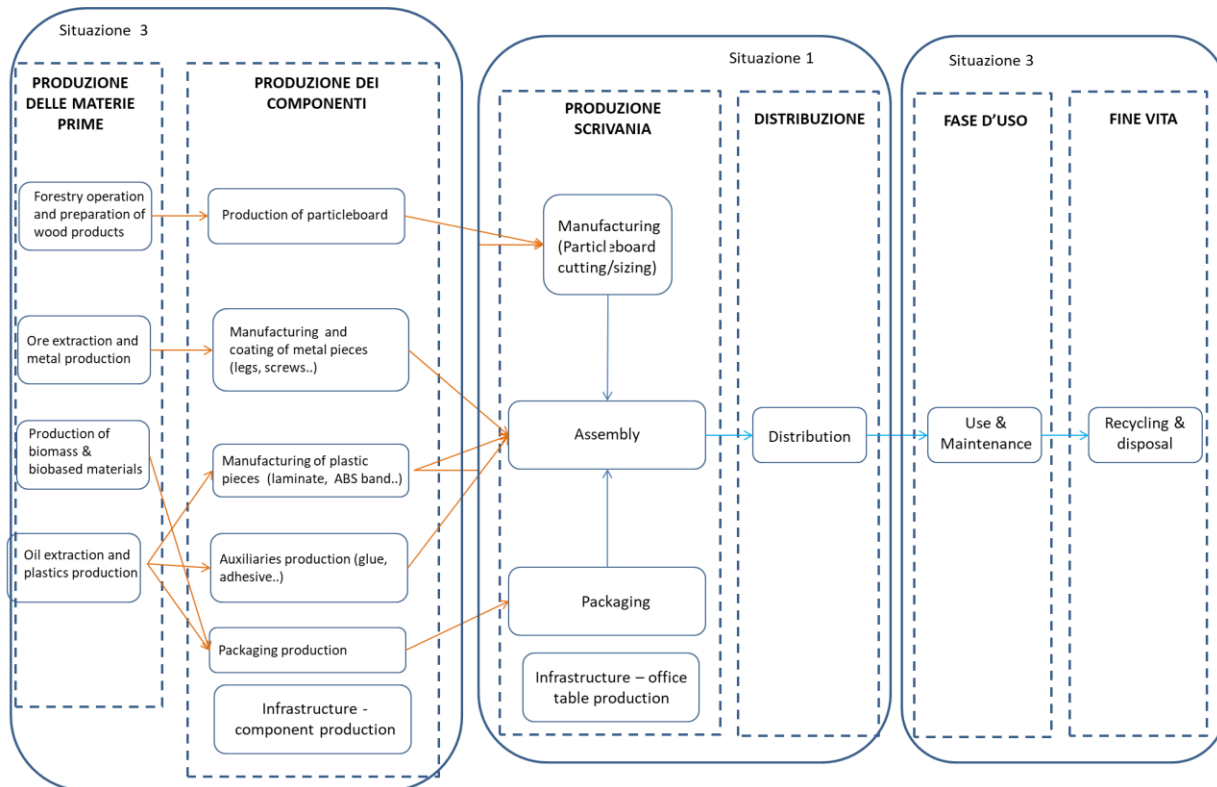
The default normalization factors provided by the PEF Guidance have been applied for the default impact categories.

2. Functional unit and system boundaries

The functional unit, as defined in the PEFCR, is one MDL Legno and the system boundaries were set from cradle to grave.

The system boundaries are "cradle to grave" e includes all the processes, namely:

- Production and supply of raw materials;
- Production and supply of components and packaging;
- Production and assembly of the MDL Legno, within the company productive site;
- Distribution of the MDL Legno
- Use and maintenance;
- End of life of the MDL Legno and of the packaging.



Primary data have been collected for the production and manufacturing office table process, referred to year 2017.

3. Product environmental footprint results

In this supporting study the relevant life cycle stages, processes, elementary flows and impact categories have been identified for the MDL Legno analysed and compared to that identified in the screening study.

For MDL Legno, the most relevant impact categories are:

- Climate change, fossil;
- Particulate matter;
- Acidification;
- Mineral, fossil and renewable resource depletion;

Differently to the PEF screening study, the photochemical ozone formation did not emerge as relevant impact category

Categoria d'impatto	Unità	Totale	
Totale	Pt	0,578172735	100%
Climate change, fossil	Pt	0,035471084	6%
Climate change, biogenic	Pt	0,00023997	0%
Climate change, land use & transf	Pt	0,000119066	0%
Ozone depletion	Pt	0,000926519	0%
Particulate matter	Pt	0,084604054	15%
Ionizing radiation HH	Pt	0,007049347	1%
Photochemical ozone formation	Pt	0,030225256	5%
Acidification	Pt	0,047158172	8%
Terrestrial eutrophication	Pt	0,020025731	3%
Freshwater eutrophication	Pt	0,009949264	2%
Marine eutrophication	Pt	0,018156066	3%
Land use	Pt	0,00637997	1%
Water resource depletion	Pt	0,019468559	3%
Mineral, fossil & ren resource depletion	Pt	0,298399677	52%

MDL Legno Relevant Impact categories

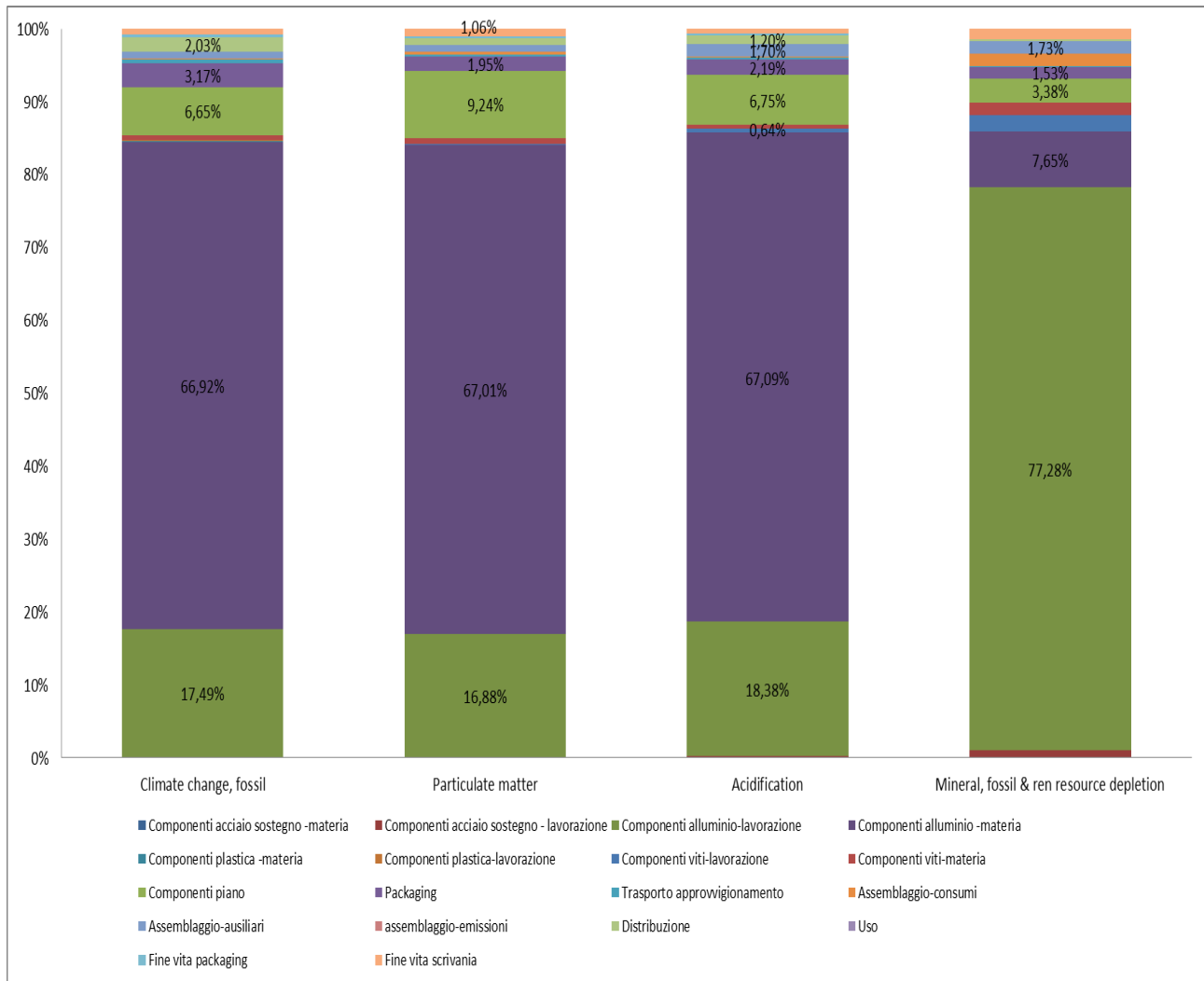
For all the impact category, the most relevant life cycle stage is the components production, with a contribute above 90% for all the relevant impact categories

Categoria d'impatto	Componenti acciaio sostegno - materia	Componenti acciaio sostegno - lavorazione	Componenti alluminio - lavorazione	Componenti alluminio - materia	Componenti plastica - materia	Componenti plastica - lavorazione	Componenti viti - lavorazione	Componenti viti - materia	Componenti piano	Packaging	Trasporto approvvigionamento	Assemblaggio consumi	Assemblaggio ausiliari	assemblaggio emissioni	Distribuzione	Uso	Fine vita packaging	Fine vita scrivania
Climate change, fossil	0,10%	0,02%	17,49%	66,92%	0,12%	0,02%	0,04%	0,69%	6,65%	3,17%	0,57%	0,17%	0,87%	0,00%	2,03%	0,00%	0,36%	0,79%
Particulate matter	0,11%	0,04%	16,88%	67,01%	0,06%	0,01%	0,09%	0,81%	9,24%	1,95%	0,25%	0,46%	0,91%	0,00%	0,94%	0,00%	0,17%	1,06%
Photochemical ozone formation	0,08%	0,19%	18,38%	67,09%	0,07%	0,02%	0,44%	0,64%	6,75%	2,19%	0,23%	0,15%	1,70%	0,00%	1,20%	0,00%	0,16%	0,70%
Acidification	0,06%	0,96%	77,28%	7,65%	0,01%	0,00%	2,17%	1,72%	3,38%	1,53%	0,08%	1,78%	1,73%	0,00%	0,28%	0,00%	0,01%	1,37%
Terrestrial eutrophication	0,10%	0,02%	17,49%	66,92%	0,12%	0,02%	0,04%	0,69%	6,65%	3,17%	0,57%	0,17%	0,87%	0,00%	2,03%	0,00%	0,36%	0,79%
Mineral, fossil & ren resource depletion	0,11%	0,04%	16,88%	67,01%	0,06%	0,01%	0,09%	0,81%	9,24%	1,95%	0,25%	0,46%	0,91%	0,00%	0,94%	0,00%	0,17%	1,06%

MDL Legno Relevant Life Cycle Phases

The most relevant processes identified are:

- Metal components processing (in particular aluminium);
- Steel and aluminium extraction and processing



MDL Legno relevant processes

The most relevant elementary flows are:

- Mineral and fossil resource depletion and Particulate matter from the metal components (in particular aluminium and steel components);
- Particulate matter and Mineral and fossil resource depletion from the components processing, in particular aluminium components;
- Metal components (in particular aluminium) processing phase;

As an input for the improvement of the PEF CR it is suggested to add additional alloying elements within the list on mandatory data to be included in the PEF Study.