

greenly

2025-09-16

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

12.835.392 (sold in CH)

Summary



01 | Methodology



02 | Results

01

Methodology

Environmental Impact Assessment

Functional unit	<p>The functional unit is a quantified performance of a product system for use as a reference unit. One of the primary purposes of a functional unit is to provide a reference to which the input and output data are normalized (in a mathematical sense).</p> <p>The functional unit of this analysis is "500 page(s) of A4 paper for writing".</p>
Impact Indicator	<p>The impact is measured through the "IPCC 2013 GWP 100a" method.</p>
Electricity impact calculation method	<p>Following guidelines from the GHG Protocol, the impact of electricity is calculated using the location-based approach. This means that the emission factors used represent the average annual carbon intensity of the power grid in the country the processes take place in.</p>
Hypothesis	<p>Manufacturing Processes and associated loss percentages are assumed based on materials in the product.</p> <p>The electricity is based on the average in the country of manufacturing.</p> <p>Transportation is based on the common routes between the country of manufacturing and the country of sale.</p> <p>No replacements during the lifetime, therefore there are no emissions corresponding to the usage phase.</p> <p>The End of Life is based on the average waste management process of the materials in the product.</p>

Environmental Impact Assessment

System Boundaries

The scope of this research includes the complete lifecycle of a piece of paper from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

Exclusions

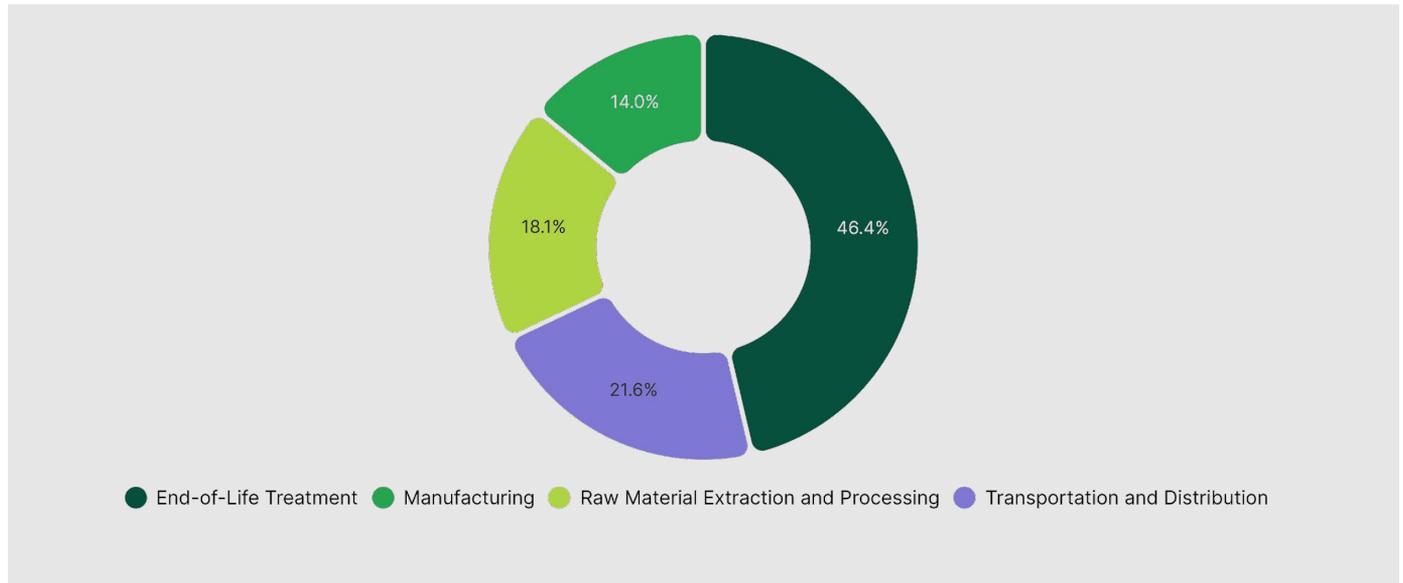
The impact of secondary packaging impact and writing utensils are excluded from this assessment.

02

Results

12.835.392 (sold in CH)

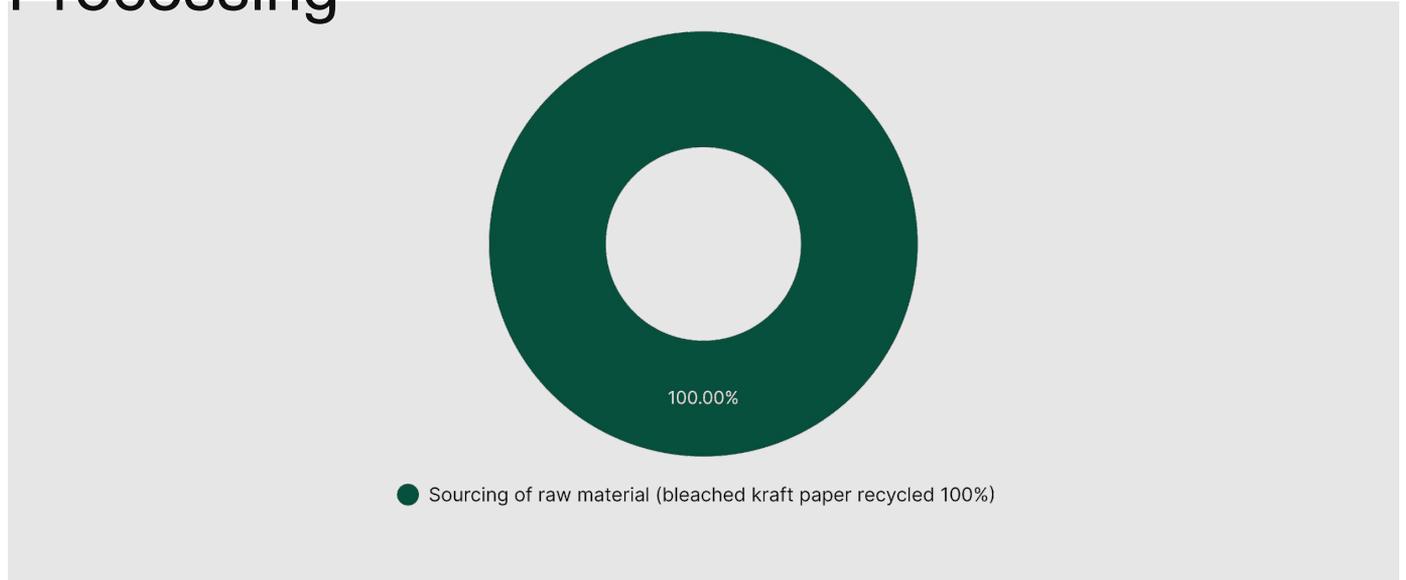
Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
End-of-Life Treatment	2.77	46.35 %
Transportation and Distribution	1.29	21.55 %
Raw Material Extraction and Processing	1.08	18.09 %
Manufacturing	0.84	14.00 %
TOTAL	5.97	100.00 %

12.835.392 (sold in CH)

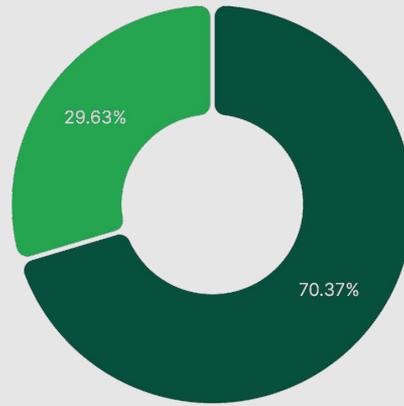
Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper recycled 100%)	1	7.2	1.08	100.00 %
TOTAL			1.08	100.00 %

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Climate Change - Manufacturing

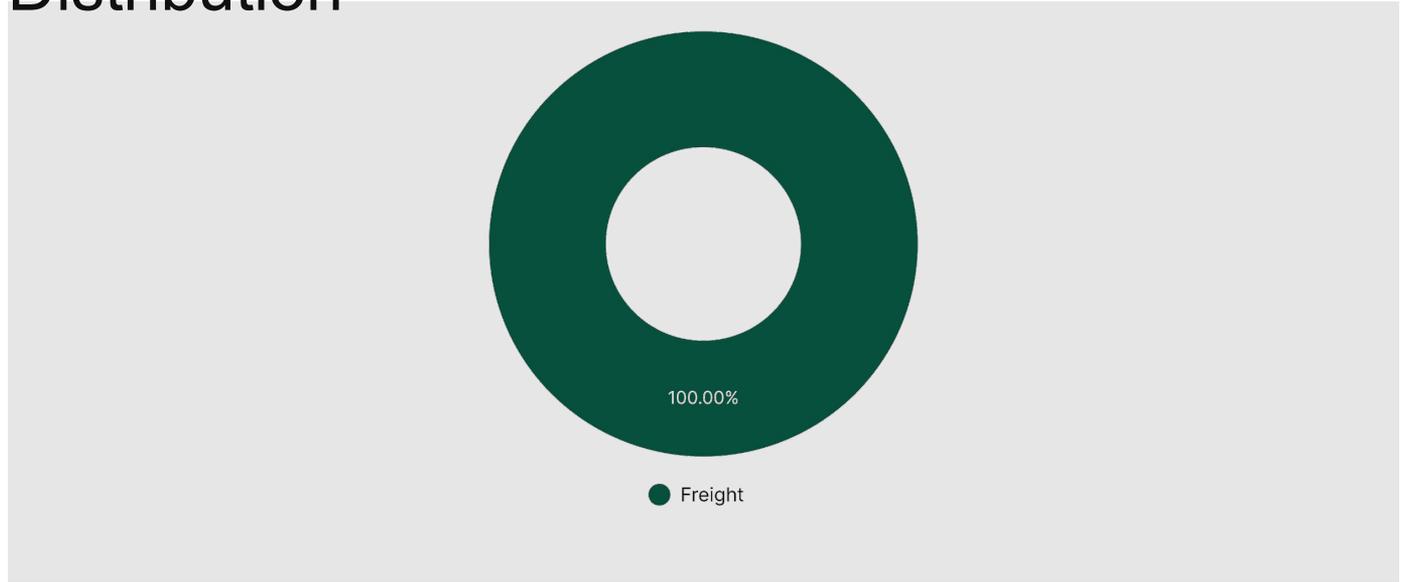


- Electricity usage during material transformation (bleached kraft paper recycled 100%)
- Natural gas usage during material transformation (bleached kraft paper recycled 100%)

Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper recycled 100%)	2	2.55	588.09	70.37 %
Natural gas usage during material transformation (bleached kraft paper recycled 100%)	3	1.37	247.61	29.63 %
TOTAL			835.7	100.00 %

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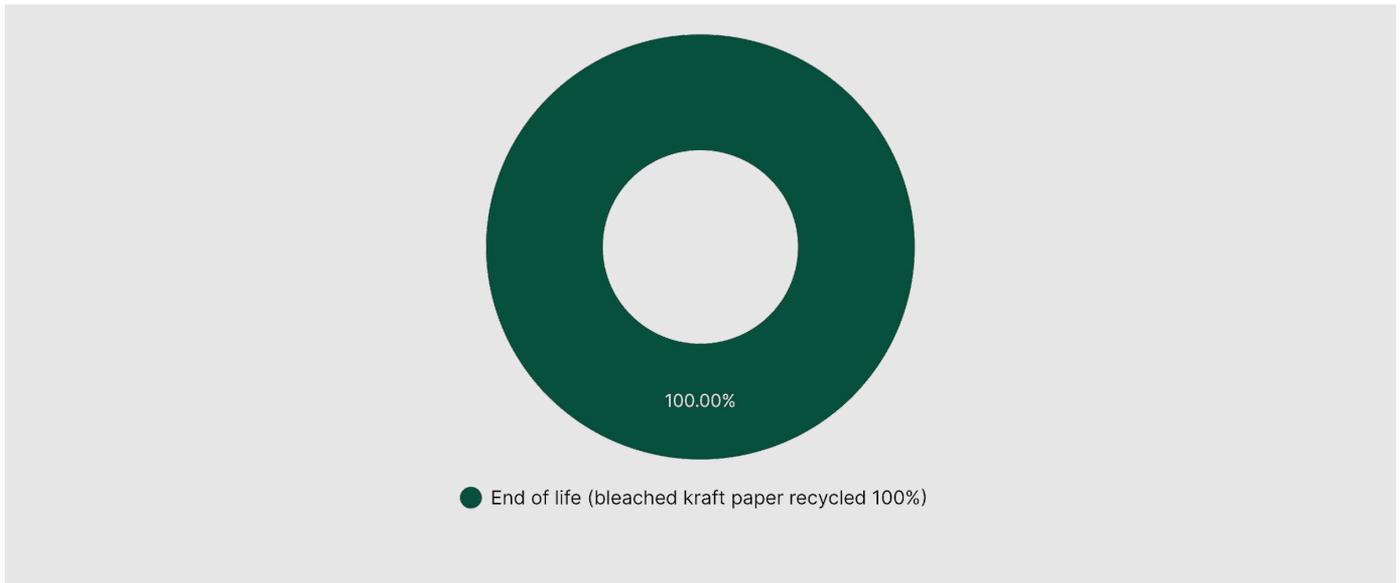
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Freight	4	4.8	1.29	100.00 %
TOTAL			1.29	100.00 %

12.835.392 (sold in CH)

Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper recycled 100%)	5	4.8	2.77	100.00 %
TOTAL			2.77	100.00 %

Contact us

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