

greenly

2025-09-18

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

13093111 (sold in PL)

Summary



01 | Methodology



02 | Results

01

Methodology

Environmental Impact Assessment

<p>Functional unit</p>	<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). The functional unit of this analysis is "20 page(s) of A4 paper for writing".</p>
<p>Impact Indicator</p>	<p>The impact is measured through the "IPCC 2013 GWP 100a" method.</p>
<p>Electricity impact calculation method</p>	<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>
<p>Hypothesis</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

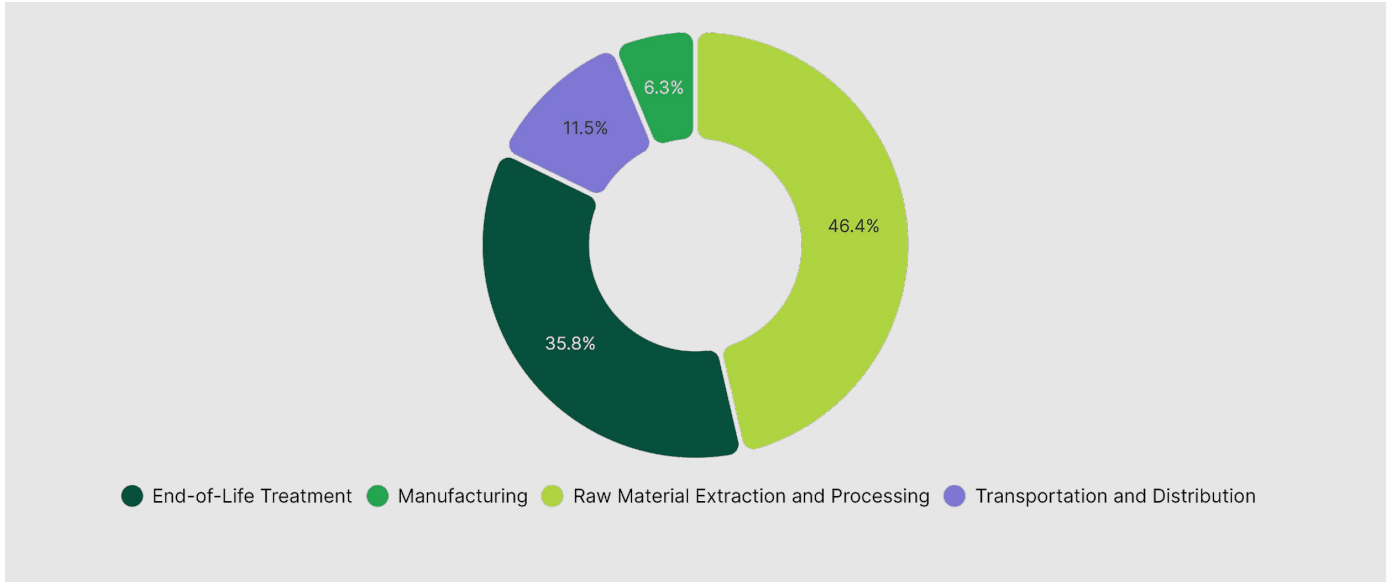
The impact of secondary packaging impact and writing utensils are excluded from this assessment.

02

Results

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Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	0.49	46.40 %
End-of-Life Treatment	0.37	35.82 %
Transportation and Distribution	0.12	11.50 %
Manufacturing	0.07	6.28 %
TOTAL	1.05	100.00 %

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Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	0.98	485.34	100.00 %
TOTAL			485.34	100.00 %

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Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Natural gas usage during material transformation (bleached kraft paper)	3	0.19	33.53	51.03 %
Electricity usage during material transformation (bleached kraft paper)	2	0.34	32.18	48.97 %
TOTAL			65.71	100.00 %

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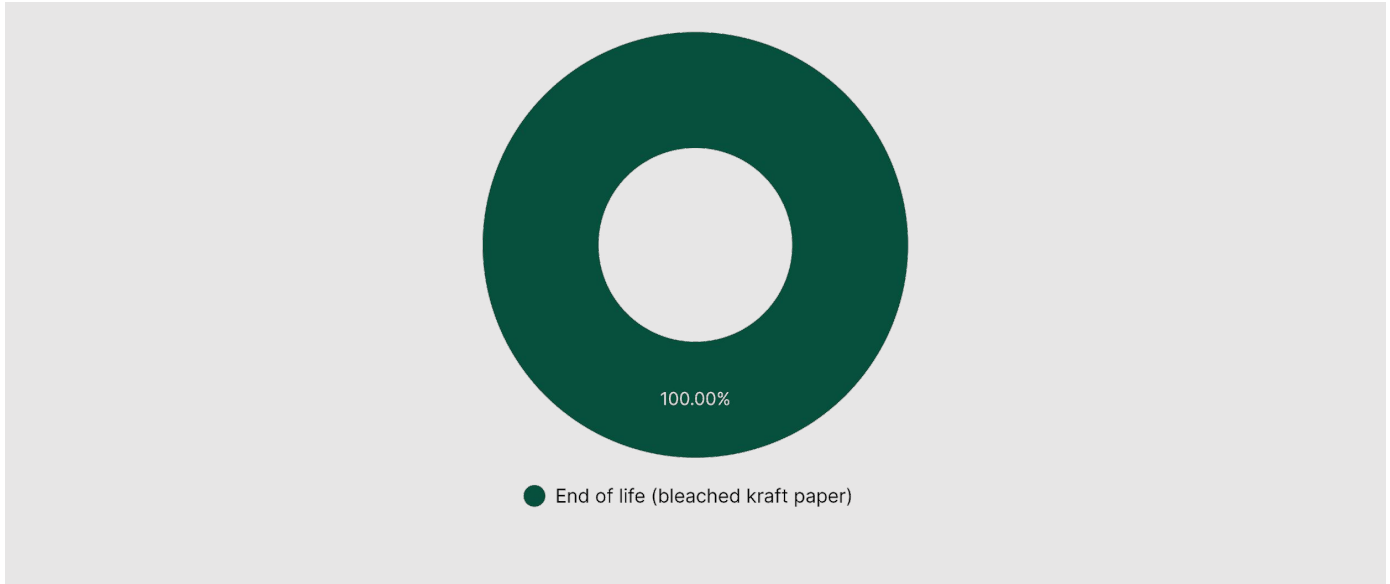
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	4	0.65	120.35	100.00 %
TOTAL			120.35	100.00 %

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Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper)	5	0.65	374.69	100.00 %
TOTAL			374.69	100.00 %

Contact us

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