

greenly

2025-09-18

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

2111028 (sold in HK)

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 "500 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

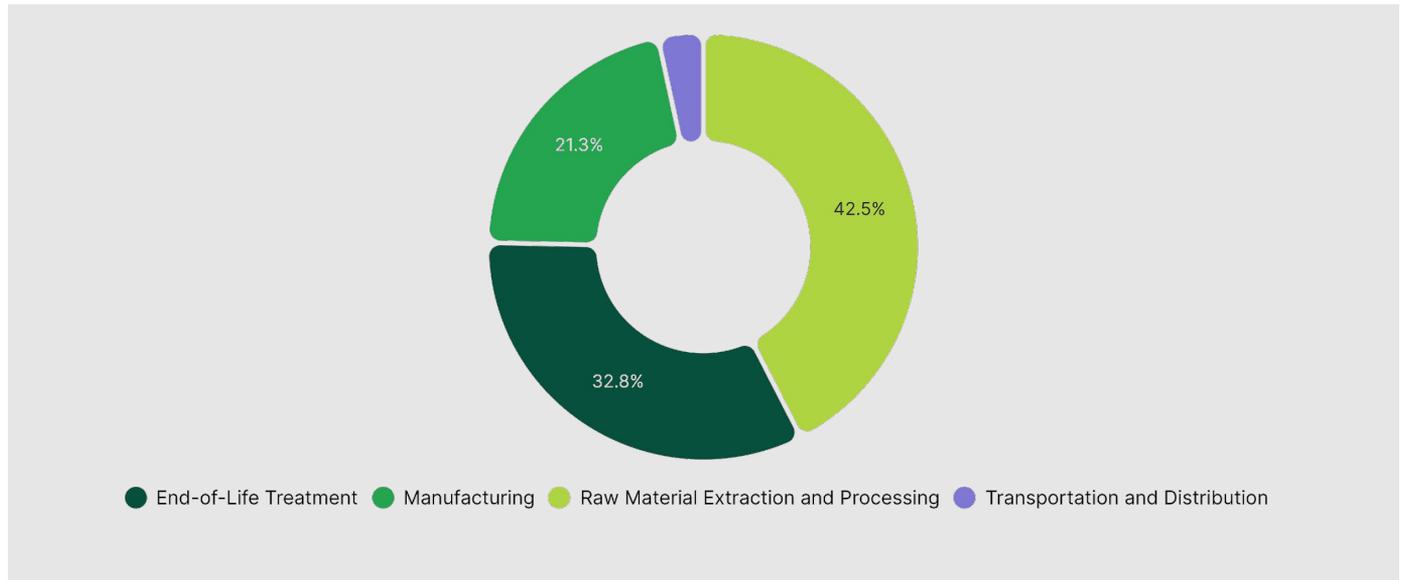
The impact of secondary packaging impact and writing utensils are excluded from this assessment.

02

Results

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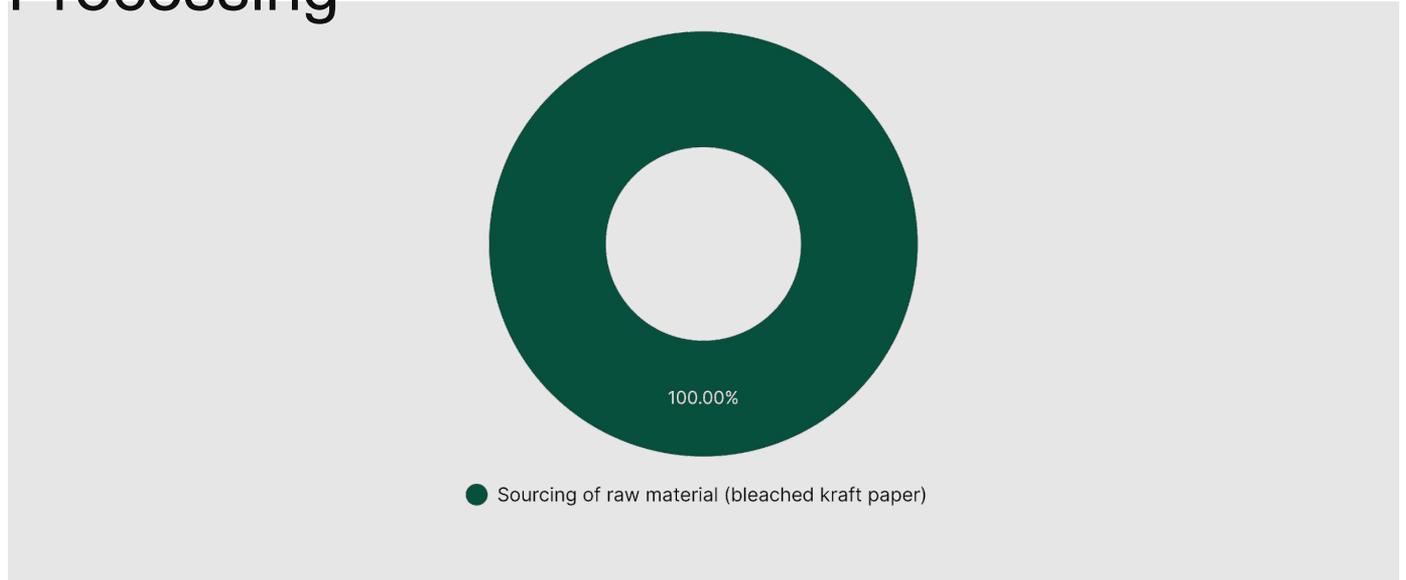
Climate Change



Step	Impact (kg CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	1.91	42.50 %
End-of-Life Treatment	1.48	32.81 %
Manufacturing	0.96	21.31 %
Transportation and Distribution	0.15	3.38 %
TOTAL	4.5	100.00 %

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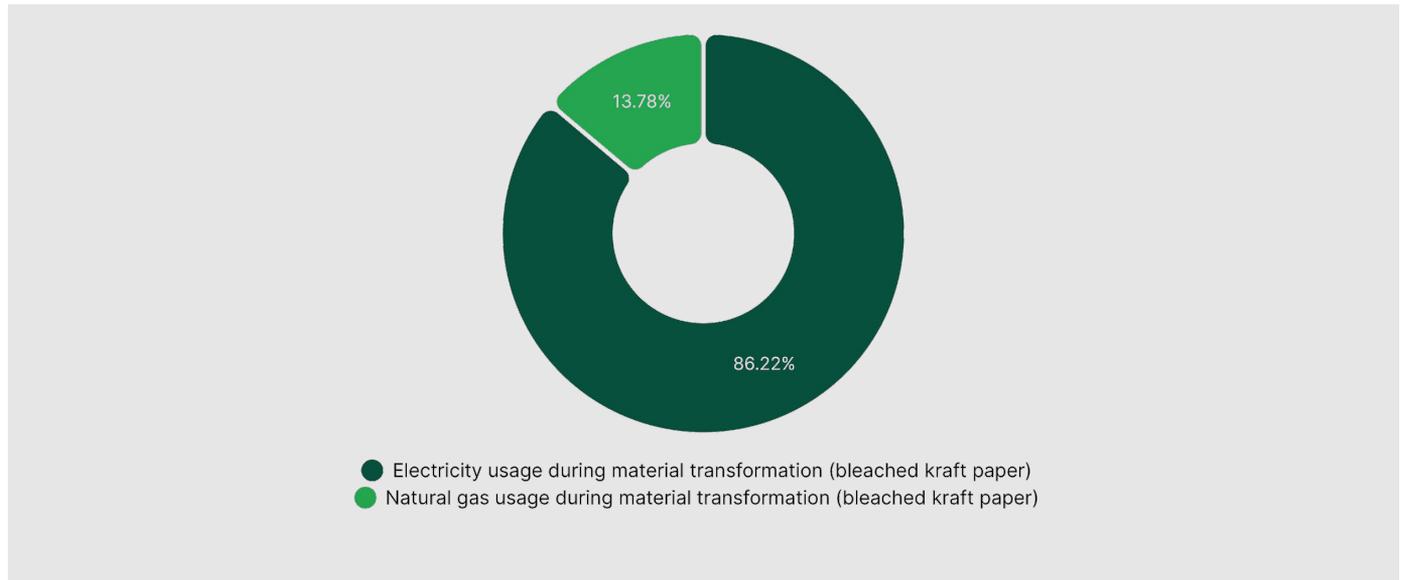
Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	3.84	1.91	100.00 %
TOTAL			1.91	100.00 %

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Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	2	1.36	826.29	86.22 %
Natural gas usage during material transformation (bleached kraft paper)	3	0.73	132.06	13.78 %

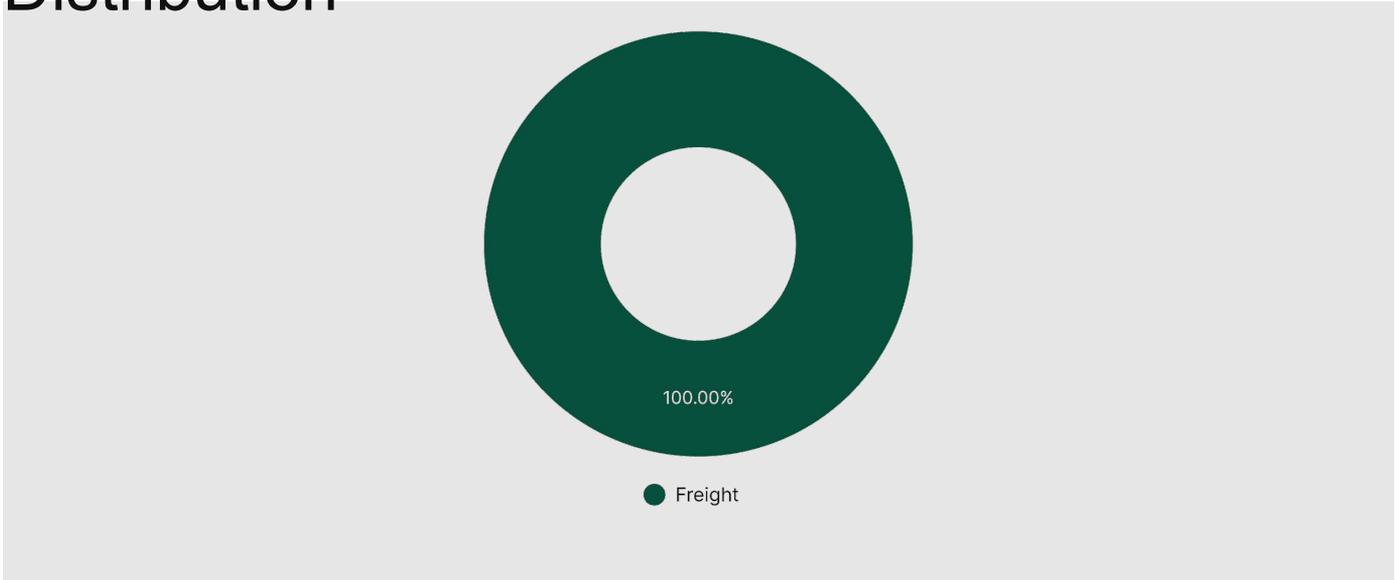
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TOTAL			958.35	100.00 %
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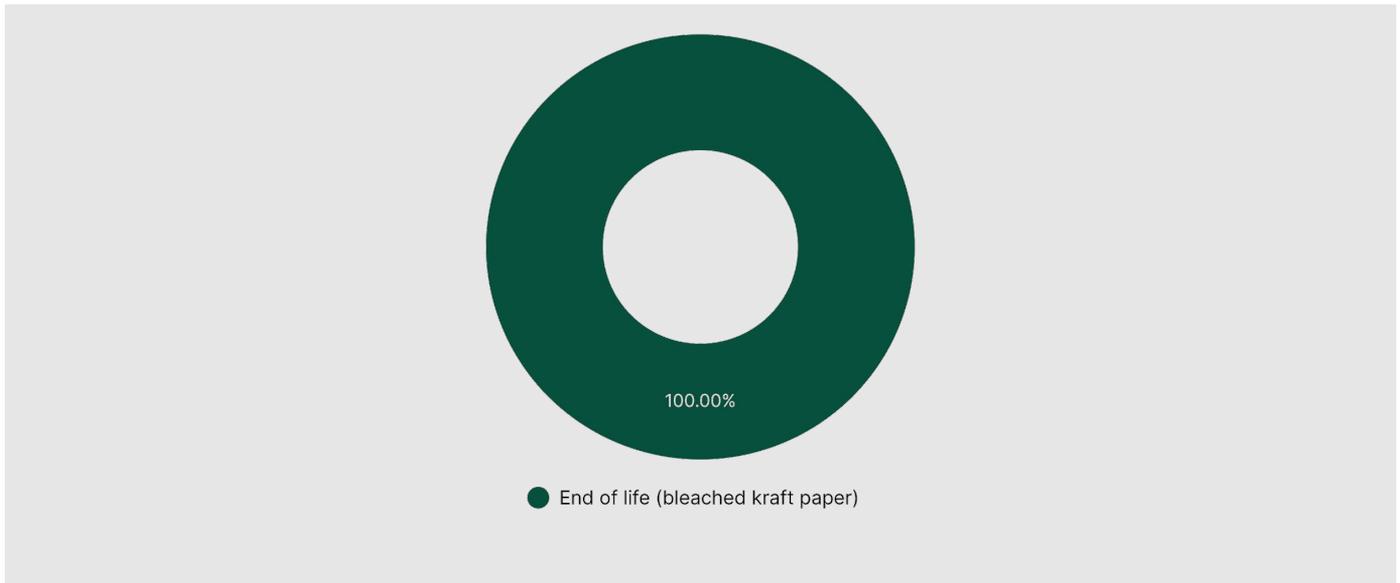
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	4	2.56	151.85	100.00 %
TOTAL			151.85	100.00 %

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Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (kg CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper)	5	2.56	1.48	100.00 %
TOTAL			1.48	100.00 %

Contact us

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