

greenly

2025-09-17

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

20110676 (sold in CH)

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 "5 set(s) of bound pages of paper for the purpose of 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 notebook from raw material extraction to disposal options for each material, which is the cradle-to-grave perspective.

Exclusions

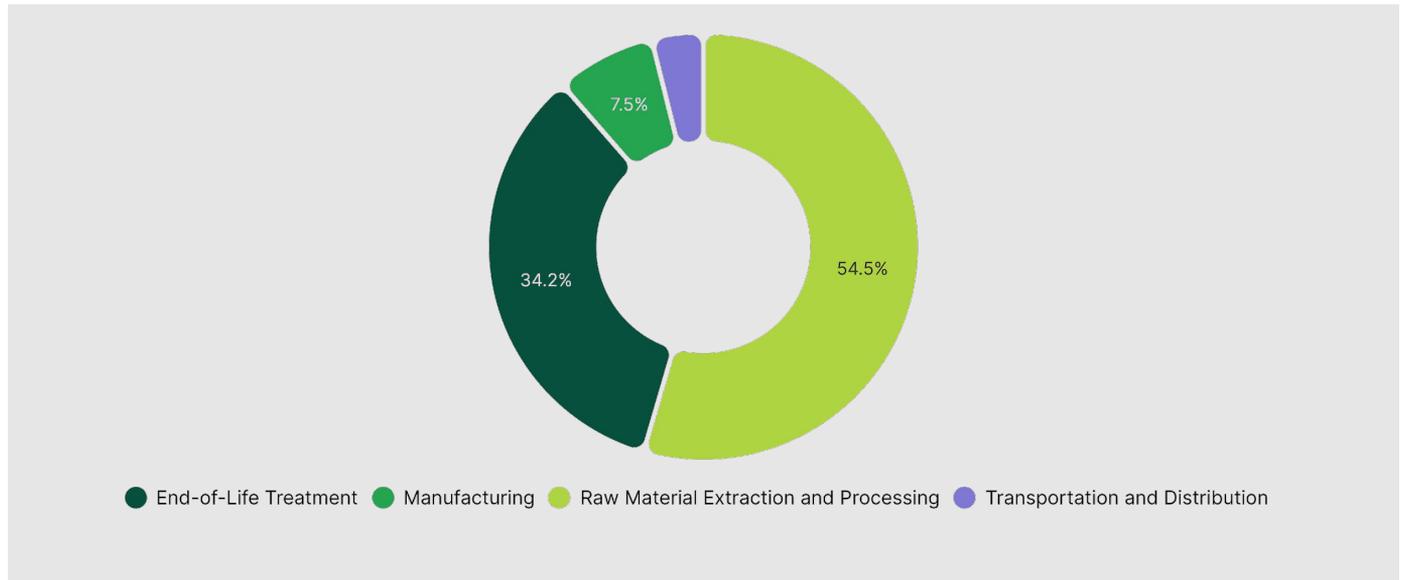
The impact of secondary packaging and writing utensils are excluded from this assessment.

02

Results

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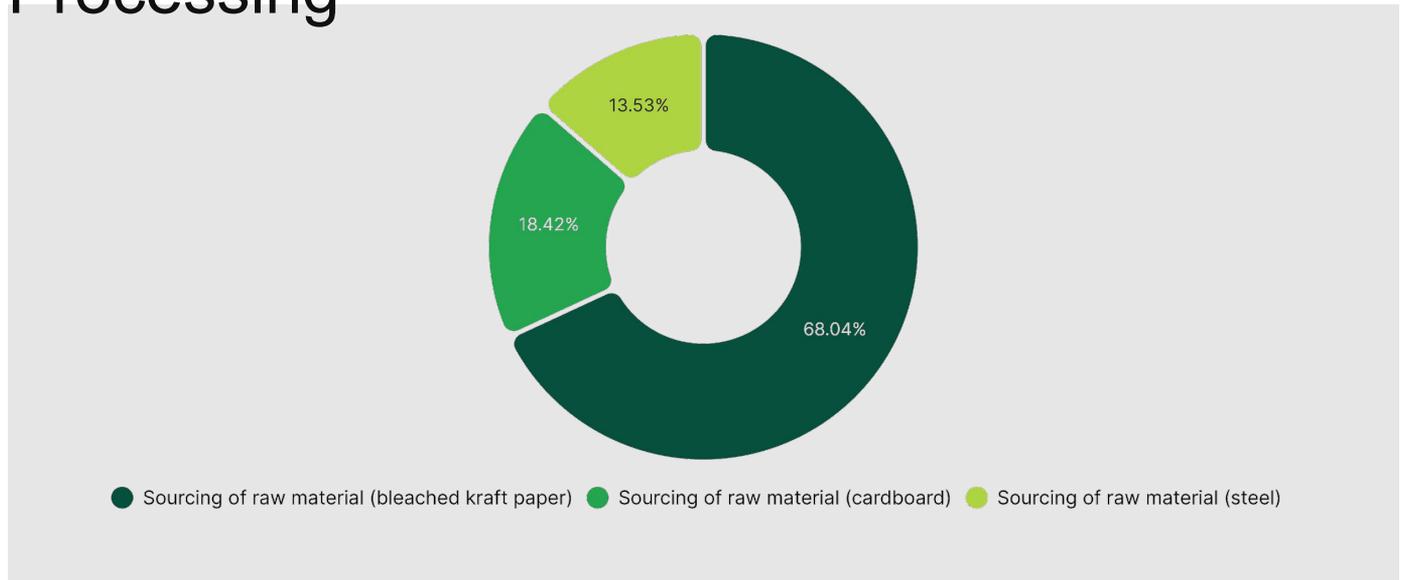
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	243.35	54.49 %
End-of-Life Treatment	152.67	34.18 %
Manufacturing	33.34	7.46 %
Transportation and Distribution	17.26	3.86 %
TOTAL	446.62	100.00 %

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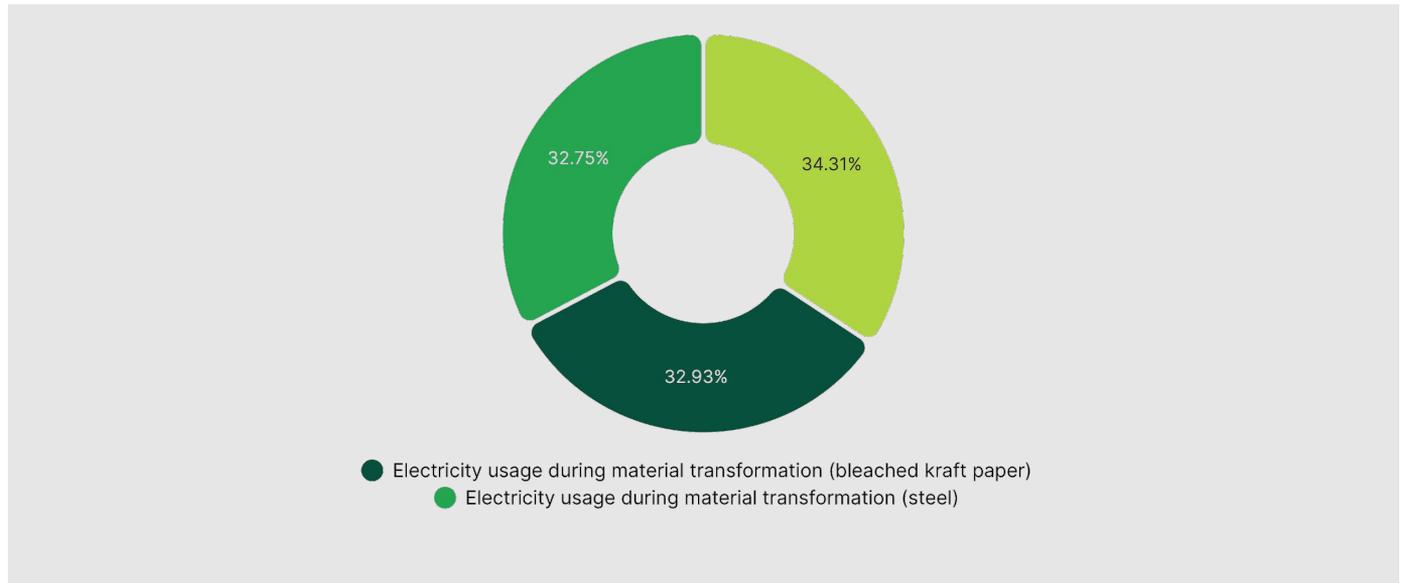
Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	0.33	165.58	68.04 %
Sourcing of raw material (cardboard)	2	0.06	44.83	18.42 %
Sourcing of raw material (steel)	3	0.02	32.94	13.53 %
TOTAL			243.35	100.00 %

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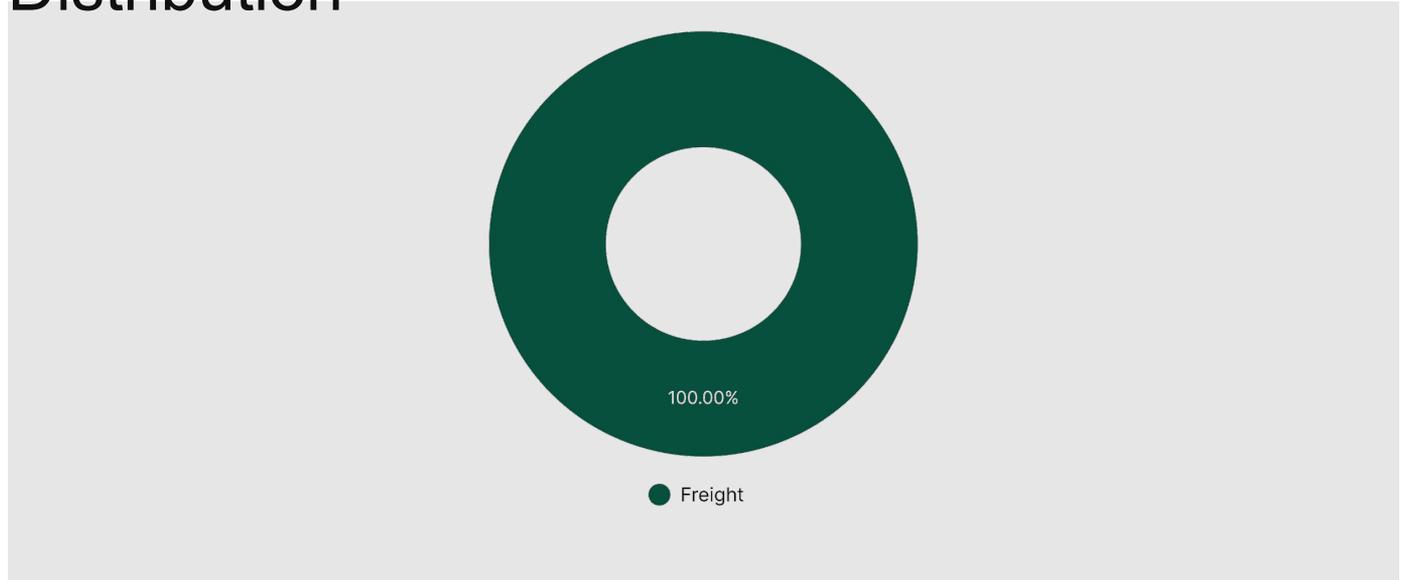
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Natural gas usage during material transformation (bleached kraft paper)	5	0.06	11.44	34.31 %
Electricity usage during material transformation (bleached kraft paper)	4	0.12	10.98	32.93 %
Electricity usage during material transformation (steel)	4	0.12	10.92	32.75 %
TOTAL			33.34	100.00 %

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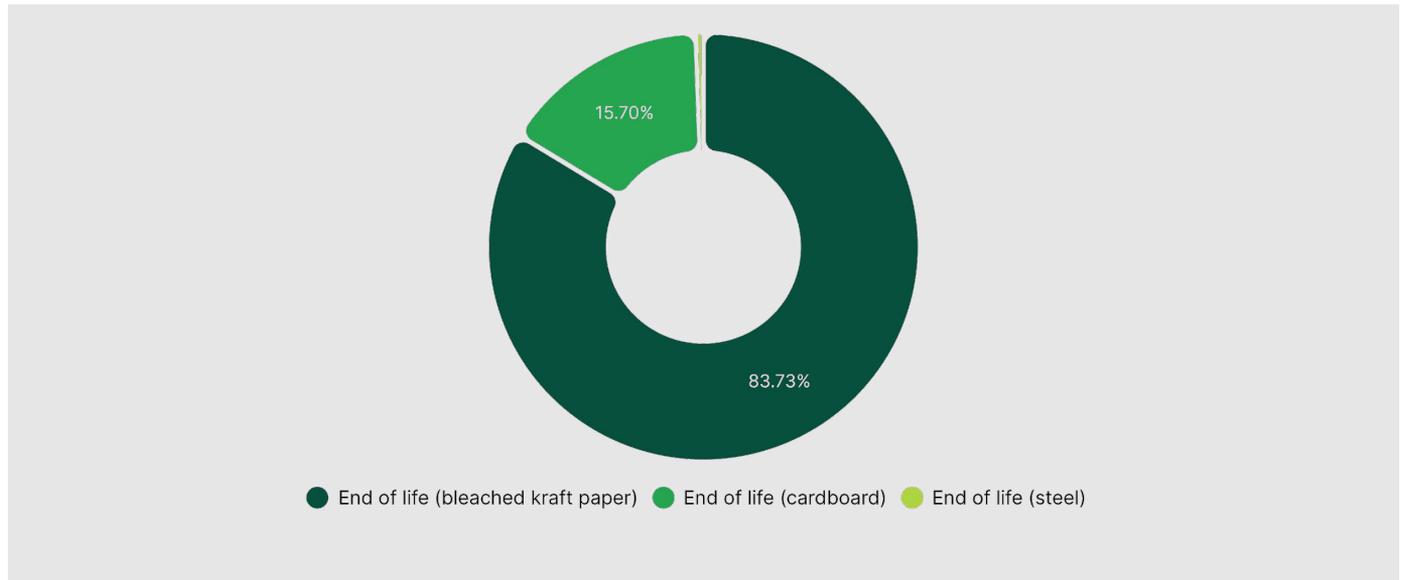
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	6	0.28	17.26	100.00 %
TOTAL			17.26	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)	7	0.22	127.83	83.73 %
End of life (cardboard)	7	0.04	23.97	15.70 %
End of life (steel)	8	0.01	0.87	0.57 %
TOTAL			152.67	100.00 %

Contact us

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