

greenly

2025-09-13

Lyreco LCA

Life Cycle Assessment

The methodology in this report is based on ISO 14040

3.780.961 (sold in DE)

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 "250 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

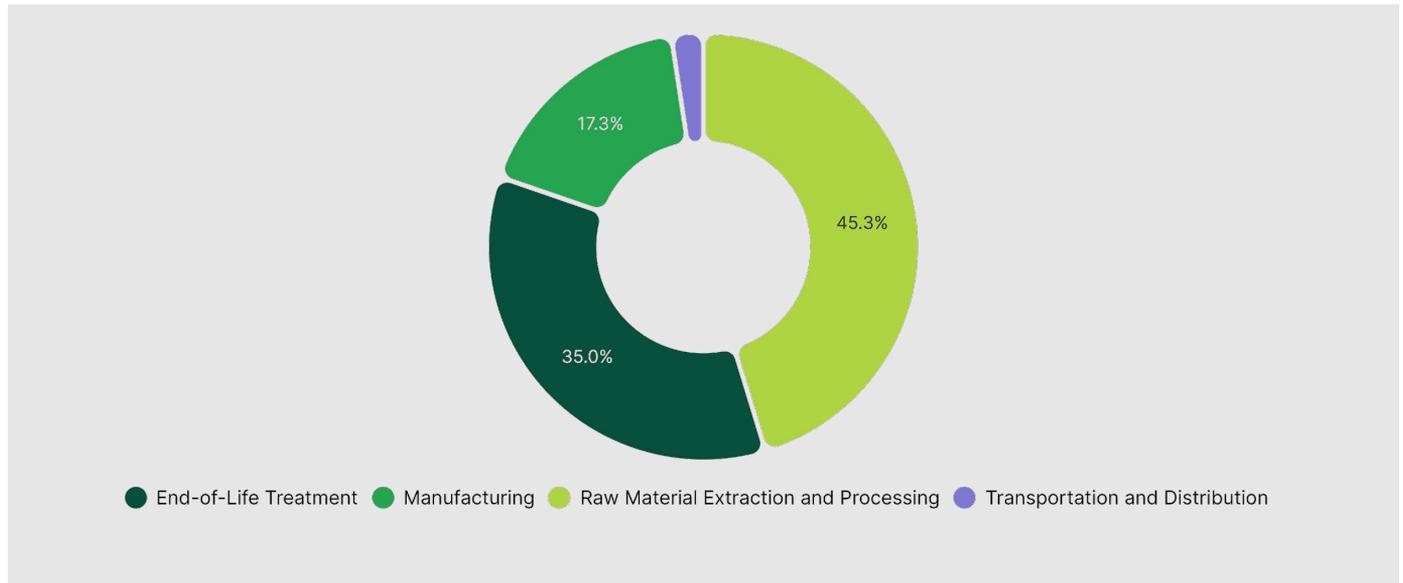
The impact of secondary packaging impact and writing utensils are excluded from this assessment.

02

Results

3.780.961 (sold in DE)

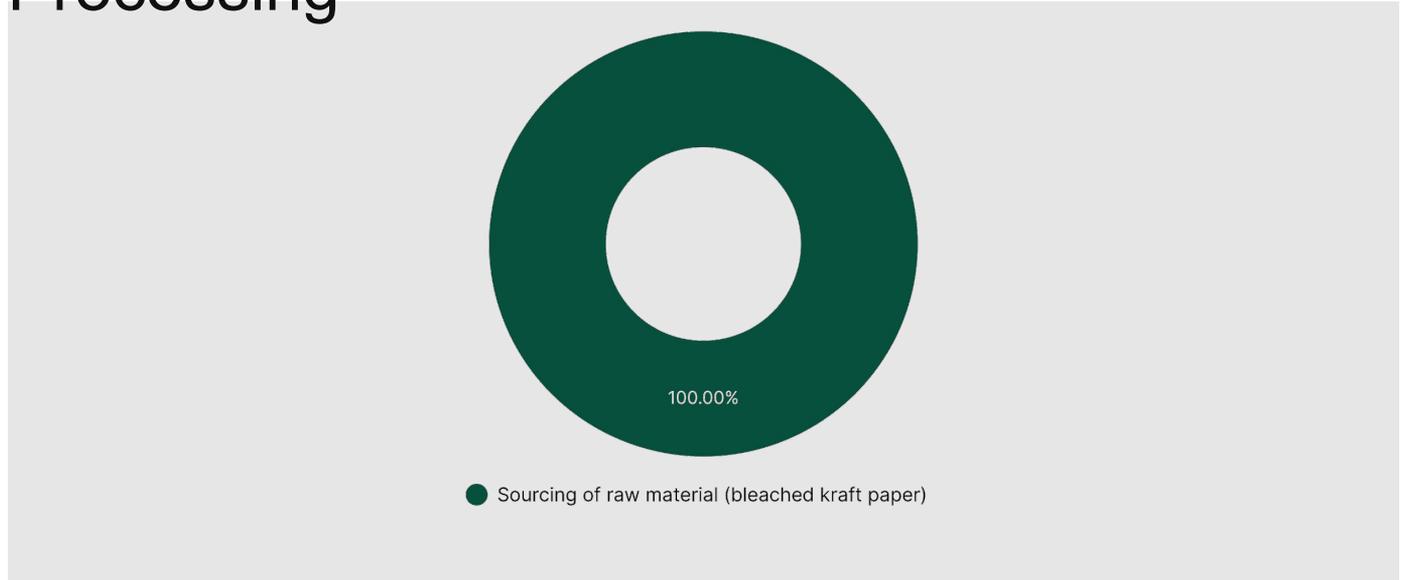
Climate Change



Step	Impact (g CO ₂ eq)	Percentage (%)
Raw Material Extraction and Processing	397.23	45.32 %
End-of-Life Treatment	306.67	34.99 %
Manufacturing	151.59	17.30 %
Transportation and Distribution	20.96	2.39 %
TOTAL	876.45	100.00 %

3.780.961 (sold in DE)

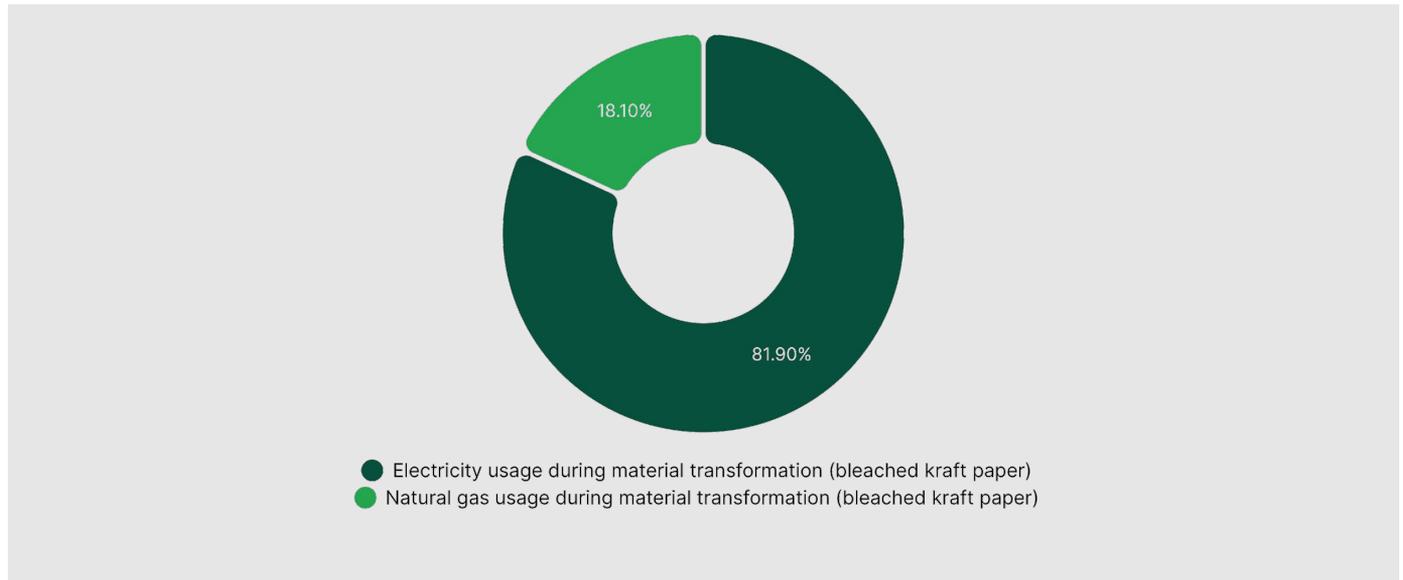
Climate Change - Raw Material Extraction and Processing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Sourcing of raw material (bleached kraft paper)	1	0.8	397.23	100.00 %
TOTAL			397.23	100.00 %

3.780.961 (sold in DE)

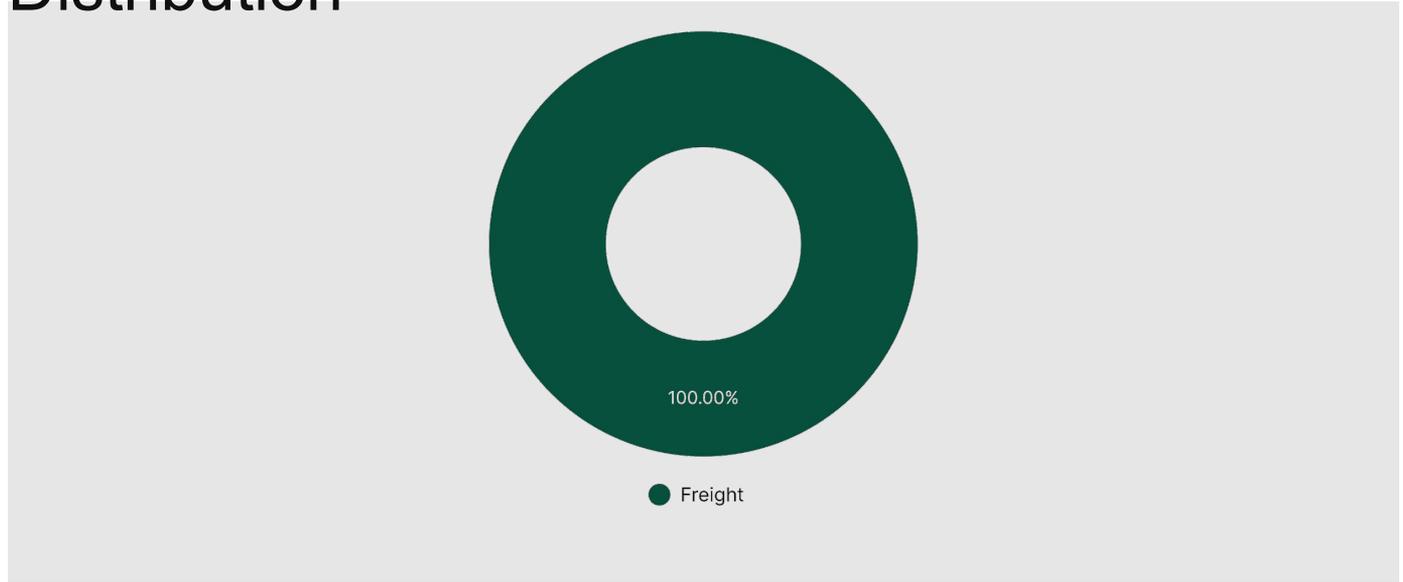
Climate Change - Manufacturing



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Electricity usage during material transformation (bleached kraft paper)	2	0.28	124.15	81.90 %
Natural gas usage during material transformation (bleached kraft paper)	3	0.15	27.44	18.10 %
TOTAL			151.59	100.00 %

3.780.961 (sold in DE)

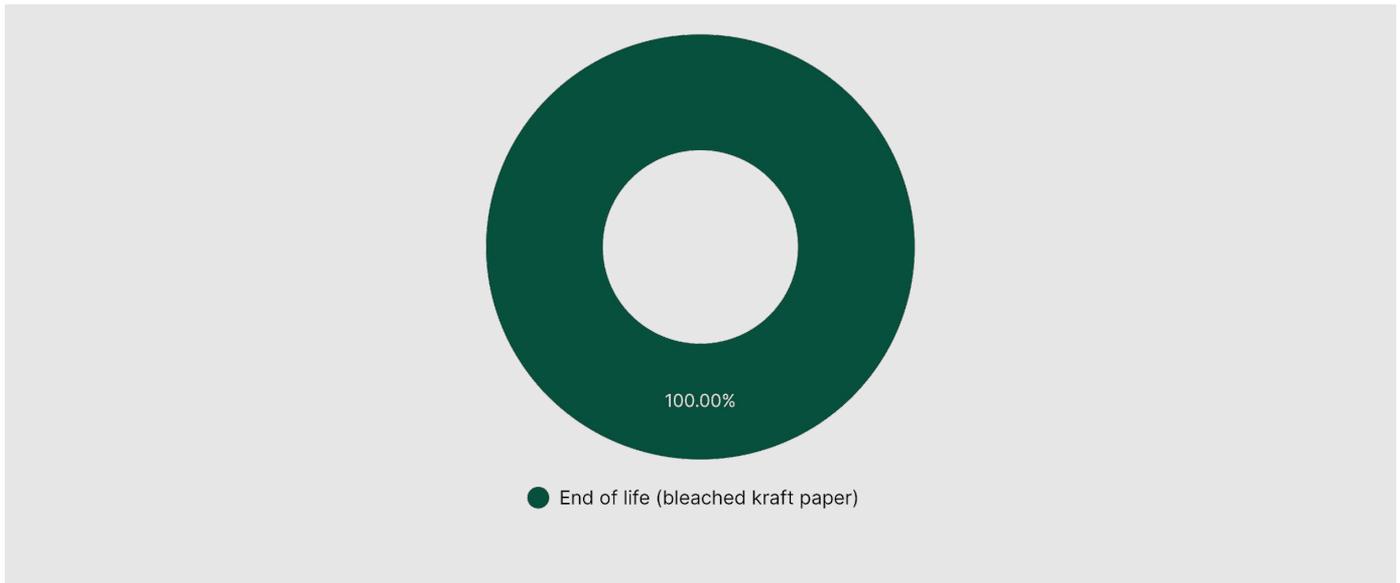
Climate Change - Transportation and Distribution



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
Freight	4	0.53	20.96	100.00 %
TOTAL			20.96	100.00 %

3.780.961 (sold in DE)

Climate Change - End-of-Life Treatment



Activity	Emission Factor Num	Quantity	Impact (g CO ₂ eq)	Percentage (%)
End of life (bleached kraft paper)	5	0.53	306.67	100.00 %
TOTAL			306.67	100.00 %

Contact us

Alexis Normand CEO

www.greenly.earth