

Børne loppen

Genbrug i børnehøjde

Comparative Life Cycle Assessment (LCA)

Average basket at Børneloppen against equivalent new products

Summary Report

June 2021

Summary Report

This summary report compiles the main findings of the LCA Background Report. The LCA Background Report is available from Børneloppen Management upon request.

Børneloppen is a Danish company that offers space for the retail of second-hand children's consumer goods (clothes, toys, small equipment) at its multiple franchise locations. Børneloppen prevents helps to reduce the number of children's items from going to waste after their initial users grow out of them.

Børneloppen has commissioned a comparative life cycle assessment (LCA) study to compare the environmental impacts of purchasing children's items second hand at Børneloppen to purchasing the same items new. The purpose is to communicate the impact to Børneloppen's stakeholders, who mostly include clients (sellers and buyers of used children's items), franchisees and Børneloppen's own staff. The impact indicators in focus are greenhouse gas (GHG) emissions and water.

The LCA Background Report has been compiled in accordance with the International Reference Life Cycle Data System (ILCD) Handbook and in alignment with ISO 14040 (Environmental management — Life cycle assessment — Principles and framework) and 14044 (Environmental management — Life cycle assessment — Requirements and guidelines), except that a critical review has not been performed by another third-party assurance provider, and no uncertainty analysis has been performed.

The comparisons are carried out based on the main function of the products, which is the provision of various items catering to the needs of children, including clothing (outdoor and indoor, inclusive of footwear), entertainment (e.g., toys or books) and other practical needs (e.g., baby carriers or small children's furniture). The functional unit is the provision of children's products equal to the content of the average basket at Børneloppen.

The reference flow is Børneloppen's average basket, defined in terms of the type of product purchased (product category) and the material used to manufacture these products. Data to inform these parameters is provided by a sampling exercise carried out by Børneloppen's staff prior to the LCA. The sampling exercise yielded 208 items in 45 baskets, split across four Børneloppen stores in Denmark.

The system boundaries include life stages from cradle to factory gate. Retail and other downstream processes happen to be redundant in the two considered scenarios (second-hand items against new items) and are therefore left out of the analysis. Since Børneloppen does not carry out extra activities, e.g., washing or reconditioning of the second-hand items, the second-hand items follow cut-off rules and come into the system free of burdens. This means that no GHG emissions or water consumption is allocated to the products sold by Børneloppen.

Table S1 presents the average composition of Børneloppen's consumer basket by type of item (referred to as category) and material. The composition was determined by an onsite survey prior to the LCA exercise and was carried out by Børneloppen's staff. Table S2 presents the LCA results for GHG and water across the identified category-material pairs. These results present the environmental load of new items and are assumed to be the net impact of shopping at Børneloppen, following the cut-off allocation rule.

Table S1 composition of the average consumer basket at Børneloppen, per item (category) and material

Category	Material	Weight (kg)	Value (DKK)
Clothes	Cotton	0.175	62.06
Clothes	Organic Cotton	0.016	7.80
Clothes	Wool	0.009	2.98
Clothes	Polyester	0.065	12.76
Clothes	Viscose	0.016	5.71
Clothes	Other	0.027	6.23
Toys	Cotton	0.008	1.73
Toys	Polyester	0.014	2.26
Toys	Paper	0.010	1.11
Toys	Cardboard	0.081	5.37
Toys	Metal (zamak)	0.013	7.07
Toys	Plastic	0.135	20.40
Toys	Electronics	0.013	1.40
Toys	Other	0.008	2.87
Toys	Wood	0.040	4.59
Equipment	Cotton	0.024	14.34
Equipment	Steel	0.032	1.42
Equipment	Plastic	0.173	6.46
Equipment	Electronics	0.002	0.03
Equipment	Wood	0.003	0.28
Footwear	Various	0.100	20.93
Total		0.962	187.80

Table S2 LCA environmental impacts of Børneloppen's average shopping basket, scaled to DKK 200

Category	Material	Emissions (kg CO ₂ eq)	Water depletion (l)
Clothes	Cotton	3.362	1,220.5
Clothes	Organic Cotton	0.217	3.5
Clothes	Wool	0.967	8.0
Clothes	Polyester	0.822	14.6
Clothes	Viscose	0.231	5.1
Clothes	Other	n/a	n/a
Toys	Cotton	0.155	56.1
Toys	Polyester	0.177	3.3
Toys	Paper	0.039	0.9
Toys	Cardboard	0.058	15.0

Toys	Metal	0.057	1.5
Toys	Plastic	0.727	9.6
Toys	Electronics	1.291	13.6
Toys	Other	n/a	n/a
Toys	Wood	0.031	0.6
Equipment	Cotton	0.449	165.0
Equipment	Steel	0.160	0.9
Equipment	Plastic	0.879	10.5
Equipment	Electronics	0.184	1.9
Equipment	Wood	0.001	0.0
Footwear	Various	1.721	196.8
Total for DKK 200		11.529	1,727.5

For the purpose of the analysis, the average basket was scaled from DKK 187.80 in the sampled data to DKK 200.00, using a constant category – material-to-price ratio. Table S2 shows the impact of the average Børneloppen basket (for DKK 200 spent) in terms of greenhouse gas emissions in CO₂ equivalent and water depletion in litres.

Table S2 shows that 11.5 kg of CO₂ as well as 1,727 litres of water depletion can be attributed to the purchase of the equivalent new products found in the average Børneloppen basket (scaled to DKK 200). Since no allocations are modelled for reused products (cut-off rule) and no impact is considered for the reconditioning process borne by Børneloppen, the impact of new products purchased are considered the net impact of Børneloppen.

By purchasing second-hand items at Børneloppen instead of new items, an impact of 11.5 kg of avoided CO₂ equivalent and 1,727 litres of avoided water depletion can be achieved, based on the items found in the average Børneloppen consumer basket.

Statement by Management

Børneloppen ApS Management has today considered and approved the comparative Life Cycle Assessment (LCA) Summary Report, which compares the environmental impact of the average basket of children's items purchased at Børneloppen to the same items purchased new.

The LCA Background Report has been prepared in accordance with the International Reference Life Cycle Data System (ILCD) Handbook and in alignment with ISO 14040 and 14044, except that a critical review has not been performed by another third-party assurance provider, and that no uncertainty analysis has been performed.

This report is an accurate summary of the main results of the LCA Background Report.

In my opinion, the LCA Background Report is compliant with the International Reference Life Cycle Data System (ILCD) Handbook and in alignment with ISO 14040 and 14044, with the exception noted above, and is free from material misstatement and omissions, whether due to fraud or error, including the accuracy and completeness of the data, sources and assumptions used.

Copenhagen, 30 June 2021

Management

Johanna Kihl Nielsen

CEO

Independent Auditor's Compilation Report on the LCA Summary Report

To Management and other stakeholders of Børneloppen ApS

We have been asked to compile the Comparative Life Cycle Assessment (LCA) Summary Report for the average basket of children's items purchased at Børneloppen against the same items purchased new (hereinafter referred to as the LCA Summary Report). The LCA Summary Report has been compiled based on the information we have received from Børneloppen ApS Management and is a summary of the LCA Background Report. The LCA Summary Report may be used for the purpose of general market communication.

We performed this compilation engagement in accordance with ISRS 4410, Compilation Engagements.

We have applied our expertise in non-financial reporting to assist Management in the preparation and presentation of the LCA Background Report in accordance with the International Reference Life Cycle Data System (ILCD) Handbook and in alignment with ISO 14040 and 14044, except that a critical review has not been performed by another third-party assurance provider, and that no uncertainty analysis has been performed. We have complied with relevant provisions of the Danish Public Accountants Act and FSR – danske revisorer's Code of Conduct for professional accountants, including the principles of integrity, objectivity, professional competence and due care.

The LCA Summary Report is a summary of the LCA Background Report, and the accuracy and completeness of the information used to compile the LCA Summary Report and the LCA Background Report are Management's responsibility.

Since a compilation engagement is not an assurance engagement, we are not required to verify the accuracy or completeness of the information Management provided to us to compile the LCA Summary Report and the LCA Background Report. Accordingly, we do not express an audit opinion or a review conclusion on the LCA Summary Report or the LCA Background Report.

Our Compilation Report is solely for the purpose set forth in the first paragraph above and for your information and is not to be used for any other purpose.

Copenhagen, 30 June 2021

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