

Summary of the comparative life cycle assessment of Postevand cartons and 100% recycled PET bottles for water in Denmark

Detailed information on methodology, results, data sources, boundaries, assumptions and references is available [here](#).

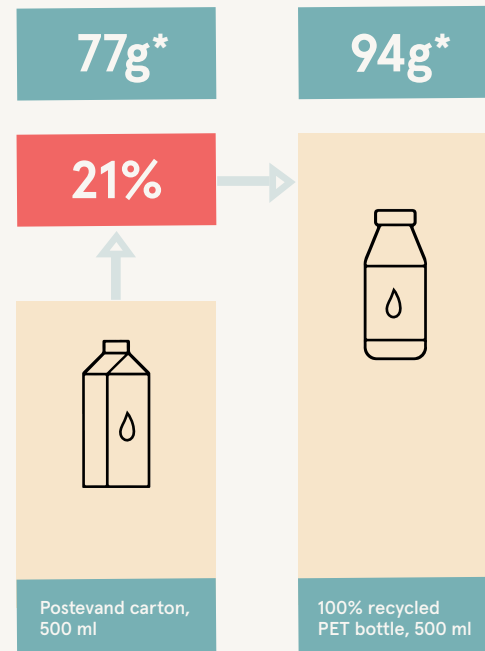
A Life Cycle Assessment (LCA) is a tool to quantify the environmental impacts associated with a product throughout its lifecycle. The system boundary for the product systems in this LCA was “cradle-to-grave”, comprising:

1. the cultivation, extraction and processing of raw materials
2. manufacturing
3. forming and filling processes
4. transportation and waste stages
5. end-of-life

An independent panel of experts carried out a critical review of the study to ensure compliance with the relevant ISO standards (ISO 14040 and 14044).

The study analyzed and compared a 500 ml Pure-Pak® carton without aluminium barrier to a 500 ml 100% recycled PET bottle, both intended for packaging tap water for the Danish market.

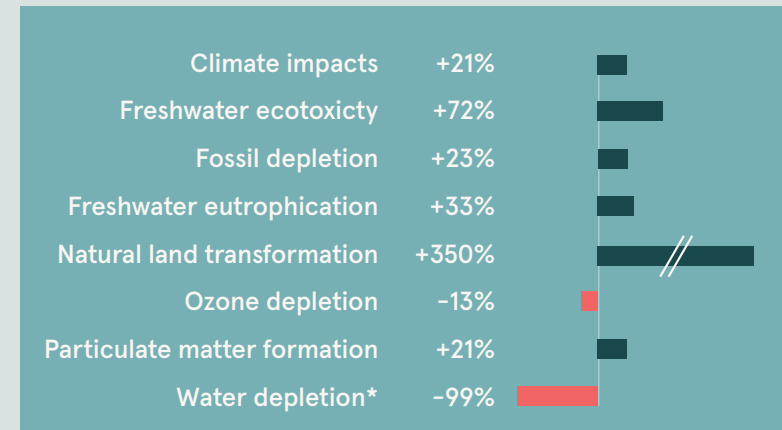
Over its full lifecycle, 8 impact categories were assessed. A key focus for this study was the Global Warming Potential (GWP) impact category, measured in CO₂e (carbon dioxide equivalents).



*: CO₂ equivalents per package (Source: Anthesis LCA for Postevand, 2023)

The Danish market is in the process of developing recycling systems for various packaging, traditionally having incinerated most waste categories for energy. Main differences between Denmark and other countries are recycling rates. Sensitivity analysis show that increased future recycling rates (and a projected decrease in incineration of plastic waste) may reduce carbon footprint by 10% for the carton.

The carton performs better than the rPET bottle in 6 of 8 impact categories



*The high water depletion associated with the carton stems from an old and incorrect dataset which does not reflect the circulation of cooling water in production of nuclear energy used in paperboard production. Sensitivity analysis show that by using a different dataset, water depletion is reduced by 99%.

The full report is available [here](#)

The LCA has been performed by Anthesis, the sustainability activator with the largest group of dedicated sustainability experts in the world (www.anthesisgroup.com)

If you have the option, always drink tap water