

Environmental impact of protective packaging

2025 TNO study finds EPS in best-in-class solution

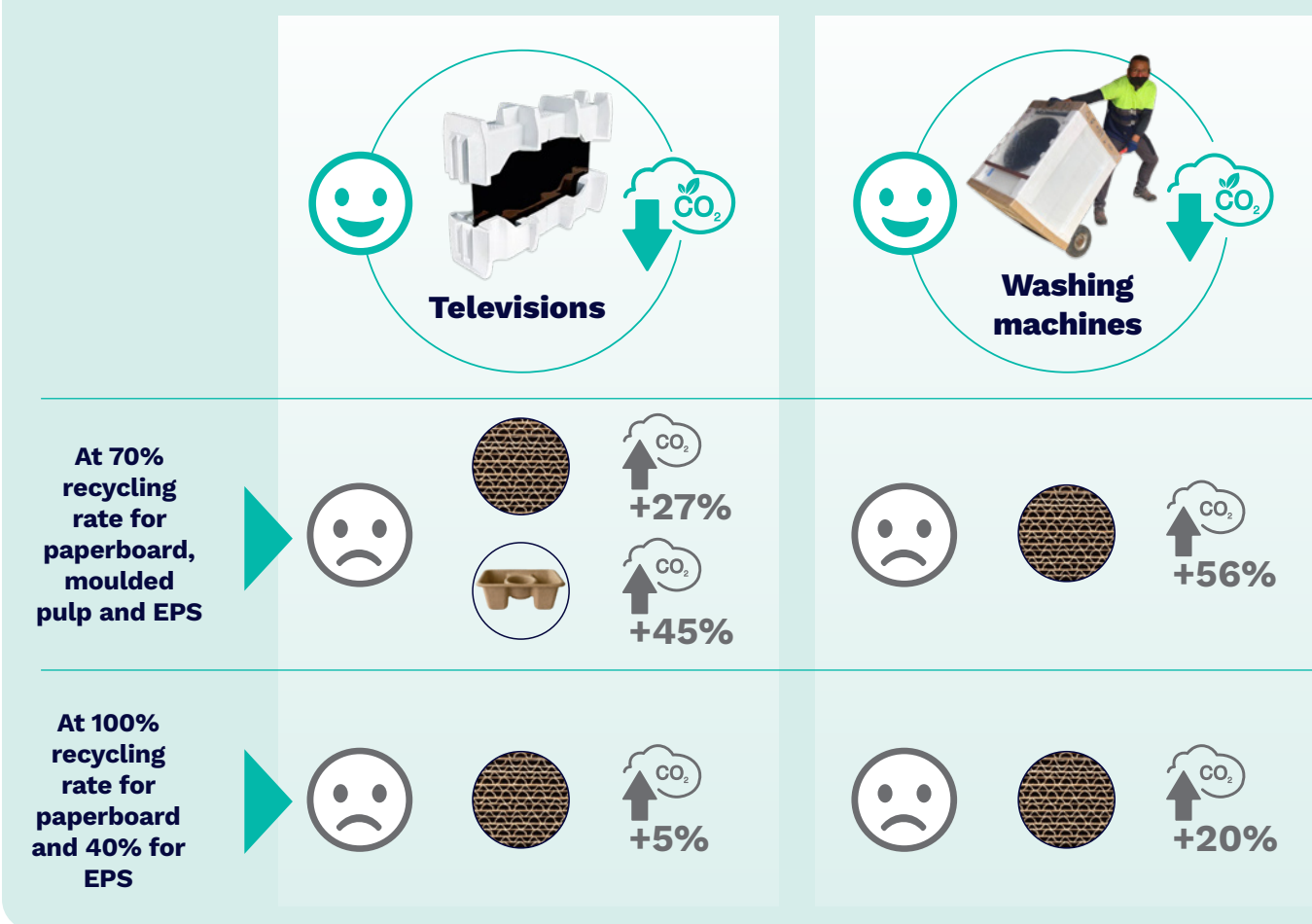
Background

A recent study by TNO* compared the **lifecycle performance of EPS, EPP, corrugated paperboard, and moulded pulp** in the packaging of TVs and washing machines.

The study showed that the true environmental impact of protective packaging depends strongly on its protective performance, since damaged goods can cause very high environmental costs.

Why other materials are no suitable alternative to EPS

Relative life cycle CO₂ emissions of EPS versus other materials



EPS is lightweight, resilient, and recyclable in established systems.



EPS **saves emissions and costs** where avoiding damage is essential, particularly for protection of heavy & high value goods.



EPS **outperforms alternative materials** in nearly all investigated **environmental impact categories** as well

Performance based life cycle assessments are key to compare environmental benefits of different materials. Without these, decision makers risk regrettable substitution of best-in-class materials such as EPS packaging.

* The Netherlands Organisation for Applied Scientific Research aka TNO (2025). Environmental Comparison of Protective Packaging Materials. Commissioned by EUMEPS and BASF using a cradle-to-grave approach that included production, transport, recycling, and product loss.