



FEFCO Technical Information Sheet:

About the carbon footprint of corrugated packaging

Background

Climate change is a topic of high public interest. Stakeholders are increasingly looking at standards, labels and other instruments that broaden the focus beyond emissions related to production activities. In this context, buyers are asking for the “carbon footprint” associated with the supply chain for the manufacture, distribution and disposal of products and packaging provided to them. Customers want a simple statement that accurately reflects the real situation and is credible.

Developing the carbon footprint for corrugated packaging

To contribute appropriate and accurate information for the needs of stakeholders, FEFCO participated in a co-ordinated activity by the European paper and board industry to develop a common framework for carbon footprinting (CEPI’s “*Framework for Carbon Footprints for Paper and Board Products, April 2017*”). FEFCO then further collaborated with paper and board converters to produce a common methodology for the converting sector (CITPA’s “*Guidelines for calculating carbon footprints for paper-based packaging, March 2018*”). These latest two documents replace earlier versions and significantly extend and enhance the methodology applied for paper and board packaging. Whilst the earlier methodology focused on fossil greenhouse gas (GHG) emissions from cradle-to-gate only, the approach now covers the cradle-to-grave carbon impact, taking account of fossil and biogenic GHG emissions and removals and emissions from direct land use change (dLUC).

This extended approach provides better harmonization with existing internationally accepted protocols and frameworks, namely:

- The "Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification and communication" technical specification from the International Organization for Standardization (ISO/TS 14067:2013);
- The Product Life Cycle Accounting and Reporting Standard (Product Standard) from the World Resource Institute (WRI) and World Business Council for Sustainable Development (WBCSD) GHG Protocol published in 2011; and
- The European Commission Product Environmental Footprint (PEF) Category Rules (PEFCR) for Intermediate Paper Product (Draft PEFCR for stakeholder consultation, May 2016).

In 2022, the CEPI and CITPA frameworks were subject to an independent peer review by ifeu – Institute for Energy and Environmental Research Heidelberg GmbH, Heidelberg, Germany. This review found the methods to be compatible with the requirements of the “Product Life Cycle Accounting and Reporting Standard” of the Greenhouse Gas Protocol by the World Resources Institute (WRI).

Use of the Carbon Footprint Data

Primary data was sourced from the European Database for Corrugated Board Life Cycle Studies for the production of virgin and recycled liner and fluting materials and for conversion of these into corrugated boxes. This ensures that the results are representative of the current situation.

Packaging is typically a minor element of the total “footprint” of a product so the provision of soundly-based average data is an appropriate approach. Calculating carbon footprints for specific constructions of corrugated board involves making allocations which may be arbitrary and lead to misleading results, a problem which the use of the European Database avoids. However, in the



context of life cycle thinking, the carbon footprint is only one element of the environmental impact of a product. In making comparisons it is recommended that other aspects are also considered.

Provision of the data

The results of the calculation are available from FEFCO and can be used by those in the supply chain who are directly involved in generating carbon footprint data for packed products involving corrugated packaging.

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