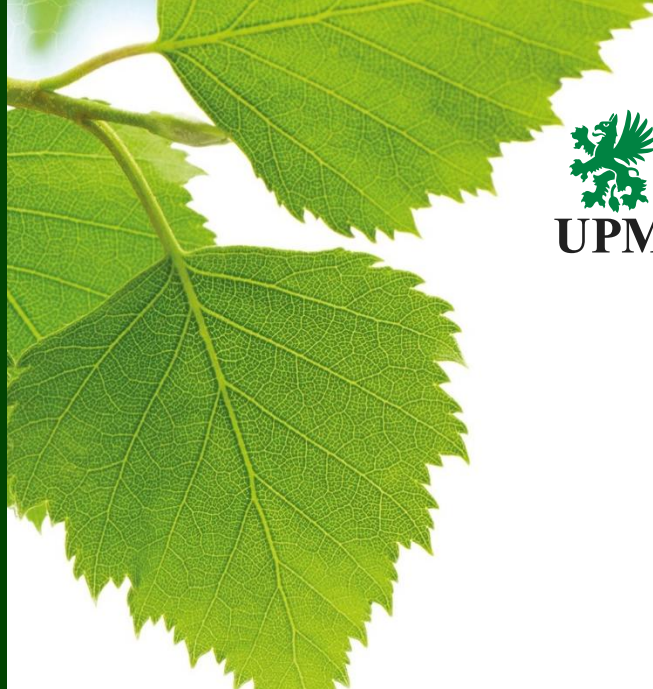


Carbon Footprint

UPM Betula pulp
Pietarsaari



Data collection period: 01.01.2024 to 31.12.2024

Date of issue: 05.06.2025

kilograms per air-dried tonne of pulp (kg/ADT)

Carbon Footprint: **237 kg** [CO₂eq.]

The carbon footprint of UPM Betula pulp from the Pietarsaari pulp mill in Finland covers the lifecycle stages 'cradle to gate', and includes the production of raw materials, fuels & energy, manufacturing of the pulp, treatment of effluent and wastes, packaging, and inbound & internal transport to UPM Pulp's mill 'gate'.

Please note: For all Finnish mills this year, there has been a change to supplier-specific data from some chemical suppliers. Previously, average industry emission factors were used (i.e., secondary data). This has therefore resulted in a significant reduction in the partial carbon footprint in some cases.

See over page for a more detailed visualisation of the Life Cycle Assessment process.

How is this product carbon footprint calculated?

This carbon footprint is calculated by examining part of the life cycle of the pulp and identifying where greenhouse gases are released. The Life Cycle Assessment follows the ISO 14040 and ISO 14044 standards for Life Cycle Assessment and ISO 14067 for carbon footprints.

This specific footprint document only provides a summary for the carbon emissions part of the wider Life Cycle Assessment study. A separate summary report, which provides further details, including other environmental emissions measured, is available upon request – please contact Jared Boow, Senior Manager – Sustainability (email: pulp.sustainability@upm.com).

The Life Cycle Assessment study has been critically reviewed against to the requirements of ISO 14040/44/67 by an independent third party (AFRY Management Consulting Oy) to ensure the transparency and credibility of the study.

Carbon Footprint

UPM Betula pulp, Pietarsaari pulp mill

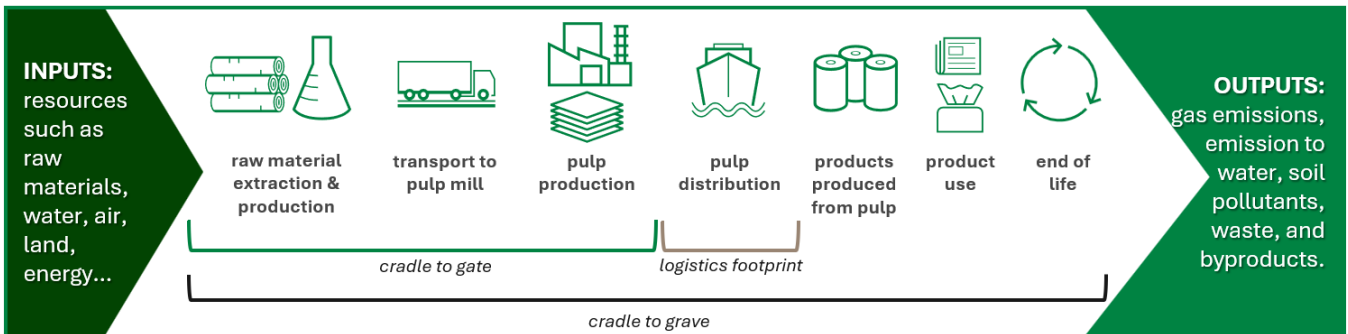


What is a Life Cycle Assessment?

Life Cycle Assessment ('LCA') is a standardized process to evaluate the environmental burdens of a product through its life cycle.

A complete life cycle ('cradle to grave') would include raw material extraction and processing, transportation to a pulp mill, pulp production, distribution, further processing, use, and waste management. If, however, the study includes only the phases up to pulp production (but not the processing, use, and disposal stages), it is called a cradle-to-gate assessment.

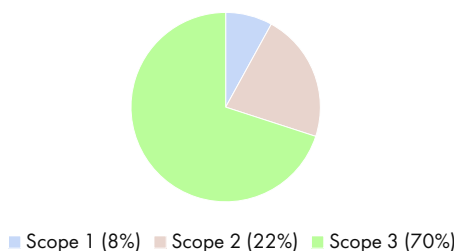
The system boundary for this study is 'cradle to gate' – with the 'gate' being when pulp leaves UPM Pulp to be delivered to our customers. It is therefore a 'partial' carbon footprint. A separate tailored logistics footprint can be provided to our customers' own destination if required (see diagram below).



Greenhouse Gas (GHG) Protocol carbon emissions by 'Scope':

Carbon emissions are often reported at an organization-level using the GHG Protocol methodology, which categorizes them into three 'Scopes' (1, 2, & 3). In order to provide continuity with previous carbon footprints, we have shown the proportions for each Scope below, based on mill-level emissions (not product-level). It should be noted that these are approximations, due to slight differences between product-level methodologies and organisational ones; they do however provide enough accuracy to assist interested customers wishing to use them to inform their own strategies and targets.

GHG Protocol – carbon emissions by Scope: UPM Pietarsaari pulp mill



Scope 1: Direct emissions from pulp production (e.g., fossil fuels used in mill processes).

Scope 2: Indirect emissions from the generation of purchased energy for pulp production (electricity, steam, heating, and cooling).

Scope 3: Indirect emissions from manufacturing of raw materials (e.g., wood fibres and chemicals) and those raw materials' transport to the pulp mill.