

UPM SUPPLIER GUIDELINES:

CALCULATING PRODUCT CARBON FOOTPRINT

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Introduction

UPM is working towards net-zero emissions in its entire value chain in a joint effort to limit global warming to 1.5˚C. While we aim for significant emissions reductions in our own operations, over 70 percent of a company's entire carbon footprint is often generated in the value chain.

For this reason, UPM has launched its -30 by 30 program to reduce emissions from the most significant sources in our value chain: purchased goods and services, and logistics. Our main target is to reduce these emissions by 30 percent against 2018 levels by 2030.

Our commitments



1.5°C

Limiting global temperature rise by 2050



-65%

Reduction of CO_2 emissions from own energy generation and purchased energy by 2030



-30%

Reduction of CO_2 emissions of our supply chain by 2030



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Climate-positive land-use and product portfolio

We want to collaborate with suppliers and partners who are capable and motivated to join us in designing and producing low-carbon products and solutions for our societies. In order to monitor and make progress on our climate targets, we also want to ensure that we receive information about the greenhouse gas emissions of our suppliers and partners. This document is intended to provide further guidance on these requirements for UPM's suppliers and partners.

At UPM, we want to make climate a key consideration in our product development and procurement decisions so that we can move, together, towards a future beyond fossils.

Overview of the requirements

As part of UPM's -30 by 30 program for value chain emissions reductions, UPM requests its suppliers and partners to provide **data about the carbon footprint of the goods and services that UPM purchases** from them. UPM refers to this data as the **Product Carbon Footprint (PCF)** data.

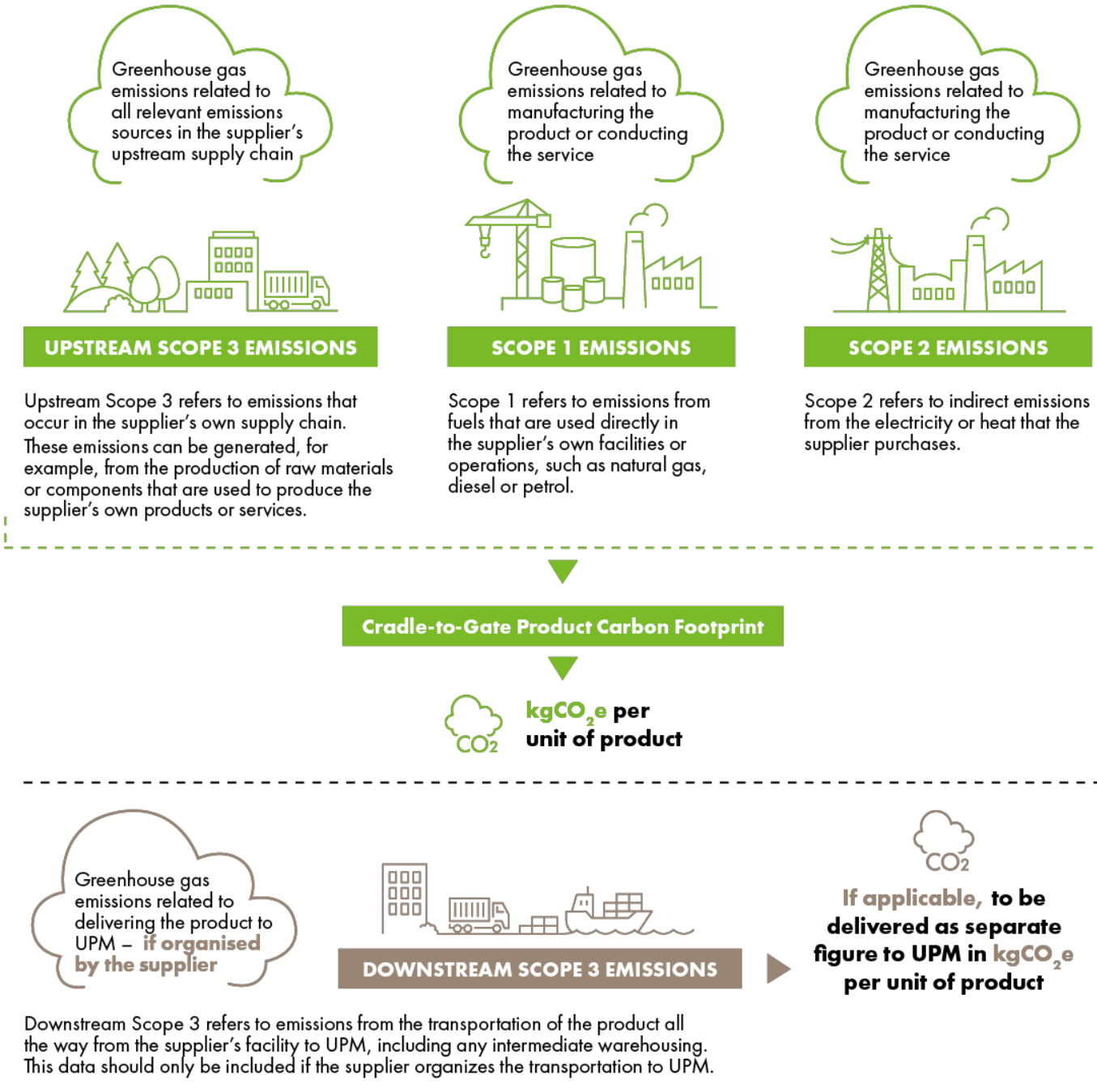
UPM requests **new and existing suppliers and partners to provide the carbon footprint data**. The data must be updated and reported to UPM on an annual basis.

Providing the carbon footprint data for products and services is one of UPM's environmental requirements to its suppliers and partners. Please make sure that you have also familiarized yourself with UPM's general supplier requirements:

1. The UPM Supplier and Third-Party Code – a mandatory requirement for all UPM suppliers
2. UPM Supplier Assessment Criteria – a general overview of all supplier requirements
3. Sourcing category specific requirements – more detailed requirements specific to UPM's different business areas.

Scope of the product carbon footprint information

The carbon footprint for the goods and services that UPM purchases from its suppliers and partners should cover the **relevant cradle to gate greenhouse gas emissions** of a product or service. This means all the relevant emissions from the supplier's own upstream supply chain and operations. The visualization below shows the GHG scopes that should be included in the PCF calculation. **UPM does not require its suppliers to report the three scopes separately** in their PCFs, with the exception of downstream Scope 3 emissions as described below.



Regarding Scope 2 emissions from purchased electricity and heat, UPM recommends using the market-based approach in the emissions calculation. For more information, see the specific considerations section.

Regarding downstream Scope 3 emissions for transportation from the supplier's facility to UPM, these emissions should be reported **if the transportation is organised by the supplier**. These emissions must be reported separately from the PCF and should, if possible, **cover well-to-wheels**, as explained in the specific considerations section. If primary emissions data from carriers are available, UPM recommends its suppliers reporting that. Alternatively, the emissions can be calculated using suitable data sources as mentioned on page 8.

The product carbon footprint data is to be disclosed in **kg of CO_2e per unit of product, excluding biogenic carbon** (for more information, see the specific considerations section). The unit of product refers to, for example, litres, cubic metres, or tonnes of product. The reported unit should be in line with the purchase order. If the carbon footprint data is not reported in 100% dry matter/active substance, it must be clearly stated.

The product carbon footprint data must be updated and reported to UPM on an annual basis.

Specific considerations

Data allocation

The carbon footprint data should be specific to the materials, products or services that have been delivered to UPM. If this is not possible, a description of how emissions have been allocated to correspond only UPM's share of production / delivery should be provided along with the carbon footprint data. In case the supplier is using the allocation method, UPM requires related background material to be attached on top of the reported emissions.

Scope 2 emissions calculations for purchased energy

UPM recommends using the market-based approach in the emissions calculation. The market-based approach means calculating emissions with an emission factor that takes into consideration the renewable and CO_2-free energy purchased by the company, instead of using an emission factor that reflects the average emissions of national energy generation (location-based approach).

If the market-based approach is not possible, the location-based approach can be used. Please refer to the Greenhouse Gas Protocol's Scope 2 Guidance for more information. Regarding Scope 2 emissions, the approach and source of emissions factors should be reported. If an emission factor of zero is used, the evidence of using renewable energy should be provided.

Downstream Scope 3 emissions for transportation

Downstream Scope 3 emissions for transportation from the supplier's facility to UPM site(s) should cover well-to-wheels, consisting of well-to-tank and tank-to-wheels. In other words, the reported transportation emissions should include all phases of the fuel life cycle – from producing fuel (i.e., extraction of raw materials) to the use of fuel (e.g., driving). For more information, see the Global Logistics Emissions Council Framework (GLEC) as mentioned on page 8.

Offsetting or compensating emissions

Offsetting emissions signifies compensating for the emissions of a product or service by supporting projects that help reduce or avoid emissions outside the company. Offsetting (or compensating) does not reduce the emissions of the company or product, even though it supports low-carbon development outside the company.

Therefore, **the product carbon footprint data must be reported to UPM without offsetting**. If a product or service's carbon footprint has been offset, kindly provide UPM further evidence of its scope and any other relevant details.

Accounting for biogenic carbon removals

Biogenic carbon refers to the amount of carbon dioxide sequestered during plant growth, also known as biogenic carbon removals, and the carbon dioxide emitted during the burning and degrading of renewable materials.

When calculating the carbon footprint of products or services, any potential impacts of **biogenic carbon removals should not be included as part of the product carbon footprint data**. Any relevant information about biogenic carbon removals can be provided separately to UPM as additional information, as per the ISO 14067 Product Carbon Footprint standard or Product Environmental Footprint (PEF) guidelines. **If applicable, biogenic emissions can be reported separately in the questionnaire.**

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Quality of the product carbon footprint information

Whenever possible, the product carbon footprint calculation should be based on primary data, meaning data about the actual consumption of materials, energy, etc. collected directly at the source. If this is not possible, secondary data can be used. Secondary data refers to, for example, data derived from research, governmental or other public organisations and databases.

See some examples of reliable secondary data sources below:

Relevant industry associations	Description
Plastics Europe	European trade association for the plastics industry. Plastics Europe publishes information about the environmental data and processes by its member companies.
General data sources and software	**Description**
Sphera Solutions	Global Life Cycle Assessment (LCA) modelling and reporting **software** and database for reporting.
Ecoinvent	Global life cycle inventory database for products' environmental assessments.
DEFRA (UK Department for Environment Food & Rural Affairs)	Widely used source for emissions factors (coefficients) for calculating company greenhouse gas emissions.
GLEC (Global Logistics Emissions Council)	The global methodology for calculating and reporting of logistics greenhouse gas emissions across transport modes.
EcoTransitIT World	Widely used **software** worldwide for automatic calculations of energy consumption and carbon emissions of global transport chains for all modes of transport, including warehousing.

Use of credible standards and guidelines

At a minimum, the product carbon footprint calculation should follow the GHG Protocol Product standard or applicable ISO standards, notably the ISO 14067. For logistics emissions, the ISO 14083 standard is recommended.

UPM recommends conducting the product carbon footprint calculations according to:

- the most recent valid industry association recommendations,
- Product Category Rules (PCRs) by the Environmental Product Declaration (the International EPD System)
- other program operators' Product Environmental Footprint (PEF) method and the Product Environmental Footprint Category Rules (PEFCR) by the European Commission

Standard	Description
TfS Product Carbon Footprint Guideline	Guideline on the calculation of PCF for chemical materials developed by the chemical industry association Together for Sustainability (TfS). ***Please refer to specific considerations below***
ISO 14040 and 14044 (LCA)	International standards that focus on the process of performing a Life Cycle Assessment (LCA), i.e., evaluating the environmental impacts of a product throughout its entire life cycle. The basis for most product-related standards.
ISO 14067 (Carbon footprint)	A standard that is based on ISO 14040/44 and ISO 14025 (Type III labels) but focuses on climate change only.
GHG Protocol Product Standard	Global standard for understanding and calculating the full life cycle emissions of a product in any sector, globally.
GHG Protocol Corporate standard	Widely used global standard that details the requirements and guidance for companies and other organisations preparing a corporate-level GHG emissions inventory.
GHG Protocol Value Chain (Scope 3) Standard	Supplement to the GHG Protocol Corporate Accounting and Reporting Standard. Principles and requirements to assess and report GHG emissions from the value chain.
ISO 14083	Methodology for the quantification and reporting of greenhouse gas (GHG) emissions arising from the operation of transport chains of passengers and freight.

Specific considerations when using TfS Product Carbon Footprint Guideline

UPM is a proud member company of Together for Sustainability (TfS), the leading industry initiative focusing on enhancing CSR standards throughout chemical supply chains. Suppliers are strongly encouraged to leverage the resources provided by TfS, accessible via the TfS Academy.

When calculating and reporting the PCF according to the TfS PCF Guideline, the following exceptions apply: If a material contains recycled content, suppliers are requested to use the cut-off approach and provide strictly cradle-to-gate figures without additional information on the end-of-life. The use of the upstream system expansion (USE) approach is **not** supported.

Transparency of the carbon footprint information

The product carbon footprint should account for all the significant emissions sources along a product or a service's life cycle. The exclusion of life cycle stages, processes, inputs or outputs is only permitted if they do not significantly change the overall conclusions of the PCF.

Any exclusions must be clearly stated and reported as part of the PCF, along with the threshold that has been used to determine whether an emissions source is significant (significance threshold). The reasons for exclusion and their implications must also be explained.

UPM strongly recommends that an accredited third-party conduct an assurance or verification of the PCF data, or alternatively, that a critical review or a peer review is conducted. If there is no widely used methodology for calculating the PCF for a specific type of product or service, or if the methodology is under development, collaboration with a credible institution or organization is recommended for ensuring the reliability and transparency of the calculation methodology.

UPM expectations & requirements

We want to first and foremost collaborate with our suppliers and partners to adopt more climate-friendly practices.

UPM requests the PCF data from suppliers starting from 2022 and encourages all suppliers and partners to provide this data as soon as possible. However, we recognize that setting up the necessary data collection and calculation infrastructure may take time and therefore, the provision of emissions data will become a requirement from 2024 onwards.

WHAT:	WHEN:	WHO:	HOW:
UPM will request Product Carbon Footprint (PCF) information for the goods and services it purchases from its suppliers.	UPM will request its suppliers and partners to provide and update the PCF data on an annual basis.	All new and existing suppliers are requested to calculate and report the PCF data to UPM.	Familiarise yourself with UPM Supplier Guidelines: Calculating Product Carbon Footprint for more details about the calculation principles.



Key principles and summary of the product carbon footprint information