Product Category rules

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**TITLE PCR**

UN CPC CODE: XXXX



TABLE OF CONTENTS

[1. PRODUCT CATEGORY 3](#_Toc88487562)

[1.1 Product Category Definition 3](#_Toc88487563)

[1.2 Product Category Description 3](#_Toc88487564)

[1.3 Functional Unit (if any) 3](#_Toc88487565)

[1.4 Declared Unit (if any) 3](#_Toc88487566)

[1.5 Product Lifetime 3](#_Toc88487567)

[2. SYSTEM BOUNDARY 4](#_Toc88487568)

[2.1 Diagram 4](#_Toc88487569)

[2.2 Upstream 4](#_Toc88487570)

[2.3 Core 4](#_Toc88487571)

[2.4 Downstream 4](#_Toc88487572)

[3. DATA AND RULES FOR THE CFP STUDIES 6](#_Toc88487573)

[3.1 Specific Data Or Calculation Rules 6](#_Toc88487574)

[**3.1.1 Specific Data** 6](#_Toc88487575)

[**3.1.2 Calculation Rules** 6](#_Toc88487576)

[3.2 Cut-Off Rules 7](#_Toc88487577)

[3.3 Allocation Rules 7](#_Toc88487578)

[4. PCR APPLICABILITY 8](#_Toc88487579)

[4.1 Impact Category Indicator Results 8](#_Toc88487580)

[4.2 PCR Use for EPD Purpose 8](#_Toc88487581)

[5. COMPLEMENTARY INFORMATION 9](#_Toc88487582)

[5.1 PCR Use Within Other Programme Operators 9](#_Toc88487583)

[5.2 Glossary 9](#_Toc88487584)

[5.3 Bibliography 9](#_Toc88487585)

[5.4 Underlying Studies 9](#_Toc88487586)

[5.5 Other Existing PCR 9](#_Toc88487587)

# **PRODUCT CATEGORY**

## **1.1 Product Category Definition**

This document provides Product Category Rules (PCR) for the assessment of the impact on climate change of XXX and the declaration of this performance by a CFP*.* The product category corresponds to UN CPC XXX.

The product category is defined under UNSD-CPC Ver 2.1 classification:

Division number: **description**.

Within the present PCR, the following terminology is adopted:

* The term “shall” is used to indicate what is obligatory.
* The term “should” is used to indicate a recommendation, rather than a requirement.
* The term “may” or “can” is used to indicate an option that is permissible

For the definition of terms used in the document, see the normative standards.

## **1.2 Product Category Description**

Add a description of the product category

## **1.3 Functional Unit (if any)**

The functional unit shall be XXX.

## **1.4 Declared Unit (if any)**

The declared unit shall be XXX.

## **1.5 Product Lifetime**

Add a description; if not applicable, indicate: Not applicable for this product category.

# **SYSTEM BOUNDARY**

Carbon Footprint Italy follows an approach that include all attributional processes from “cradle to grave”, using the “limited loss of information at the final product” principle. This is especially important in the case of business-to-consumer communication.

The scope of this PCR and of CFPs based on this document is cradle to gate/grave.

For the purpose of different data quality rules and for the presentation of results, the life cycle of products is split into three different life cycle stages:

* Upstream processes (from cradle-to-gate);
* Core processes (from gate-to-gate);
* Downstream processes (from gate-to-grave).

In the CFP, the impact on climate change associated to each of the three life-cycle stages mentioned above shall be reported separately.

## **2.1 Diagram**

Insert a diagram of system boundary

Figure 1 – System diagram illustrating the processes that are included in the product system, divided into upstream, core and downstream processes.

## **2.2 Upstream**

The following attributional processes are part of the product system and classified as upstream processes:

* XXX
* XXX

The system shall not include:

* XXX

Upstream processes not listed may also be included. All elementary flows at resource extraction shall be included, except for the flows that fall under the general cut-off rule in Section 3.2.

## **2.3 Core**

The following attributional processes are part of the product system and classified as core processes:

* XXX

The system shall not include:

* XXX

## **2.4 Downstream**

The following attributional processes are part of the product system and classified as downstream processes:

* XXX

The system shall not include:

* XXX

# **DATA AND RULES FOR THE CFP STUDIES**

## **3.1 Specific Data Or Calculation Rules**

### **3.1.1 Specific Data**

A CFP calculation requires two different kinds of information:

* data related to the **environmental aspects** of the considered system (such materials or energy flows that enter the production system). These data shall come from the company that is performing the CFP calculation.
* data related to the **life cycle impacts** of the material or energy flows that enter the production system. Generic data can be used if specific data are not available.

Data on environmental aspects shall be as specific as possible and shall be representative of the studied process.

Data on the life cycle of materials or energy inputs are classified into three categories – specific data, selected generic data, and proxy data, defined as follows:

* **primary data** (also referred to as “site-specific data”) – data gathered from the actual manufacturing plant where product-specific processes are carried out, and data from other parts of the life cycle traced to the specific product system under study, e.g. materials or electricity provided by a contracted supplier that is able to provide data for the actual delivered services, transportation that takes place based on actual fuel consumption, and related emissions, etc.
* **secondary data:**  data from commonly available data sources (e.g. commercial databases and free databases) that fulfil prescribed data quality characteristics for precision, completeness, and,proxy data from commonly available data sources (e.g. commercial databases and free databases) that do not fulfil all of the data quality characteristics of “selected generic data”.

As a general rule, specific data shall always be used, if available, after performing a data quality assessment.

The availability of direct data highly depends on XXX

Any data used should preferably represent average values for a specific reference year. However, how these data are generated could vary, e.g. over time, and in such cases they should be presented under the form of a representative annual average value for a specified reference period. Such deviations should be declared.

The attributional LCA approach in Carbon Footprint Italy forms the basic prerequisites for selecting generic data. To allow the classification of generic data as “selected generic data”, they shall fulfil selected prescribed characteristics for precision, completeness, and representativeness (temporal, geographical, and technological), such as:

* the reference year must be as current as possible and preferably assessed to be representative for at least the validity period of the CFP,
* the cut-off criteria to be met on the level of the modelled product system are the qualitative coverage of at least 99% of energy, mass, and overall environmental relevance of the flows,
* completeness in which the inventory data set should, in principle, cover all elementary flows that contribute to a relevant degree of GHG emissions.

### **3.1.2 Calculation Rules**

The following requirements apply to the study:

* Data referring to processes and activities upstream in a supply chain over which an organisation has direct management control shall be specific and collected on site.
* Data referring to contractors that supply main parts, packaging, or main auxiliaries should be requested from the contractor as specific data, as well as infrastructure, where relevant.
* In case specific data is lacking, selected generic data may be used. If this is also lacking, proxy data may be used.
* For the electricity used in the processes, electricity production impacts shall be accounted for in this priority when specific data are used in the processes:
  1. Specific electricity mix as generated, or purchased, from an electricity supplier, demonstrated by a Guarantee of Origin (or similar, where reliability, traceability, and the avoidance of double-counting are ensured) as provided by the electricity supplier. If no specific mix is purchased, the residual electricity mix from the electricity supplier shall be used.[[1]](#footnote-1)
  2. National residual electricity mix or residual electricity mix on the market
  3. National electricity production mix or electricity mix on the market.

The mix of electricity used in upstream processes shall be documented in the CFP study report, where relevant.

* XXX
* Waste treatment processes of manufacturing waste should be based on specific data, if available.
* Scenarios for the end-of-life stage shall be technically and economically practicable and compliant with current regulations in the relevant geographical region based on the geographical scope of the CFP. Key assumptions regarding the end-of-life stage scenario shall be documented.

## **3.2 Cut-Off Rules**

Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts shall be included (not including processes that are explicitly outside the system boundary as described in Section 4.3).

The check for cut-off rules in a satisfactory way is through the combination of expert judgment based on experience of similar product systems and a sensitivity analysis in which it is possible to understand how the un-investigated input or output could affect the final results.

## **3.3 Allocation Rules**

The following stepwise procedure shall be applied for multifunctional products and multiproduct processes:

1. Allocation shall be avoided, if possible, by dividing the unit process into two or more sub-processes and collecting the environmental data related to these sub-processes.
2. If allocation cannot be avoided, the inputs and outputs of the system shall be partitioned between its different products or functions in a way that reflects the underlying physical relationships between them; i.e. they should reflect the way in which the inputs and outputs are changed by quantitative changes in the products or functions delivered by the system.
3. Where physical relationships alone cannot be established or used as the basis for allocation (or they are too time consuming), the most suitable allocation procedure shall be used and documented.

In accordance with other existing programme operators, the methodological choices for allocation for reuse, recycling and recovery have been set according to the polluter pays principle (PPP). This means that the generator of the waste shall carry the full climate impact until the point in the product’s life cycle at which the waste is transported to a scrapyard or the gate of a waste processing plant (collection site). The subsequent user of the waste shall carry the climate impact from the processing and refinement of the waste but not the impact caused in the “earlier” life cycles.

# **PCR APPLICABILITY**

This document constitutes the Product Category Rules (PCR[[2]](#footnote-2)) developed by Carbon Footprint Italy.

The requirements described in this Product Category Rules (PCR) are specified in addition to the ones indicated in the ISO standard 14067. Therefore, both the PCR and the ISO 14067 requirements shall be fulfilled in order to register to Carbon Footprint Italy.

In fact, this PCR was conceived and developed for CFP studies. Anyway, it can also be used for EPD (Environmental Product Declaration); to do this, the additional specific regulations required by the programme operator selected for the EPD registration should be followed as well (see Section 4.2).

So, in this PCR only the parameter reported in Section 4.1. shall be included.

## **4.1 Impact Category Indicator Results**

The present PCR is aimed at the development of CFP. Therefore, a special focus is on the “Global Warming Potential” indicator.

The specific GHG emissions and removals treatment in the CFP or partial CFP that shall be quantified and documented separately in the CFP study report are reported in the ISO 14067:2018, Table 1 of chapter 6.4.9.8.

Four GWP indicators shall be declared, which differentiates greenhouse gases depending on their origin: GWP-fossil, GWP-biogenic emissions, GWP-land use and land use change (dLuc), and GWP-biogenic removals, in accordance with the mentioned ISO 14067:2018 standard.

It should be noted that other impact categories can be relevant for the product category under assessment, other than the “Global Warming Potential” category. Therefore, in order to integrate the CFP results and to provide a broader view of the product environmental impacts, more impact categories shall be evaluated. The detail of this option are outlined In the following sections.

## **PCR Use for EPD Purpose**

This PCR was conceived and developed for CFP studies. Anyway, it can also be used for EPD (Environmental Product Declaration); to do this, other predetermined parameters required by the programme operator selected for the EPD registration shall be followed. These parameters are:

* other impact category indicator results;
* inventory results that are elementary flows;
* data that do not represent elementary flows;
* additional environmental information.

# **COMPLEMENTARY INFORMATION**

## **5.1 PCR Use Within Other Programme Operators**

Carbon Footprint Italy believes in the importance of sharing different existing experiences and considers the different Programme Operators as organizations that cooperate for a global climate transition.

CFI maintains the copyright of the document to ensure that it is possible to publish, update when necessary, and available to all organisations to develop and register CFPs. Stakeholders participating in PCR development should be acknowledged in the final document and on the website.

This PCR can be openly used by each CFP or EPD Programme Operator, if the original source of the know-how is mentioned (namely, the “PCR 202X-XXXX", developed by Carbon Footprint Italy).

## **5.2 Glossary**

CO2 Carbon dioxide

CPC Central product classification

CFI Carbon Footprint Italy

CFP Carbon Footprint of Products

GHG Greenhouse gases

ISO International Organization for Standardization

kg kilogram

LCA Life cycle assessment

PCR Product Category Rules

UN United Nations

## **5.3 Bibliography**

ISO (2000), ISO 14020:2000, Environmental labels and declarations – General principles

ISO (2017), ISO 14026:2017, Environmental labels and declarations – Principles, requirements and guidelines for communication of footprint information

ISO (2006b), ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework

ISO (2006c), ISO 14044: 2006, Environmental management – Life cycle assessment – Requirements and guidelines

ISO (2018), ISO 14067:2018, Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification

PQ 04 PCR Development, Carbon Footprint Italy

XXX

## **5.4 Underlying Studies**

The methodological choices made during the development of this PCR (functional unit/declared unit, system boundary, allocation methods, impact categories, data quality rules, etc.) in this PCR were primarily based on the following underlying studies:

* *XXX*

## **5.5 Other Existing PCR**

As part of the development of this PCR, existing PCRs were considered in order to avoid overlaps in scope. The existence of such documents was checked in the public PCR listings of the following programmes based on ISO 14025 or similar:

* XXX

The following existing PCRs were identified:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PCR NAME | PROGRAMME | REGISTRATION NUMBER | SCOPE | Motivation for exclusion |
| XXX | XXX | XXX | XXX | XXX |

|  |  |
| --- | --- |
| Programme operator: | **Carbon Footprint Italy**  Via Niccolò Tommaseo, 17 - 35131 Padua, Italy  Website: [www.carbonfootprintitaly.it](https://carbonfootprintitaly.it/en/)/en/  E-mail: [info@carbonfootprintitaly](mailto:info@carbonfootprintitaly).it |
| Product category: | Title of PCR |
| Registration number and version: | *202X-XXXX, version 1.0* |
| CPC classification code: | XXXX |
| Geographical scope: | Global |
| PCR moderator: | *Name Surname, Company, e-mail address* |
| PCR Committee: | *XXXX* |
| PCR Review panel | The Technical-Scientific Committee of Carbon Footprint Italy. The review panel may be contacted via [info@carbonfootprintitaly.it](mailto:info@carbonfootprintitaly.it) |
| PCR initiation phase: | 202X-XX-XX |
| Open consultation: | *202X-XX-XX – 202X-XX-XX* |
| Publication: | *Added by the Secretariat* |
| Valid until: | *Added by the Secretariat* |

|  |
| --- |
| Cover image © *added by the Secretariat in the PCR* |

1. The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total production mix of the electricity supplier. [↑](#footnote-ref-1)
2. Product Category Rules (PCRs) are documents that provide the rules, requirements and guidelines for developing a CFP study for a specific product category. PCRs are necessary to ensure uniformity of methodological approach to studies and to allow comparability between CFP studies related to products of the same category. The PCR development process is described in the “PQ04 PCR development” procedure, which can be downloaded in the dedicated section of the website.

   This PCR follows the requirements of ISO/TS 14027, ISO 14067 and ISO 14025. [↑](#footnote-ref-2)