

PROCESSED PAPER AND PAPERBOARD

PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214, 32151

PCR 2010:14
VERSION 3.1.2

VALID UNTIL: 2026-05-18



TABLE OF CONTENTS

1	Introduction	3
2	General information	4
2.1	Administrative information	4
2.2	Scope of PCR.....	4
3	PCR review and background information.....	6
3.1	PCR review	6
3.2	Open consultation	6
3.3	Existing PCRs for the product category	7
3.4	Reasoning for development of PCR.....	7
3.5	Underlying studies.....	7
4	Goal and scope, life cycle inventory and life cycle impact assessment	8
4.1	Declared unit	8
4.2	Reference service life (RSL).....	8
4.3	System boundary	8
4.4	System diagram	11
4.5	Cut-off rules.....	11
4.6	Allocation rules	12
4.7	Data quality requirements.....	12
4.8	Recommended databases for generic data	13
4.9	Impact categories and impact assessment	13
4.10	Other calculation rules and scenarios	14
5	Content and format of EPD.....	16
5.1	EPD languages	16
5.2	Units and quantities.....	16
5.3	Use of images in EPD	17
5.4	EPD reporting format.....	17
6	Glossary.....	22
7	References.....	23
8	Version history of PCR	24

1 INTRODUCTION

This document constitutes Product Category Rules (PCR) developed in the framework of the International EPD® System: a programme for type III environmental declarations¹ according to ISO 14025:2006. Environmental Product Declarations (EPD) are voluntary documents for a company or organisation to present transparent information about the life cycle environmental impact for their goods or services.

The rules for the overall administration and operation of the programme are the General Programme Instructions, publicly available at www.environdec.com. A PCR complements the General Programme Instructions and the standards by providing specific rules, requirements and guidelines for developing an EPD for one or more specific product categories (see Figure 1). A PCR should enable different practitioners using the PCR to generate consistent results when assessing products of the same product category.

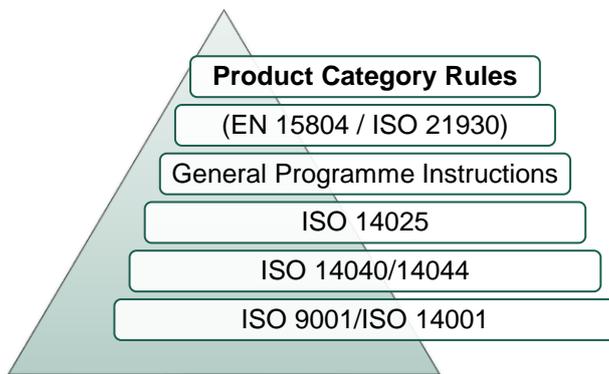


Figure 1 Illustration PCR in relation to the hierarchy of standards and other documents.

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.

A PCR is valid for a pre-determined period of time to ensure that it is updated at regular intervals. The latest version of the PCR is available via www.environdec.com. Stakeholder feedback on PCRs is very much encouraged. Any comments on this PCR document may be given via the PCR Forum at www.environdec.com or sent directly to the PCR moderator during its development or during the period of validity.

Any references to this document should include the PCR registration number, name and version.

The programme operator 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 EPDs. Stakeholders participating in PCR development should be acknowledged in the final document and on the website.

¹ Type III environmental declarations in the International EPD® System are referred to as EPD, Environmental Product Declarations.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Processed paper and paperboard
Registration number and version:	2010:14, version 3.1.2
Programme:	 The International EPD® System
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden. Website: www.environdec.com E-mail: info@environdec.com
PCR moderator:	Josefin Gunnarsson, IVL Swedish Environmental Research Institute josefin.gunnarsson@ivl.se
PCR Committee:	BillerudKorsnäs
Date of publication and last revision:	2025-11-19 (Version 3.1.2) A version history is available in Section 8.
Valid until:	2026-05-18
Schedule for renewal:	A PCR is valid for a pre-determined period of time to ensure that it is updated at regular intervals. When the PCR is about to expire the PCR moderator shall initiate a discussion with the Secretariat how to proceed with updating the document and renewing its validity. A PCR document may be revised during its period of validity provided significant and well-justified proposals for changes or amendments are presented. See www.environdec.com for up-to-date information and the latest version.
Standards conformance:	General Programme Instructions of the International EPD® System, version 3.01, based on ISO 14025 and ISO 14040/14044
PCR language(s):	This PCR was developed and is available in English. In case of translated versions the English version takes precedence in case of any discrepancies.

2.2 SCOPE OF PCR

2.2.1 PRODUCT CATEGORY DEFINITION AND DESCRIPTION

This document provides Product Category Rules (PCR) for the assessment of the environmental performance of processed paper (including corrugated paper) and paperboard and the declaration of this performance by an EPD. The product category corresponds to class 3214 (Processed paper and paperboard) and its sub-classes as well as sub-class 32151 (Corrugated paper and paperboard) as defined in the UN CPC system:

- Division: 32 - Pulp, paper and paper products; printed matter and related articles
 - Group: 321 - Pulp, paper and paperboard

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

- **Class 3214: Processed paper and paperboard**
 - **Sub-class 32141 - Composite paper and paperboard, not surface-coated or impregnated**
 - **Sub-class 32142 - Paper and paperboard, creped, crinkled, embossed or perforated n.e.c.**
 - **Sub-class 32143 - Paper and paperboard coated with kaolin or with other inorganic substances**
 - **Sub-class 32149 - Other paper and paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, gummed or adhesive, covered, surface-coloured, surface decorated or printed, in rolls or sheets**
- Class 3215 Corrugated paper and paperboard and containers of paper and paperboard
 - **Sub-class 32151 Corrugated paper and paperboard**

See to <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=25> for further information on the CPC codes covered by this PCR and related CPC codes.

The product group and CPC code shall be specified in the EPD.

The International EPD® System offers the possibility for similar products to be included in the same EPD (see General Programme Instructions available at www.environdec.com for further details).

The scope of this PCR was expanded as of version 3.1, published 2022-07-06, by the inclusion of UN CPC 32151, which was previously covered by PCR 2013:07 Corrugated paper and paperboard (expired 2021-08-11). Note that an EPD based on PCR 2013:08 shall not be compared with an EPD based on the present PCR.

2.2.2 GEOGRAPHICAL REGION

This PCR is applicable to be used globally.

2.2.3 EPD VALIDITY

An EPD based on this PCR shall be valid from its registration and publication at www.environdec.com and for a five year period starting from the date of the verification report ("approval date"), or until the EPD has been de-registered from the International EPD® System.

An EPD shall be updated and re-verified during its validity if changes in technology or other circumstances have led to:

- an increase of 10% or more of any of the indicators listed in Section 5.4.5.1 **Error! Reference source not found.**. This should be monitored by carrying out annual checks, in cases when e.g. the production process or supply chain have changed in the recent year to an extent that makes an update necessary. Moreover, quick estimates based on the LCA report are sufficient. If a sensitivity analysis of key parameters was carried out in the LCA report, this can help estimate the impact. If a contribution analysis was carried out in the LCA report, this can give an indication of which processes could affect the result the most if they change.
- errors in the declared information, or
- significant changes to the declared product information, content declaration, or additional environmental information.

If such changes have occurred, but the EPD is not updated, the EPD owner shall contact the Secretariat to de-register the EPD.

3 PCR REVIEW AND BACKGROUND INFORMATION

This PCR was developed in accordance with the process described in the General Programme Instructions of the International EPD® System, including PCR review and open consultation.

3.1 PCR REVIEW

3.1.1 VERSION 1.0

Version 1.0 of the PCR was reviewed by the Technical Committee of the International EPD System.

3.1.2 VERSION 2.0

Version 1.0 of the PCR was reviewed by the Technical Committee of the International EPD System.

3.1.3 VERSION 3.0

PCR review panel:	The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com . The review panel may be contacted via info@environdec.com . Members of the Technical Committee were requested to state any potential conflict of interest with the PCR moderator or PCR committee, and were excused from the review.
Chair of the PCR review:	Paola Borla
Review dates:	2020-07-03 until 2020-10-19

3.2 OPEN CONSULTATION

3.2.1 VERSION 1.0

This PCR was available for open consultation from 2014-09-26 until 2010-02-01, during which any stakeholder was able to provide comments by posting on the PCR forum on www.environdec.com or by contacting the PCR moderator.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders.

3.2.2 VERSION 2.0

This PCR was available for open consultation from 2014-09-26 until 2014-11-26, during which any stakeholder was able to provide comments by posting on the PCR forum on www.environdec.com or by contacting the PCR moderator.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders. The following stakeholders provided comments during the open consultation, and agreed to be listed as contributors to the PCR and at www.environdec.com:

- IVL Swedish Environmental Research Institute
- Politecnico di Milano
- BillerudKorsnäs AB
- Lloyd's Register Quality Assurance Italy Srl

3.2.3 VERSION 3.0

This PCR was available for open consultation from 2020-04-03 until 2020-06-03, during which any stakeholder was able to provide comments by posting on the PCR forum on www.environdec.com or by contacting the PCR moderator.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders. None of the stakeholders provided comments during the open consultation.

3.3 EXISTING PCRS FOR THE PRODUCT CATEGORY

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:

- International EPD® System. www.environdec.com.
- FP Innovations. <https://web.fpinnovations.ca/>
- SCS Global Services. <https://www.scsglobalservices.com/>
- PEF – Product Environmental Footprint. https://ec.europa.eu/environment/eussd/smgp/ef_pilots.htm

The following existing PCRs were identified:

PCR NAME	PROGRAMME	REGISTRATION NUMBER	SCOPE
Product Category Rules for North American Market Pulp, Paper and Paperboard Products, Tissue, and Containerboard	FPInnovations	Project No. 301011749	UN CPC 32: Pulp, paper and paper products; printed matter and related articles
Product Category Rule Module for Market Pulp and Paper Products	SCS Global Services		Market pulp and paper products

3.4 REASONING FOR DEVELOPMENT OF PCR

This PCR was developed in order to enable publication of Environmental Product Declarations (EPD) for this product category based on ISO 14025, ISO 14040/14044 and other relevant standards to be used in different applications and target audiences.

3.5 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:

- No underlying studies were carried out for this update of the PCR.

4 GOAL AND SCOPE, LIFE CYCLE INVENTORY AND LIFE CYCLE IMPACT ASSESSMENT

The goal of this section is to provide specific rules, requirements and guidelines for developing an EPD for the product category as defined in Section 2.2.1.

4.1 DECLARED UNIT

The declared unit (DU) shall be one tonne (1000 kg) of product (the packaging weight is not included in this one tonne), defined at the gate of an average converter, merchant or distribution platform, alternatively defined at the factory gate. If the product is intended to be used as a form of packaging after further processing, guidance may be provided on how to translate the declared unit into a packaged volume and/or amount.

The declared unit shall also specify the moisture content (in %) and grammage (in g/m²) of the product.

The declared unit shall be stated in the EPD. The environmental impact shall be given per functional unit. A description of the function of the product should be included in the EPD, if relevant.

4.2 REFERENCE SERVICE LIFE (RSL)

Not applicable for this product category because the use phase is not included within the system boundaries.

4.3 SYSTEM BOUNDARY

The scope of this PCR and EPDs based on it is either cradle-to-gate or cradle-to-grave, depending on whether the optional use phase and end-of-life processes are included.

4.3.1 LIFE CYCLE STAGES

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

- Upstream processes (from cradle-to-gate)
- Core processes (from gate-to-gate)
- Downstream processes (from gate-to-gate/grave), excluding or including the use phase and end of life.

In the EPD, the environmental performance associated with each of the three life-cycle stages above shall be reported separately. The processes included in the scope of the PCR and belonging to each life cycle stage are described in Sections 4.3.1.1–4.3.1.3.

4.3.1.1. Upstream processes

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

- Forestry. The included activities are production of plants, seeds or cuttings for cultivation, silviculture (soil preparation, planting, cleaning and fertilisation), logging (thinning/final felling and harvesting of biomass), and internal transports. The cradle is soil preparation. Changes in soil carbon or any other biogenic carbon sinks due to the forestry system are not included within the scope of this PCR.
- Production of materials and substances used in forestry (e.g. fertilisers, pesticides, cleaning chemicals, barriers to protect seedlings, etc).
- Production of energy wares used in forestry.
- Construction and maintenance of roads dedicated to forestry.
- Maintenance of machinery and equipment (e.g. forwarders) dedicated to forestry,
- Production of auxiliary products used in the core processes such as detergents for cleaning, etc.

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

- Production of pigments, additives and other chemicals used in the core processes.
- Production of other raw materials used in the core processes.
- Production of packaging used for transport of the raw materials to the core processes.
- Production of electricity and fuels used in the core processes.

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 4.5.

4.3.1.2. Core processes

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

- External transportation to the core processes, including the transport of logs.
- Recycling process of purchased recycled paper and the transport from the recycling process to where the material is used.
- Production of pulp (produced internally or purchased).
- Production of paper and paperboard.
- Embossing, impregnation, printing and pigment coating of paper and paperboard (if relevant).
- Cutting and packing of paper and paperboard (if relevant).
- Treatment of waste generated from the production processes.

Manufacturing processes not listed may also be included. The production of the raw materials used for production of all product parts shall be included. A minimum of 99% of the total weight of the declared product including packaging shall be included.

The technical system shall not include:

- Manufacturing of production equipment, buildings and other capital goods.
- Business travel of personnel.
- Travel to and from work by personnel.
- Research and development activities.

4.3.1.3. Downstream processes

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

- Waste management of transport packaging waste (based on scenarios)

Use phase, transportation from final manufacturing to an average converter, merchant or distribution platform and waste management of paperboard materials after use (based on scenarios) may also be included in the downstream processes but should be presented separately.

4.3.2 OTHER BOUNDARY SETTING

4.3.2.1. Boundary towards nature

Boundaries to nature are defined as where flows of material and energy resources leaves nature and enters the technical system', i.e. the part of the environment that is made or modified by humans. Emissions to air, water and soil cross the system boundary when they are emitted from the product system. Forestry system is, for example, part of the technical system, which means that elementary flows that leave the stand to water and air are to be recorded.

4.3.2.2. Boundaries in the life cycle

See Section 4.3.1. The EPD may present the information divided into additional sub-divisions.

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

4.3.2.3. Boundaries towards other technical systems

If there is an inflow of recycled material to the production system in the production/manufacturing phase, the recycling process and the transportation from the recycling process to where the material is used shall be included. If there is an outflow of material to recovery, the transportation of the material to the recovery process shall be included. The material going to recovery is then an outflow from the production system (see the General Programme Instructions). Similarly, energy produced at the mill and sold externally is an outflow from the production system. See Section 4.6.2 for allocation procedures.

4.3.2.4. Boundaries in time

The life cycle inventory (LCI) data shall be representative for the year/time frame for which the EPD is valid (maximum three years).

4.3.2.5. Geographical boundaries

The data for the core module shall be representative for the actual production processes and representative for the site/region where the respective process is taking place.

4.4 SYSTEM DIAGRAM

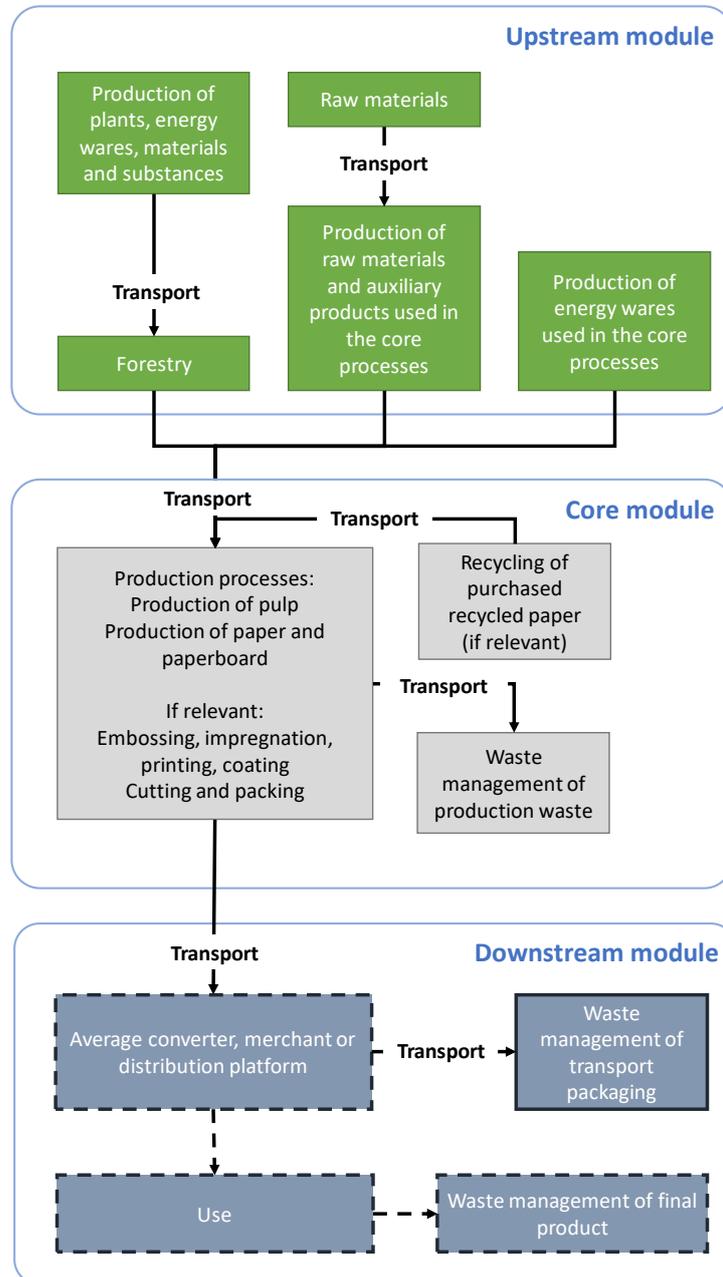


Figure 2 System diagram illustrating the processes that are included in the product system, divided into upstream, core and downstream processes. The processes in dashed lines are optional.

4.5 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.

4.6 ALLOCATION RULES

4.6.1 CO-PRODUCT ALLOCATION

The stepwise procedure below shall be consulted for all 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), other relationships (e.g. economic) should be applied. If economic allocation is used, a specific sensitivity analysis shall be provided to the verifier, and the monitoring of the relationship between results and current and/or historical economic value shall be documented and updated. The economic allocation factors shall be based on market price and these market prices shall be an average representative of at least one year. This year shall be the same year as that corresponding to the data used to model the core modules

4.6.2 REUSE, RECYCLING, AND RECOVERY

In the framework of the International EPD® System, 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 environmental impact until the point in the product's life cycle at which the waste is transported to a waste disposal facility or the gate of a waste processing plant (collection site). The subsequent user of the waste shall carry the environmental impact from the processing and refinement of the waste but not the environmental impact caused in the "earlier" life cycles. See General Programme Instruction for further information and examples.

4.7 DATA QUALITY REQUIREMENTS

An LCA 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 usually come from the company that is performing the LCA calculation.
- data related to the **life cycle impacts** of the material or energy flows that enter the production system. These data usually come from databases.

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 (e.g. an existing EPD), selected generic data, and proxy data, defined as follows:

- **specific data** (also referred to as "primary data" or "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.,
- **generic data** (sometimes referred to as "secondary data"), divided into:
 - **selected generic 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** – 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. It is mandatory to use specific data for the core processes as defined above. For the upstream processes, downstream processes, and infrastructure, generic data may also be used if specific data are not available.

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

4.7.1 RULES FOR USING GENERIC DATA

The attributional LCA approach in the International EPD® System 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 EPD,
- 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 the impact categories, and
- the representativeness of the resulting inventory in the given temporal, technological, and geographical reference should, as a general principle, be better than $\pm 5\%$ of the environmental impact of fully representative data. Here, qualitative reasoning regarding the choice of dataset is sufficient, such as a short justification of why the choice of datasets can be expected to be within the 5% deviation.

Section 4.8 provides a list of recommended databases/data sets to be used for generic data.

If selected generic data that meets the requirements of the International EPD® System are not available as the necessary input data, proxy data may be used and documented. The environmental impacts associated with proxy data shall not exceed 10% of the overall environmental impact from the product system.

The EPD may include a data quality declaration to demonstrate the share of specific data, selected generic data and proxy data for the environmental impacts.

4.8 RECOMMENDED DATABASES FOR GENERIC DATA

Table 1 lists recommended databases for generic data. Please note that this listing does not imply that other data that fulfil the data quality requirements may not be used and that data quality assessment shall also be performed for the data sets in the recommended database by an LCA practitioner.

PROCESS	GEOGRAPHICAL SCOPE	RECOMMENDED DATASET	DATABASE
Miscellaneous	Europe	Miscellaneous	European Life Cycle Database (ELCD)
Production of packaging	Europe	Packaging production	FEFCO (European Federation of Corrugated Board and Manufacturers)
Production of plastics and chemicals	Europe	Production of plastics and chemicals	Plastics Europe
Forestry	Finland	Forest operations	Metsäteho (only in Finnish)

Table 1 Recommended databases for generic data. Other databases can be used (e.g. Ecoinvent or Thinkstep), even as these are not open access.

4.9 IMPACT CATEGORIES AND IMPACT ASSESSMENT

The EPD shall declare the default impact categories as described in the General Programme Instructions. The characterisation models and factors to use for the default impact categories are available on www.environdec.com/impact-categories and shall be updated on a regular basis based on the latest developments in LCA methodology and ensuring the market stability of EPDs. The source and version of the characterisation models and the factors used shall be reported in the EPD. Alternative regional life cycle impact assessment methods and characterisation factors are allowed to be calculated and displayed in addition to the default list. If

so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate information.

4.10 OTHER CALCULATION RULES AND SCENARIOS

4.10.1 UPSTREAM PROCESSES

The following requirements apply to the upstream processes:

- 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.
- The transport of main parts and components along the supply chain to a distribution point (e.g. a stockroom or warehouse) where the final delivery to the manufacturer can take place based on the actual transportation mode, distance from the supplier, and vehicle load.
- In case specific data is lacking, selected generic data may be used. If this is also lacking, proxy data may be used. However, specific data should be used for the following processes:
 - Silviculture (cut over clearing, regeneration, cleaning and fertilisation)
 - Logging (thinning/final felling and extraction of timber)
- Data should be representative for at least 5 years, for activities taking place more than five years in the past or if data is not available, non-specific data from databases or literature may be used and documented.
- For the electricity used in the upstream processes, electricity production impacts shall be accounted for in this priority when specific data are used in the upstream 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.²
 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 EPD, where relevant.

- Packaging: specific data shall be used to model the production of the packaging of the product and its transport, if it is under the direct control of the organization or if the environmental impact related to the consumer packaging production is more than 10% of the total product environmental indicators. In other cases, generic data may be used. When consumer packaging shows the organization's logo, the LCA report should report the exerted/non exerted direct control on the production of consumer packaging by the organization.

4.10.2 CORE PROCESSES

The following requirements apply to the core processes:

- Specific data shall be used for the assembly of the product and for the manufacture of main parts as well as for on-site generation of steam, heat, electricity, etc., where relevant.
- For the electricity used in the core processes, electricity production impacts shall be accounted for in this priority:

² 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.

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.³
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 the core processes shall be documented in the EPD, where relevant.

- Transport from the final delivery point of raw materials, chemicals, main parts, and components (see above regarding upstream processes) to the manufacturing plant/place of service provision should be based on the actual transportation mode, distance from the supplier, and vehicle load, if available.
- Waste treatment processes of manufacturing waste should be based on specific data, if available.

4.10.3 DOWNSTREAM PROCESSES

The following requirements apply to the downstream processes:

- The type of transport and transport distance should be representative to actual conditions on the market for which the EPD is valid.
- For the products covered by this PCR, the use phase is usually not relevant (i.e. it does not give relevant environmental impacts) and is therefore optional to be included in the calculations.
- The EPD may include the transport from manufacture to an average converter, merchant or distribution platform. This transport, if included, shall be described in the LCA report, which should reflect the actual situation to the best extent possible. The following priority should be used:
 1. Actual transportation distances and types.
 2. Calculated as the average distance of a product of that product type transported by different means of transport modes.
 3. Calculated as a fixed long transport, of 1 000 km transport by lorry.
- Waste management of transport packaging shall be included in the downstream module, based on scenarios for the relevant market.
- The end-of-life phase, which is optional to include, may be estimated based on scenarios that represent current practices and praxis.

³ 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.

5 CONTENT AND FORMAT OF EPD

EPDs based on this PCR shall contain the information described in this section. Flexibility is allowed in the formatting and layout provided that the EPD still includes the prescribed information. A generic template for EPDs is available via www.environdec.com

As a general rule the EPD content:

- shall be in line with the requirements and guidelines in ISO 14020 (Environmental labels and declarations - General principles),
- shall be verifiable, accurate, relevant and not misleading, and
- shall not include rating, judgements or direct comparison with other products.

An EPD should be made with a reasonable number of pages for the intended audience and use.

5.1 EPD LANGUAGES

EPDs should be published in English, but may also be published in additional languages. If the EPD is not available in English, it shall contain an executive summary in English including the main content of the EPD. This summary is part of the EPD and thus subject to the same verification procedure.

5.2 UNITS AND QUANTITIES

The following requirements apply for units and quantities:

- The International System of Units (SI units) shall be used, e.g., kilograms (kg), Joules (J) and metres (m). Reasonable multiples of SI units may be decided in the PCR to improve readability, e.g., grams (g) or megajoules (MJ). The following exceptions apply:
 - Resources used for energy input (primary energy) should be expressed as kilowatt-hours (kWh) or megajoules (MJ), including renewable energy sources, e.g., hydropower, wind power and geothermal power.
 - Water use should be expressed in cubic metres (m³)
 - Temperature should be expressed in degrees Celsius (°C),
 - Time should be expressed in the units most practical, e.g., seconds, minutes, hours, days or years.
- Three significant figures⁴ should be adopted for all results. The number of significant digits shall be appropriate and consistent.
- The thousand separator and decimal mark in the EPD shall follow one of the following styles (a number with six significant figures shown for illustration):
 - SI style (French version): 1 234,56
 - SI style (English version): 1 234.56

In case of potential confusion or intended use of the EPD in markets where different symbols are used, the EPD shall state what symbols are used for thousand separator and decimal mark.

- Dates and times presented in the EPD should follow the format in ISO 8601. For years, the prescribed format is YYYY-MM-DD, e.g., 2017-03-26 for March 26th, 2017.
- The result tables shall:
 - Only contain values or the letters “INA” (Indicator Not Assessed). It is not possible to specify INA for mandatory indicators. INA shall only be used for voluntary parameters that are not quantified because no data is available.⁵
 - Contain no blank cells, hyphens, less than or greater than signs or letters (except “INA”).

⁴ Significant figures are those digits that carry meaning contributing to its precision. For example, with two significant digits, the result of 123.45 shall be displayed as 120, and 0.12345 shall be displayed as 0.12. In scientific notation, these two examples would be displayed as $1.2 \cdot 10^2$ and $1.2 \cdot 10^{-2}$.

⁵ This requirement does not intend to give guidance on what indicators are mandated (“shall”) or voluntary.

- Use the value 0 only for parameters that have been calculated to be zero.
- Footnotes shall be used to explain any limitation to the result value.

5.3 USE OF IMAGES IN EPD

Images used in the EPD, especially pictures featured on the cover page, may in themselves be interpreted as an environmental claim. Images such as trees, mountains, wildlife that are not related to the declared product should therefore be used with caution and in compliance with national legislation and best available practices in the markets in which the EPD is intended to be used.

5.4 EPD REPORTING FORMAT

The reporting format of the EPD shall include the following sections:

- Cover page (see Section 5.4.1)
- Programme information (see Section 5.4.2)
- Product information (see Section 5.4.3)
- Content declaration (see Section 5.4.4)
- Environmental performance (see Section 5.4.5)
- Additional environmental information (see Section 5.4.5.2)
- References (see Section 5.4.9)

The following information shall be included, when applicable:

- Information related to Sector EPDs (see Section 5.4.7)
- Differences versus previous versions (see Section 5.4.8)
- Executive summary in English (see Section 5.4.10)

5.4.1 COVER PAGE

The cover page shall include:

- Product name and image,
- Name and logotype of EPD owner,
- The text "Environmental Product Declaration" and/or "EPD"
- *Programme: The International EPD[®] System, www.environdec.com,*
- *Programme operator: EPD International AB*
- Logotype of the International EPD[®] System,
- EPD registration number as issued by the programme operator⁶,
- *Date of publication (issue): YYYY-MM-DD,*
- *Date of revision: YYYY-MM-DD,, when applicable,*
- *Date of validity; YYYY-MM-DD,*
- A note that "An EPD should provide current information, and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com."

⁶ The EPD shall not include a "registration number" if such is provided by the certification body, as this may be confused with the registration number issued by the programme operator.

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

- A statement of conformity with ISO 14025,

5.4.2 PROGRAMME INFORMATION

The programme information section of the EPD shall include:

- Address of programme operator: *EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: info@environdec.com*
- The following mandatory statement from ISO 14025: “EPDs within the same product category but from different programmes may not be comparable.”
- A statement that the EPD owner has the sole ownership, liability and responsibility of the EPD
- Information about verification⁷ and reference PCR in a table with the following format and contents:

Product category rules (PCR): <name, registration number, version and UN CPC code(s)>
PCR review was conducted by: <name and organisation of the review chair, and information on how to contact the chair through the programme operator>
Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input type="checkbox"/> EPD verification
Third party verifier: <name, organisation and signature of the third party verifier> <i>In case of certification bodies:</i> Accredited by: <name of the accreditation body and accreditation number, if applicable>. <i>In case of individual verifiers:</i> Approved by: The International EPD® System Technical Committee, supported by the Secretariat
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input type="checkbox"/> No

5.4.3 PRODUCT INFORMATION

The product information section of the EPD shall include:

- Address and contact information to EPD owner,
- Description of the organisation. This may include information on products- or management system-related certifications (e.g. ISO 14024 Type I environmental labels, ISO 9001- and 14001-certificates and EMAS-registrations) and other relevant work the organisation wants to communicate (e.g. SA 8000, supply-chain management and social responsibility),
- Name and location of production site,
- Product identification by name, and an unambiguous identification of the product by standards, concessions or other means,
- Identification of the product according to the UN CPC scheme system. Other relevant codes for product classification may also be included, e.g.
 - Common Procurement Vocabulary (CPV),
 - United Nations Standard Products and Services Code® (UNSPSC),

⁷ If the EPD has been verified by an approved individual verifier who has received contractual assistance from a certification body that is not accredited, this certification body shall not be included in this table.

- Classification of Products by Activity (NACE/CPA) or
- Australian and New Zealand Standard Industrial Classification (ANZSIC),
- Description of the product, its application/intended use and technical functions, e.g. expected service life time,
- Geographical scope of the EPD, i.e., for which geographical location(s) of use and end-of-life the product's performance has been calculated,
- Functional unit or declared unit,
- Reference service life (RSL), if applicable,
- Declaration of the year(s) covered by the data used for the LCA calculation and other relevant reference years,
- Reference to the main database(s) for generic data and LCA software used, if relevant,
- System diagram of the processes included in the LCA, divided into the life cycle stages,
- Description if the EPD system boundary is "cradle-to-gate", "cradle-to-gate with options" or "cradle-to-grave",
- Information on which life cycle stages are not considered (if any), with a justification of the omission,
- Relevant websites for more information or explanatory materials.

This section may also include:

- Name and contact information of organisation carrying out the underlying LCA study,
- Additional information about the underlying LCA-based information, such as assumptions, cut-off rules, data quality and allocation.

5.4.4 CONTENT DECLARATION

The content declaration shall have the form of a list of materials and chemical substances including information on their environmental and hazardous properties. The gross weight of material shall be declared in the EPD at a minimum of 99 % of one unit of product. The content declaration does not apply to proprietary materials and substances such as those covered by exclusive legal rights including patent and trademarks. As a general rule, an indication that a product is "free" of a specific hazardous material or substance should be done with caution and only when relevant, following the rules in ISO 14021 on self-declared environmental claims.

Information on the hazardous properties of materials and chemical substances should follow the requirements given in the latest revision of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)⁸, issued by United Nations or national or regional applications of the GHS.

As an example, the following regulations should be used for EPDs intended to be used in the European Union:

- Regulation (EC) No 1907/2006 of the European parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures

5.4.4.1. Information about recycled materials

When a product is made in whole or in part with recycled materials, the provenience of the materials (pre-consumer or post-consumer) shall be presented in the EPD as part of the content declaration.

To avoid any misunderstanding about which material may be considered "recycled material", the guidance given in ISO 14021 shall be taken into account. In brief, the standard states that:

- only pre-consumer or post-consumer materials (scraps) shall be considered in the accounting of the recycled materials, and

⁸ The GHS document is available on www.unece.org.

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

- materials coming from scrap reutilisation (such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it) shall not be considered as recycled content.

5.4.4.2. Information about packaging

As packaging is strongly connected with the product, the producer shall provide information about packaging in the EPD, when applicable. Packaging may be classified as:

- Distribution Packaging: packaging designed to contain one or more articles or packages, or bulk materials, for the purposes of transport, handling and/or distribution (ISO 21067-1:2016, Par. 2.2.6)
- Consumer Packaging: packaging constituting, with its content, a sales unit for the final user or consumer at the point of retail (ISO 21067-1:2016, Par. 2.2.7).

Consumer packaging is generally the outcome of eco-design processes, or other activities, under direct control of the organisation. Many critical categories with strict legal requirements belong to consumer packaging category like food contact packaging and pharmaceutical packaging.

The type and function of packaging shall be reported in the EPD.

A statement of the source of the materials (pre-consumer or post-consumer) shall be presented in the EPD when the packaging is made in whole or in part by recycled materials.

5.4.5 ENVIRONMENTAL PERFORMANCE

5.4.5.1. Environmental impacts

The EPD shall declare the environmental impact indicators, per declared unit and per life cycle stage, using the default impact categories, characterisation models and factors available on www.environdec.com/indicators. The source and version of the characterisation models and the factors used shall be reported in the EPD. Alternative regional life cycle impact assessment methods and characterisation factors are allowed to be calculated and displayed in addition to the default list. If so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate

Note the following for the impact category of climate change:

- While forest management activities might result in changed carbon storage (above and below ground) in the forest, the potential climate impact of this change is not included in the EPD.
- Greenhouse gas (GHG) emissions offset mechanism shall not be used at any point in the assessment of the GHG emissions of the product. The organisation could declare its participation to some offsetting program in the other information section of the EPD.

5.4.5.2. Use of resources

The EPD shall declare the indicators for resource use listed at www.environdec.com/indicators per declared unit, per life-cycle stage and in aggregated form.

5.4.5.3. Waste production and output flows

Waste generated along the whole life cycle production chains shall be treated following the technical specifications described in the GPI. The EPD shall declare the indicators for waste production and output flows as listed at www.environdec.com/indicators per declared, per life-cycle stage and in aggregated form.

5.4.6 ADDITIONAL INFORMATION

Information about emissions of toxic substances such as dioxins, polycyclic aromatic hydrocarbons (PAH) and toxic metals such as As, Cd, Cr, Hg and Pb (each presented separately) may be included as additional information.

In addition to this, additional emissions in the form of life cycle inventory data, such as COD, may be presented in the EPD per declared unit and divided into upstream, core and downstream module. It should, however, be clearly stated that the environmental impact of these emissions is already included in the environmental impact categories in Section 5.4.5.

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

If relevant, recommendations for waste treatment of paperboard materials shall be included in the EPD. The potential environmental impact and benefit of recycling and waste treatment (based on scenarios for the intended market or markets) can voluntarily be included in the EPD but should be presented separately from other results.

5.4.7 INFORMATION RELATED TO SECTOR EPDS

For sector EPDs, the following information shall also be included:

- a list of the contributing manufacturers that the Sector EPD covers,
- a description of how the selection of the sites/products has been done and how the average has been determined, and
- a statement that the document covers average values for an entire or partial product category (specifying the percentage of representativeness) and, hence, the declared product is an average that is not available for purchase on the market.

5.4.8 DIFFERENCES VERSUS PREVIOUS VERSIONS

For EPDs that have been updated, the following information shall also be included:

- a description of the differences versus previously published versions, e.g. a description of the percentage change in results and the main reason for the change;
- a revision date on the cover page

5.4.9 REFERENCES

This section shall include a list of references, including the General Programme Instructions (including version number), standards and PCR (registration number, name and version). The source and version of the characterisation models and the factors used shall be reported in the EPD.

5.4.10 EXECUTIVE SUMMARY IN ENGLISH

For EPDs published in another language than English, an executive summary in English shall be included.

The executive summary should contain relevant summarised information related to the programme, product, environmental performance, additional information, information related to sector EPDs, references and differences versus previous versions.

6 GLOSSARY

ANZSIC	Australian and New Zealand Standard Industrial Classification
CO ₂	Carbon dioxide
CPV	Common Procurement Vocabulary
CPC	Central product classification
DU	Declared unit
EC	European Commission
EPD	Environmental product declaration
ELCD	European Life Cycle Database (ELCD)
EN	European Norms
FEFCO	European Federation of Corrugated Board and Manufacturers
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GHG	Greenhouse gas
INA	indicator not assessed
ISO	International Organization for Standardization
kg	kilogram
LCA	Life cycle assessment
LCI	Life cycle inventory
m ³	Cubic meter
MJ	Mega Joule
NACE/CPA	Classification of Products by Activity
PCR	Product Category Rules
PPP	Polluter pays principle
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RSL	Reference service life
SI	The International System of Units
UN	United Nations
UNSPSC	United Nations Standard Products and Services Code [®]

7 REFERENCES

CEN (2013), EN 15804:2012+A1:2013, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.

EPD International (2017) General Programme Instructions for the International EPD® System. Version 3.0, dated 2017-12-11.
www.environdec.com

FPInnovations (2017). Product Category Rules for North American Market Pulp, Paper and Paperboard Products, Tissue, and Containerboard. September 2017, Project No. 301011749

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

ISO (2004), ISO 8601:2004 Data elements and interchange formats – Information interchange – Representation of dates and times

ISO (2006a), ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures

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 (2013), ISO/TS 14067:2013, Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication

ISO (2014), ISO 14046:2014, Environmental management – Water footprint – Principles, requirements and guidelines

ISO (2017), ISO 21930:2017, Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services

PEF Technical secretariat (2018). Product Environmental Footprint (PEF) Category Rules (PEFCRs): INTERMEDIATE PAPER PRODUCT.

SCS Global Services (2016). Product Category Rule Module for Market Pulp and Paper Products.

8 VERSION HISTORY OF PCR

VERSION 1.0, 2010-07-07

Original document, developed in parallel to PCR 2010:15.

VERSION 1.1

- Changes in Section 11.3.1

VERSION 1.2

- New template used
- Date of validity extended to 2013-12-31
- Clarification of Figure 1
- Updated PCR Moderator contact information

VERSION 2.0, 2015-02-23

- Compliance with the latest general programme instructions
- Use of the latest PCR Basic Module
- Validity extended after new round of open consultation
- Updated PCR Moderator contact information
- Clarifications and editorial changes
- Possibility for similar products to be included in the same EPD added in the definition of the product group section
- Updating of the declared unit to clarify that the packaging shall be included
- Information on recycled materials added in the content of materials and chemical substances section
- Definition of the definition to be used in the economic allocation added
- Updating of data quality rules
- Updating of the generic databases to be used as source of generic data
- Net uptake of biogenic CO₂ removed as additional environmental information
- Alignment with ISO/TS 14067
- Relevant references added

VERSION 2.01, 2016-04-01

- Corrected validity date in Section 1 plus minor editorial changes

VERSION 3.0, 2020-11-18

- Compliance with the latest general programme instructions
- Added specifications for functional unit
- Modified system diagram and description of processes included
- Added environmental impact categories plus minor editorial changes

PROCESSED PAPER AND PAPERBOARD
PRODUCT CATEGORY CLASSIFICATION: UN CPC 3214

VERSION 3.0.1, 2021-10-25

- New PCR moderator

VERSION 3.0.2, 2022-04-13

- Editorial changes in Sections 5.4.5.1 to 5.4.5.3, to clarify that the indicator list at www.environdec.com applies also for the indicators of resource use, waste production and other output flows.

VERSION 3.1, 2022-07-06

- Expanded scope to also include UN CPC 32151 Corrugated paper and paperboard (previously covered by PCR 2013:07, which expired 2021-08-11).
- Minor editorial changes.

VERSION 3.1.1, 2024-10-31

Validity period was prolonged for one year until 2025-11-18.

VERSION 3.1.2, 2025-11-19

Validity period was prolonged for six months until 2026-05-18.

© EPD INTERNATIONAL AB 2022

YOUR USE OF THIS MATERIAL IS SUBJECT TO THE GENERAL TERMS OF USE PUBLISHED ON BY EPD INTERNATIONAL AB:S HOMEPAGE AT WWW.ENVIRONDEC.COM. IF YOU HAVE NOT REGISTERED AND ACCEPTED EPD INTERNATIONAL AB:S THE GENERAL TERMS OF USE, YOU ARE NOT AUTHORIZED TO EXPLOIT THIS WORK IN ANY MANNER.

COVER IMAGE © ISTOCKPHOTO.COM / MIKHAIL ARTAMONOV

