

**BOOKS, IN PRINT**  
PRODUCT CATEGORY DEFINITION: UN CPC 322

2011:24  
VERSION 2.0

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## GENERAL INTRODUCTION TO PRODUCT CATEGORY RULES IN THE INTERNATIONAL EPD<sup>®</sup> SYSTEM

This is a Product Category Rules (PCR) document developed in the framework of the International EPD<sup>®</sup> System, operating in accordance with ISO 14025:2006 and the following international standards:

- ISO 9001, Quality management systems
- ISO 14001, Environmental management systems
- ISO 14040, LCA - Principles and procedures
- ISO 14044, LCA - Requirements and guidelines

The International EPD<sup>®</sup> System is a system of voluntary environmental declarations applicable to any type of goods and services. The rules and requirements of the system are defined in the General Programme Instructions, available at the website: [www.environdec.com](http://www.environdec.com).

A PCR is defined in ISO 14025 as a set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product categories. This PCR document specifies the rules for the underlying life cycle assessment (LCA) and sets minimum requirements on EPDs for a specific product group that are more detailed than the standards and the General Programme Instructions.

In the case of building products, the International EPD<sup>®</sup> System also allows the use of EN 15804 (Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products) and ISO 21930 (Environmental declaration of building products) as underlying standards, if relevant. The compliance with these standards shall be defined in each PCR.

The principle programme elements in International EPD<sup>®</sup> System are presented below. More information is available in the General Programme Instructions and on the website:

PURPOSE	ELEMENT IDENTIFICATION AND PRINCIPAL APPROACH
Complying with principles set in ISO 14025 on modularity and comparability	1. "Book-keeping LCA approach" (attributional LCA) 2. A Polluter-Pays (PP), allocation method
Simplifying work to develop Product Category Rules (PCR)	3. PCR Module Initiative (PMI) in order to structure PCR in modules according to international classification 4. PCR Moderator for leadership and support of the PCR work 5. Pre-certification of EPDs
Secure international participation in PCR work	5. Online PCR Forum for open and transparent stakeholder consultation
Facilitating identification and collection of LCA-based information	6. Selective data quality approach for specific and generic data
Broaden market applications of EPDs	8. Introducing Sector EPDs 9. Introducing "Single-issue EPDs"
Expand possibilities for organisations to issue EPDs in a cost-effective way	10. Introducing "EPD process certification"

Alignment of Product Category Rules (PCR) across intermediate and final products in the supply chain and of PCRs developed in the framework of other ISO 14025 compliant programmes is strongly encouraged. In order to have a unique identification of each product group, the United Nation Statistics Division - Classification Registry CPC codes (<http://unstats.un.org>) are used in the International EPD<sup>®</sup> System.

All PCR documents have a maximum period of validity after which the document shall be revisited.

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## 1 GENERAL INFORMATION

Name:	Books, in print
Programme operator:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a> . E-mail: <a href="mailto:info@environdec.com">info@environdec.com</a>
Date:	Version 2.0: 2016-01-12  Version 1.0: was published 2011-12-21. A version history is available in Section 13
Registration no:	2011:24
This PCR was prepared by:	Regional Ministry of Environment, Government of Andalusia
Appointed PCR moderator:	Mónica de la Cruz, <a href="mailto:monicadelacruz@ecoedicion.eu">monicadelacruz@ecoedicion.eu</a>
Open consultation period:	2015-07-02 until 2015-09-15 (Version 2.0)
Contributors (including previous versions)	–
Review panel for this PCR:	The Technical Committee of the International EPD® System. Full list of TC members available on <a href="http://www.environdec.com/TC">www.environdec.com/TC</a>
Valid within the following geographical representativeness:	Global
PCR language:	English and translated to Spanish  The English version takes precedence of any translated versions in case of discrepancies.
Valid until:	2020-01-12
More information on this PCR's website:	<a href="http://environdec.com/en/PCR/Detail/pcr2011-24">http://environdec.com/en/PCR/Detail/pcr2011-24</a>  

This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 322 (Books, in print) and the declaration of this performance by an EPD.

This PCR complies with the General Programme Instruction of the International EPD System, version 2.5 dated May 11, 2015. This PCR is based on the requirements and guidelines given in PCR Basic Module, CPC Division 32: “Pulp, paper and paper products; printed matter and related articles”, version 2.0, dated October 24, 2013.

This PCR document is publically available on [www.environdec.com](http://www.environdec.com). The PCR document is a living document. If relevant changes in the LCA methodology or in the technology for the product category occur, the document will be revised and any changes will be published on the website.

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There are a number of existing guidelines on environmental indicators related paper, which is the main raw material of printed publications, but neither of books specifically. Nevertheless the following documents have previously been considered during the development of this PCR:

- CEPI (2007): Framework for the development of carbon footprints for paper and board products.
- CEPI (2014): Product Environmental Footprint (PEF) Category Rules (PEFCR) Pilot, Intermediate Paper Product (Scope, Unit of Analysis and Representative Product)

Any comments to this PCR document may be given on the PCR Forum on [www.environdec.com](http://www.environdec.com) or directly to the PCR moderator during the period of validity. The PCR Moderator should initiate a revision process before the validity time expires to give due time for announcing and collecting comments.

EPDs shall be based on the latest version of the PCR, and refer to the version number and date of the PCR used. The production of new PCR versions does not affect the certification period of EPDs that are already published.

## 2 DEFINITION OF THE PRODUCT GROUP

The product group covered by this PCR is “Books, in print” as defined in the UN CPC system group 322. This CPC Group includes the following underlying CPC Classes and their subclasses:

- **Group: 322 – Books, in print**
  - 3221 – Educational textbooks, in print
  - 3222 – General reference books, in print
  - 3223 – Directories, in print
  - 3229 – Other books, in print

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

### 2.1 SPECIFICATION OF MANUFACTURING COMPANY

The EPD shall include the following information about the printing house (mandatory information):

- Name of the company
- Production site(s) and country.
- Issuer and contact information.
- Information on environmental management systems: ISO 14001 and/or EMAS certificate at the manufacturing site.

It is voluntary to include other information about the printing house, such as:

- Specific aspects regarding the production.
- Environmental policy
- Company logotype

### 2.2 SPECIFICATION OF THE PRODUCT

The EPD shall include a description of the product (mandatory):

- Weight of the product
- Number of pages
- Size of the page (according to ISO 216 code: A4, A5, ... if possible)
- Kind of paper (virgin fibre paper, recycled paper, coated, uncoated...)

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- Certifications on the sustainable origin of the product (eg, PEFC, FSC ...) or other environmental product certifications, if any.
- Grammage of the paper (weight per unit area, e.g. g/m<sup>2</sup>)
- Type of book binding (hardcover, soft cover,...; dust jacket., if relevant)
- Used printing process (offset, CTP, digital printing...)
- Print run
- Number of used inks
- Type of ink (acrylic based, aqueous based...)

Relevant Type I and Type II environmental labels awarded to the product may be stated.

Any claims made about the product must be verifiable.

Also it shall be included its intended use and its classification number according to the UN CPC classification system (<http://unstats.un.org>).

- Section: 3 – Other transportable goods, except metal products, machinery and equipment
  - Division: 32 – Pulp, paper and paper products; printed matter and related articles
    - Group: 322 – Books, in print

### 3 DECLARED UNIT

The declared unit (DU) shall be one product unit with the physical and technical characteristics described in the section above, defined at the gate of a distribution platform, alternatively defined at the printing house gate.

In addition, data may also be shown using the alternative declared unit of:

One hundred grammes (100 gr) of final product with the physical and technical characteristics described in the section above, defined at the gate of a distribution platform, alternatively defined at the printing house gate.

The declared unit shall be stated in the EPD. The environmental impact shall be given per declared unit.

### 4 CONTENT DECLARATION

The EPD shall include a content declaration of the product covering relevant materials and substances.

- Material composition of the product, in kg per declared unit and % of the total product weight;
- All materials of > = 1.0 % by weight (except for the case of inks and coatings, they should be included although they are in a lower percentage);
- All materials and substances that are regulated by compulsory standards and clients demands;
- All materials and substances that are hazardous to health and the environment, being allergenic, carcinogenic, mutagenic or toxic if present in such a concentration in the product that it meets requirements for being subjects to labelling according to the legislation (e.g. the European Directives on substances and preparations).

### 5 UNITS AND QUANTITIES

The International System of Units (SI units) shall be used.

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A maximum of three significant digits shall be used when reporting LCA results. In any case, it is recommended to provide rounded data in respect of their scientific significance.

The preferred power and energy units are:

- kWh for electricity
- MJ (GJ) for fuels

The thousands separator and decimal mark in the EPD shall follow one of the following styles:

- SI style (French version): 1 234,56
- SI style (English version): 1 234.56

In case of any potential confusion, the EPD shall state what symbols are used for thousand separator and decimal mark.

## 6 GENERAL SYSTEM BOUNDARIES

According to the International EPD<sup>®</sup> System general rules, the LCA calculations are separated into three different life cycle stages:

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

According to this, the general system boundaries are:

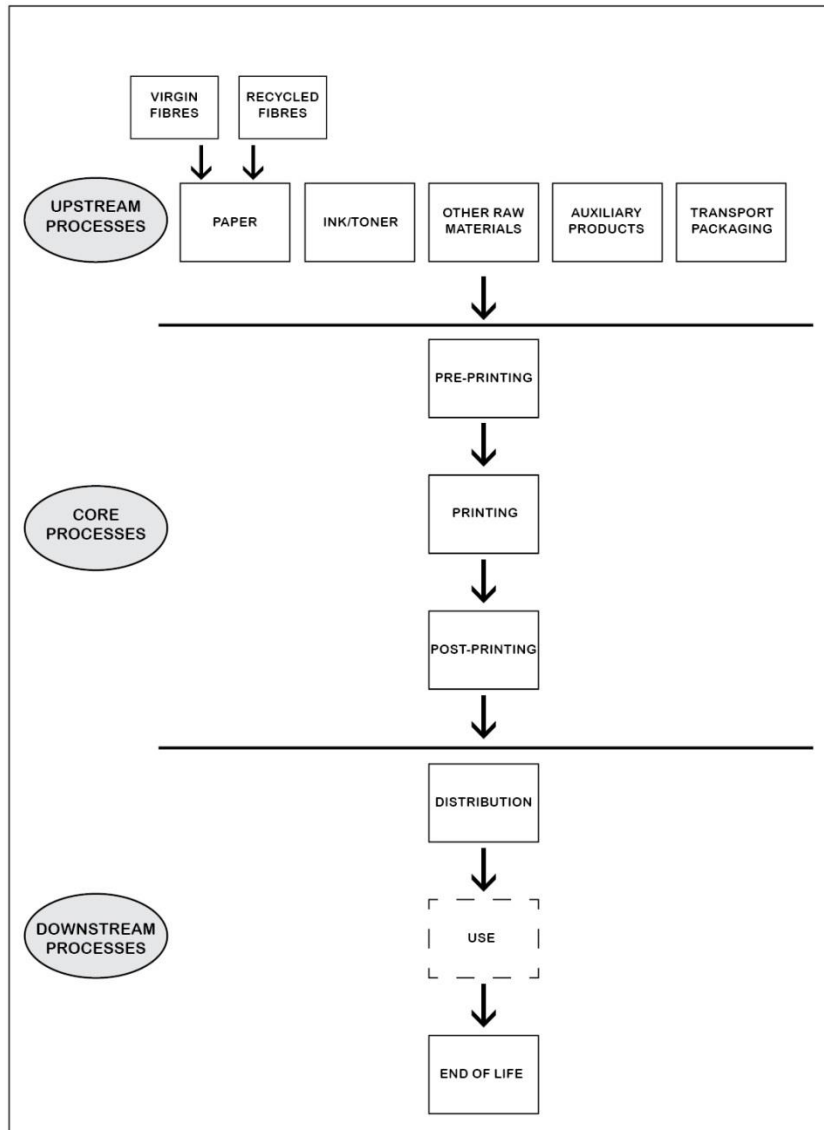


Figure 1 Illustration of the upstream, core and downstream modules and processes (stages in dashed box are optional).

## 6.1 UPSTREAM PROCESSES

The upstream processes include the following inflow of raw material and energy wares needed for the manufacture of the book in print:

- If paper from virgin fibre used: production of virgin fibre paper, included silvicultural, transport or wood processing activities: e.g. seedling production, soil preparation, planting (sowing or natural regeneration), pre-commercial thinning, thinning, fertilization, felling, transportation, pulping, transportation of pulp to paper production (if not integrated) and paper production.
- If paper from recycle fibre used: production of recycled paper, included collection of paper for recycling from households, industry and offices and transport to a sorting facility; sorting into paper grades and transport, pulping transportation of pulp to paper production (if not integrated) and paper production.
- Production of printing ink or tonner.
- Production of other raw materials within the book: biopolymers, fossil plastics, varnishes, etc.



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- Production of auxiliary products, as aluminium plates, solvents, minerals, chemicals, etc, if relevant.
- Production processes of the energy wares (fuels, electricity and heat) used in the productions.
- Production of transport packaging.
- Used energy in raw materials manufacturing.

## 6.2 CORE PROCESSES

The core processes include:

- Transport of raw materials and packaging to manufacturing centre
- Pre-printing processes, included energy ware used in design and files preparation processes; preparation of printing forms, if applies; production of printing proofs.
- Printing processes, included production processes.
- Post printing processes, included binding book, finishing (relief, stamping, coating, lamination and so on) and packaging for distribution.
- Transportation of materials to post printing centre, if relevant.
- Scraps and waste treatment generated during core processes.

## 6.3 DOWNSTREAM PROCESSES

The downstream processes include:

- Distribution, i.e. transport of product from production centre (printing office) to distribution platform and transport of product from distribution platform/s to sales centre.
- Use of product by consumer (optional).
- End of life. Management of packaging waste and product waste.

# 7 CORE MODULE

## 7.1 SYSTEM BOUNDARIES

### 7.1.1 TECHNICAL SYSTEM

The processes listed in Section 6.2 for the production of the final product shall be included. Manufacturing processes not listed may be included. However, the production of the raw materials used for production of all ingredients shall be included in the upstream module.

- A minimum of 99% of the total weight of the declared product including packaging shall be included.
- The manufacturing of production equipment, buildings and other capital goods shall not be included.
- The paper waste management (i.e. the cuttings from postprinting) shall be included.
- Business travel of personnel should not be included Travel to and from work by personnel should not be included.
- Research and development activities may be included if relevant.
- The printing systems (e.g. offset printing, CTP printing, digital printing...) shall be pointed at the processes of the core module.

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## 7.1.2 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.

## 7.1.3 TIME BOUNDARIES

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

When using data specific to one year, it is important to ensure that this year is representative of the converting operation. By comparing the latest data with a three year average, any data points that are not representative can be identified and corrected.

All data may be a maximum of 4 years old.

## 7.1.4 BOUNDARIES TO NATURE

Boundaries to nature are defined as flows of material and energy resources from nature into the system. Emissions to air, water and soil cross the system boundary when they are emitted from or leaving the product system.

## 7.1.5 BOUNDARIES TOWARDS OTHER TECHNICAL SYSTEMS

If there is an inflow of recycled paper or other 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 recycling, the transportation of the material to a sorting facility/recycling process shall be included. The material intended for recycling is then an outflow from the production system.

## 7.2 CUT OFF RULES

Life Cycle Inventory data for a minimum of 99% of total inflows to the core module shall be included. Inflows not included in the LCA shall be documented in the EPD.

It is important to emphasize that all available data shall be used. Using cut-off rules should not give the perceptions of "hiding" information, but rather to facilitate the data collection for practitioners.

## 7.3 ALLOCATION RULES

Allocation between different products and co-products shall be based on mass allocation. Alternatively, allocation rules can be based on economical issues, when relevant, but this should be clearly stated and that the use must be justified.

Allocation for energy consumption can be based on the technical features (e.g. power capacity) of the machineries used for the productive processes.

## 7.4 DATA QUALITY RULES

Specific data (often called site specific data), gathered from the printing houses, shall be used for the core module. The requirement for specific data also includes actual product weights, amounts of raw materials used and amounts of waste, etc. Specific data for the generation of electricity bought shall be used if possible. The data should be verifiable by invoice or similar.

If specific data are not available or if the purchased electricity is not specified for parts of the core module, the electricity mix used in those parts shall be approximated as the official electricity mix in the country of printing. The mix of electricity used shall be documented.

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## 8 UPSTREAM MODULE

### 8.1 SYSTEM BOUNDARIES

All elementary flows at resource extraction shall be included, except for the flows that fall under the general 1% cut off rule (in terms of mass or energy).

Production and transportation of all the raw materials, packaging, auxiliary materials to the printing facilities may be included even other not listed processes.

Scraps and waste treatment of upstream processes may be also included.

### 8.2 DATA QUALITY RULES

As a general rule, specific data shall always be used if available. For the upstream module, selected generic data and other generic data may – under certain criteria -- also be used if specific (real) data are not available. Specific data shall be used for purchase by supplier, for instance, paper consumption, tonners, inks, fuels, etc.

#### 8.2.1 RULES FOR USING GENERIC DATA

In case not to have real data in upstream processes generic (secondary) data selected from commercial or free databases could be used.

For allowing the use of selected generic data, prescribed characteristics for precision, completeness and representativeness must be fulfilled and demonstrated, including but not limited to:

- Reference year to be as current as possible, preferably being representative for at least 5 years,
- Cut-off criteria to be met on the level of the modelled product system are the qualitative coverage of at least 99% of-both the energy, the mass.
- Completeness where the inventory data set should in principle cover all elementary flows that contribute to a relevant degree of the impact categories.
- Representativeness of the resulting inventory for the good or service in the given geographical reference should, as a general principle, be better than  $\pm 5\%$ .
- Technological equivalence adhere to "Data deriving from the same chemical and physical processes or at least the same technology coverage (nature of the technology mix, e.g. weighted average of the actual process mix, best available technology or worst operating unit)",

Data calculated with system expansion should not be used, but if no other data is available, any negative flows should be changed to zero.

If specific data, selected generic data or other data that meets the requirements of the International EPD® System is not available as the necessary input data, other generic data may be used and documented. The environmental impacts associated to other generic data must not exceed 10% of the overall environmental impact from the product system.

#### 8.2.2 DATA QUALITY DECLARATION

The EPD® may include an indicator suitable for demonstrate the relevance of selected generic data.

## 9 DOWNSTREAM MODULE

### 9.1 DISTRIBUTION SCENARIO (MANDATORY)

Specific distribution data (e.g. a weighted average distribution mode and route) may be included. Also, an average retailer may be included.

The following processes shall be included:

- Transport from manufacturing site to distribution platform.
- Transport from distribution platform to sales centre.
- Transport due to returns from sales centre to distribution platform

Data can be provided in the EPD according to the average transport scenario inside the production country.

### 9.2 USE PHASE SCENARIO (OPTIONAL)

If the Use Phase is taken into account, the following processes shall be included:

- Movement of the consumer to the point of sale, such as transport by private car, public transport, ...
- Energy consumption due to the storage at libraries, bookstores, dwellings, ...

If the use phase is considered, it should be reported separately from the other downstream activities in order to allow comparisons.

### 9.3 END OF LIFE SCENARIO (MANDATORY)

To include in the EPD the end of life of books will be mandatory.

The potential impacts and benefits of recycling or other treatment of end of life of books may be calculated taking into account a typical scenario of the area in which the books are mainly distributed.

As a second option, it could be calculated as a fixed scenario, such as 100% recycling or 50% recycled, 50% landfill. In this case, these assumptions must be clearly stated in the EPD.

The different End-of-life options (recycling, incineration, landfill) should be quantified and modelled as follows:

- In all options potential impacts of treatment processes must be quantified;
- The benefits from recycling/incineration of waste must be quantified as avoided product.

This approach actually should be considered in all the different stages where waste management is included (production of raw materials, production of books etc.). However, according to the attributional LCA approach, no credits associated with upstream burdens of scrap or recycled material used could be included.

## 10 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

### 10.1 USE OF RESOURCES

The consumption of natural resources and resources per declared unit shall be reported in the EPD, divided into core, upstream and downstream module.

In this sense, EPD should include the following inventory data (extracted resources):

- Non-renewable resources:
  - Material resources.

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- Energy resources (used for energy conversion purposes).
- Renewable resources
  - Material resources.
  - Energy resources (used for energy conversion purposes).
- Water use divided in:
  - Total amount of water.
  - Direct amount of water used by the core module.
- Electricity (electricity consumption during manufacturing).

The following requirements on the resource declaration also apply:

- All parameters for resource consumption shall be expressed in mass, with the exception of renewable energy resources used for the generation of hydroelectric, wind electricity and solar energy, which shall be expressed in MJ;
- All parameters shall not be aggregated but reported separately. Resources which contribute for less than 5 % in each category shall be included in the resources list as "other";
- Nuclear power shall be reported among the non-renewable energy resources as kg of uranium calculated by converting the thermal energy (MJ) considering a reactor of III generation with an efficiency of 33 %.

## 10.2 POTENTIAL ENVIRONMENTAL IMPACT

The following default environmental impact categories in the International EPD® System shall be reported in the EPD:

- Emission of greenhouse gases (expressed as the sum of global warming potential, GWP, 100 years), in carbon dioxide (CO<sub>2</sub>) equivalents.
- Emission of acidifying gases (expressed as the sum of acidification potential, AP) in sulphur dioxide (SO<sub>2</sub>) equivalents.
- Emissions of gases that contribute to the creation of ground level ozone (expressed as C<sub>2</sub>H<sub>4</sub> (ethylene) equivalents, POCP).
- Emission of substances to water contributing to oxygen depletion (expressed as the sum of eutrophication potential, EP), in phosphate (PO<sub>43-</sub>) equivalents.

In addition, the potential environmental impacts in the following impact categories shall be declared:

- Emission of the exhausting ozone gases (expressed as the sum of the ozone-depleting potential, ODP) in kg CFC – 11 equivalents, 20 years.

The recommended characterisation factors to use are available on the website [www.environdec.com](http://www.environdec.com). In case of using other models or characterization factors, the reason should be clearly stated and justified in the EPD.

And in any case, the characterisation factors used shall be reported in the EPD.

## 10.3 SPECIFICATIONS FOR GWP CALCULATIONS

Both emissions to the atmosphere and removals from the atmosphere shall be accounted for the assessment of the overall GHG emissions of the product being assessed. This assessment shall include the gases arising from both fossil and biogenic sources for all products, with the exception of human food and animal feed products.

Where some or all removed carbon will not be emitted to the atmosphere within the 100-year assessment period, the portion of carbon not emitted to the atmosphere during that period shall be treated as stored carbon. Following issues shall be taken into account:

- Carbon storage might arise where biogenic carbon forms part or all of a product (e.g. wood fibre in a table), or where atmospheric carbon is taken up by a product over its life cycle (e.g. cement),

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- While forest management activities might result in additional carbon storage in managed forests through the retention of forest biomass, this potential source of storage is not included in the scope of the International EPD® System.

GHG emissions offset mechanism shall not be subtracted from global carbon footprint, just could be used as additional information. The organisation could declare its participation to some offsetting program in the other information section of the EPD® or single issue EPD.

## 10.4 WASTE PRODUCTION

*(Waste generated along the whole life cycle production chains shall be treated following the technical specifications described in the General Programme Instructions, Annex A.)*

When the amount of waste has to be declared, the following information shall be reported:

- Hazardous waste, in kg (as defined by regional directives)
- Radioactive waste, in kg
- Non-hazardous waste, in kg

## 10.5 OTHER ENVIRONMENTAL INDICATORS

The EPD shall contain the following indicators:

- Recycled material content (in % material content per declared unit)
- Co-products used in other chains

## 10.6 ADDITIONAL ENVIRONMENTAL INFORMATION

The EPD may contain information regarding the used technology, the production site, the characteristics of production territory, supply/delivery information and other factors such as impacts on biodiversity and noise production.

Additional information can be included as print methods, inks usage with specific characteristics, saving actions and energetic efficiency in the processes, etc.

Water Footprint (expressed as m<sup>3</sup>- eq.) can be used as additional environmental information. In this case, the footprint will accomplish the standard ISO 14046 Water footprint – Principles, requirements and guidelines, and will apply the following requirements:

- Water use includes evaporation, transpiration, product integration, release into different drainage basins or the sea, displacement of water from one water resource type to another water resource type within a drainage basin (e.g. from groundwater to surface water). In-stream water use is not included.
- For water used in closed loop processes (such as cooling system) and in power generation only the net water consumption (such as reintegrations of water losses) should be considered.
- Sea water shall not be included in the indicator.
- Tap water or treated water (e.g. from a water treatment plant), or waste water that is not directly released in the environment (e.g. sent to a wastewater treatment plant) are not elementary water flows, but intermediate flows from a process within the technosphere.
- Additional transparency in terms of geographical location, type of water resource (e.g. groundwater, surface water),
- Water quality and temporal aspects are voluntary.

## 11 CONTENT OF THE EPD®

As a general rule the EPD® content:

- must be verifiable;
- must not include rating, judgements or direct comparison with other products.

EPD®s can be published on several languages, but if the EPD® document is not available in English, the organization shall provide a summary in English including the main content of the EPD® to be available on [www.environdec.com](http://www.environdec.com).

The EPD® cover page (if existent) shall as a minimum include relevant information about the product, such as name and an image, the EPD® logotype and date of publication and validity.

### 11.1 PROGRAMME-RELATED INFORMATION

The programme-related part of the EPD® shall include:

- Reference to the International EPD® System as the programme operator
- EPD® logotype
- Reference PCR document(s) and CPC codes
- EPD® registration number as provided by the Secretariat
- Date of publication and validity. If relevant, the revision schedule may be indicated.
- Declaration of the year(s) covered by the data used for the LCA calculation
- Geographical scope of application of the EPD®
- Information about the year or reference period of the underlying data to the EPD®
- Reference to the website – [www.environdec.com](http://www.environdec.com) – and other relevant websites for more information

### 11.2 PRODUCT-RELATED INFORMATION

#### 11.2.1 SPECIFICATION OF THE MANUFACTURING COMPANY

See Section 2.1.

#### 11.2.2 SPECIFICATION OF THE PRODUCT

See Section 2.2.

#### 11.2.3 DECLARED UNIT

See Section 3.

### 11.3 CONTENT DECLARATION

See Section 4.

### 11.4 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

#### 11.4.1 USE OF RESOURCES

See Section 10.1.

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#### 11.4.2 POTENTIAL ENVIRONMENTAL IMPACT

See Section 10.2.

#### 11.4.3 WASTE PRODUCTION

See Section 10.3

### 11.5 ADDITIONAL ENVIRONMENTAL INFORMATION

See Section 10.4

### 11.6 MANDATORY STATEMENTS

The following information is mandatory to include in the EPD:

- Any omission of life cycle stages not making the EPD cover the full life cycle, with a justification of the omission,
- Means of obtaining explanatory materials, for example references to chosen methodologies,
- A statement that “EPDs within the same product category but from different programmes may not be comparable”.

The EPD shall also give the following information about the verification process:

Product Category Rules (PCR) review was conducted by: <i>The Technical Committee of the International EPD<sup>®</sup> System. Chair: Claudia Peña</i> Contact via <a href="mailto:info@environdec.com">info@environdec.com</a> .
Independent 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: <i>Name and contact information</i>
Accredited or approved by: <i>Name of the accreditation body. For individual verifiers: “The International EPD<sup>®</sup> System”</i>

### 11.7 DIFFERENCES VERSUS PREVIOUS VERSIONS OF THE EPD

The main causes of changes in the environmental performance in comparison with previous EPD versions shall be described shortly.

### 11.8 REFERENCES

The EPD shall, if relevant, refer to:

- The underlying LCA
- The PCRs used
- Other documents that verify and complement the EPD
- Instruction for recycling
- Programme instructions
- Sources of additional information
- Methodology for calculations of net sequestration of biogenic CO<sub>2</sub>



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## 12 VALIDITY OF THE EPD

The validity of the EPD® is set at three years after which the declaration must necessarily be revised and reissued.

During the validity period surveillance follow up shall be agreed with the verifier in order to evaluate if the content are still consistent with the current situation. It is not necessary to perform a full LCA, only the monitoring of main parameters is requested. The surveillance verification could be organised as documental check aimed to the evaluation of the main environmental aspects relevant for the LCA calculation.

The EPD shall be updated if one of the environmental indicators has worsened for more than 10 % compared with the data currently published

## 13 CHANGES IN THIS DOCUMENT

VERSION 1.0, 2011-12-21

Original version

VERSION 1.01, 2013-07-17

- Minor editorial changes
- Use of PCR template
- Removed references to “may be defined on a more detailed CPC level” as this PCR is intended to cover UN CPC 322 and its underlying classes.

VERSION 1.02, 2013-10-24

- Updated introductory chapter and general information to latest version.
- Changed name of content declaration
- Updated verification box

VERSION 2.0, 2016-01-12

- Minor changes have been carried out to make the PCR comply with the General Programme Instruction of the International EPD System, version 2.5 dated May 11, 2015.
- The upstream processes have been reorganized:
  - The processes related the production of paper as raw material have been grouped on two regarding the origin of the fibre: paper from virgin fibre (from forestry) and paper from recycling.
  - The processes related to the production of materials o products within the book (varnishes, thread..) and the processes related the production of auxiliary products (such as aluminium plates, solvents, etc) are stated in a group form.
  - The production of “toner” is mentioned specifically, together with printing ink.
- Within the core processes, the scraps and waste treatment generated during core processes have been grouped.
- Within the downstream processes, different “end of life” options have been introduced to calculate the impacts:
  - Taking into account a typical scenario of the area in which the books are mainly distributed.
  - Taking into account a fixed scenario, such as 100% recycling or 50% recycled/50% landfill.
- The environmental impact categories to be reported will be:
  - Emission of greenhouse gases

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- Emission of acidifying
- Emissions of gases that contribute to the creation of ground level
- Emission of substances to water contributing to eutrophication.

Meanwhile the category “emissions of ozone-depleting” and “water footprint” shall be declared in addition.

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