

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

(TOILET OR FACIAL TISSUE STOCK, TOWEL OR NAPKIN STOCK AND SIMILAR PAPER; CELLULOSE WADDING AND WEBS OF CELLULOSE FIBRES)

PCR 2011:05

VERSION 3.0.2

VALID UNTIL: 2026-01-01



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 Functional unit/Declared unit	8
	4.2 Reference service life (RSL)	8
	4.3 System boundary	8
	4.4 System diagram	10
	4.5 Cut-off rules.....	10
	4.6 Allocation rules.....	11
	4.7 Data quality requirements.....	11
	4.8 Recommended databases for generic data	12
	4.9 Impact categories and impact assessment	13
	4.10 Other calculation rules and scenarios	13
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	23
7	References.....	24
8	Version history of PCR	25

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.

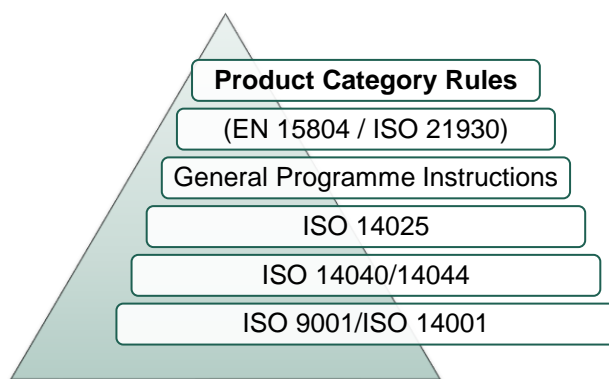


Figure 1 Illustration PCR in relation to the hierarchy of standards and other documents.

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.

TISSUE PRODUCTS
PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Tissue products
Registration number and version:	2011:05, version 3.0.2
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:	Phil Mogel, European Tissue Symposium (ETS)
PCR Committee:	European Tissue Symposium (ETS)
Date of publication and last revision:	2022-04-20, version 3.0.2 See version history in Section 8.
Valid until:	2026-01-01
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 Basic Module, CPC Division 32 Pulp, paper and paper products, etc., version 3.02
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 Tissue products and the declaration of this performance by an EPD. The product category corresponds to UN CPC 32131 Toilet or facial tissue stock, towel or napkin stock and similar paper; cellulose wadding and webs of cellulose fibres. The cellulose fibres may be virgin fibres or recycled fibres, i.e. fibres derived from recovered paper. Product Category Classification: UN CPC 32131 (Toilet or facial tissue stock, towel or napkin stock and similar paper; cellulose wadding and webs of cellulose fibres)

The product groups covered by this PCR include:

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

- Products that consist of at least 90% fibres, the fibres being virgin or recycled, cellulose based natural fibres.
- Parent reels, sheets or rolls of tissue paper fit for use for personal hygiene, wiping, cleaning and absorption.
- The tissue product normally consists of creped or embossed paper in one or several plies. When present, the core in a rolled product is included.
- Laminated tissue products and wet wipes are excluded from the product group.

The product group and UN CPC code shall be specified in the EPD (<http://unstats.un.org/unsd/cr/registry/reqcst.asp?Cl=25>)

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,
- 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

PCR review panel:	<p>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.</p> <p>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.</p>
-------------------	---

3.1.2 VERSION 2.0

PCR review panel:	<p>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.</p> <p>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.</p>
Chair of the PCR review:	Rita Schenck
Review dates:	2015-06-25 until 2015-08-13

3.1.3 VERSION 3.0

PCR review panel:	<p>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.</p> <p>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.</p>
Chair of the PCR review:	Lars-Gunnar Lindfors
Review dates:	2020-08-20 until 2021-02-02

3.2 OPEN CONSULTATION

3.2.1 VERSION 1.0

This PCR was available for open consultation from 2011-03-14 until 2011-04-07, 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.

3.2.2 VERSION 2.0

This PCR was available for open consultation from 2015-02-02 until 2015-04-02, 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.

TISSUE PRODUCTS
PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

3.2.3 VERSION 3.0

This PCR was available for open consultation from 2020-02-14 until 2020-04-10, 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:

Riccardo Balducci and Marco Simoncini, Sofidel

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.
- Global EPD: <https://www.aenor.com/certificacion/certificacion-de-producto/declaraciones-ambientales-de-producto>
- IBU: <https://ibu-epd.com/en/>
- EPD Norway: www.epd-norge.no

No other PCRs for this UN CPC-code were identified.

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 different internal underlying studies.

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 FUNCTIONAL UNIT/DECLARED UNIT

The declared unit shall be **one tonne (1,000 kg) of tissue and its packaging** and shall be declared in the EPD. In addition, data may also be shown using alternative functional units of:

- One square meter of tissue (i.e. different g/m² of tissue), or
- The amount of tissue required to absorb 1 g of water (the determination of the amount of water absorb shall be by using the test method DIN 54 540), or
- Amount of tissue used for a specified functional unit, e.g. amount of paper needed for a hand-drying.

The declared unit shall be stated in the EPD. The environmental impact shall be given per declared unit, and functional unit if applied. 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.

4.3 SYSTEM BOUNDARY

The International EPD® System uses an approach where all attributional processes from “cradle to grave” should be included using the principle of “limited loss of information at the final product”. This is especially important in the case of business-to-consumer communication.

The scope of this PCR, and EPDs based on it, is cradle-to-grave. For the disposable products covered by this PCR the use phase is not relevant since the products are typically single use, i.e. used for a very short time and disposed of immediately afterwards.

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-grave)

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 upstream processes include the following production processes of raw materials needed for the manufacture of tissue products:

- Production of purchased fuels used in the upstream process
- Production process of purchased electricity/steam/heating/cooling used in the upstream processes.
- Forestry, from first thinning to final felling and transport to pulp mill
- Production of functional chemicals and other chemicals used in the core processes.
- Production of other raw materials
- Production of primary and secondary packaging (including cores, if applicable)

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

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 core processes include:

- Production of purchased fuels used in the core process
- Production process of purchased electricity/steam/heating/cooling) used in the core process.
- Transports of raw materials
- Waste transportation and treatment of waste generated during manufacturing
- Pulp production (in the case of virgin fibres)
- Recovered paper process (in the case of recycled fibres) and the transport from the recovered paper process to where the deinked pulp is used.
 - In a separate results column or table, the results for the following process shall be declared for the environmental impact indicators and may be declared for the resource use and waste indicators: an additional process with virgin fibre production, which is a virtual compensation for the for actual fibre loss in the recovered paper process. The paper quality determines which type of fibres to be compensated. The fiber loss estimation shall be justified and documented. Section 5.4.5 provides further guidance on the declaration of the results of this process.²
- Tissue paper manufacturing
- Transport of parent reels (if applicable)
- Converting of products
- Wastewater treatment
- Transports to warehouse for finished products

The production of waste from the recovered paper process, tissue production and converting shall be presented as a total sum split into recovered waste, other waste, and hazardous waste. The waste shall be classified according to the Waste List of the European Waste Catalogue. All waste shall be in dry content.

The following processes are not included:

- The construction and maintenance of factory buildings and infrastructure and related maintenance
- Production and maintenance of manufacturing equipment and related maintenance
- Packaging of raw materials
- Personnel activities
- Pallets
- Business travel of personnel
- Travel to and from work by personnel
- Research and development activities

4.3.1.3. Downstream processes

The downstream processes include:

- Transport of the product to customer, where an average market shall be presented giving an average distance to market
- Disposal of products

² According to previous versions of this PCR, these results were to be declared together with the results of other core processes, but as of this version they have to be separately declared as they reflect a consequential modelling element in an otherwise attributional product model.

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

- Waste management of transport packaging waste (based on scenarios)
- Production of electricity and fuels used in the upstream module

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.

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.

4.3.2.3. Boundaries towards other technical systems

See Section 4.6.2.

4.4 SYSTEM DIAGRAM

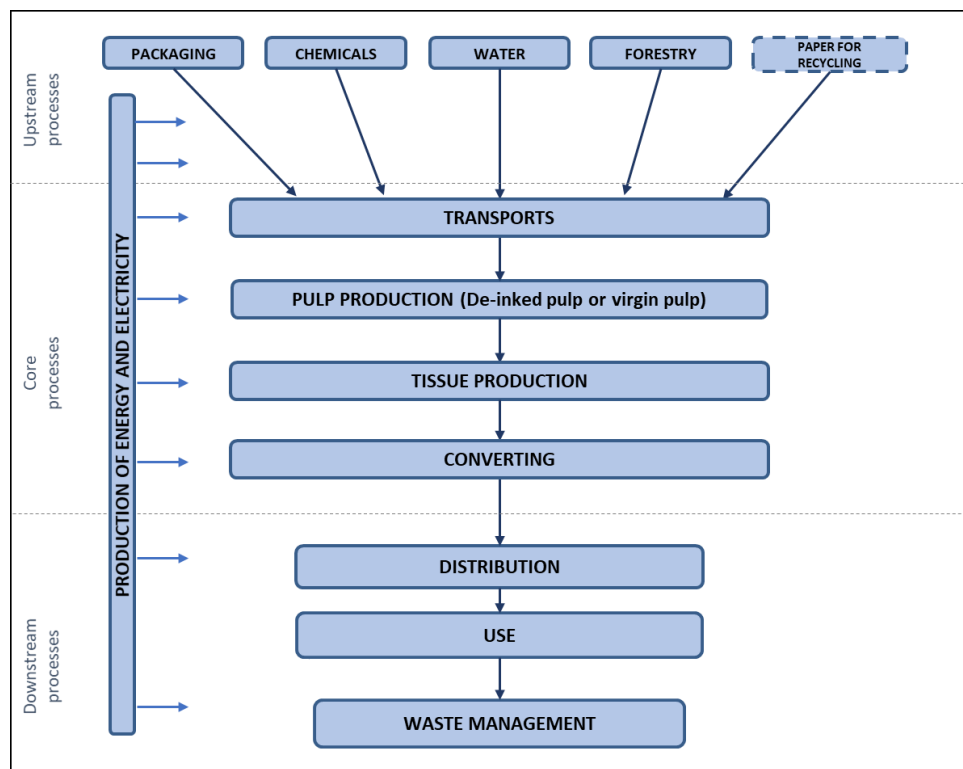


Figure 2 System diagram illustrating the processes that are included in the product system, divided into upstream, core and downstream processes. The dashed process for paper for recycling is to show that only transport of paper for recycling is added.

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

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

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 scrapyard 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, 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:
 1. **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,
 2. **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.

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

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.

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
Energy mixes	Regional	-	Ecoinvent 3.6 or later
Transport	Global/European	-	Ecoinvent 3.6 or later
Forest operations	Global/European	Staffan Berg, Eva-Lotta Lindholm, Energy use and environmental impacts of forest operations in Sweden, Berg & Lindholm 2002 (updated 2005), J. of Cleaner Production 13 (2005) 33-42. <i>Please note the following errors in Table 3: it should be kg instead of g, and in Table 4 it should be g instead of kg.</i>	
Plastics (and precursors)	Global/European	-	Ecoinvent 3.6 or later, Plastics Europe
Packaging	Global/European	-	FEFCO
Other chemicals	Global/European	-	Ecoinvent 3.6 or later
Miscellaneous	USA	-	Latest version

Waste statistics	OECD	OECD Statistics Environment Database - Municipal waste, Generation and Treatment	Latest version: Environment Database – Municipal waste, etc.
Waste statistics	EU	Eurostat https://ec.europa.eu/eurostat/en/web/waste/data/database	Waste generation and waste treatment
Waste processes for paper, PP, PE, PET, plastic mix, PU, viscose, CaCO ₃ , etc.	Global, Europe	-	Ecoinvent 3.1 or later
For other regions of the world, databases with appropriate geographical coverage shall be used, if possible.			

Table 1 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.

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 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.
- 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.³

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.

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 LCA report, where relevant.

Packaging: specific data shall be used for the consumer packaging production 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.

Table 2 gives average conversion factors for round wood assortments from over bark to under bark.

Round wood assortment	Factor
Pine logs	0.880
Spruce logs	0.898
Birch logs	0.885
Pine pulpwood	0.863
Spruce pulpwood	0.864
Birch pulpwood	0.862
All assortments, average	0.875

Data source: Finnish Statistical Yearbook of Forestry 2014;,
http://www.metla.fi/metinfo/tilasto/julkaisut/vsk/2013/vsk13_symbolit_kartat.pdf

Table 2 Conversion factors for going from over bark to under bark volumes. Multiplying the log volume or weight with (over) bark by the factor gives log volume or weight without (under) bark.

4.10.2 CORE PROCESSES

For the electricity used in the core processes, the following requirements apply:

- Specific data shall be used for on-site generation of steam, heat, electricity, etc., where relevant.
For on-site electricity production where no contractual instruments have been sold to a third party: the own electricity mix shall be modelled.
Where contractual instruments have been sold to a third party: the 'country-specific residual grid mix, consumption mix' shall be used.

For purchased electricity the following apply:

1. Specific electricity mixes 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.⁴
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 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.

4.10.3 DOWNSTREAM PROCESSES

The following requirements apply to the downstream processes:

For the disposable products covered by this PCR, the use phase is not relevant since the products are typical single use, i.e. used for a very short time and disposed of immediately afterwards. Use of additional products (e.g. soaps or detergents) is explicitly excluded from the system boundaries.

The use of electricity in the region/country where the product is used (as specified in the geographical scope of the EPD) shall be accounted for in the following priority:

1. National residual electricity mix or residual mix on the market
2. National electricity production mix or electricity mix on the market

The mix of electricity used in the downstream processes shall be documented in the EPD, where relevant.

The transport of the product to the customer shall be described in the EPD, 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, such as 1 000 km transport by lorry or 10 000 km by airplane, according to product type.

Sea transports between continents may be calculated using the following tool: Sea-distances.org. The type of transport and transport distance should be representative to actual conditions on the market for which the EPD is valid.

Waste management of used products and packaging: The waste management shall be based on available municipal solid waste statistics from the region and the models to be used are listed in the table for generic data (see 4.8). Waste management of transport packaging shall be included in the downstream module, based on scenarios for the relevant market.

Scenarios for the end-of-life stage shall be technically and economically practicable and compliant with current regulations in the relevant geographical region based on the geographical scope of the EPD. Key assumptions regarding the end-of-life stage scenario shall be documented.

The calculation of the environmental impacts due to waste management of tissue products and their packaging shall be based on following allocation:

1. Landfilling shall be attributed to the studied process.
2. For the calculation of impacts related to incineration with energy recovery, the environmental impact of the incineration shall be attributed to the waste generator, and the impacts related to making use of the thermal energy shall be attributed to the next product life cycle. In the event of incineration without energy recovery⁵ the product system generating the waste shall include all of the environmental impacts from incineration. If the incineration is with energy recovery, 50% of the impacts of the waste incineration plant may be attributed to waste treatment and 50% to the energy recovery.
3. In case of recycling or other recovery (e.g. composting) impacts shall be borne by the product until it enters the facility gate where the process takes place. Benefits and credits of recovery are outside the system boundaries. An estimation of the avoided impacts due to such recovery could be made and declared separately.

⁵ Incineration with an efficiency of less than 60% is defined as 'without energy recovery' (Guidelines on the interpretation of the R1 energy efficiency formula for incineration facilities dedicated to the processing of municipal solid waste according to Annex II of Directive 2008/98/EC on Waste).

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 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 figures⁶ 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.⁷
 - Contain no blank cells, hyphens, less than or greater than signs or letters (except "INA").

⁶ 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 $1.2 \cdot 10^{-2}$.

⁷ This requirement does not intend to give guidance on what indicators are mandated ("shall") or voluntary.

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

- 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 5.4.6)
- 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 operator⁸,
- Date of publication (issue): 20XX-YY-ZZ,
- Date of revision: 20XX-YY-ZZ, when applicable,
- Date of validity: 20XX-YY-ZZ

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."

A statement of conformity with ISO 14025,

⁸ 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.

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 verification⁹ and reference PCR in a table with the following format and contents:

Product category rules (PCR): <i><name, registration number, version and UN CPC code(s)></i>
PCR review was conducted by: <i><name and organisation of the review chair, and information on how to contact the chair through the programme operator></i>
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: <i><name, organisation and signature of the third party verifier></i> <i>In case of certification bodies:</i> Accredited by: <i><name of the accreditation body and accreditation number, if applicable></i> . <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),
 - Classification of Products by Activity (NACE/CPA) or
 - Australian and New Zealand Standard Industrial Classification (ANZSIC),

⁹ 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.

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

- 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,
- Declared unit, and functional unit if applied.
- 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 following information about the product shall be stated:

- Type of pulp or type of recovered paper (reference may be made to EN-643-2001, especially if the product is to be sold in Europe)
- Bleaching agents
- Group of functional chemicals in descending order (based on mass) according to table 1, if present in final product in more than 2% by mass

Additive	Function/main use
Wet-strength agent	Provides the paper the ability to retain a proportion of its dry strength when it becomes wet. Active ingredients depend on pH in the tissue process.
Dry strength agent	Dry-strength additives increase the tensile and other strength properties of the paper.
Dye	Dye The colour is water-soluble and absorbed on the fibre surface
Fixing agents	To help ensure absorption of the dyes on to the fibres
Fluorescent whitening agent	To impart extra whiteness to the tissue
Glue: laminating glue, pick-up glue, tail seal glue	To achieve a tissue that includes multiple flat tissue layers by gluing them together
Softeners, de-bonders, absorbency aids	A softener interferes with substances in the tissue paper stock, resulting in improved surface softness.
Lotions, perfumes, detergents	
Source: Policy Statement concerning tissue paper, kitchen towels and napkins. Version 1-2004. Public Health Committee	

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

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)¹⁰, 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
- 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.

¹⁰ The GHS document is available on www.unece.org.

5.4.5 ENVIRONMENTAL PERFORMANCE

5.4.5.1. Environmental impacts

The EPD shall declare the environmental impact indicators, per functional 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 information.

In addition, the EPD shall declare the results of the environmental impact indicators for the virtual compensation for actual fibre loss in the recovered paper process (see Section 4.3.1.2), in a separate results column or table. These results shall not be included in the total results column.

5.4.5.2. Use of resources

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

In addition, the EPD may declare the results of the resource use indicators for the virtual compensation for actual fibre loss in the recovered paper process (see Section 4.3.1.2), in a separate results column or table. These results shall not be included in the total results column.

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 functional unit, per life-cycle stage and in aggregated form.

In addition, the EPD may declare the results of the waste indicators for the virtual compensation for actual fibre loss in the recovered paper process (see Section 4.3.1.2), in a separate results column or table. These results shall not be included in the total results column.

5.4.5.4. Other environmental indicators

The EPD may declare other environmental indicators from the inventory or impact assessment, if relevant for the product. Such indicators should be based on international standards or similar methodologies developed in a transparent procedure. Reference to the chosen indicators and methodologies shall be reported.

5.4.6 ADDITIONAL INFORMATION

Additional environmental information is voluntary. Methods used to report such information shall be specified or referenced and justified in the EPD.

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:

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

- 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

A reference section shall include a list of references, including references to 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.

TISSUE PRODUCTS
PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

6 GLOSSARY

CO ₂	Carbon dioxide
CPC	Central product classification
DIN	Deutsche Industrienorm
EC	European Commission
EN	European Standards
EPD	Environmental product declaration
IBU	Institut Bauen und Umwelt e.V.
ISO	International Organization for Standardization
kg	kilogram
MJ	Mega joule
LCA	Life cycle assessment
LCI	Life cycle inventory
PCR	Product Category Rules
PE	Polyethylene
PET	Polyethylene terephthalate
PP	Polypropylene
PPP	Polluter Pays Principle
PU	Polyurethane
RSL	Reference Service Life
SA	Social Accountability standards
SI	The International System of Units
UN	United Nations

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 (2019) General Programme Instructions for the International EPD® System. Version 3.01 dated 2019-09-18.
www.environdec.com

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 (2018), ISO 14067:2018, 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

8 VERSION HISTORY OF PCR

VERSION 1.0, 2011-05-24

- Original version of this PCR for Tissue products

VERSION 1.01, 2013-07-19

- Compliance with to the General Programme Instructions, Version 2.01.
- Use of the latest template

VERSION 2.0, 2015-10-01

- Use of latest template
- Waste treatment of production waste and electricity generation in core process
- Clarification that justification of choices in the underlying LCA shall be done in the LCA report and not in the EPD
- Updated table for generic data
- Clarification of packaging part of product

VERSION 2.01, 2019-09-06

- Clarified terms of use
- Editorial changes

VERSION 3.0, 2021-03-08

- Use of latest template and use of latest GPI
- Clarified use of declared and/or functional unit
- Clarified figure of system boundaries and clarified listing of upstream and core processes
- New requirement on separate declaration of results for the additional, virtual process of virgin fibre production compensating for the fibre loss in the recovered paper process
- Updated table for recommended generic data
- Added table for conversion factors for wood
- Updated Glossary section
- Updated Environmental Performance section according to latest version of the GPI

VERSION 3.0.1, 2022-04-20

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

VERSION 3.0.2, 2024-11-26

- Updated with prolonged validity until 2026-01-01, due to the initiation of a process to update the PCR with a new 5-year validity period.

TISSUE PRODUCTS

PRODUCT CATEGORY CLASSIFICATION: UN CPC 32131

© EPD INTERNATIONAL AB 2024

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/TERMS-OF-USE. 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 / 06PHOTO

