# GENERAL PROGRAMME INSTRUCTIONS FOR THE INTERNATIONAL EPD SYSTEM

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# 1 INTRODUCTION

This document, including its annexes, constitutes the General Programme Instructions (GPI) of the International EPD System. It forms the basis of the overall administration and operation of a programme for Type III environmental declarations according to ISO 14025. A Type III environmental declaration developed in the programme is referred to as an Environmental Product Declaration (EPD).

References to this document should be:

*EPD International (202X) General Programme Instructions for the International EPD System. Version 5.0.0. www.environdec.com.*

Within the present document, the following terminology is adopted:

- The term “shall” is used to indicate what is mandatory, i.e., a requirement.
- The term “should” is used to indicate a recommendation.
- 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.

This document was developed and published in English. Translated versions may be published in addition to the English version, but the English version shall take precedence in case of any discrepancies.

# 2 PROGRAMME OBJECTIVES AND SCOPE

The main objective of the International EPD System is to support organisations in improving their environmental performance by enabling them to transparently communicate quantified environmental information on the life cycle of their products in a credible, comparable, and understandable way. This is done by:

- offering a voluntary programme for verified Type III environmental declarations according to ISO 14025, ISO 14040/14044, and other relevant standards or methodology guidelines, including but not limited to:
  - EN 15804 and, optionally, ISO 21930 for construction products (including both goods and services),
  - ISO/TS 14027 for the development of Product Category Rules (PCR),
  - ISO 14026 for footprint communication, and
  - ISO 14067 for the calculation of carbon footprint-related indicators.
- contributing to make standardised, verified, and life cycle-based environmental information a useful tool in different applications, e.g. by facilitating different applications and increasing digitalisation and digitization,
- helping organisations to meet voluntary and/or mandatory (legislation) requirements and specifications when declaring products' environmental performance in international markets, and
- seeking cooperation and harmonisation with other environmental declarations programmes and initiatives (national, regional, sectorial, etc.) to help organisations broaden the use and acceptance of EPDs . This activity includes:
  - Establishing national and/or regional licensees and co-location centres (CLC) based on and fully aligned with the International EPD System, including the GPI.
  - Bilateral and multilateral mutual recognitions with established programme operators as encouraged by ISO 14025 and ISO/TS 14029, as well as in international membership platforms, the ECO Platform in particular. Especially harmonised technical and methodological requirements agreed on and released by ECO Platform shall be adopted and implemented within a reasonable transition period.
  - Leading and partaking in international PCR harmonisation activities, standardisation, and policy-related initiatives such as CEN (Central European Norm) .

The scope of the programme includes any type of product[1] from any organisation in any country where there is a market demand to communicate its life cycle-based environmental information. The programme operator reserves the right to decline publication of EPDs for certain product categories or countries, e.g., in case of current or future sanctions regimes prompted by the United Nations (UN), the European Union (EU) or others.

The resulting EPDs are open to several applications and target audiences, including but not limited to business-to-business and business-to-consumer communication. It is the responsibility of the EPD owner to ensure that any claims made are compliant with all relevant laws or regulations in the relevant region.

The scope of an EPD in the programme may be both product- and/or project-specific for a single company (covering one or several manufacturing sites), or as the average product of companies in a specific sector and geographical area: a "sector EPD." Similar products from the same company may be included in the same EPD if certain requirements are met. Single-footprint reports, such as climate declarations, may be published in parallel to an EPD as a complementary communication format.

EPDs shall be based on PCRs (Product Category Rules) providing rules and guidelines for defined product categories.

EPD International AB as the International EPD Systemprogramme operator reserves the exclusive right to pilot/test and introduce novel services. Such services may not be defined in the valid GPI but shall facilitate the transparent and credible communication of product performances by making the results comparable, third party-verified and lifecycle-based.

[1] "Product" is defined to include both goods and services.

# 3 GOVERNING DOCUMENTS

Figure 1 outlines the general hierarchy of documents that govern thethe the organisation and operation of the International EPD System. The version of the documents (including any amendments) referenced in this document applies, unless applicable PCR(s) and standards refer to another version. If there are conflicting rules in the documents, these should be resolved by guidance in the GPI or in the applicable PCR. Note that EPD International AB as an organization is ISO 9001-certified and has the objective to become accredited according to other ISO standards to meet future compliance with hard law in, for example, the EU. For clarity's sake, the International EPD System is eligible to fully comply with all relevant standards, including those that have been adopted as c-PCRs.

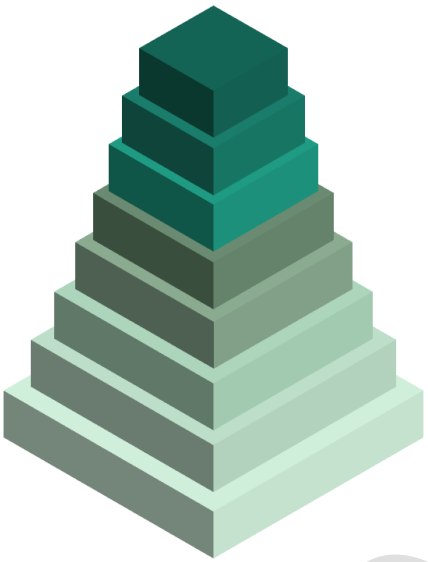


*Figure 1. Essential documents for the governance and operation of the International EPD System.*



 

# 4 PROGRAMME ORGANISATION AND ROLES

The International EPD System is open for any stakeholder to read EPDs[2], participate in PCR development, and be part of the future development of the programme. Its organisational structure includes several parties, in which tasks and responsibilities may be divided into four main processes:

1. Programme administration (see Section 4.1) led by the Secretariat assisted by the Technical Committee (TC) and the International Advisory Board (IAB).
2. EPD development (see Section 4.2) by organisations, such as manufacturing companies or trade associations.
3. Validation and verification (see Section 4.2) involving organisations developing EPDs, and independent verifiers (accredited certification bodies or approved individual verifiers).
4. PCR development (see Section 4.3) led by a PCR Moderator who coordinates the work of a PCR Committee, with input from a broader PCR stakeholder consultation group, the TC, and the Secretariat, which also administers the process.

## 4.1 ROLES IN PROGRAMME ADMINISTRATION

### 4.1.1 PROGRAMME OPERATOR

EPD International AB, a limited company registered in Sweden, is the programme operator and has the overall responsibility for the administration and operation of the International EPD System. The main source of funding for its activities is the fees paid by organisations developing and registering EPDs.

### 4.1.2 SECRETARIAT

The programme operator shall have a Secretariat in order:

- to prepare, maintain, and communicate the GPI,
- to ensure that the GPI are followed,
- to monitor changes in procedures and documents and modify the programme and the GPI, where necessary,
- to ensure appropriate consultations for maintaining the credibility of the programme,
- to facilitate the participation and involvement of interested parties and to publish the names of the organisations involved as interested parties in programme development,
- to establish a procedure to safeguard the consistency of data within the programme,
- to guide and oversee the development of the PCR and to act as the contact between the PCR Moderator/PCR Committee and the TC,
- to establish a transparent procedure for the definition of product categories,
- to establish an accepted open consultation procedure for the programme structure and the PCRs,
- to facilitate harmonisation when developing PCRs,
- to prepare guidelines, checklists, and other tools for PCR development,
- to publish the report from the open consultation and PCR review of PCR development,
- to ensure the consistency of transparent validation and verification procedures for PCR review, validation and verification of Life Cycle Assessment (LCA), and validation and verification of EPD,
- to define additional tasks for the PCR review procedure and for the external individual verifiers (if found necessary),
- to inform the PCR moderator at least one year before the end of the current validity of a PCR,

[2] Terms and conditions may apply.

- to maintain a list of independent verifiers and guide an organisation in the selection procedure,
- to decide upon the necessity of using third-party validations and verifications via rules in the GPI,
- to administer EPD publication based on the verification report and other documentation,
- to manage and maintain the website of the programme,
- to make publicly available and maintain lists and records of PCRs and EPDs within the programme,
- to issue registration numbers and publish PCRs and EPDs in the programme,
- to manage and maintain the database of EPDs in machine-readable format, if existent,
- to issue a newsletter on a regular basis and to maintain a list of subscribers to the newsletter,
- to make publicly available explanatory materials,
- to manage membership in the TC to ensure competent independent PCR Review Panel members and to facilitate its work and meetings,
- to manage membership in the International Advisory Board, and facilitate its work and meetings,
- to establish and maintain mutual recognition agreements between the International EPD System and other established programme operators,
- to follow-up that approved individual verifiers remain active in the field of environmental declarations and report the results to the TC,
- to handle complaints or feedback on published EPDs or other documents, and
- to establish procedures to avoid the misuse of references to the programme, its logotype, ISO 14025, and EPDs published in the programme.

The Secretariat is staffed by the programme operator. Some tasks may be delegated to licensees that manage, for example, customer support and EPD publications for specified regional markets (see Section 5.7).

### 4.1.3 TECHNICAL COMMITTEE

The TC shall assist the Secretariat by:

- acting as the PCR Review Panel update,(see Sections 9.5 and 9.6),
- proposing changes in the general LCA method (see Annex A) and measures for the development of technical and LCA-oriented issues within the framework of the programme,
- supporting the Secretariat in technical issues,
- reviewing medium and large updates of the GPI (see Section 5.1.1),
- approving individual verifiers and suggesting measures for the surveillance of their competences, and
- performing sample checks to ensure that validations and verifications done by individual verifiers are carried out according to the GPI and applicable PCR.The TC has a chair, which shall also be a member of the International Advisory Board (IAB). The TC shall operate according to routines specified in more detail in a separate document.International Advisory Board

The IAB shall provide wise, complimentary counsel regarding market- and policy-related challenges and opportunities EPD International may be facing. The IAB provides oversight, guidance, and expertise to help the Secretariat gain new insights and advice to solve business problems or explore new opportunities, and to stay informed about, for example, industry- and policy-related trends and developments.

The IAB provides strategic advice and expertise to the Secretariat by;

- spotting new, innovative market trends in EPD development, validation and verification,
- following the market acceptance and uptake of the International EPD System and suggest activities and events aimed at promoting its establishment and applicability,
- considering and proposing new potential audiences and applications for EPDs, and

- providing input to the work of preparing the GPI and other activities to revise and update the programme.

The IAB shall advise and assist the Secretariat but has no authority or liability. It has no governance responsibilities and cannot make financial decisions on the Secretariat's behalf. The Secretariat decides whether it will act upon the advice, or not.

The Secretariat coordinates and executes the IAB meetings.The IAB members should contribute in setting and approving the meeting agenda. The IAB will meet with the Secretariat at least four (4) times a year.

The IAB members shall be listed at www.environdec.com and may be contacted via the Secretariat.

### 4.1.4 ACCREDITATION BODIES

Accreditation bodies shall have the role of accrediting certification bodies for carrying out individual EPD validation and verification (see Section 8.4), EPD process certification (see Section 8.5) and/or validation and verification of pre-verified tools (see Section 8.6).

## 4.2 ROLES IN EPD DEVELOPMENT, VALIDATION AND VERIFICATION

### 4.2.1 SECRETARIAT AND TECHNICAL COMMITTEE

The roles of the Secretariat and TC in relation to EPD development, validation and verification are described in Section 4.1.

### 4.2.2 EPD OWNERS

EPDs are developed by manufacturing companies, retailers, or trade associations for their products, either by themselves or assisted by a consultant to carry out the LCA and/or other tasks.

The EPD owner shall have the responsibility to:

- be the sole owner and to have the liability and responsibility of the EPD[3],
- sign the service agreement,
- collect and calculate LCA data and results and other information to be included in the EPD as prescribed in the GPI and the PCR,
- prepare an LCA report (termed "project report" in EN 15804),
- have the LCA report and the EPD (including environmental performance results, additional environmental, social, and economic information, and all other content) independently validated and verified (see Section 8.3) either via:
  - Individual EPD validation and verification by an accredited certification body or approved individual verifier, or
  - EPD process certification by an accredited certification body,
  - Pre-verified tools by an accredited certification body or approved individual verifier.
- establish and maintain follow-up procedures during the validity period of the EPD as defined during the initial validation and verification,
- apply for EPD publication with the Secretariat by providing the prescribed documentation,
- provide the Secretariat with correct invoicing information and to timely pay fees,
- inform the Secretariat in case of updated contact or invoicing information,

[3] The EPD owner has full responsibility for all its activities and use relating to the EPD. The EPD owner is solely responsible for all claims, including product liability claims, that may arise in connection with the EPD owner's use, manufacture and sale of products referring to or using the EPD and the use of the Trademarks of EPD International AB.

- use the International EPD System logotype based on the guidelines in Annex B and in accordance with applicable laws, rules, and standards, and
- inform the Secretariat when the EPD is to be depublished.

### 4.2.3 INDEPENDENT VERIFIERS – ACCREDITED CERTIFICATION BODIES AND APPROVED INDIVIDUAL VERIFIERS

Validation and verification is carried out by approved individual verifiers or accredited certification bodies.The current list of approved individual verifiers is available on www.environdec.com.

Independent verifiers shall have the role:

- to independently seek validation and verification assignments.
- before accepting a validation and verification task:
  - to ensure that they have the necessary knowledge and experience of the types of products, the industry, and the relevant standards of the product covered by the EPD and its geographical scope,
  - to ensure the independence of their role in the validation and verification, and
  - to ensure that they have the necessary language skills for the validation and verification task (e.g., English and the language used in the LCA report).
- after being contracted to perform a validation and verification task:
  - to review the EPD based on the GPI and a valid PCR, including:
    - the underlying data used for the LCA calculations,
    - the way the LCA calculations have been carried out and their compliance with the calculation rules,
    - the presentation of environmental performance results,
    - the presentation of additional environmental, social, and economic information, and
    - any other information included in the declaration.
  - to document the review in a verification report in English,
  - to inform their clients that the publication of an EPD is a mandatory part of developing an EPD, and
  - to carry out any obligations during the validity period of the EPD as set during the original validation and verification.
- to provide the Secretariat with up-to-date contact information,
- to acquire and maintain in-depth knowledge of the International EPD System and its normative standards and to stay up to date on recent developments,
- to provide documentation upon request to the Secretariat proving that the individual verifiers remain active in the field of environmental declarations, and
- to inform the Secretariat if they are no longer active in the field of environmental declarations or no longer actively seeking validation and verification assignments within the International EPD System.

## 4.3 ROLES IN PCR DEVELOPMENT

### 4.3.1 SECRETARIAT AND TECHNICAL COMMITTEE

The roles of the Secretariat and the TC in relation to PCR development are described in Section 4.1.

### 4.3.2 PCR MODERATOR

The PCR Moderator[4] has several tasks related to the development of the PCR, primarily:

- to act as the chair and contact person of the PCR Committee,
- to invite LCA/EPD/PCR experts, industry experts, and other relevant stakeholders to take part in the development of the PCR as part of the PCR Committee, among others by announcing the development process in relevant industry forums and publications, and be open to new stakeholders willing to participate in the PCR Committee,
- to document the above outreach activities, including a list of invited parties, and submit this to the Secretariat within 90 days (about 3 months) of the initiation of the development process (unless a justification for extending this time period is submitted to, and approved by, the Secretariat) and no later than the initiation of the open consultation,
- to promote collaboration between PCR Committee members and seek contributions from them,
- to submit a time plan for PCR development to the Secretariat and inform the Secretariat of any changes to the time plan during the development,
- to propose the scope of product category and identify relevant codes in the UN CPC scheme,
- to lead and be responsible for the overall preparation of the draft PCR by the PCR Committee, including ensuring acceptable quality of the text (e.g. in terms of language and clarity),
- to propose stakeholders to be invited to the open consultation as part of the PCR stakeholder consultation group,
- to act as contact person for stakeholders in the open consultation process,
- to collect and respond to stakeholder comments,
- to lead the updating of the draft PCR based on comments received during the open consultation, make a summary of comments accepted and rejected (and their rationale), and submit these documents to the Secretariat,
- to lead the updating of the draft PCR based on the PCR review, make a summary of the comments and suggested changes accepted and rejected (and their rationale), and submit these documents to the Secretariat,
- to alert stakeholders involved in the process about the outcome of the work and the publication of the PCR,
- to remain as the contact person during the time when the PCR is being used on the market for, for example, collecting suggestions for improvement in upcoming revisions. In case this is not possible, the PCR Moderator shall contact the Secretariat and may suggest another person capable of taking over the duties.
- to, at least six months before the end of the validity period of the PCR, initiate a discussion with the Secretariat on if and how to proceed with updating the PCR to align with the latest GPI, the latest LCA method developments in the sector, and to renew its validity period.

### 4.3.3 PCR COMMITTEE

The PCR Committee is a group of interested parties tasked by the Secretariat with drafting and finalizing the PCR. The task of the PCR Committee is to define the product category and develop the respective PCR.

### 4.3.4 PCR STAKEHOLDER CONSULTATION GROUP

The PCR stakeholder consultation group comprises those stakeholders invited to provide feedback on the draft PCR during the open consultation. Their role is to read and provide comments on the draft PCR during the open consultation.

[4] This role may also be referred to as “PCR Committee Chair”.

# 5 PROCESS FOR PROGRAMME ADMINISTRATION

## 5.1 GENERAL PROGRAMME INSTRUCTIONS (GPI)

The GPI shall be available at the website (www.environdec.com). There are four categories of rules in the GPI, related to:

- **General operation of the programme**. Upon the release of a new version of the GPI, changes in this category of rules should be implemented by the Secretariat and followed within 90 days (about 3 months).
- **EPD development and maintenance, content of EPDs and LCA rules** (see Sections 6 and 7, and Annex A). Upon the release of a new GPI, changes in this category of rules shall be followed in new PCR development and updating processes (unless deviations are justified and approved in the PCR development/updating process, see Section 6) and, after the publication of these PCRs, in EPDs published under these PCRs.
- **EPD validation and verification procedures** (see Section 8). Upon the release of a new GPI, changes in this category of rules shall be followed in new validations and verifications within 90 days (about 3 months).
- **PCR development, maintenance and content** (see Sections 9 and 10). Upon the release of a new version of the GPI, changes in this category of rules shall be followed in any new PCR developments or updates being initiated.

Information about transition periods between different versions of the GPI shall be published at www.environdec.com.

### 5.1.1 UPDATES AND VERSION CONTROL OF THE GPI

There are three types of GPI updates:

- **Large updates** should be done about every three years, to ensure a balance between following the latest developments in, for example, standards, and consistency and market stability. Large updates can include any type of change, including changes in requirements (“shall”). Large updates may be done sooner than after three years, in case of critical external developments, such as new regulation or updates of important standards. Large updates shall be handled by the Secretariat and be subject to an open consultation and 60 days (about 2 months) review by the TC. In large updates, the first digit of the version number shall change and the second and third digits shall be set to zero (e.g., the version number is changed from 5.X.X to 6.0.0).
- **Medium updates** can include any type of change, expect additions of, or changes in, requirements (“shall”). Medium updates shall be handled by the Secretariat and may be reviewed by the TC. In medium updates, the second digit of the version number shall change, and the third digit be set to zero (e.g., the version number is changed from 5.0.2 to 5.1.0).
- **Small updates** shall only concern editorial changes and be handled by the Secretariat. In small updates, the third digit of the version number shall change (e.g., from 5.0.2 to 5.0.3).

A medium or small update shall be done with caution and only if there is a strong justification for it.

Other organizations may be involved at different stages in in each type of updates, for example to provide expertise on a specific subject, if deemed useful by the Secretariat.

After a small or medium update of the GPI, the previous version may be removed from the website. PCRs and EPDs that comply with such previous versions will also comply with the updated version, as no changes in requirements have been done. After a large update of the GPI, the previous version shall be available for download at www.environdec.com as long as there are valid EPDs published under PCRs based on the previous version.

## 5.2 PUBLICATION OF PCRS AND EPDS

PCRs and EPDs published in the programme shall be made available by the Secretariat at www.environdec.com together with relevant complementary information and supporting materials. PCRs and EPDs shall not be published elsewhere unless allowed by an MRA (which may, e.g., allow dual publication of EPDs). Links to the published content may be made externally (including API requests). Data from EPDs may be published externally, provided that the EPD is referenced.

## 5.3 MEMBERSHIP IN THE TECHNICAL COMMITTEE

The TC shall consist of a group of at least eight LCA/EPD/PCR experts. The maximum number of TC members shall be limited to 20 to keep the TC functional. TC members are appointed for a period of 3 years. TC memberships can consecutively be renewed after the Secretariat's written approval for additional 3-year periods without limitations in time. Secretariat shall support the TC members in their activities by the provision of adequate access to material and (online) meeting infrastructure.

### 5.3.1 APPOINTMENT OF MEMBERS TO TC

Membership in the TC shall be based on unsolicited applications, needs expressed by the Secretariat and/or the TC in terms of skills or capability to fulfil the role as TC member, and nominations by EPD stakeholders. The applicant shall submit a CV and a motivational letter to the Secretariat. The TC shall be involved in the recruitment process of applicants, for example by providing feedback on applications by E-mail or at TC meetings. The Secretariat, represented by the CEO, has the sole right to approve new TC members.

In appointing new TC members, the following aspects shall be considered:

- Diversity of the TC with respect to gender, age, national origin, race and/or colour.
- Diversity of TC with regards to sector knowledge/experience and geographical coverage (e.g., in terms of current residency or current/past professional experience). Consideration shall be taken to sectors the Secretariat has identified as growth markets.
- Each member should have at least 15 years of credible life-cycle thinking, life-cycle management, LCA and/or EPD experience, including LCA/EPD critical review/validation/verification experience (proven record of accomplishment).
- TC shall have members with insights/experience from other kinds of ongoing and novel sustainability work, for example related to circular economy, ISO/EN standardization work, eco-labelling, eco-design, EU PEF and the EU Green Deal, organisation-focused sustainability work, etc.
- TC should have members with excellent knowledge in digitalization/digitization, especially regarding standards, data quality and formats, system and tool validation
- TC should have members that are active (contributors, conveyors, etc.) in ISO and other relevant standardisation bodies, to promote LCA and EPD standardisation, harmonisation, and global acceptance.
- TC should have members that are updated on the latest developments in life-cycle thinking, life-cycle management, LCA and EPD from a global point of view, including academic and practical/industry knowledge/experience.

If there is need for additional expertise, for example in PCR reviews or when discussing technical topics at TC meetings, external experts may be consulted.

The members of the TC shall be listed at www.environdec.com and may be contacted via the Secretariat.

### 5.3.2 SUSPENSION OF MEMBERS FROM TC

The Secretariat, in consultation with the TC chair, should initiate adequate measures and/or corrective actions against non-functioning TC members that are consistently and/or repeatedly not delivering on agreed tasks and thereby impede the functioning of the TC in its entirety or parts thereof. Such measures may result in a temporary and/or final suspension of the TC member from the TC. When TC members decide to step down from their TC mandate, the TC member should inform the Secretariat as soon as possible.

## 5.4 MEMBERSHIP IN THE INTERNATIONAL ADVISORY BOARD

The International Advisory Board (IAB) should be a group of diverse experts from various industries, (private and public) organisations, countries and the like so that they can bring their relevant skills, guidance, and knowledge to the Secretariat; it will offer advice to help the the International EPD System grow and achieve its objectives.

- The IAB members should pro-actively work with the Secretariat to implement any strategies, ideas, or projects that result from this advisory work.

- The IAB members shall support the mission of EPD International and use their positions to promote its realisation.

## 5.5 FEEDBACK OR COMPLAINTS

Any stakeholder may contact the Secretariat with feedback or complaints on EPDs, PCRs or other published documents, or on decisions taken during the operation of the programme. Such a complaint shall:

- not be anonymous,
- include a clear description of the scope and nature of the complaint, and
- include a reference to the rule in the GPI, ISO 14025, PCR or other reference that is the topic of the complaint.

The Secretariat should respond to any complaints as soon as possible and contact the organisations that are affected. The Secretariat may temporarily withdraw the document in question from www.environdec.com pending investigation or corrective action by the document owner. If the complaint concerns an EPD and if no corrective action is taken within a reasonable time period, the EPD may be de-published by the Secretariat (see Section 6.6).

## 5.6 AVOIDING MISUSE

The Secretariat should strive to avoid misuse of the programme and its logotype, ISO 14025, and information provided in EPDs published in the programme. Misuse can for example relate to the following:

- According to ISO 14025, Type III environmental declarations are subject to the administration of a programme operator. Information should be available on www.environdec.com to state this requirement. If a document is identified on the market claiming to be compliant with ISO 14025 or EN 15804, but without the involvement of a programme operator, the Secretariat may contact the organisations responsible for the document for corrective action.
- The International EPD System logotype is a registered trademark in selected markets, and its use is limited to EPDs published within the programme. The Secretariat should contact organisations using the logotype without fulfilling this requirement.The International EPD System logotype is not a Type I environmental label and should not be used in a way that may confuse it as such. For further rules and guidance on use of the logotype, see Annex B.
- EPDs published in the programme shall not be used for greenwashing, as this violates the main objective of the programme to support organisations in improving their environmental performance (see Section 2). For example, communication using EPDs or the information in EPDs shall follow applicable marketing legislation.
- In the case of detected misuse of an EPD and by the Secretariat requested corrective actions do not fulfil the Secretariat's expectations on correct use of the EPD as set out in this GPI, the Secretariat reserves the right to temporarily or permanently depublish EPDs to avoid further damage/misuse.
- International EPD SystemInternational EPD System.

## 5.7 ESTABLISHMENT OF LICENSEES

The program operator shall establish routines to ensure that EPDs which have been registered through a licensee fulfil the rules in the GPI and the specific PCR(s). EPDs registered via licensees shall fully comply with the rules in this GPI, be published by the Secretariat in the EPD library at www.environdec.com, and be considered equivalent to other EPDs in all aspects.

An updated list of active licensees shall be available at www.environdec.com.

## 5.8 MUTUAL RECOGNITION WITH OTHER PROGRAMMES

Mutual and multilateral recognition agreements (MRAs) with other EPD programmes make it possible to, for example, adopt PCRs (see Section 9.8) or dual-publish EPDs. MRAs should follow ISO/TS 14029 requirements whenever possible, but shall as a minimum include:

- the scope of the mutual recognition (e.g., only for EPDs, only for EPDs of a specific product category, only for PCRs),
- licensing fee structures,
- procedures for the harmonisation of PCRs and PCR development,
- procedures for validation and verification,
- procedures for registration and publication, and
- procedures to ensure that the conditions for the mutual recognition are kept valid.

An MRA does not necessarily mean that the EPDs of different programmes are comparable as EPDs. EPD International has the ambition to harmonise its rules with peers and other PCR developers to ascertain comparability of EPDs whenever reasonable and requested.

The use of the logotype of the other programme is dependent on the terms and conditions of that other programme.

The list of current MRAs shall be available at www.environdec.com.

When harmonisation of rules via a MRA is not possible and the EPD user requires the use of specific PCRs that are outside the International EPD System for compliance (hard law) reasons in selected applications, the Secretariat may develop, on a case-to-case basis, solutions for restricted and clearly defined uses and/or markets. Such solutions may result in the publication of EPDs (or similar publications) that do not comply with all rules in this GPI; all aspects of non-compliance should be identified and clearly communicated to all involved relevant parties, and all these aspects of non-compliance and the restrictions of the use of the EPD shall be clearly described in the EPD.

## 5.9 GENERAL LCA METHOD

The general LCA method to be used in EPDs published in the International EPD System is described in Annex A and at the website (www.environdec.com/indicators). The latter is for rules and guidance concerning the environmental performance indicators and their methods. PCRs should refer to Annex A and the website for the general LCA method and not repeat any content of Annex A and the website. PCRs may, however, include additions, specifications, and deviations to the general LCA method, the description of EPD content and format (see Section 7) and other rules in the GPI (see Section 6 for more on PCR development). The content at www.environdec.com/indicators shall be linked to a specific version of the GPI and changes shall only be done in connection to GPI updates (see Section 5.1.1), except editorial changes and clarifications (e.g., with regard to developments in external standards) that may be done at any time.

Aspects of the general LCA method that are found to be frequently misunderstood, or not sufficiently clear, may be clarified at the website in the Frequently Asked Questions section (www.environdec.com/faq) or the methodology guidance and examples section (www.environdec.com/methodology). These clarifications shall not include any additions or changes to requirements or recommendations, but may include additions and changes to permissions and guidance.

Information at www.environdec.com/indicators, www.environdec.com/faq and www.environdec.com/methodology shall be connected to a publication date, and removes content shall be archived.

## 5.10 CHECKING COMPETENCE AND QUALIFICATIONS OF VERIFIERS

EPD validation and verification is carried out by approved individual verifiers or accredited certification bodies. Their competence and qualifications shall be checked, approved, and supervised by the Technical Committee supported by the Secretariat or by accreditation bodies.

The checking of competence requirements and the supervision of the verifiers should include the following activities:

- review of the verifier's integrity and independence, documentation of competence, and management capacity (quality system, if existent),
- review on-site, at the verifier's site, and scrutiny of validations and verifications carried out or in progress (if found relevant), and
- supervision (follow-up and review) of the operations of the verifier.

An updated list of approved individual verifiers and accredited certification bodies shall be available via www.environdec.com.

## 5.10.1 COMPETENCE REQUIREMENTS OF VERIFIERS

### 5.10.1.1 Competence requirements for verifiers

The verifier (individual or team of individuals within a certification body) shall be independent (see Section 8.1) and have the following competences:

- general knowledge of industry and product-related environmental matters,
- process and product knowledge and/or experience, including relevant standards, within the product sector in which the verifier intends to perform validations and verifications,
- knowledge and experience of LCA, including ISO 14040/14044,
- knowledge and experience of the relevant standards in the field of environmental labelling and declarations, including ISO 14020, ISO 14025, and EN 15804,
- knowledge and experience of the framework and GPI of the International EPD System and any regional/national licensees under which the verifier intends to perform validations and verifications,
- knowledge of ISO/TS 14071 LCA Critical Review Process and Reviewer Competencies, and ISO 19011 Guidelines for Auditing Management Systems,
- knowledge of the overall regulatory framework in which the concept of EPDs has been introduced, including relevant laws and regulations for the applicable markets,
- experience in reviewing LCAs, validation and verification of EPDs, or the equivalent, and
- sufficient proficiency in English to read and understand the GPI, the PCR and the EPD, and to document the validation and verification in a verification report in English.

### 5.10.1.2 Specific competence requirements for certification bodies

In general, the team of personnel carrying out the validation and verification in a certification body should have:

- at least three years of experience with audits in the specific sector of activity, and
- at least three witness audits in verifying EPDs with a more experienced verifier.

In case the certification body lacks the necessary competence among its own employees, they shall have competence at the management level that make it possible to:

- determine the extent of sufficient competence (as described above) needed for carrying out the validation and verification,
- recruit or contract competent personnel for carrying out reviews and to ensure that they receive adequate training and introduction, and
- ensure that validation and verification are done correctly.

### 5.10.1.3 Specific competence requirements for individual verifiers

The requirements for the qualification of an individual verifier are:

- documented experience as an LCA practitioner during at least five years, and at least five LCA studies performed. Of these studies, at least one shall have been performed in the last five years, include multiple environmental impacts, and have been critically reviewed according to ISO/TS 14071 or formed the basis of a validated and verified EPD, and
- at least five documented critical reviews of LCAs conducted maximum five years prior to the application according to ISO/TS 14071. One of the critical reviews shall involve assessment of multiple environmental impacts. Validation and verification of EPDs in other programmes can also be considered.

In addition to these requirements, general auditor skills and regular auditing or certification experience is an advantage, but not a requirement.

If the independent verifier participates in a training course organized by the International EPD System (physical or online), the requirement on number of performed reviews is reduced to three reviews. Participation in certification or training programmes may be accounted for the requirement of documented experience. In addition, individual verifiers may build up validation and verification experience by using the process described in Section 5.10.3.2, which may be taken into account for the overall assessment. Such observed or guided validation and verification shall be considered equal to having performed LCA critical review to fulfill the requirement above.

In addition to the competence requirements to become an approved individual verifier, the verifier shall ensure that they have knowledge and experience of the types of products, the industry, and the relevant standards of the product covered by the EPD and its geographical scope before taking on a validation and verification task. The description of this process shall be included in the submission of the application as part of the description of verifier's own processes for managing validation and verification activities according to Section 5.10.3.

## 5.10.2 ACCREDITATION OF CERTIFICATION BODIES

Certification bodies may be accredited for EPD validation and verification and/or EPD process certification. The prerequisite to become accredited is to be certified for ISO/IEC 17065 and/or ISO/IEC 17029[5]. Checking the resource requirements of certification bodies shall follow the procedure set in the applicable standard(s) for validation and verification bodies, and consider the competence requirements in this GPI (Section 5.10.1). It is recommended to also include specific product categories and/or sectors.

The accreditation of certification bodies shall be made by accreditation bodies that take part in, follow, and have been accepted into the European co-operation for Accreditation (EA)[6], International Accreditation Forum Multilateral Recognition Arrangement (IAF MLA)[7], or the corresponding multinational cooperation agreements.[8] Such accreditation bodies commit to conformity with ISO/IEC 17011.

An updated list of accreditation bodies offering such accreditation services shall be available at www.environdec.com. The accreditation body shall inform the Secretariat of the services they provide, and of certification bodies currently accredited for EPD validation and verification and EPD process certification.

## 5.10.3 APPROVAL OF INDIVIDUAL VERIFIERS

Experts in LCA and EPD may be approved to carry out EPD validation and verification (i.e., not EPD process certification) as individual verifiers. Declaration of competence in a specific product category is covered by a self-declaration of competence for each validation and verification task. The approval to perform EPD validation and verification as individual verifiers shall, as default, cover all kinds of EPDs published via the International EPD System (sector, product-specific, project-specific, etc.) unless otherwise defined. Approved individual verifiers are free to offer their services in any country, except in the markets of regional/national licensee where further approval may be required.

As ISO/IEC 17065, ISO/IEC 17029 and ISO 14065 are not entirely applicable for individual LCA/EPD experts, a separate procedure described below is used for checking competence and qualifications, following the rationale of the standards, which specifically secures their independence. To start the evaluation procedure as individual verifier, the applicant shall provide the Secretariat with:

- An application form (the template is available at www.environdec.com),
- A CV demonstrating:
  - compliance with the general and specific competence requirements in Section 5.10.1, and
  - any formal qualifications or training related to LCA, EPDs, and/or auditing practice.

[5] Additionally, it is recommended to be certified for ISO 14065, as the standard is a sector application of ISO/IEC 17029:2019 on environmental information.

[6] www.european-accreditation.org

[7] www.iaf.nu

[8] Other corresponding agreements will be added to future versions of the GPI.

 

- A description of the verifier's own processes for managing validation and verification activities, which should follow applicable process requirements according to Section 9 in ISO 17029, and as a minimum cover:
  - a process for managing, storing, and maintaining client-confidential data and information,
  - what information needs to be collected from the client to determine whether to accept or reject the validation and verification task,
  - a process to ensure sufficient knowledge and experience of the product group, relevant standards for the product group, and the geographical area for the specific validation and verification task,
  - a process for maintaining the independence of the validation and verification and the role as individual verifier, including identifying and disclosing conflicts of interest[9], and
  - a process for managing, evaluating, and resolving comments regarding potential deviations that passed through the EPD validation and verification in a prompt and appropriate manner.
- Relevant references.

If the documentation is in any other language than English, an authorized translation of the documents into English shall be submitted. The evaluation of the credentials and approval of the applicant are carried out by the TC supported by the Secretariat. The TC may delegate the task of approving and checking competences of individual verifiers from a regional market to the respective regional/national licensee, if relevant. Information on regional/national licensee performing these tasks shall be published on www.environdec.com. In case the application to become an individual verifier has been rejected, the applicant may reapply again after 12 months from the day the decision from TC was shared with the applicant. Any feedback or complaints on the approval of individual verifiers shall use the procedure described in Section 5.5. The approval of individual verifiers may be withdrawn due to misconduct or other reasons.

The Secretariat and TC reserve the right to check the first EPD validated and verified by an independent verifier to make sure that the EPD and the validation and verification process fulfil the requirements. To support this process and to avoid delays, newly approved verifiers shall inform the Secretariat when a first validation and verification is ongoing to enable planning for such a check by the Secretariat and TC. The Secretariat and TC may also make additional checks of future work done by individual verifiers for quality assurance.

#### 5.10.3.1 Verifier competences

Verifiers should develop, maintain, and improve their competence through continual professional development and regular participation in EPD validations and verifications. Approved individual verifiers shall stay up to date with the development within the International EPD System, shall be active within the field of environmental declarations, and shall actively take on validation and verification tasks. To uphold recognition as an individual verifier, the verifier shall annually:

- participate in meetings held by EPD International AB intended for verifiers, and
- carry out at least one EPD validation and verification within the International EPD System or another appropriate[10] programme for type III environmental declarations, or prepare one PCR in the role of PCR Moderator.

The Secretariat shall initiate the annual check and check the documentation the verifier has sent and report the results to the TC. The verifier is responsible for submitting annually proof that validates their status as a verifier. Inactive verifiers shall no longer perform validation and verification tasks and shall be removed from the listing at www.environdec.com.

The verifier is responsible for providing updated contact information to be published at www.environdec.com. If a verifier is no longer actively taking on validation and verification tasks, the verifier shall contact the Secretariat to be removed from the listing at www.environdec.com.

#### 5.10.3.2 Peer-shadowing programme

Experts in LCA and EPD may build up validation and verification experience through observing an EPD validation and verification and/or a guided validation and verification with an approved individual verifier (the "trainer"). The trainer shall have conducted at least five validation and verification tasks within the last five years within the International EPD System. Furthermore, the trainer shall be responsible that validation and verification shall be carried out in accordance

[9] For example, commercial, financial, or other pressures that compromise the impartiality.

[10] Appropriateness is determined by the Secretariat with the support of the Technical Committee.

with the principles and procedures in Section 7. It is important that the participants of the training program have experience in performing LCAs, including multiple environmental performance indicators, to ensure the effectiveness of building up validation and verification experience.

For observing validation and verification, experts in LCA and EPD may take part in an EPD validation and verification as carried out by an approved individual verifier in the role of observer. The whole process from the perspective of the approved individual verifier, with access to documentation and dialogue between the LCA practitioner and the verifier, shall be observed. The approved individual verifier shall provide the Secretariat with a report of the observed validation and verification, including but not limited to the following:

- a description of the procedure for the observed validation and verification tasks,
- the number of fictive and/or actual EPDs that were validated and verified,
- The GPI version(s) and PCR(s), including their respective versions, to which the EPDs plan to conform, and
- scope of the EPD (e.g., multiple products, conformance with standards such as EN 15804, system boundary, additional indicators).

In a guided validation and verification, experts in LCA and EPD may take part in an EPD validation and verification as carried out by an approved individual verifier. Part of the validation and verification procedure may be jointly performed by the expert and the approved individual verifier. The approved individual verifier shall provide the Secretariat with a report, including but not limited to the following:

- the information required for observing validation and verification, may include the description of the procedure if relevant,
- a description of the procedure for the guided validation and verification tasks,
- evaluation on at least the competence requirements in Section 5.10 and soft skills,
- any major and minor shortcomings, and
- aspect that requires further improvement.

# 6 PROCESS FOR EPD DEVELOPMENT AND MAINTENANCE

Developing an EPD in the International EPD System includes the following main steps:

1. perform LCA study based on PCR (see Section 6.1),
2. compile information in the EPD reporting format (see Section 6.2),
3. validation and verification (see Section 6.3), and
4. publication (see Section 6.4).

A published EPD may be corrected and amended (see Section 6.5). An EPD will normally remain published until the EPD owner requests it to be depublished (see Section 6.6).

The development and maintenance of EPDs are carried out in the EPD Portal (https://portal.environdec.com/). For an organisation to publish EPDs in the International EPD System, it is mandatory to create an account, connected to an organisation, in the EPD Portal. A registration number (S-P-XXXXX) is reserved when initiating the EPD development. The registration number is unique for the EPD and shall not be re-used for another EPD.

EPDs shall only be developed for products on the market or intended to be on the market[11,12].

## 6.1 PERFORM LCA STUDY BASED ON PCR

When developing an EPD, the environmental performance of the product shall be described from a life cycle perspective why one of the main steps is to carry out an LCA of the product. The LCA study may be performed by the organisation itself (in-house) or with the help of a consultant with expertise in LCA and environmental declarations.

The LCA study shall comply with:

- the international accepted principles, framework, methodology and practices for LCA established by ISO 14040 and ISO 14044,
- the general purpose of EPDs in the collection of data, and the methods and assumptions used as advocated in the ISO standard 14025 and described in Annex A of the GPI, and
- the PCR and complimentary PCR (c-PCR) applicable for the specified product category.

The PCR used shall be listed at www.environdec.com and be valid at the time of the validation and verification[13]. The Secretariat may provide guidance in finding the correct PCR, and it should be contacted in case of doubts about the applicability of the PCR to the product in question. The Secretariat may in turn seek support from the PCR Moderator or the TC. If a PCR does not exist for the product category of interest, it may be developed (see Section 6). For products not yet, or recently, on the market, a special procedure for developing EPDs shall be followed (Sections 6.1.1 and 6.1.2).

If an applicable c-PCR exists in the International EPD System, it shall be used together with the applicable main PCR.

If more than one PCR is applicable, the EPD owner may choose to use any of them, but it is recommended to use the one that is more specific in scope in terms of product function. An alternative is to use, and verify the EPD towards, several applicable PCRs, as long as there are no conflicting requirements in the PCRs.

### 6.1.1 EPDS OF PRODUCTS NOT YET ON THE MARKET

Products designed and planned but not yet launched on the market (forthcoming products) may be included in an EPD provided that the EPD owner has a published and valid EPD for a similar product (as defined in Section A.9.1), using

[11] The market does not need to be an open market, but can be a product offered to one or a few customers, for example in public procurement.

[12] For example, if an EPD is developed for a product manufactured at a specific site, the product manufactured at this site shall, at the point of sale, be distinguishable from other otherwise identical products.

[13] The “time of validation and verification” is normally considered to be the date of the verification report, which is also the date on which the EPD validity is based.

the same PCR (i.e., the same first-digit version number). The LCA model of the similar product shall then be used as the basis for the LCA model of the forthcoming product.

An EPD on a similar product is defined as an *EPD sibling* when its LCA model only differs from the LCA model of the forthcoming product in terms of the activity data (e.g., different shares of materials, energy use in the manufacturing process, or distribution distance). If the LCA model of a valid EPD sibling is used when modelling the forthcoming product, the data quality requirements in Annex A and applicable PCR can be assumed to be fulfilled.

**Information to stakeholders commenting in the open consultation**

The concept of "non-sibling EPD" (see below) is considered to be removed as it may not match the overall concept of EPDs based on specific, and verifiable, data. Please let us know what you think.

When differences between products are not limited to activity data but involve larger changes in the LCA model, for example use of different materials in product assembly or the use of a different manufacturing technology (e.g., as change in an existing manufacturing process or as an additional manufacturing process), the EPD of the similar product is defined as *non-sibling EPD*. If the LCA model of the forthcoming product is based on a non-sibling EPD, the EPD owner shall prove that the data quality requirements in Annex A and applicable PCR are met. In such case, the EPD owner may use available inventory data for comparable technologies existing on the market (e.g., data from other manufacturers) or forecast/design data of a manufacturing plant to complement the lack of specific data.

EPDs for forthcoming products shall include, at the cover page and in the product information section, the following disclaimer:

- Product not yet on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty.

Validation and verification of forthcoming products shall be done according to the principles and procedures in Section 7.

EPDs of forthcoming products shall be updated and re-validated and re-verified when there is production data available from one year of production[14]. Once such data is available, updating, re-validation and re-verification shall be done within 90 days, otherwise the EPD shall be depublished. The contract with the verifier shall ensure the verifier takes part in the follow-up activities during the EPD validity period (see the second option in Section 8.4.9).

If it is known that the product will not be produced, the EPD owner shall depublish the EPD in the EPD Portal.

### 6.1.2 EPDS OF PRODUCTS RECENTLY ON THE MARKET

LCI data should be based on data from at least one year of production (see Section A.5.2). If such data is not available because the product has not yet been produced for one year, the LCI data may be based on data from a shorter time period (e.g., three months) provided that the data can be proven to be conservative or representative for 1-year data. In such cases, the EPD shall be updated, and re-validated and re-verified when there is production data for one year of production available. Once such data is available, updating, re-validation and re-verification shall be done within 90 days (about 3 months), otherwise the EPD shall be depublished. The contract with the verifier shall ensure the verifier takes parts in the follow-up activities during the EPD validity period (see the second option in Section 8.4.9).

EPDs of products recently on the market shall include, at the cover page and in the product information section, the product description section the following disclaimer:

- Product recently on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty.

[14] This time period is not related to the version date of the EPD, as production may start months, or even years, after the EPD was approved.

 

## 6.2 COMPILE INFORMATION IN THE EPD REPORTING FORMAT

The results of the LCA study (i.e., the environmental performance results) and other information declared in the EPD shall be compiled in the EPD reporting format (see Section 7 and applicable PCR). This may be performed by the organisation itself (in-house) or with the help of a consultant.

Templates for EPD development and instructions on what information to provide are available at www.environdec.com and https://portal.environdec.com/.

## 6.3 VALIDATION AND VERIFICATION

Validation and verification shall be carried out in accordance with the principles and procedures in Section 7. Mandatory and optional verification reports are available at www.environdec.com.

## 6.4 PUBLICATION

EPDs are published in the EPD portal after the EPD owner has, with or without help of a consultant, completed the mandatory steps, and signed the service agreement (note: a consultant cannot sign the agreement on behalf of the EPD owner).

After publication, EPDs are publicly available at www.environdec.com. The programme operator may also publish EPDs in alternative formats or managed databases to enable further use of the EPD information. The information in alternative formats shall correspond with the information in the EPD.

Upon publication of the EPD, it may be used by the organisation until it has expired or been depublished (see Section 6.6). During this time, the organisation may also use the International EPD System logotype following the guidance in Annex B.Publication shall be done within 90 days (about 3 months) of the version date of the EPD (see Section 8.4.6).

EPD International has the sole publishing rights for EPDs developed using the International EPD System, unless exceptions are allowed by an MRA (see Section 5.2).

### 6.4.1 VERSION CONTROL

The current version date shall be included on the cover page (see Section 7.4.1) and the previous version dates shall be included in a version history (see Section 7.4.11).

### 6.4.2 COST AND FEES

There is a fee structure associated with the publication of EPDs in the International EPD System, which is the main source of funding for the operation of the programme. These fees may be one-time fees or recurring fees (e.g., annual) to maintain publication, and continued use of the EPDs. Up-to-date information about fees shall be available at www.environdec.com. The fee structure and fees should be revised annually.

Fees should be invoiced to the EPD owner based on the invoice address provided in the publication process.

### 6.4.3 REPORTING SINGLE ENVIRONMENTAL PERFORMANCE RESULTS

After publication of an EPD, it is possible to adapt the information given to specific user needs and market applications with the concept of single-footprint reports, also available for download in the EPD Portal. A single-footprint report may, for instance, have the form of a climate declaration, extracting the information related to climate change based on the environmental performance results declared in the EPD. A single-footprint report shall only be published if an EPD is published for the same product.

Single-footprint reports shall include the following information as a minimum:

- information about the owner of the document (including contact information),
- information about the product,
- life-cycle stages covered,

- description of the declared or functional unit,
- declaration of the environmental performance results for the chosen environmental issue based on the corresponding results as declared in the EPD,
- statements on cover page that the report is a single-footprint report and does not comply with ISO 14025 and other reference standards/documents (e.g., EN 15804 or applicable PCR) that require declaration of a range of indicators,,
- information on how to obtain information about other environmental issues of the declared product through the published EPD, and
- a statement that: “This single-footprint report only addresses one environmental issue and does not assess other environmental issues of the product. Other environmental issues may be of equal or greater importance than the issue covered by the displayed results.”

## 6.5 UPDATE

An EPD owner may choose to make amendments or other changes to an EPD during its period of validity, for example as an output of the annual follow-up (see Section 8.4.9).

An updated EPD shall undergo re-validation and re-verification, except when only editorial changes (see Section 8.4.10)

An updated EPD shall include a new version date on the cover page and a description of the differences versus the previous version (see Section 7.4.11).

An updated EPD should keep the same registration number as the previous version, also if it is updated according to a new PCR.

Substantial changes of the product information covered by an EPD (see Section 6.5.1) shall be treated as a separate EPD publication and not an update of an existing EPD.

### 6.5.1 WHEN AN UPDATE IS MANDATORY

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

- an increase of 10% or more in the aggregated results over included life-cycle stagesffor any of the declared environmental performance indicators,
- errors in the declared information (see Section 5.5 for the procedure to handle complaints), or
- significant changes to the declared product information, content declaration, or additional environmental, social, or economic information.

If such changes have occurred, but the EPD is not updated, the EPD owner shall depublish the EPD (see Section 6.6).

## 6.6 DEPUBLICATION

Depublication of an EPD is when it is made no longer publicly available at www.environdec.com. This may be done in the EPD Portal by the EPD owner or the Secretariat.

The Secretariat may depublish EPDs if fees are not paid in due time, in case the EPD owner does not comply with the terms and conditions, or if the EPD contains errors that are not corrected by the EPD owner in time. Such EPDs may be published again by the Secretariat, in case fees are paid, the terms and conditions are again fulfilled, or the errors are corrected.

Depublished EPDs shall not be considered valid, even if the validity period as stated in the EPD has not passed.

Depublished EPDs shall no longer be used. This means that no communication shall be made from the EPD owner that could confuse stakeholders to believe the EPD is still published and valid.

The EPD owner may choose to keep an EPD that has passed the period of validity (i.e., is expired) published at www.environdec.com for, for example, record keeping. Even if it remains published, the expired EPD and its content shall not be used in any kind of market application (e.g., public procurement, software programmes) and/or the market in general, unless an exception in writing is made by the programme operator and accepted by the intended user of the EPD information.

For expired EPDs to become valid again, the validity period has to be renewed within 1 year from its expiration. Otherwise, the EPD shall be published as a new EPD (e.g., with the payment of a new registration fee).

The Secretariat may share depublished EPDs upon request, provided the EPD owner accepts this.

## 6.7 ARCHIVING

An EPD should be archived when there is no intention to again publish the EPD at www.environdec.com. This may be done in the EPD Portal by the EPD owner or the Secretariat. Archived EPDs shall be seen as expired, even if the validity period as stated in the EPD has not passed.

The archive shall be maintained by the Secretariat.

Archived EPDs can be made available upon request, provided the EPD owner accepts this.



 

# 7 CONTENT AND FORMAT OF EPD

General rules on content and format of EPDs registered in the International EPD System are listed below. Additional or deviating requirements on the content may be set in the applicable PCR. A generic template for EPDs is available at www.environdec.com, but other layouts and formats are allowed.

As a general rule, the EPD content shall:

- be in line with the rules and guidelines in ISO 14020 (Environmental labels and declarations – General principles),
- be verifiable, accurate, relevant, and not misleading, and
- not include rating, judgements, or direct comparisons with other products[15, 16].

For EPDs for construction products compliant with EN 15804, the communication format of the EPD shall be in accordance with EN 15942.

An EPD can be published in one or several formats, for example as a pdf and/or a machine-readable format. Different machine-readable format can be used (e.g., the ILCD+EPD+, OpenEPD or ISO 22057 format), to meet the market's expectations and demands on applicability and usefulness. When published only in a machine-readable format, all mandatory information according to the GPI and PCR, that is missing in the data entries in the specific machine-readable format, shall be added to the EPD Portal to complement the machine-readable format. The content of EPDs published in different formats shall be consistent with each other.

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

## 7.1 EPD LANGUAGES

EPDs should, whenever possible, be published in English as a minimum to ensure global applicability and usefulness, but they may also be published in other languages. All EPD versions in different languages that are subject to publication in the International EPD System shall have identical content and be subject to third-party validation and verification. The verifier may initiate the validation and verification process according to Section 8 with one version and use it as a reference for cross-checking the others.

When English is not used, the EPD shall contain an executive summary in English that includes the main content of the EPD (see Section 7.4.14). This executive summary is part of the EPD and, thus, also subject to the validation and verification process.

## 7.2 UNITS AND QUANTITIES

The following requirements apply for units and quantities:

- The International System of Units (SI units) shall be used where available, 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 ($m^3$).
  - 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.
  - Results of the environmental performance indicators shall be expressed in the units prescribed by the impact assessment methods, e.g. kg $CO_2$ equivalents.

[15] Therefore, results of normalization are not allowed to be reported in the EPD.

[16] "Other products" include previous or alternative versions of the studied product, i.e., the EPD shall not display changes in the environmental performance results of a product over time, or differences with regard to a hypothetical version of the product using, e.g., alternative production processes or input materials.

 

- Two significant digits[17] should be adopted for all results. The number of significant digits shall be appropriate.

  **Information to stakeholders commenting in the open consultation**
  Displaying results with two significant digits is a change from the three significant digits of the previous GPI. This change is suggested as two significant digits better reflect the typical precision and accuracy of LCA results. Showing results with three significant digits gives, in general, a false sense of precision and accuracy.

- Scientific notation may be used, e.g. 1.2E+2 for 120, or 1.2E-2 for 0.012.
- The thousand separator and decimal mark in the EPD shall follow one of the following styles (a number with six significant digits shown for illustration):
  - SI style (French version): 1 234,56
  - SI style (English version): 1 234.56

  In the event of potential confusion or intended use of the EPD in markets where different symbols are used, the EPD shall state which symbols are used for thousand separator and decimal mark.
- Variations, in percentage, between two numbers shall be calculated by dividing the absolute value of the difference between the numbers by the average of the numbers, and then multiplying by 100. See example in footnote[18].
- Dates and times presented in the EPD should follow the format in ISO 8601. For dates, 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 “ND” (Not Declared). It is not possible to specify ND for mandatory environmental performance indicators. ND shall only be used for optional indicators that are not quantified because no data is available.[19]
  - contain no blank cells, hyphens, less than or greater than signs, or letters (except “ND”).
  - use the value “0” only for parameters that have been calculated to be zero.
  - use footnotes to explain any limitation to the result value.

## 7.3 USE OF IMAGES AND GRAPHICS

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, and wildlife that are not related to the declared product shall, 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.

EPDs claiming compliance with ISO 14026 shall fulfil the the requirements on footprint graphics in ISO 14026.

## 7.4 EPD REPORTING FORMAT

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

- Cover page (see Section 7.4.1)
- General information (see Section 7.4.2)

[17] Significant digits are those 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 1.2E+2 and 1.2E-2.

[18] For example, if the variation between the values 9 and 10 is calculated, the following calculation shall be made: 1/9.5*100 = 10.526…% ≈ 11% (with two decimals).

[19] This requirement does not intend to give guidance on which indicators are mandatory or optional.

- Programme information
- PCR and verification
- Ownership and limitations on use of EPD

- Information about EPD owner (see Section 7.4.3)
- Product information (see Section 7.4.4)
- Content declaration (see Section 7.4.5)
- LCA information (see Section 7.4.6)
- Environmental performance results (see Section 7.4.7)
- References (see Section 7.4.13)
- Abbreviations (see Section 7.4.12)

The following information shall be included, where applicable:

- Additional environmental information (see Section 7.4.8)
- Additional social and economic information (see Section 7.4.9)
- Information related to sector EPDs (see Section 7.4.10)
- Differences versus previous versions (see Section 7.4.11)
- An executive summary in English (see Section 7.4.14)

### 7.4.1 COVER PAGE

The EPD shall include the following on the cover page:

- Product name
- 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 operator[20]
- Version date: 20XX-YY-ZZ
- Validity date: 20XX-YY-ZZ
- Statement: “An EPD should provide current information and may be updated if conditions change. It is recommended to confirm the validity of the EPD at www.environdec.com.”
- A statement of conformity with ISO 14025

In the case of EPDs registered through a regional or national licensee (see Section 5.7), the cover page shall in addition to above information include the following:

- Name of the licensee

Where applicable, the cover page shall also include the following:

- For EPDs registered under PCR 2019:14 Construction products: a statement of conformity with EN 15804:2012+A2:2019/2021 or later versions of EN 15804 (if published), and ISO 21930, if applicable.

[20] The EPD shall not include a “registration number” or “certification number” if such is provided by the certification body, as this may be confused with the registration number issued by the programme operator.

- For EPDs registered under PCR 2019:14 Construction products: ECO EPD logotype as approved by the ECO Platform
- For EPDs registered under PCR 2019:14 Construction products: “EPDs of construction products may not be comparable if they do not comply with EN 15804”,
- For EPDs of multiple products: a statement that the EPD covers multiple products and a list of all products covered by the EPD (if the EPD covers more than 10 products, the list of products may instead be included in product information section in the EPD; then this list shall be referred to on the cover page) and information on the type of EPD: “EPD of multiple products, based on the average results of the product group”, “EPD of multiple products, based on a representative product”, or “EPD of multiple products, based on worst-case results”.
- For sector EPDs: a statement that the EPD is a sector EPD.
- For EPDs of products not yet on the market (see Section 6.1.1): a disclaimer saying “Product not yet on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty”.
- For EPDs of products recently on the market (see Section 6.1.2): the following disclaimer: “Product recently on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty”.
- When relevant, information about dual publication[21] of EPD in another programme, such as registration number and logotype.
- When relevant, a statement of conformity with other standards (e.g., ISO 14067, ISO 14026) and methodological guidelines.

See the brand book for layout examples for the cover page (EPD International 2023b).

## 7.4.2 GENERAL INFORMATION

### 7.4.2.1 Programme information

The EPD shall include the following in the subsection on programme information:

- The address of the programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: info@environdec.com

### 7.4.2.2 Product category rules

The EPD shall include information about the PCR (and c-PCR, if applicable) used according to Table 1.. Any text displayed in grey is solely for guidance and shall not be included in the EPD.

*Table 1. Information on Product Category Rules (PCR).*

| **Product Category Rules (PCR)** |
|---|
| *For EPDs of construction products:*<br>CEN standard EN 15804 serves as the core Product Category Rules (PCR)<br>*If the EPD complies with ISO 21930, “ISO standard ISO 21930” shall be added to the above text.* |
| Product Category Rules (PCR): *<name, registration number, version and UN CPC code(s)>*<br>*If applicable, the corresponding information about complementary Product Category Rules (c-PCR) shall also be included.* |
| PCR review was conducted by: *<name and organisations of the review chair, and information on how to contact the chair through the programme operator>*<br>*If applicable, the corresponding information about complementary Product Category Rules (c-PCR) shall also be included.* |

[21] Dual publication was formerly (GPI 4 and earlier) referred to as dual registration.

#### 7.4.2.3 Validation and verification

The EPD shall include information about validation and verification according to

Table 2. Any text displayed in grey is solely for guidance and shall not be included in the EPD.

*Table 2. Information on validation and verification.*

| **Validation and verification** |
|---|
| External and independent ('third-party') validation and verification of the declaration and data, according to ISO 14025:2006, via:<br>☐ EPD validation and verification by a third-party verifier<br>☐ EPD validation and verification by EPD Process Certification*<br>☒ EPD validation and verification by a pre-verified LCA/EPD tool and a verifier<br>☐ EPD validation and verification by a pre-verified and integrated EPD tool<br>In case of individual verifier:<br>Third-party verifier: *<Name, and organisation of the individual verifier>*<br>Approved by: The International EPD System<br>In case of certification bodies:<br>Third-party verifier: *<Name of certification body (incl. address.) issuing the certification>*<br>Accredited by: *<Name of the accreditation body>*<br>In case of pre-verified LCA/EPD tool and a verifier<br>Third-party verifier: *<Name, and organisations of the individual verifier>*<br>Verifier approved/accredited by: *<"The International EPD System"/name of the accreditation body>*<br>Tool name and version: *<tool name and version>*<br>Third-party verifier, accountable for the tool validation and verification: *<Name and organisations of the individual verifier/certification body that performed the validation of the tool>*<br>Verifier approved/accredited by: *<"The International EPD System"/name of the accreditation body>*<br>Include disclaimer in all cases.<br>*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent validation and verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.envrondec.com. *International EPD System* |
| Procedure for follow-up of data during EPD validity involves third-party verifier:<br>☐ Yes ☐ No |

Note that procedure for follow-up the validity of the EPD is at minimum required once a year with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period (see Section 8.3.2). The follow-up can be organized entirely by the EPD owner or together with the original verifier via an agreement between the two parties. In both approaches, the EPD owner is responsible for the procedure being carried out. If a change that requires an update (see 6.5.1) is identified, the EPD shall be re-validated and re-verified by a verifier.

#### 7.4.2.4 Ownership and limitations on use of EPD

The EPD shall include the following information about ownership and limitations on use of EPD:

- A statement that: "The EPD owner has the sole ownership, liability, and responsibility for the EPD."

- A statement, adapted from ISO 14025, that: “EPDs within the same product category but registered in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); apply identical impact assessment methods (including the same version of 30haracterization factors); and be valid at the time of comparison.”

### 7.4.3 INFORMATION ABOUT EPD OWNER

The EPD shall include the following information about the EPD owner:

- Address and contact information of the EPD owner.
- Description of the organisation of the EPD owner. This may include information on product-related 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).
- Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable.

This section may also include:

- Visual representation (e.g., an image) of the EPD owner as an organisation

### 7.4.4 PRODUCT INFORMATION

The EPD shall include the following information about the product:

- Product identification by name, and an unambiguous identification of the product by standards, concessions, or other means.
- Visual representation (e.g., an image) of product[22]
- Identification of the product according to the UN CPC scheme system, if there is an applicable UN CPC identification number. Other relevant codes for product classification may also be included, for example:
  - Common Procurement Vocabulary (CPV),
  - UN Standard Products and Services Code® (UNSPSC),
  - Classification of Products by Activity (NACE/CPA),
  - Australian and New Zealand Standard Industrial Classification (ANZSIC), or
  - Global Trade Item Number (GTIN)[23, 24]. Note that if the GTIN used when ordering a product is different from the GTIN used when delivering a product, the GTIN used in the ordering system is preferable in an EPD.
- Description of the product, description of the technical purpose of the product, including its application/intended use.
- Technical and/or actual lifespan, if applicable.
- Location of the production site(s), including, as a minimum, the city (or municipality, if not located in a city).
- References to any relevant websites for more information or explanatory materials.

This section may also include:

- List of products (see Section 7.4.1)

[22] A visualisation of the product may also be included on the cover page.

[23] GTINs need to be verified and accessible here: https://www.gs1.org/services/verified-by-gs1/results.

[24] If a Global Model Number (GMN) is established on the market, which groups several producer-specific GTINs to a common product type, GMN may be used instead of GTIN, or as a complement.

- Name of manufacturer(s) and site(s)
- Description of the material properties of the product with a declaration of relevant physical or chemical product properties, such as density, etc.

### 7.4.5 CONTENT DECLARATION

The EPD shall include a section on content declaration including the following (see also examples below):

- The weight of one unit of a product, as purchased or per declared unit, and contain information about the content of the product in the form of a list of materials and substances, including information on biogenic and post-consumer recycled[25] content.
  - Proprietary materials and substances of confidential nature are exempted from the above requirement (see Section 8.2.3). If not declared, these shall be replaced by a generic term/description of the material/substance and/or a range of values (instead of specific values), provided that the applicable rules or declaration of hazardous are followed (see below).
- The weight and the content of distribution and/or consumer packaging, when relevant.
- The gross weight of material in the content declaration shall cover 100% of one unit of product and its packaging. If there is more than 5% (post-consumer) recycled or biogenic content in the product, this shall be declared (if below 5%, this may be declared). If there is more than 5% biogenic content in the packaging material, this shall be declared (if below 5%, this may be declared). Also (post-consumer) recycled content of the packaging material may be declared.
- For EPDs of multiple products or sector EPDs, a description what the content declaration represents.
- Information on the environmental and hazardous/toxic properties of substances contained in the product, irrespective of whether the substances have been included or excluded from the LCA model based on, for example, the cut-off rules. For EPDs intended to be used in the EU, the following regulations shall be considered[26]:
  - 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); and
  - 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.
- Other information on substances with hazardous/ toxic properties that can be of concern for human health and/or the environment, if required by normative standards or regulation applicable in the market for which the EPD is intended to be used.

Information on the environmental and hazardous properties of substances should follow the requirements given in the latest revision of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS),[27] issued by the UN or national or regional applications of the GHS.

Claims that a product is “free” of a specific hazardous material or substance should be done with caution and only when relevant, following the rules in ISO 14021 on self-declared environmental claims. For example, such a claim shall not be done with the material/substance that has never been associated with the product category, is not included in the product category, or if the product category is legally required not to include the material/substance in the market(s) covered by the geographical scope of by the EPD.

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[25] Only post-consumer recycled materials shall be considered in the content declaration. Note that *secondary materials* are defined differently and is therefore a complementary indicator included in the environmental performance result (see www.environdec.com/indicators), which accounts for both pre-consumer and post-consumer waste as outlined in ISO 14021.

[26] This means that, for EPDs intended to be used in the EU, the substances in the Candidate List of Substances of Very High Concern (SVHC) which exceeds the limits for registration with the European Chemicals Agency (i.e., if the substance constitute more than 0.1% of the weight of the product or any component of the product) shall be declared. The Candidate List of SVHC is available via the European Chemicals Agency (https://echa.europa.eu/candidate-list-table)

[27] The GHS document is available at www.unece.org.

Additional rules for the content declaration may be set by the PCR, for example which materials and substances to declare.

The content declaration may not be relevant for EPDs for intangible products, such as services. If not relevant, the PCR shall specify that the content declaration shall not be included in EPD.

*Table 3. Example on content declaration of the product(s).*

| **Product content** | **Weight, kg** | **Post-consumer material, weight-%** | **Biogenic material[1], weight-%** | **Biogenic material[1], kg C/kg** |
|---|---|---|---|---|
| Filler | 0.35 | 35 | 0 | 0 |
| Pigment | 0.35 | 35 | 0 | 0 |
| Polymer | 0.20 | 10 | 10 | 5 |
| Other | 0.10 | 10 | 0 | 0 |
| **Total** | **1** | **90** | **10** | **5** |
| Note 1 | 1 kg biogenic carbon is equivalent to 44/12 kg of $CO_2$ | | | |

*Table 4. Example on content declaration of the packaging.*

| **Packaging materials** | **Weight, kg** | **Weight-% (versus the product)** | **Biogenic material[1], kg C/kg** |
|---|---|---|---|
| Steel | 0.05 | 5 | 0 |
| **Total** | **0.05** | **5** | **0** |
| Note 1 | kg biogenic carbon is equivalent to 44/12 kg of $CO_2$ | | |

*Table 5. Example on content declaration of hazardous substances.*

| **Hazardous substances from the candidate list of SVHC for Authorisation** | **EC No.** | **CAS No.** | **Weight-% per functional or declared unit** |
|---|---|---|---|
| Isobutyl 4-hydroxybenzoate | 224-208-8 | 4247-02-3 | 0.5 |
| 1,4-dioxane | 204-661-8 | 123-91-1 | 0.2 |

### 7.4.6 LCA INFORMATION

The EPD shall include a section on LCA information including the following:

- Geographical scope of the EPD per module or life-cycle stage (or other division of the product life cycle, if defined in the PCR), i.e. which countries or regions have the processes in modules A1-A5 been modelled to represent, and which countries/regions have the use (module B) and end-of-life (module C) of the for which geographical location(s) of use and end-of-life the products been modelled to represent. Declared/functional unit, and conversion factor to mass if mass is not used as declared unit.
- Reference service life (RSL) and its relationship with the technical/actual lifespan, if applicable.
- Description of the EPD system boundary as “cradle-to-gate,” “cradle-to-gate with options,” “cradle-to-grave” or any other type of system boundary defined in and permitted by the PCR.
- Information on which life-cycle stages are not considered (if any), with a justification for the omission.
- Process flow diagram of the product system, divided into the life cycle stages and modules (or other division of the product life cycle, if defined in the PCR), showing the system boundary of the LCA.
- Reference to the main database(s) for the generic data and LCA software used, if relevant.
- Declaration of the year(s) the data of the manufacturing processes in module A3, and other relevant processes, represent,

- Share of specific data and, if applicable, variation in GWP-total results between products and sites, see Table 6 for an example.
- Information on the modelling of infrastructure/capital goods, if relevant, in line with requirements in Section A.3.1.2.
- Description of scenario(s), if applicable.
- List of characterisation methods and factors used, with reference to the source(s). The list shall include a description of the version number (e.g., EF 3.0 or EF 3.1) of the EN 15804 reference package used, if applicable.

This section may also include:

- Any additional information about the LCA, such as cut-off rules, data quality, allocation methods, other methodological choices and assumptions, and results from the interpretation (uncertainty, sensitivity, or contribution analyses). EPDs claiming compliance with ISO 14026 shall include quantitative or qualitative information about the uncertainties of the LCA results.

Above information may be declared in a table, see Table 6 for an example. If reported in a table, the following rules apply:

- Modules declared:
  - Modules declared shall be noted with “X.”
  - Modules not declared shall be marked as “ND.”
- Geography:
  - Geographical representation per module shall be reported. This reporting shall be done by the country code(s) (e.g. UK, FR, DE) and/or name of the region(s) (e.g. EU 27, Global).
- Share of specific data used:
  - The share of the GWP-total results in A1-A3 (A1-A5 for services, or for other life-cycle stage if defined by the PCR) coming from specific data shall be reported in the EPD. If more than 90% specific data is used, “>90%” may be reported. See Section A.5.1 for a definition of specific data.



 

*Table 6. Example for the reporting of modules declared, geographical scope, share of specific data (in GWP-GHG results) and variation in GWP-GHG results between products and sites. Share of specific data and variation shall be reported for A1-A3 in EPDs of goods and for A1-A5 in EPDs of services.*

| | **Product stage** | | | **Construction /instalation stage** | | **Use stage** | | | | | | | **End-of-life stage** | | | | **Beyond product life cycle** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Construction/installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse/recovery/recycling potential |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Modules declared | | | | | | | | | | | | | | | | | |
| Geography | | | | | | | | | | | | | | | | | |
| Specific data used | - | | | - | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | - | | | - | | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | - | | | - | | - | - | - | - | - | - | - | - | - | - | - | - |

## 7.4.7 ENVIRONMENTAL PERFORMANCE

The EPD shall include a section on environmental performance including the following:

- LCA results of the product or service. See Section A.8 and applicable PCR for rules on this declaration, including the indicators and impact assessment methods to use.
- A statement that “the environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks” (adopted from EN 15804).
- Declare whether the EN 15804 reference package based on EF 3.0, EF 3.1 or a later version has been used.
- If applicable, a statement that recommends considering the results of end-of-life stage in the use of results of the production stage. For example, “The results of end-of-life stage (module C) should be considered in the use of the results of production stage (modules A1-A3 or A1-A5 for services).”

In addition to the main environmental performance results, this section may declare additional LCA results in a separate subsection. The subsection with additional LCA results shall clearly describe the scenario/method used to calculate the results, including how it differs from the scenario/method of the main environmental performance results. The following additional results may be included:

- Results for additional scenarios for modules A4-C4 (the downstream stage). If this is done, the most representative scenario (for the geographical scope of the EPD) shall be declared as the main environmental performance results, and the other scenarios shall be declared in the separate subsection.
- Results of alternative LCA modelling, if such an alternative modelling approach is explicitly allowed by the applicable PCR or the GPI. This GPI allows two alternative modelling approaches:
  - Alternative GWP-biogenic results, if GWP-biogenic would allow consideration of permanent (more than 100 years) storage of biogenic carbon, either in the product, in a landfill, or because of applying carbon capture and storage (CCS) to the incineration of biogenic carbon.
  - Alternative results using market-based biogas modelling of biogas (see Section A.5.4).

### 7.4.8 ADDITIONAL ENVIRONMENTAL INFORMATION

An EPD may declare additional environmentally relevant information not derived from the LCA, such as:

- the release of dangerous substances into indoor air, soil, and water during the use stage,
- instructions for proper use of the product, e.g., to minimise energy or water consumption or to improve the durability of the product,
- instructions for proper maintenance and service of the product, e.g., to minimise energy or water consumption or to improve the durability of the product,
- information on key parts of the product that determine its durability,
- information on recycling including, e.g., suitable procedures for recycling the entire product or selected parts and the potential environmental benefits gained,
- information on a suitable method of reuse of the product (or parts of the products) and procedures for disposal as waste at the end of its life cycle,
- information regarding disposal of the product, or inherent materials, and any other information considered necessary to minimise the product's end-of-life impacts,
- information on carbon neutrality claims or commitments for the product and/or an organisation, that complies with ISO 14068, and
- a more detailed description of an organisation's overall environmental work, in addition to the information listed in the section on information about EPD owner **Error! Reference source not found.**, such as:
  - the existence of any type of organised environmental activity,
  - information on where interested parties may find more details about the organisation's environmental work.

Any additional environmental information declared shall be substantiated and verifiable, and be derived using appropriate methods and be specific, accurate, not misleading, and relevant to the specific product. Quantitative information is preferred over qualitative information.

The PCR may specify rules on additional environmental information to be declared in the EPD (see Section 9.3.4).

It is recommended to add information enabling the possibility to make comparisons with sector benchmarks (outside of the EPD) or, if not available, with benchmarks of common products and services preferably based on the concept of declared/functional unit, which is useful for scaling the environmental impacts of different activities, products, and services. Such comparisons shall, however, never be done in the EPD.

The additional environmental information section shall not include any claims related to the environmental performance indicators, or other LCA indicators, that do not comply with the LCA rules of this GPI or applicable PCR. For example, it is not allowed to claim reductions of GHG emissions based on a mass balance approach (MBA; see Section A.5.2).

### 7.4.9 ADDITIONAL ECONOMIC AND SOCIAL INFORMATION

An EPD may include relevant social and economic information as additional information. This may be product information or a description of an organization's overall work on social or economic sustainability, such as activities related to supply chain management or social responsibility[28].

Any additional social and economic information declared shall be substantiated and verifiable, and be derived using appropriate methods and be specific, accurate, not misleading, and relevant to the specific product. Quantitative information is preferred over qualitative information.

The PCR may specify rules on additional social or economic information to declare and adjust and amend the above guidance accordingly. Methods used to report such information shall be specified or referenced. A justification for the choice of additional social or economic information shall be included in the PCR.

[28] For more information about social responsibility, see ISO 26000:2010 Social responsibility.

 

Further information on which indicators that could be used can be obtained by the Global Reporting Initiative documents available at www.globalreporting.org.

### 7.4.10 INFORMATION RELATED TO SECTOR EPDS

For sector EPDs (see Section A.9.2), the following information shall 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 the 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.

### 7.4.11 VERSION HISTORY

The first time an EPD is updated, a new section in the EPD shall be added, named “Version history.” This section shall include the current and previous version dates of the EPD. For each version date, a description of the differences versus the previously published version shall be included.

### 7.4.12 ABBREVIATIONS

A section shall be included describing all abbreviations used in the EPD (if any).

### 7.4.13 REFERENCES

A reference section shall be included, including a list of all sources referred to in the EPD, including the GPI (including version number), and PCR (registration number, name, and version) used to develop the EPD.

### 7.4.14 EXECUTIVE SUMMARY IN ENGLISH

The executive summary, if included (see Section 7.1), shall contain relevant summarised information related to the programme, product, environmental performance, and information related to sector EPDs. Besides this, further information may be added such as additional information, references as well as differences versus previous EPD versions.



 

# 8 PROCESS FOR VALIDATION AND VERIFICATION

As part of the process for developing EPDs outlined in Section 6, the International EPD System employs three external and independent ("third-party") EPD validation and verification procedures:International EPD System

- **Individual EPD validation and verification** (Section 8.4).
- **EPD process certification** (Section 8.5).
- **Pre-verified tool** (Section 8.6).

The validation and verification process shall be carried out by an approved individual verifier or an accredited certification body with knowledge and experience of the types of products, the industry, and relevant standards of the product covered by the EPD and its geographical scope. Approved individual verifiers and accredited certification bodies are listed at www.environdec.com.See Section 5.10 for information on the process of checking the competence and qualifications of verifiers.

## 8.1 INDEPENDENCE OF VALIDATION AND VERIFICATION

All types of information and data shall be impartially[29] and independently[30] validated and verified. As that, the verifier shall not have conflicts of interest, and not be employed in a part- or full-time role by the practitioner or commissioner of the LCA study, nor any entities directly or indirectly owned by that organization. Furthermore, verifiers shall not take on validation and verification tasks in which their impartiality and independence may potentially be questioned.

To prevent self-review as defined in ISO 17029, independent verifiers shall neither have been involved in the execution of the LCA, nor the development of the EPD, nor the development of pre-verified tools. Verifier who have been involved in a tool development shall not perform validation and verification on the tool nor on the EPDs generated by the tool.

To avoid potential problems with independence between the execution of the LCA and the EPD validation and verification, LCA practitioners and/or tool owners shall neither include the cost of validation and verification in their offer of LCA services to the EPD owner, nor handle or be involved in contacting the verifier.

Verifiers shall independently seek out assignments from organisations developing EPDs without the involvement of the programme operator. To ensure independence, the contract between the verifier and the company shall be written in such a way that there is no economic pressure on the verifier to approve the EPD and no condition included in the contract predetermining the result of the validation and verification. It is recommended that the minimum amount of time for a validation and verification should be 16 hours, excluding future follow-up procedures according to Section 8.3.2 and 8.4.9.. For validation and verification of several EPDs at the same time, the amount of time for the validation and verification of each EPD may be reduced due to common aspects of these EPDs. The payment should be done in advance to further secure independence between the verifier and EPD owner. The verifier shall report any perceived pressure by the EPD owner or LCA practitioner to influence the outcome of the validation and verification to the programme operator, who may assist with arbitration, if necessary.

## 8.2 PRINCIPLES FOR VALIDATION AND VERIFICATION

Based on the GPI, the PCR and relevant standards, the validation and verification shall cover the following main areas:

- the underlying data used for the LCA calculations,
- the way the LCA calculations have been carried out and their compliance with the calculation rules,
- the presentation of environmental performance results,
- the presentation of additional environmental, social and economic information, and.
- any other information included in the declaration.

[29] Impartiality is according to ISO/IEC 17029, defined as the presence of objectivity. Objectivity is upheld when conflicts of interest are either absent or effectively addressed to prevent any adverse influence on the validation and verification activities of the verifier.

[30] Independence is defined according to ISO/IEC 17000, as freedom of a person or organization from the control or authority of another person or organization.

 

The verifier may choose to organise the validation and verification either as an “on-desk” or “on-site” exercise. It should be conducted on-site when the manufacturing processes are dominant regarding the overall environmental performance results. The decision to conduct an on-site exercise is made by verifiers, but EPD owners may also request to adopt this approach to protect and minimise itself against the risk of sharing business sensitive information outside a controlled environment (i.e., a manufacturing site or the like).

When on-desk exercise is applied, with or without remote techniques for virtual visits, it shall be performed in a way that equal reliability and quality is ascertained as if performed on-site.

### 8.2.1 VALIDATION

Validation confirms that information provided by the EPD owner (“claims”), through the provision of objective evidence, fulfills the requirements for a intended future use or application. This is done by evaluating the reasonableness and plausibility of the assumptions, limitations, and methods that support claims about the outcome of future activities.

The objectives of the validation are:

- to validate methods, assumptions and scenarios, and
- to validate procedures established for updating the information in the LCA modelling and the LCA report and the EPD.

### 8.2.2 VERIFICATION

Verification confirms that information provided by the EPD owner (“claims”), through the provision of objective evidence, fulfills specified requirements. This is done by evaluating that claims are materially correct and conforms with specified requirements based on historical data and information.

The objectives of the verification are:

- to verify the compliance of the LCA modelling and the report, and the EPD, with the GPI, and applicable PCR(s) and standards,
- to verify the accuracy of the information contained in the LCA modelling and the report, and the EPD,
- to verify compliance with relevant legislation, and
- to verify sampling procedures used in the data collection.

### 8.2.3 DATA CONFIDENTIALITY

Business data may be of confidential nature because of competitive business aspects, intellectual property rights, or similar legal restrictions. Such confidential data are not required to make public in the EPD, as the EPD typically only provides data aggregated over the full, or relevant parts of, the life cycle. If information in the content declaration is confidential, generic names, or descriptions, of materials/substances and/or range of values (instead of specific values) can be declared in the EPD, provided that the applicable rules for declaration of hazardous are followed; but specific information shall be provided in the LCA report. Business data identified as confidential and provided during the validation and verification process shall be kept confidential by the verifier unless otherwise agreed**.**

## 8.3 EPD OWNERS’ OBLIGATIONS FOR VALIDATION AND VERIFICATION

EPD owners developing an EPD shall:

- ensure that the LCA modelling and report, and the EPD, are independently validated and verified,
- present data for validation and verification (Section 8.3.1), and
- establish internal follow-up procedures (Section 8.3.2).

### 8.3.1 PRESENTATION OF DATA FOR VALIDATION AND VERIFICATION

Data for validation and verification shall be presented in the form of an LCA report – a systematic and comprehensive summary of the project documentation that supports the validation and verification of an EPD. The LCA report is not part of the public communication. The LCA report should be written in English or, at a minimum, it shall be written in a language that is understood by the verifier.

In the presentation of data for validation and verification, references shall be made to the PCR, the GPI, as well as other documents used. In the event the verifier finds the LCA modelling, the LCA report or the EPD not in conformance with the requirements, the verifier may ask for additional information or further refinement of the underlying data. This dialogue shall be documented and included in the verification report (Section 8.4.6).

The presentation of the environmental performance results and other EPD content shall be sufficiently comprehensive to facilitate the examination by the verifier. Some guidance for the organisation providing data and information to the verifier is given below with regard to:

- layout of the presentation, and
- description of the LCA modelling and other background documentation for information declared in the EPD.

For construction product EPDs compliant with EN 15804, the requirements for the LCA report in Section 8 (“Project report”) of the standard apply.

#### 8.3.1.1 Layout of the presentation

The presentation of data from the LCA modelling shall be done in a consistent way to cover the most important aspects related to the accuracy and relevance of the data. Data on unit processes, modules and life-cycle stages shall be described in a transparent way, including references to any data used. The same rules apply regardless of the type of data, i.e., for specific and proxy data (see Annex A for definitions of these data categories), for data from databases and literature sources, from questionnaires, or derived from personal communication.

#### 8.3.1.2 Description of the LCA modelling

Presentation of data, data quality assurance and data handling are central parts of the LCA report. Specific data collected from manufacturing processes shall be documented on the site level. Information on unit processes modules and proxy data shall be reported on the level of aggregation available for use in the calculation, but more detailed data can be reported, if relevant.

Data and meta data relevant for the EPD shall be documented, as specified below per LCA phase.

The following information about the goal and scope definition shall be included in the LCA report, where relevant:

- definition of declared or functional unit, including technical specifications, product lifespan and reference service life, when relevant,
- description of key methodological elements, including documentation and justification of procedures for allocation, averaging data, and cut-off,
- the technical system (type of system, geographical location, system boundary, and description of life-cycle stages/modules including omissions of life-cycle stages/modules).

The following information about the inventory analysis shall be included in the LCA report, where relevant:

- the technical system (qualitative/quantitative description of unit processes, accounting for data confidentiality),
- data collection (specific/proxy data, collection procedures, time period for data collection, identification and handling of missing data and assessment of their, checks of data collection being performed, references, and other administrative information),
- validation of data (internal quality assurance procedures; routines for identification, follow-up, and treatment of missing data; references to external critical reviews of data already validated),
- inventory analysis results (presentation of all input and output inventory data and how they relate to reference functions and reference flows separated into the data categories chosen for the LCA calculation, results for different life cycle stages/information modules, and the final aggregated results), and



 

- other key assumptions made.

The following information about the impact assessment shall be included in the LCA report, where relevant:

- assignment of the results from the inventory analysis (classification),
- results of the characterisation and impact assessment calculations,
- references to all characterisation methods and factors used, and
- a statement that “the environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks” (adopted from EN 15804).

The following information about the interpretation shall be included in the LCA report, where relevant:

- sensitivity analysis,
- uncertainty analysis,
- data quality assessment, and
- other tools used during the interpretation.

### 8.3.2 ESTABLISHMENT OF INTERNAL FOLLOW-UP PROCEDURES

Internal follow-up procedures shall be established with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period (see Section 6.5). The main parameters that may mandate an update shall be identified through a sensitivity analysis. The established procedure may or may not involve a contracted verifier (see Section 8.4.9). The follow-up shall be at least annually and should be made with a frequency that will allow for an acceptable coverage of changes that might occur.

The procedure should include how the organisation monitors any significant changes that have taken place in the information submitted as input data for the information in the EPD, such as raw material acquisition, transportation modes, manufacturing processes, changes in product design, or updated legislation. The follow-up procedure may be integrated in an existing quality or environmental management system.

## 8.4 INDIVIDUAL EPD VALIDATION AND VERIFICATION

EPD validation and verification is the assessment of LCA data and results, additional environmental, social, and economic information, and other information presented in an EPD based on the GPI and an applicable PCR. The verifier shall also ensure that any claim in the EPD does not violate relevant legislation.

EPD validation and verification can be conducted by an approved individual verifier or an accredited certification body, which is the process described here in Section 8.4, or via EPD process certification, as is described in Section 8.5.

### 8.4.1 LCA AND PCR COMPLIANCE

The verifier shall check that the following have been performed in accordance with the GPI, the PCR, and relevant standards:

- collection of LCA data and choice of methods,
- inventory analysis, and
- impact assessment.

When reviewing the underlying data from the inventory analysis, the verifier shall examine that:

- each unit process is defined as specified in the PCR,
- all relevant information is documented for each unit process and module, i.e. is sufficiently consistent and understandable to enable an independent evaluation of the relevance of the data in accordance with the PCR, and
- data validity is reliable.

With regard to checking information from the inventory analysis, the verifier can make use of sample checks for the unit processes/information modules to check their conformity to original data sources. The organisation developing the EPD shall provide the verifier with information about the underlying data and calculations carried out upon request.

When reviewing the environmental performance results, the verifier shall check that the calculations are made in a correct way based on the inventory analysis results and the prescribed characterisation factors.

Sample checks should be carried out for:

- those unit processes/modules that have a significant influence on the inventory analysis results, and
- a random sample of unit processes/modules.

### 8.4.2 EPD INFORMATION

The verifier shall check the consistency of the information in all parts of the EPD related to the GPI, the PCR, and relevant standards, including, but not limited to, information about the product, the environmental performance results, the additional environmental, social, and economic information, as well as the mandatory statements. These rules also apply to any information of a more qualitative nature related to the organisation making the declaration.

The examination of the presentation of the EPD shall specifically focus on that:

- the background information is presented in a transparent and understandable way,
- the presentation is credible and neutral,
- the declaration format follows requirements and recommendations on the overall layout,
- information in different presentation formats, for example EPDs in pdf and xml (i.e., machine-readable format), correspond with each other, and that
- information and guidance are given on where to find supplementary explanatory materials.

### 8.4.3 COMPLIANCE WITH RELEVANT LEGISLATION

The verifier shall check compliance with relevant legislation associated with claims included in the EPD.

### 8.4.4 VALIDATION AND VERIFICATION OF SECTOR EPD

The validation and verification procedure for a sector EPD should be stricter than company-specific EPDs due to the multiple character of information from the considerable number of operations and manufacturing sites to be covered in a sector EPD. The following aspects shall be handled in a specific way:

- a validation and verification procedure whereby a verifier can assure inclusion of all operations and manufacturing sites, and
- the appointment of a person responsible for reporting all significant changes in the underlying material relevant for the sector EPD for all operations and manufacturing sites that may lead to adjustments in the EPD.

When defining a reasonable size for a representative sample of manufacturing sites as a basis for a sector EPDs, there are several possible points of departures, for example:

- to consider the validation and verification procedure for environmental management systems in case of a corporate certification indicating that approximately one-third of the total number of sites should be visited annually so all sites should be covered over a period of three years (this rule may not be applicable for sector EPDs if the number of sites becomes too extensive),
- to consider if there exist clear differences among the sites with regard to the upstream processes or the manufacturing processes – and if so, make a representative sample out of each such category,
- to randomly check a number of sites and find out if there are any substantial differences to consider – if not, there is the possibility to apply basic theories of statistics indicating that reaching a sample size of approximately 25 sites will give reasonably good and accurate information about the average situation prevailing among the sites, or
- to decide about a suitable selection of sample size, for example covering a certain percentage, such as 20%.

 

Regardless which approach is taken, the sample size should be adjusted to the inherent uncertainties in traditional LCA studies and in the PCR.

### 8.4.5 OUTSOURCING

Certification bodies can outsource the validation and verification task if they are accredited to either ISO 17065 or ISO 17029, or both, and meet the standards' requirements for outsourcing.

Note that any training to provide hands-on experience in EPD valiation and verification to LCA experts is not considered as outsourcing since the approved verifier who is appointed as trainer shall be involved in the entire procedure according to Section 8.4.

### 8.4.6 EPD VERIFICATION REPORT

The validation and verification procedure shall be transparent and result in a verification report in English. A single report may be used for multiple EPDs that are validated and verified together based on the same PCR. The report shall document the validation and verification process, including the dialogue between the LCA practitioner and the verifier, while adhering to the rules of data confidentiality.

The report shall be dated and signed by the verifier. This date is the date the EPD is approved, and becomes the version date of the EPD[31] (except when an EPD is updated without validation and verification, see Section 6.5). The version date shall be within the validity period of the PCR.

The report shall include the following information:

- EPD owner
- EPD registration numbers
- Product name(s)
- PCR and c-PCR(s)
- Validity date
- Title and version of the LCA report
- Name of the LCA practitioner, if applicable
- Name of the organisation and the outsourced reviewer(s) involved in the validation and verification process, if applicable
- Name of the verifier(s) which has been replaced, if applicable
- Name and organisation of the verifier
- Date, location and signature by verifier

One report may be used for the validation and verification of several EPDs, if the EPDs are using the same PCR and follow the same periods of validity.

The verification report shall be submitted during the EPD publication process and be available to any person upon request.

International EPD SystemIn case the EPD validation and verification has been outsourced according to Section 8.4.5, the verification report shall include the name of the reviewer(s) and organization to which the validation and verification task has been delegated.

For construction product EPDs, the verification report template available at www.environdec.com shall be used.

The verification report shall allow identification of the pre-verified tool (see Section 8.6) and provide the version of the tool if used for EPD development.

[31] The version date corresponds to the “date of publication” according to ISO 14025 and “date of issue” according to EN 15804.

### 8.4.7 PROVIDING INFORMATION ABOUT EPD PUBLICATION

During EPD validation and verification, the verifier shall inform the organisation developing the EPD that publication of the EPD at www.environdec.com is a mandatory step in the process.

### 8.4.8 SETTING EPD VALIDITY

An EPD becomes valid as of its version date (see Section 8.4.6). When an EPD is originally published, the validity period is normally five years starting from the version date. For validity periods in case of updates of EPDs, see Section 6.5. The version date and the period of validity shall be stated in the EPD (see Section 7.4).

Publication of a new version of the PCR or the GPI does not affect the validity of already published EPDs.

### 8.4.9 FOLLOW-UP DURING THE EPD VALIDITY PERIOD

As part of the validation and verification, a procedure to follow-up and monitor any changes that would require an update of the EPD during its validity period shall be made (see Section 6.5 and Section 8.3.2). It is not necessary to perform a full LCA; it is only required to perform a screening LCA that focusses on the parameters that in the initial LCA (e.g., including the sensitivity analysis) were identified to significantly influence the environmental performance results.

The surveillance validation and verification may be organised either:

1. fully by the company itself during the EPD period of validity. If the established follow-up procedure identifies changes needed in the EPD, a verifier shall be contracted to perform validation and verification, or
2. as the responsibility of the EPD owner, but with a contracted surveillance validation and verification in which a verifier is contracted to take part in the follow-up throughout the period of validity of the EPD.

### 8.4.10 VALIDATION AND VERIFICATION OF EPD UPDATES

All EPD updates shall undergo re-validation and re-verification according to Section 7, except for editorial changes (see below). This validation and verification may be based on one of the following options:

1. The same version of the PCR[32] as was used in the original validation and verification, even if it is not a currently valid version or if the PCR has expired. The revised EPD shall then maintain its original period of validity.
2. A current, valid version of the PCR. The new period of validity for the EPD may then be set based on its new version date (see Section 8.4.6).

The validation and verification shall result in a verification report. The updated EPD and proof of validation and verification shall, thereafter, be provided to the Secretariat to update the published version on the website.

If the changes made are only editorial, such as a change of logotype or correction of spelling errors, this shall be done without re-validation and re-verification. In such cases, the version date shall be the date of the latest version that was uploaded on the website and the period of validity shall be maintained.

## 8.5 EPD PROCESS CERTIFICATION

EPD process certification can be used to simplify the process for EPD owners in collecting data, conducting LCAs, and developing EPDs on a large scale. With EPD process certification, the EPD owner handles the management of EPD data involved in the validation and verification procedure by themselves and issues EPDs without a third-party verifier being involved in each case. An EPD process certification may be implemented under a multi-site approach, i.e., covering several entities or subsidiaries of an organization, if the EPD process covers all sites included under the EPD process certification. The ownership of the EPD may be delegated to the other entities and subsidiaries that are covered in the same scope of the EPD process certification.

An organisation that has an EPD process certification assessed and certified by an accredited body on a regular basis, is allowed to:

[32] Including the same version of the default list of environmental performance indicators at www.environdec.com/indicators.

 

- develop and issue new EPDs for publication at www.environdec.com, and
- update published EPDs.

Terminology of EPD process certification is described in Section 12.

## 8.5.1 THE EPD PROCESS

### 8.5.1.1 General requirements

The organisation subject to the EPD process certification shall establish, document, implement, and maintain a systemized EPD process and continually improve its effectiveness in accordance with the requirements of this document.

The organisation shall:

- determine the sequence and interaction of the EPD process and other processes within the organisation,
- determine the criteria and methods needed to ensure that both the operation and control of the EPD process are effective,
- ensure the availability of the resources and information necessary to support the operation of and to monitor the EPD process,
- monitor, measure where applicable, and analyse the EPD process, and
- implement actions necessary to achieve planned results and continual improvement of the EPD process.

Where an organisation chooses to outsource any part of the EPD process that affects the conformity of the EPD result, the organisation shall ensure control over such process parts and retain full responsibility.

An internal verifier shall perform validation and verification procedure according to Section 8.4 on the LCA and EPD developed inside the EPD process before publication. This procedure shall be documented in a verification report and submitted during the EPD publication process (see Section 8.4.6).

The EPD process shall be validated and verified by an accredited certification body that has evidence of competence in audit of management systems for all personnel involved in EPD process certification, and the validation and verification shall be done as an accredited service under the supervision of a accreditation body.

### 8.5.1.2 Document requirements

The documentation of the EPD process shall include:

- a general description of the EPD process,
- description and records of evaluation of internal verifier competences, and
- documented procedures and records required by this document.

### 8.5.1.3 Management responsibility

The internal EPD process certification process shall be outlined according to the “PDCA (Plan Do Check Act) principle”:

- **Planning:** Setting up resources needed for this activity, assessment plans, and defining criteria for approval. Records of this shall be kept.
- **Doing:** Executing assessments according to plan with trained internal staff at defined intervals and according to the criteria for approval. Records of this shall be kept.
- **Checking:** An internal independent party shall verify that the EPD process certification activity is outlined well and works effectively and according to the norms.
- **Acting:** Finally, management shall certify in a written statement that the above process works properly and effective and according to the norms. The statement shall be updated annually.

Top management shall ensure that responsibilities and authorities related to the EPD process are defined and communicated within the organisation. An EPD process ownership and EPD responsible publisher shall be defined.

Top management shall explicitly declare its intensions and ambitions with the EPD process in the form of one or several policies, strategies, or similar type of documents.

Top management shall annually – based on the results from internal assessments and external validations and verifications – evaluate the EPD process concerning its effectiveness, relevance, and appropriateness and draw conclusions and define actions needed for the continuous improvement of the EPD process.

#### 8.5.1.4 Provision of resources

The organisation shall determine and provide the resources needed to implement and maintain the EPD process and continually improve its effectiveness.

Personnel performing work affecting conformity to the EPD process requirements shall be competent regarding appropriate education, training, skills, and experience.

The organisation shall:

- determine the necessary competence for personnel performing work affecting conformity to the EPD process requirements,
- where applicable, provide training or take other actions to achieve the necessary competence,
- evaluate the effectiveness of the actions taken,
- ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the conformity of EPD process requirements, and
- maintain appropriate records of education, training, skills, and experience.

The organisation shall determine, provide, and maintain the infrastructure needed to achieve conformity to the EPD process requirements. Infrastructure includes, where applicable,

- workspace and associated utilities,
- process equipment (both hardware and software),
- supporting services (i.e. information systems), and
- competence required for certification bodies according to Sections 5.10.1.1 and 5.10.1.3

#### 8.5.1.5 Planning the EPD process

The organisation shall plan and develop the EPD process. The planning of the EPD process shall be consistent with the requirements of the GPI and applicable PCR. In planning the EPD process, the organisation shall determine the following, where appropriate:

- applicable PCR(s),
- applicable GPI version(s)[33],
- the need to specify activities within the EPD process and to provide specific resources for these (i.e., data collection, LCA modelling, LCA results review, EPD preparation, EPD review, maintenance of the period of validity of EPDs, and representativeness),
- required validation and verification of the LCA and EPD, and
- records needed to provide evidence that the EPD process meets the EPD process certification requirements.

[33] In case the PCR is based on an older version of the current GPI, both versions are applicable. See Section 5.1 for a description of when different parts of a new version of the GPI becomes applicable.

**Status check of relevant requirements**

The organisation shall determine and ensure it has the ability to meet the requirements from the PCR, GPI and relevant standards.

The organisation is also responsible to check for changes in the requirements, for example by monitoring upcoming GPI and PCR updates. Any changes affecting the EPD process shall be communicated to the certification body that issued the certificate. The certification body shall require appropriate corrections and corrective actions within a reasonable time limit and without undue delay to maintain the certification. The implementation of the corrections shall be reviewed and approved by the certification body and, if appropriate, it may be postponed to the annual validation and verification (see Section 8.5.3).

Records such as status checks and actions arising from the review shall be maintained.

**Planning the LCA and EPD development**

The organisation shall plan the LCA and EPD development according to the ISO14040 series, the GPI and applicable PCR.

If an EPD process owner intends to develop a single-footprint report (see Section 6.4.3), for example a climate declaration, this shall also be covered by the EPD process.

If an EPD process owner intends to develop machine-readable EPDs, these shall also be covered by the EPD process and it shall be assured that the information in this presentation format correspond with the information developed in the EPD process.

8.5.1.6 Operation of the EPD process

**Collecting information**

The organisation shall ensure that collected data conforms to specified data quality requirements. The type and extent of control applied to the data collection activity shall be dependent upon the effects the gathered information will have on the LCA result and the representativeness of the EPD.

The organisation shall establish and implement controlling activities necessary to ensure that the information used in the LCA for EPDs is relevant, consistent, and up-to date.

**Operation of the LCA development**

The organisation shall plan and carry out the LCA under controlled conditions. Controlled conditions shall include, where applicable:

- the availability of information that describes the characteristics of the actual product group,
- the availability of work instructions, where necessary,
- the use of suitable equipment, and
- the availability and use of critical reviews of LCA results.

**Operation of the EPD development**

The organisation shall plan and carry out the EPD development under controlled conditions. Controlled conditions shall include, where applicable:

- the availability of information that describes the characteristics of the actual product group,
- the availability of work instructions, where necessary,
- the use of suitable equipment and communication tools, and
- the availability and use of internal or external validation and verification of EPDs.

Some information in EPDs is not connected to an LCA but shall be planed and controlled similarly, securing sources and quality of data.

According to the GPI, EPDs shall include mandatory statements. The part concerning a third-party verifier, in this context, means the third-party verifier certifying the EPD process.

**Maintenance of the EPD during its validity**

The organisation shall ensure the EPD's representativeness during its validity period.

The EPD process shall contain measures that identify changing conditions that risk making the EPDs out of date or not representative. Efficient control and applicable action shall be applied to such identified risks.

## 8.5.2 EPD PROCESS ASSURANCE

### 8.5.2.1 EPD process assessment

The organisation shall conduct internal EPD process assessments at planned intervals to determine whether the EPD process:

- conforms to the planned arrangements, to the requirements in the GPI and to the EPD process requirements established by the organisation, and
- is effectively implemented and maintained.

An assessment programme shall be planned, taking into consideration the status and importance of the activities within the EPD process to be assessed, as well as the results of previous assessments. The assessment criteria, scope, frequency, and methods shall be defined. The selection of assessors and conduct of assessments shall ensure the objectivity and impartiality of the audit process. Assessors shall not assess their own work.

A documented procedure shall be established to define the responsibilities and requirements for planning and conducting assessments, establishing records, and reporting results. Records of the assessment results shall be maintained.

The management responsible for the activity being assessed shall ensure that any necessary corrections and corrective actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow up activities shall include validation and verification of the actions taken and the reporting of these results.

### 8.5.2.2 EPD management review

Top management (or a representative with the role of EPD process owner) shall review the organisation's EPD process at planned intervals to ensure its continuing suitability, adequacy, and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the EPD process.

Records from such reviews shall be maintained.

**Review input**

The input to management review shall include information on:

- results from internal assessments,
- reaction from EPD audience and other stakeholders,
- validation and verification of EPD process performance and EPD conformity done by third-party verifier,
- status on corrective actions,
- follow-up actions from previous management reviews,
- changes that could affect the launched EPDs, as well as the development of new EPDs, and
- recommendations for improvement.

**Review output**

The main output of the review is the EPD process assurance statement, which ensures the conformity of the present EPD process with the GPI.

Other outputs from the management review shall include any decisions and actions related to

- the improvement of the effectiveness of the EPD process and its activities,
- the improvement of individual EPDs related to input from the EPD audience or other relevant stakeholders, and
- resource needs.

### 8.5.3 EPD PROCESS CERTIFICATION AND ANNUAL VALIDATION AND VERIFICATION

During the validity period of the EPDs following the EPD process, there shall be a validation and verification done by an accredited certification body, as a complement to the internal assurance activity.

The validation and verification shall be done annually and cover the EPD process and the internal EPD process assurance activity. The validation and verification shall follow the praxis from audit management systems, i.e. ISO 14001, ISO 9001 or ISO 50001. Double validation and verification of processes that shall be part of the EPD process certification but are already certified and valid under ISO 9001 and ISO 14001 management system audits shall be avoided where reasonable. The accredited certification body decides whether prior certification is of sufficient quality to be applied/considered under EPD process certification. The validation and verification shall also include sample checks of EPDs launched by the organisation and their compliance to the GPI and the PCR. At least one sample check shall be performed per year and product category. If the EPD process includes several manufacturing plants, the sample should alternate between those.

The EPD process certification assessment has the form of a check of the quality assurance of the internal competence and skills in an organisation to:

- conduct the prescribed LCA calculations according to the GPI and the PCR(s) as determined based on the scope of the process certification,
- develop EPDs according to the GPI and the PCR(s) as determined based on the scope of the process certification, and
- have regular follow-up routines in place to accurately check the relevance of the current information in registered EPDs.

In the case that the EPD process covers several manufacturing sites, the validation and verification shall at least assess one manufacturing site per year and product category and should be done as an “on-site” exercise. The result is an EPD process certificate, stating that the EPD process and EPD process assurance activity follows the GPI. A valid certificate shall be submitted to the Secretariat during the EPD publication process and upon renewal of the certificate after the annual validation and verification. The certificate shall specify the PCR(s) used in the EPD Process Certification. Without changes to the EPD process, the EPD Process Certification shall be valid for a maximum of 3 years.

EPDs developed in a certified EPD process shall be considered as equal to a third-party certified EPD.

## 8.6 PRE-VERIFIED TOOLS FOR EPD DEVELOPMENT

The International EPD System allows the use of pre-verified LCA and EPD tools to facilitate the development of EPDs. The application of pre-verified tools leads to a more efficient EPD validation and verification as all or certain elements of the LCA and EPD are pre-verified in the tool. Dependent on the pre-verified tool’s features such as parameterization and mechanisms to ensure data integrity, the efficiency of the validation and verification procedure can go from having a more simplified validation and verification per EPD to only performing an annual sample check.

The pre-verified tools are valid for one or several defined PCRs, including a certain one-digit version number of each PCR[34]. To extend the scope of the pre-verified tool to other PCRs, it shall be re-validated and re-verified against these PCRs. In cases where the PCR can be applied for different subcategories of products (e.g. with different functional or

[34] For example, if the PCR is updated from version number 1.1.0 to 1.1.1 or 1.2.0, the tool covers the updated versions, but if the PCR is updated from 1.1.0 to 2.0.0, the tool does not cover the updated version (see Section 9.6).

 

declared units), the scope of the pre-verified tool shall be further specified, using for example relevant c-PCRs, CPC codes, and/or other relevant product categorisation systems. The Secretariat shall inform the owner of the pre-verified tool about relevant changes, e.g. changes in the PCR, which may require an update of the pre-verified tool.

A pre-verified tool can serve either as a pre-verified LCA tool or a pre-verified EPD tool. When used as a pre-verified LCA tool, it generates the environmental performance results necessary for creating an EPD. Subsequently, the EPD is developed by the user of the pre-verified tool. When the tool functions as a pre-verified EPD tool, it can automatically generate the entire EPD.

Any LCA or EPD tool that has undergone validation and verification within the International EPD System is classified as a pre-verified tool. Furthermore, pre-verified EPD tools can be categorized as *pre-verified and integrated EPD tools* when they have the capability to completely replace the need for individual EPD validation and verification with an annual check. This level of integration can be achieved through either a fully automated solution with minimal to no human interaction or a semi-automated solution complemented by certain parts of the EPD process certification. The several types of pre-verified tools are outlined in Table 7.

*Table 7. Classification of pre-verified tools.*

| **Tool types** | | **Outputs** | **Benefits** |
|---|---|---|---|
| Pre-verified LCA tool | | LCA results | Simplified individual EPD validation and verification |
| Pre-verified EPD tool | | EPD | Simplified individual EPD validation and verification |
| Pre-verified and integrated EPD tool | Fully automated solution | EPD | Replacing individual EPD validation and verification with annual check |
| | Semi-automated solution | | |

All valid pre-verified tools shall be registered at www.environdec.com.

### 8.6.1 SCOPE OF PRE-VERIFICATION

The prerequisite of pre-verified tools is that the user shall not be able to modify and manipulate elements in the tool that have been pre-verified. The collection of pre-verified elements in a pre-verified tool is defined as the *scope of pre-verification*. The constraints on how much can be pre-verified are typically dependent on the range of features the pre-verified tool can offer, the scope of the LCA and the integrated management system. The scope shall also be clear in terms of what products the tool covers, in line with the data quality assessment of data.

The scope of pre-verification in a tool is decided by the tool owner and shall be comprehensively described in the *tool project report* at a level of detail that is required by the *tool verifier*.

An example of a pre-verified tool is where the LCA model is parameterised for the bill of materials and/or product components in a way that allows the user of the tool:

- to modify a pre-defined selection of input data, or
- choose from a pre-defined menu of product components connected to a specific product.

### 8.6.2 TOOL VALIDITY

The validity of the tool shall be the same as the PCR to which it complies and a maximum of 5 years. In case the tool is compliant with several PCRs, the validity shall be in accordance with the validity date of the PCR which expires first. The transition period of a PCR, as described in Section 6.5, is also applicable for tools. The tool shall be re-validated and re-verified at the end of the validity period or the transition period of the PCR to maintain its validity.

### 8.6.3 TOOL UPDATES

The tool owner is responsible to update the tool if conditions have changed, e.g., if the data quality requirements are no longer fulfilled. Any change to the tool beyond the variation of user-defined input parameters shall be documented and communicated to the Secretariat by the tool owner and result in a new version of the tool. All changes that may affect

 

numeric results of the LCA or may potentially jeopardize fulfilment of formal requirements to the final document require a re-validation and re-verification of the tool. The re-validation and re-verification may be limited to the parts of the tool that were modified. Only validated and verified versions of the tool shall be used to develop EPDs. The tool versions shall be archived for the validity period of the last EPD created with the tool. The tool owner shall be responsible for archiving the tool versions.

#### 8.6.3.1 Tool logbook

To facilitate the tool validation and verification in future updates, a logbook shall be maintained. The tool logbook shall save records of any changes to the tool, including but not restricted to:

- new data,
- modification of formulae and algorithms,
- modification of background data,
- expansion to additional PCRs, and
- changes to format and content of output

The tool logbook shall also record the date of any modification made and include a clear numbering of versions of the tool.

### 8.6.4 VALIDATION AND VERIFICATION OF EPDS FROM PRE-VERIFIED TOOL

EPDs developed using a pre-verified tool that do not fulfil requirements for a fully integrated tool in Section 8.6.8. shall undergo individual EPD validation and verification according to the procedure in Section 8.4.

The scope of the EPD validation and verification depends on the tool and its scope of pre-verification. The elements that are pre-verified in the tool have already been approved and should not need to be included in the validation and verification of EPDs generated by the tool. It is the responsibility of the verifier to ensure that the validation and verification is comprehensive.

The individual EPD validation and verification may be restricted to the following aspects:

- evaluation of plausibility and representativeness of input and output data[35],
- fulfilment of reporting requirements, if applicable (see Section 7.4 and applicable PCRs),
- additional environmental, social, and economic information,
- compliance with legislation connected to information presented in EPD, and
- follow-up during EPD validty (see Section 8.4.8).

#### 8.6.4.1 EPD verification report

The EPD verification report shall report the following as a minimum:

- the verification report shall follow the requirements in Section 8.4.6 with consideration of the scope of the pre-verification, see Section 8.6.4.
- the variable input data used in the EPD and identification of the inputs driving the environmental performance results in relation to the tool project report and tool verification report,

[35] Plausibility checks on input data include, for example, checks of raw data elaboration before it is fed in the tool (e.g., calculating the energy consumption for the manufacturing stage in a way that is compatible with the input interface of the tool (e.g., kWh/FU or MJ/FU). Plausibility checks of output data include, for example, checks on the relationship between the environmental performance results and the input data used in the calculation (i.e., the declared input data allow to calculate the environmental performance declared in the EPD). Checks on the output data also include, for example, checking whether any intentional or accidental manipulations have been done before the data (e.g. environmental performance results) were added to the EPD outside of the tool. This validation and verification process requires the verifier to have access to the tool and/or unedited tool outputs.

 

- validation and verification action for any additional information beyond the environmental performance results, and
- reference to name and version of the tool and the tool verification report.

### 8.6.5 NON-CONFORMITY AFFECTING ALREADY PUBLISHED EPDS

If the non-conformity is related to the tool, the tool owner has the responsibility to handle the tool deviation according to their internal management procedure for tool deviations. The procedure shall include a root-cause analysis, a process of identifying which versions that are affected, and a communication strategy to inform involved parties (including the Secretariat).

To determine appropriate corrective actions on tool deviations, the tool deviations are divided into minor and major deviations. To which category each tool deviation belongs depends on the extent to which it affects the quality of the EPD generated by the tool and its application, more information is found in Sections 8.6.5.1 and 8.6.5.2.

Note that all deviations shall be reported to the Secretariat, and they have the final decision on the nature of the deviation.

#### 8.6.5.1 Minor tool deviation

If the tool deviation and its negative impact on the quality of the generated EPDs is negligible, it is defined as a minor deviation. A rule of thumb is that a minor deviation shall not affect:

- the environmental performance results in a favourable way, and
- the transparency in a way that limit the interpretation and comparability of results.

Corrective actions for a minor tool deviation can be postponed to a tool update that is planned in a reasonably near future.

In case there are several minor tool deviations, the Secretariat can decide that these constitute one major deviation.

#### 8.6.5.2 Major tool deviation

If the tool deviation and its negative impact on the quality of the generated EPDs is significant, it is defined as a major deviation. A rule of thumb is that it is a major deviation if it does not fulfil the criteria to be a minor deviation in Section 8.6.5.1.

Corrective actions for a major tool deviation shall be handled as soon as possible and, in the meantime, the access of the tool or relevant parts of the tool shall be immediately removed from all users. The tool may also be temporarily withdrawn from the International EPD System.

If the tool owner and its users can find a temporary solution to the major deviation, it can be postponed to a tool update planned in the reasonably near future if the Secretariat approves.

#### 8.6.5.3 EPD deviations

The EPDs that may have been affected by tool deviation(s) shall be reported to the Secretariat according to the procedures in Section 5.5. In case EPD deviation(s) is identified, it shall be handled according to the procedures in Section 6.5.

### 8.6.6 APPLICATION FOR TOOL VALIDATION AND VERIFICATION

The tool owner shall arrange the validation and verification of the pre-verified tool. Verifiers, both individual verifiers and certification bodies, must obtain case-by-case approval from the Technical Committee before commencing tool validation and verification. Additionally, certification bodies shall confirm with the accreditation body whether tool validation and verification is covered by their current certification or if a renewal is necessary.

An application to act as the verifier of a pre-verified tool shall be submitted to the Secretariat. The application form is downloaded from the website www.environdec.com.

## 8.6.7 GENERAL REQUIREMENTS FOR VALIDATION AND VERIFICATION OF PRE-VERIFIED TOOLS

The aim of the pre-verification of the tool is to check the compliance with the GPI and applicable PCR(s). A pre-verified LCA or EPD tool is validated and verified, and approved based on the tool itself, the *tool project report*, the *LCA report,* and the *pilot EPD validation and verification.*

The tool owner shall provide the tool and the tool project report to the verifier, and report shall include the following:

- ownership of the tool (legal entity),
- identification of the tool including the version number,
- scope of the tool
- applicable PCR, including the PCR version,
- description of the LCA model of the tool,
- assumptions on which the model is based, including system boundary, cut offs, allocation method and other calculation rules,
- scope of pre-verification (see 8.6.1),
- identification of the variable parameters with significant impact on the environmental performance results,
- description of the data quality, data sources and references,
- conditions under which the tool is to be used, including data and software security and usability,
- information for the background report of the EPD, where applicable,
- internal management procedure for tool deviations (see Section 8.6.5).

The tool project report and pilot EPD(s) should support the writing of the LCA report and shall in addition to the project report include all relevant information for the validation and verification, as described in Section 8.3.1, including, but not limited to:

- a reference to the tool version and the tool project report,
- a description and explanation of the variable input data and the main drivers for the indicator results, and
- a description of the data quality of the variable input data

A pre-verified LCA tool typically generates an LCA report, while a pre-verified EPD tool generates both the LCA report and the EPD document.

The tool validation and verification shall be documented by the verifier in a *tool verification report* which shall be shared with the Secretariat. The tool verification report shall present how the tool meets the relevant requirements in the GPI and applicable PCR(s). Furthermore, the report shall provide a summary of the scope of pre-verification based on the detailed version in the tool project report.

After validation and verification, changes to the tool shall be restricted to modifying user-defined input parameters. The tool administrator is responsible to ensure that users are unable to modify or manipulate any aspects withing the scope of pre-verification.

To maintain data integrity, one common method is to employ locking mechanisms, which can range from simple password-based locks to more advanced access control and permission systems. These mechanisms restrict access and modification rights based on user roles and privileges. Other methods can also be applied, as well as in a combination with locking.

### 8.6.7.1 Pilot EPD as part of the tool validation and verification

Validation and verification of the pilot EPD(s) developed by a tool shall be part of the tool validation and verification. A real product or a fictive product may be used. The validation and verification of pilot EPD(s) shall be done according to the verification report for tools and the rules in Section 8.4.6.

The tool verifier shall determine how many pilot EPDs that need to be included in the tool validation and verification. After the tool has been validated and verified, and registered, pilot EPD(s) on real products may be published.

## 8.6.8 REQUIREMENTS FOR VALIDATION AND VERIFICATION OF FULLY INTEGRATED TOOLS

Fully integrated tools refer to EPD tools that are integrated in electronic or administrative management systems so that integrity of input data is ensured to a level comparable to that of traditional third-party validation and verification. This allows EPDs to be published without an individual validation and verification with exception for the pilot EPD(s) described in Section 8.6.7.1 and the EPDs included in the *annual check* procedure described in Section 8.6.8.4. The key difference from non-integrated tool is that the mechanisms to ensure data integrity shifts validation and verification requirements from individual LCA studies and EPDs to the tool and the management process it is embedded in. The fully integrated tools shall thereby contain intrinsic or external safeguards to ensure said data integrity. The output of the tool is a complete EPD ready for publication.

The management process can take a wide range of different shapes. EPD International has divided the various solutions into two alternatives: *Semi-automated solution* which is based on traditional systems that are still relied on, e.g., human checks and interactions, and an A*utomated solution* which is entirely based on automated systems with e.g., automatic data transfer from control systems in the production process.

### 8.6.8.1 General requirements for validation and verification of fully integrated tools

For the validation and verification of integrated tools, the same requirements as for non-integrated tools apply (see Section 8.6.7).

In addition to the validation and verification requirement for pre-verified tools and EPDs, the verifier shall at least check the overall management procedure, including but not limited to:

- definition of roles and processes,
- training and guidance for users and parties involved in any validation and verification of the tool, where applicable, and,
- maintenance and update of the tool.

To facilitate the annual check (see Section 8.6.8.4), there shall be a procedure to maintain documentation of at least the following information for all EPDs generated:

- name and registration number of the EPD
- date of generation,
- name of user who generated the EPD, and
- all user-defined input parameters.

### 8.6.8.2 Additional requirements for semi-automated tool

The semi-automated tools are an intermediate solution of a fully automated tool (see Section 8.6.8.3) that complements the lack of automatization with human checks and interactions. To ensure same level of data quality and integrity as the fully automated tool which do not need single EPD validation and verification, the non-automated processes need to be covered by relevant parts of the EPD process certification as described in Section 8.5. The accredited certification body shall determine to what extent the EPD process certification shall be incorporated in the organization of the tool owner based on a pre-review of the tool. The scope of the pre-verification (see Section 8.6.1) and to what extent the EPD Process Certification shall be incorporated shall be included in the application for tool for validation and verification, and registration (see Section 8.6.6). The semi-automated tool can either be an LCA or EPD tool due to the flexibility of a EPD Process Certification. However, with this integration, the ownership of the tool is limited to the EPD owner that holds the certification.

The annual validation and verification required for pre-verified and integrated EPD tools, described in Section 8.6.8.4 may be performed at the same time as the annual validation and verification required for the EPD Process Certification, described in Section 8.5.3.

#### 8.6.8.3 Additional requirements for fully automated tool

The fully automated tools are qualified as such when no human interaction is needed for the process for EPD development according to Section 6, after the validation of the tool. Possible human operations include, non-exhaustive:

- IT maintenance (e.g. troubleshooting of potential network problems between the LCA calculation engine and other accounting systems in the company),
- monitoring of the tool activity, and
- output (EPD) management.

To ensure data integrity, the tool shall have an automatic data input feature, e.g., via interface from process control or accounting systems. Assessment of evidence that the source of data as well as the transfer process are reasonably safe against manipulation, be it intentional or accidental. In this context the following sources of data can be considered to fulfil this requirement unless case-specific circumstances indicate otherwise:

- systems to control production processes,
- accounting systems, or
- other data management systems that feed directly into accounting processes.

In all other cases additional evidence needs to be provided.

In addition to the requirements on tool logbook in Section 8.6.3.1, the procedures shall be automated. The procedure to document information on generated EPDs in section 8.6.8.1 shall also be automated.

Due to the novelty of this tool solution, the Secretariat may require additional testing before approval if deemed necessary. The additional tests may be performed by the Secretariat or the Technical Committee but can also be outsourced if needed.

#### 8.6.8.4 Annual check of fully integrated tool

At least once a year a check-up of the tool shall be performed; exceptions can be made if the number of published EPDs from the tool since the previous check-up is below ten. The tool owner or manager is responsible for informing the Secretariat and the tool verifier regularly (minimum is once a year) in such cases.

This check-up shall consider:

- the log files for both the tool and the EPDs generated,
- a reasonable sample of EPDs generated since the last validation and verification, and
- the validation and verification of these EPDs. The check-up of the validations and verifications may be restricted to the following aspects:
  - plausibility of input and output data[36],
  - fulfilment of reporting requirements, if applicable (see Section 7.4 and applicable PCRs),
  - additional environmental, social, and economic information,
  - compliance with legislation connected to information presented in EPD, and
  - follow-up during EPD validty (see Section 8.4.8).

Each check-up shall be documented in an EPD verification report that shall include the mandatory information according to Section 8.6.4.1 and the following as a minimum:

[36] Plausibility checks on the inputs include, for example, checks of raw data before it enters the tool (e.g., calculating the energy consumption of the manufacturing in a way that is compatible with the input interface of the tool, e.g., kWh/FU or MJ/FU). Plausibility checks of outputs include checks on the relationship between the calculated environmental performance results and the inputs used in the calculation (i.e., whether the declared inputs allow to calculate the environmental performance declared in the EPD). Check on the outputs also include manipulations of tool outputs before incorporating the environmental profile in the EPD (e.g., averaging of similar products, production sites, etc.) done outside the tool.

 

- the number of EPDs generated and published with the tool since the last check-up, and
- the description of the sample considered in the check-up and how it was determined.

# 9 PROCESS FOR PCR DEVELOPMENT AND MAINTENANCE

Product Category Rules (PCR) provide rules and guidelines for developing EPDs for specific product categories. They shall be used together with the GPI, and relevant reference standards, when developing EPDs. A PCR should enable different practitioners to generate consistent results when assessing products of the same product category, to as far as possible support comparability of products within a product category.

PCRs shall include rules enabling comparability within the product category, including rules related to data and modelling. The GPI shall be the main reference for PCR development and the PCR shall be developed in accordance with the rules in the GPI and, for rules on the environmental performance indicators, at the website (www.environdec.com/indicators). PCRs should refer to Section 7 of this GPI for EPD content and format, and Annex A of this GPI and the website for the general LCA method, and not repeat any content of Section 10, Annex A, and the website. PCRs may, however, include additions, specifications and deviations to the rules set in the GPI and at the website, as further described below. Any nonconformity with the GPI and the website shall be documented and is subject to approval during the PCR review.

The process for PCR development described in the following sections is compliant with ISO/TS 14027.

PCRs in the International EPD System shall be developed and published in English. Translated versions of the PCRs may be published in addition to the English version, but the English version shall take precedence in the event of any discrepancies and the English version shall be used as the basis for validation and verification. For version control, the date of the publication of the translated version shall be declared at its cover page.

PCRs shall be based on one or more LCAs representing the full product life cycle conducted in accordance with ISO 14044 and other relevant LCA-based footprint studies, including any supporting studies performed in parallel to the PCR development. The PCR Committee should review relevant scientific papers available or submitted during the preparation, as appropriate. The final PCR shall reference the supporting studies, but they do not have to be publicly available.

PCRs developed in the International EPD System should have a global scope, to be as applicable as possible and to avoid creating unnecessary trade barriers.

PCRs shall aim to account for all environmentally relevant aspects of the product life cycle.

PCRs shall be developed with the intention of publishing and enabling others to publish EPDs.

The PCR development should be done by a PCR Committee, led by a PCR Moderator. The review and approval of PCRs shall be done by the TC. The Secretariat shall guide and oversee the process. Section 4.3 describes the roles in PCR development in more detail...

The development of a PCR shall be done in an internationally accepted manner based on an open, transparent, and participatory process. The PCR Committee should consist of multiple organisations, which jointly shall have expertise in the product category and in LCA/EPD.Reasonable efforts should be made to achieve consensus throughout the process.

The Secretariat may terminate the development of a PCR, for example in the event of repeated delays or the non-fulfilment of review comments.

The programme operator shall maintain the copyright of the draft and final PCR to ensure that it is possible to publish, update when necessary, and make 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.

The PCR development process consists of the following steps:

5. Initiation (see Section 9.2)
6. Preparation (see Section 9.3)
7. Open consultation (see Section 9.4)
8. Review, approval, and publication (see Section 9.5)

A checklist for PCR development is available at www.environdec.com.

After publication, a PCR may be updated (see Section 9.6) and later de-registered if expired and no longer relevant (see Section 9.7).

## 9.1 MAIN PCR AND COMPLEMENTARY PCR

PCRs covering broad product categories (e.g., construction products) may be complemented by complementary PCRs (c-PCRs) providing further rules and guidance for a subcategory (e.g., cement products). PCRs that may be complemented by c-PCRs are "main PCRs"[37]. Main PCRs should only allow declaration of environmental performance per declared unit, and thus a c-PCR may be needed to declare the environmental performance per functional unit (declared and functional units are defined in Section A.2). Apart from functional unit, a c-PCR may provide rules and guidance on other methodological aspects of specific relevance for its scope, but only rules and guidance that differ or is additional to the main PCR. A c-PCR should follow the same GPI as the main PCR. If requirements in the main PCR and a c-PCRs differ, the requirements in the c-PCR shall prevail.

The development/updating of c-PCRs should follow the same process as the development/updating of regular PCRs. The only exception allowed is if the c-PCR is an adoption of an external PCR or standard that in turn has undergone sufficient consultation and review processes. In such cases, the content of the external PCR/standard shall be reviewed by the Secretariat to ensure an acceptable quality, if necessary with support from the TC, before being adopted as a c-PCR in the International EPD System. An example of such adoption is the c-PCRs for construction products, for which EN standards outlining product category rules for a subcategory of construction products shall be adopted when available[38].

The rules on validity period of PCRs in Section 9.5.3 apply also for c-PCRs developed within the International EPD System, i.e., the expiration date should by default be set four years from the version date of the original version of the c-PCR or the most recent large c-PCR update. C-PCRs developed under a previous version of this GPI may, however, have expiration dates that were set at the expiration date of the main PCR; if the expiration date of the main PCR is extended, the validity period of such a c-PCR may be extended until four years after the version date of the original version of the c-PCR or the most recent large c-PCR update.

For the c-PCR to be applicable, the main PCR shall also be valid.

If the main PCR has undergone an update (see Section 9.6), the c-PCR is applicable under the updated main PCR, even if it refers to a previous version of the main PCR. The Secretariat may decide on exceptions to this, which then shall be communicated at www.environdec.com.

The system of a main PCR complemented by several c-PCRs should be used for industrial sectors in which:

- the use of EPDs is widespread and expected to grow,
- have a wide and diverse set of product categories (making it impractical to handle the many methodological variations in a single PCR),
- there is an interest to as far as possible harmonise methodological aspects between product categories, and
- there is an interest to gather the common methodological guidance in a single document (the main PCR), instead of in many separate PCRs.

It is mandatory to use an applicable and valid c-PCR if it has been published or adopted by the International EPD System for more than 90 days (about 3 months). If more than one c-PCR is applicable, the EPD owner may choose to use any of them, but it is recommended to use the one that is more specific in scope in terms of product function. An alternative is to use, and verify the EPD towards, several applicable c-PCRs, as long as there are no conflicting requirements in the c-PCRs.

## 9.2 INITIATION

### 9.2.1 DEFINE THE PRODUCT CATEGORY

The definition of the product category covered by a PCR shall, as far as possible, be based on the function of the product, i.e., so that the same functional unit may be applied to products within the scope of the PCR. When defining the product category, the following aspects should be considered:

[37] In other EPD programmes, main PCRs and c-PCRs are sometimes referred to as "Part A" and "Part B" PCRs, respectively.

[38] Available and upcoming EN standards are listed at https://www.cen.eu/work/endev/.

- primary and secondary functions of the product,
- exchangeability of products, e.g,, in the way that an increase in price for a product on the market leads to an increase in the price of other products,
- results from screening study/existing LCA literature for the product group,
- UN CPC code(s), and
- product category definition used in similar or related contexts, e.g., in international standards, criteria used for Type I environmental labels or green public procurement.

The product category definition should be made so that the development of the PCR is practical and feasible, accounting for existing PCRs, market situation, industry structure, potential applications, and the size of the stakeholder group affected. The scope should be decided during PCR development in a discussion between the PCR Moderator, the PCR Committee, and the Secretariat, which may ask the TC for support when necessary, with the aim to reach consensus, as far as possible. The scope may be reconsidered at a later stage based on the experience gained when using the PCR.

The product category definition should include commonly used synonyms to the product category name as well as information about which similar or related products that are not included in the scope.

To facilitate organisation of the PCR library and discovery of PCRs, the PCR scope should be classified at a three-, four-, or five-digit level in the latest version of the UN Central Product Classification (UN CPC)[39]. The PCR should also include a classification according to other commonly used schemes that are relevant depending on the geographical scope, applications, and product category, such as the Common Procurement Vocabulary (CPV), UN Standard Products and Services Code® (UNSPSC), Classification of Products by Activity (NACE/CPA), or Australian and New Zealand Standard Industrial Classification (ANZSIC).

The programme operator shall have the right to decline the development of PCRs for certain product categories.

### 9.2.2 CONSIDER AVAILABLE PCRS

The adoption of an existing PCR shall be preferred over developing a new PCR.

Existing PCRs available at www.environdec.com shall be considered before starting the development of a new PCR to avoid overlaps in scope. Existing PCRs that cover a part of the life cycle of the product in question, for example agricultural products for processed food items, should be referenced for harmonisation across product categories and in supply chains.

Existing PCRs available in other programmes shall also be considered. The International EPD System may recognise and adopt PCRs prepared by other programme operators operating in accordance with ISO 14025.

If a PCR with a relevant scope is identified in another programme or in an international standard, the PCR may be adopted following the adoption process described in Section 9.8. If the PCR is not adopted, harmonization with the PCR shall be considered in the further development of a PCR.

The programme operator may establish agreements for mutual recognition of PCRs with other programme operators, to enable adoption of their PCRs (see Section 5.8). Information about such agreements should be available on the website.

If no existing PCR is identified for the product category, the PCR development shall continue with the steps explained in the following sections.

If an existing PCR is identified but not adopted, and a new PCR with overlapping scope is developed, the new PCR shall include a justification for why its development was deemed necessary.

### 9.2.3 APPOINT A PCR MODERATOR

PCR development is coordinated by a PCR Moderator (see Section 4.3.2 for a list of the roles). The PCR Moderator is appointed by the Secretariat based on an application.

[39] http://unstats.un.org and https://unstats.un.org/unsd/classifications/Econ/CPC.cshtml

 

The PCR Moderator shall have good project management skills, familiarity with EPDs and the industry/product category, and at least basic understanding of LCA.

### 9.2.4 CREATE THE PCR COMMITTEE

PCRs should be developed as an open co-operative effort by a PCR Committee, assembled and led by the PCR Moderator. The PCR Committee should be balanced and include as many interested parties as possible from the geographical scope of the PCR, for example representatives from different companies and trade associations, to ensure broad acceptance and high quality of the final PCR. Stakeholders that should be considered are those that:

- manufacture products in the product category,
- use products in the product category,
- are experts in the product category,
- represent manufacturers or users of products in the product category,
- have commercial interests in the product category,
- are in the chain of accountability,
- have authority or decision-making power over some aspect of products in the product category,
- are programme operators,
- are developers of PCRs in other programmes and/or of similar product categories,
- are experts in the field of product sustainability, and
- are non-governmental organisations (NGOs) or other organisations interested in societal wellbeing or environment protection.

The PCR Committee shall have competence in LCA and the key processes of the product life cycles of the product category covered by the PCR. The PCR Committee should be composed of enough independent members to assure that the interests of one party do not dominate the PCR development process. Any potential conflicts of interest by PCR Committee members, or if a PCR Committee member is reimbursed by another organisation for its involvement in the committee, should be announced within the PCR Committee.

In case of the development of a new PCR with overlapping scope with another (expired or expiring) PCR of the International EPD System, the PCR Moderator of the new PCR shall invite the PCR Moderator of the other PCR to become PCR Committee member and encourage him/her to invite the PCR Committee members of the other PCR.

If there is a disagreement on the constitution of the PCR Committee, the Secretariat shall decide.

### 9.2.5 PLAN THE PCR DEVELOPMENT

The PCR Moderator shall develop and maintain a time plan for the PCR development, and keep the Secretariat informed about dates of important milestones.

### 9.2.6 ANNOUNCE PCR DEVELOPMENT

When a decision is taken to start developing a PCR, the development process shall be announced by the Secretariat at www.environdec.com together with relevant information, including:

- preliminary name and scope of the PCR,
- name, organisation, and contact details of the PCR Moderator,
- list of members of the PCR Committee, and
- preliminary time plan of PCR development.

The announcement should also be done by the Secretariat through other channels, such as the newsletter, social media, or direct contact with stakeholders.

The PCR Moderator shall announce the development process in relevant industry forums or industry publications, and by contacting the potential stakeholders identified in Section 9.2.4, so that interested parties may join the PCR development process. It shall be documented that a broad range (in terms of stakeholder types and geographical representativeness) interested parties was invited by listing members of the PCR Committee and invited parties that chose not to participate. If any interested party is excluded, this shall be justified and documented. The attempt to involve other stakeholders is especially important if single companies initiate the work to develop a PCR. The PCR Moderator shall describe these outreach activities, including a list of invited parties, and submit this to the Secretariat within 90 days of the initiation of the development process (unless a justification for extending this time period is submitted to, and approved by, the Secretariat) and no later than the initiation of the open consultation.

The final list of PCR Committee members shall include their names and/or affiliations as well as any dependencies. For example, if a member (including the PCR Moderator) is reimbursed by another organisation for its involvement in the PCR Committee, this shall be displayed (e.g. “John Smith, Organisation A, on behalf of Organisation B”). A list of the affiliations of the PCR Committee members, and potential dependencies, shall be included in the PCR.

## 9.3 PREPARATION

### 9.3.1 USE OF PCR TEMPLATE

The Secretariat, with support from the TC, shall develop a PCR Template to be used when developing PCRs. Any nonconformity with the PCR Template and the GPI (e.g., Section 7 on EPD content and format, and the general LCA method of Annex A) shall be documented and is subject to approval during the PCR review (see Section 9.5.2).

### 9.3.2 SPECIFY LCA CONTENT OF THE EPD

PCRs shall be based on the general LCA method of the International EPD System as described in Annex A, but may provide deviations, clarifications, and specifications of relevance for the product category, that may, for example, relate to:

- definition of declared/functional unit,
- definition of reference service life or product lifespan, when applicable,
- description of system boundary, including a system diagram,
- cut-off criteria,
- allocation rules,
- data quality requirements and underlying specific or generic data,
- recommended database, for data that are particularly important for the environmental performance results, or
- environmental performance indicators (see Section 9.3.3).

Existing, related PCRs, such as those covering a part of the life cycle of the product in question, should be referenced to encourage harmonisation across related product categories and within supply chains.

Due to legal requirements or other market demands in specific countries or regions, a PCR may set requirements that are only valid for certain geographical markets. In such cases, the PCR shall be clear on the geographical validity of these requirements.

### 9.3.3 SELECT LCA INDICATORS

As mandated by ISO 14025, all relevant environmental aspects of the product throughout its life cycle shall be taken into consideration and be part of EPDs based on the PCR. For aspects that are relevant but not covered by the LCA indicators, see Section 9.3.4.

A default set of LCA indicators (also termed environmental performance indicators) to declare in EPDs of the International EPD System, and associated methods for inventory and/or impact assessment shall be available on the website (www.environdec.com/indicators). Rules in the PCR may deviate from the default list of indicators. Such deviations shall be justified in the PCR development process and be based on:

- the results and interpretation of the supporting LCA studies, including the use of normalisation and weighting of results to determine the most relevant impact categories,
- a literature review of relevant impacts for the product category (the review may cover LCA and non-LCA literature),
- a review of key environmental concerns regarding the product category, e.g. from NGOs, civil society, customers, and other stakeholders, for the geographical applicability of the PCR, and
- a review of requirements in other standards or methodological guidelines of relevance for the product category, to which harmonisation is desirable, such as EN 15804 for construction products.

The selection of indicators shall focus on their environmental relevance for the product category. The selection shall also take into consideration the scope of the PCR, regional aspects or requirements, and the maturity of the methods to ensure that they are not misleading. To harmonize across product categories, rules on indicators in PCRs of similar and/or related product categories shall be considered. If a PCR requires or recommends other indicators than those in the default list, it shall describe the inventory and/or impact assessment methods to use, including references to the original source and specification of the version of methods and characterisation factors. Such indicators should be based on international standards or similar documents developed in a transparent procedure.

If the selection of indicators is based on an effort to harmonize with international standards or other external documents outlining product category rules, the PCR shall include a statement saying that the alignment/adoption of indicators from the external product category rules does *not* imply that the EPDs can be claimed to be aligned or compliant with the external product category rules. Alignment/compliant with external product category rules requires alignment/compliant of the entire method applied, and not just the selection of indicators.

### 9.3.4 SELECT ADDITIONAL ENVIRONMENTAL INFORMATION

Environmentally relevant information not covered by the LCA indicators may be declared in the EPD as additional environmental information. See Section 7.4.8 for examples and rules on such information.

The PCR shall specify which, if any, additional environmental information that is required or recommended to declare in the EPD and, if relevant, provide guidance for deriving and/or verifying the information (e.g. in terms of method to use or certification scheme to adhere to).

### 9.3.5 SELECT ADDITIONAL SOCIAL AND ECONOMIC INFORMATION

Social or economic information not covered by the LCA indicators may be declared in the EPD as additional social and economic information. See Section 7.4.9 for examples and rules on such information.

### 9.3.6 DEFINE RULES FOR COMPARABILTY

Rules for comparability of EPDs based on the PCR shall be defined with reference to ISO 14025 §6.7.2, with additions as relevant for the product category.

### 9.3.7 QUALITY CHECK BEFORE CONSULTATION

When the PCR Moderator and PCR Committee have finished a draft PCR for open consultation, the draft shall be submitted to the Secretariat. The Secretariat should check the draft before the open consultation to ensure that no obvious and unjustified contradictions to the GPI exists, to make editorial changes and to suggest other improvements for clarity.

The TC, via the Secretariat, may also provide guidance on how to interpret the GPI before the draft PCR goes to open consultation.

## 9.4 OPEN CONSULTATION

The open consultation International EPD Systemshall be a transparent, open, internet-based process that gives all interested parties a possibility to contribute, thus ensuring credibility and acceptance of the final document.

### 9.4.1 IDENTIFY THE PCR STAKEHOLDER CONSULTATION GROUP

The stakeholders that are invited to the open consultation constitute the PCR stakeholder consultation group. This group shall be notified of the start of the open consultation.

The identification of relevant stakeholders to include in the stakeholder consultation group should be carried out in cooperation between the PCR Moderator, the PCR Committee, and the Secretariat based on a list of stakeholders proposed by the PCR Moderator.

The PCR stakeholder consultation group should be selected to representatively cover knowledge and skills in different sectors of society that are both nationally and internationally relevant for the PCR under development. The group should have a geographical diversity related to the scope of the PCR.

Organisations/stakeholders contributing during the open consultation shall be listed in the PCR if they agree to be listed.

### 9.4.2 PREPARE PUBLIC MEETINGS

The open consultation may include a public meeting, for example in the form of an online seminar, organised by the PCR Moderator, to inform stakeholders and collect stakeholder feedback. The PCR Moderator shall inform the Secretariat of any planned public meeting, so that information about the meeting can be included in the invitations to the open consultation and/or published at www.environdec.com. International EPD System

### 9.4.3 INITIATE THE OPEN CONSULTATION

The initiation of the open consultation shall be done by the Secretariat, with support from the PCR Moderator, and include:

- the publication of the draft PCR,
- the publication of a template for comments,
- an announcement of the open consultation at www.environdec.com, and
- an e-mail invitation to the PCR stakeholder consultation group announcing that the draft PCR is available and open for comments.

The announcement and the invitation shall include a deadline for the consultation period and information on how to provide comments, including information about public meetings, if any (see Section 9.4.2). Stakeholders should be encouraged to spread information about the consultation to other relevant stakeholders.

The open consultation period shall start at the earliest four weeks from the initiation of the PCR development process, and last for eight weeks for new PCRs but may be shorter for updates (see Section 9.6).

### 9.4.4 COLLECT COMMENTS DURING OPEN CONSULTATION

During the open consultation period, the PCR Moderator shall guide stakeholders in the open consultation process and collect stakeholder comments. Public meetings or webinars may be held, when relevant (see Section 9.4.2).

## 9.5 REVIEW, APPROVAL, AND PUBLICATION

### 9.5.1 PREPARE UPDATED DRAFT

The PCR Moderator and PCR Committee shall prepare an updated draft PCR. The updated draft shall take the comments received during the open consultation into consideration and endeavour to resolve conflicting comments.

The PCR Moderator and PCR Committee shall prepare a summary of the open consultation that includes a description of the open consultation process, the parties participating in the consultation by providing comments, the comments received and how they have been handled. In case comments are not considered or are rejected, the omission or rejection shall be justified. The PCR Moderator and PCR Committee should also reply individually to all stakeholders that have provided comments during the consultation.

The PCR Moderator shall send the updated draft PCR and the summary of the open consultation to the Secretariat.

The Secretariat shall share a public version of the summary of the open consultation to any interested parties upon request. Names or contact information of a stakeholder that has provided comments shall only be disclosed in the public version of the summary in case the stakeholder has agreed to this.

### 9.5.2 REVIEW AND APPROVAL

The PCR review shall ensure that the PCR and the process to develop the PCR are done in accordance with the GPI and reference standards, and that the methods of the PCR are scientifically and technically sound. The review may also guide the further improvement of the PCR, for example in terms of requests or recommendations of clarifications or amendments.

The updated draft PCR provided by the PCR Moderator after the open consultation (see Section 9.5.1) shall be reviewed by the TC (see Section 4.1.3) functioning as the PCR Review Panel, supported by the Secretariat. Members of the TC shall recuse themselves from the PCR Review Panel if they have any conflicts of interest, including if they are the PCR Moderator or part of the PCR Committee, or belong to the same organisation as the PCR Moderator or the PCR Committee. The review shall have a chair, and may have one or several co-chairs, who shall be independent of the industries producing and supplying the products covered by the product category or supplying to them.

The results of the review shall be documented in a PCR review report, which shall include information on:

- whether the PCR has been developed in accordance with the GPI, and ISO 14025, 14040, 14044, 14046, 14067, and/or ISO/TS 14027,
- whether the PCR fulfils the requirements in the GPI,
- whether the environmental performance indicators, together with the additional environmental prescribed by the PCR, provide a description of the significant environmental aspects of the product,
- how the PCR Moderator and PCR Committee have handled the feedback received during the open consultation,
- any dissenting views within the PCR Review Panel, and
- the review statement, for example expressed as:
  - approval of the draft PCR, without the need for changes,
  - approval of the draft PCR, after comments and suggested changes have been satisfactorily addressed,
  - further review needed, after comments and suggested changes have been addressed, or
  - further open consultation and review needed, after comments and suggested changes have been addressed.

Before the PCR review report is sent to the PCR Moderator, the Secretariat may make editorial changes (e.g., clarifications of comments) and add complementary comments. Complementary comments may concern dissenting views between the Secretariat and the PCR Review Panel.

The PCR review report shall not be published but should be made available upon request.

If changes of the draft PCR are requested, the PCR Moderator and PCR Committee shall ensure that the review comments and suggested changes are considered in updating the draft PCR.

If the review statement says that the draft PCR can be approved after comments and suggested changes have been satisfactorily addressed, the Secretariat is responsible for checking whether the comments and suggested changes have been satisfactorily addressed. If they have not been satisfactorily addressed, or if there are uncertainties regarding whether they have been satisfactorily addressed, the Secretariat shall check with the PCR review chair before final approval and, if there is a need, initiate another round of review.

The PCR may need several rounds of review by the PCR Review Panel and revision by the PCR Moderator and PCR Committee before its final approval.

If there is a need, the Secretariat may initiate another open consultation before the next round of review. The additional open consultation may be shorter in duration than the initial open consultation.

If the PCR Review Panel does not agree on the approval of a PCR, there should be a majority vote and dissenting views shall be documented in the PCR review report. If there is a tie, the review chair shall decide on recommendation for approval, or not.

In principle, the Secretariat should follow the recommendation for approval, or not, as set out in the PCR review report. Notwithstanding, the Secretariat holds an exclusive veto-right. This veto-right shall only be exerted in exceptional cases and it is reasonably justified that the future existence of the programme may be at risk. Reasonable justification is not limited to risk for non-compliance with technical/methodological rules, but can also concern, for example, political, economic, social, and technological factors.

### 9.5.3 PUBLICATION

When the draft PCR has been approved, the Secretariat shall make final editorial changes, assign a registration number, and publish the final version of the PCR on the website together with associated information that, for example, enables the identification of which PCR to use for a specific product. This information shall include:

- PCR name,
- registration and version number of the PCR[40],
- definition of the product category,
- synonyms for the name of, or other keywords relating to, the product category, if relevant[41],
- UN CPC code(s) and, if relevant, classification in other classification schemes,
- related or similar products not covered by the PCR, with reference to other PCRs covering these products, if relevant,
- validity period of the PCR,
- name and contact details of PCR Moderator and names of organisations in the PCR Committee,
- standards conformance of the PCR,
- life-cycle stages considered in the PCR,
- geographical coverage of the PCR, and
- name and contact details of the programme operator.

The Secretariat shall set a validity period for the PCR in the range three to five years. Four years should be the default validity period, deviations from this shall be justified in the PCR.

EPD International has the sole publishing rights for PCRs developed using the International EPD System, unless exceptions are allowed by an MRA (see Section 5.2).

### 9.5.4 ANNOUNCE PUBLICATION

The PCR Moderator shall inform the PCR Committee and other stakeholders involved in the PCR development process about the outcome of the work and publication of the PCR. The Secretariat should announce the publication at www.environdec.com, in a newsletter and/or via other communication channels.

## 9.6 UPDATE

A PCR is valid for a pre-determined time period to ensure that it is updated at regular intervals. Any interested party may comment on a published PCR during its validity. Such comments may lead to an update during the period of validity (Section 9.6.1), otherwise they should be used as input when the PCR is updated when it is about to expire (Section 9.6.2).

An expired PCR shall not be used to develop and register a new EPD and shall not be used to make an update of a published EPD that prolongs its validity period. To be possible to use for these purposes, the expired PCR shall first be updated or have its validity period prolonged according to Section 9.6.2.

[40] The registration and version numbers shall together be considered the “registration code” in the terminology of ISO 14027.

[41] The name of a product category can have different denotations for different geographical regions or cultures. This should be considered when listing synonyms for the name of the product category.

 

An updated PCR shall be assigned an updated version number or, if its scope has changed significantly, a new registration number. The assignment of version number depends on whether the updated is a large, medium, or small update, as is described in the below subsections.

### 9.6.1 UPDATES WITHOUT EXTENDING VALIDITY (SMALL AND MEDIUM UPDATES)

A PCR may be updated without extending its validity period, provided there are significant and well-justified proposals for changes or amendments. This includes editorial changes, clarifications, correction of errors, or additions or changes in recommendations or permissions. The basis for such updates may be new LCA information generated in the relevant industry sector, or special market demands not covered by the existing version of the PCR, or other comments that are of sufficient technical relevance. The extent of such updates can be medium or small.

Medium updates can include any type of change, except additions of or changes in requirements (“shall”). Medium updates shall be handled by the Secretariat, shall be communicated to the PCR Moderator, may involve the PCR Moderator and the PCR Committee, should be reviewed and approved by the PCR Review Panel if the changes concern LCA rules, and may involve an open consultation if the changes are of a nature that requires stakeholder input (such open consultation may be shorter than the eight weeks prescribed in the regular PCR development process, see Section 9.4). If changes done in a medium update concern LCA rules or validation and verification, the previous version of the PCR shall be valid in parallel during a transition period of at least 90 days (about 3 months), but not exceed its previously set validity period. Information about such transition periods shall be published at www.environdec.com. In medium updates, the second digit of the version number shall change, and the third digit be set to zero (e.g., the version number can be changed from 1.0.2 to 1.1.0). The frequency of medium PCR updates shall be kept to a minimum to ensure market stability.

Small updates shall only concern editorial changes and be handled by the Secretariat. An example of when a small update is justified, is when there is a change in the information about PCR Moderator, such as a change of PCR Moderator or the contact information of the PCR Moderator. In small updates, the previous version should be immediately removed from the PCR Library in the EPD Portal and there should be no transition period. In small updates, the third digit of the version number shall change (e.g., from 1.0.2 to 1.0.3).

### 9.6.2 UPDATES TO PROLONG VALIDITY (LARGE UPDATES)

A large update can include any type of change, including changes in requirements (“shall”), . Typically, large updates shall be done when the PCR is about to expire. The PCR Moderator shall initiate a discussion with the Secretariat on if and how to proceed with updating the PCR to align with the latest GPI, the latest LCA method developments in the sector, and to renew its validity period. The Secretariat shall remind the PCR Moderator of the need to update the PCR at least a year before its expiration. There should be a market demand to register EPDs to initiate a large update. If no PCR Moderator exists for the PCR when it is time to initiate a large update of the PCR, the Secretariat shall try to find a new PCR Moderator.

In large updates, the first digit of the version number shall change and the second and third digits shall be set to zero (e.g., the version number can be changed from 1.2.2 to 2.0.0).

For large updates that prolong the validity period of the PCR, the updating process shall follow the PCR development process as described in Sections 9.2 to 9.5.

A large update may be done without prolonging its validity period, in case there have been changes in requirements in documents that International EPD System shall follow or adopt (e.g., if a corrigendum of an EN standard is published or in case of a new version of the ECO Platform verification checklist). Large updates that do not prolong the validity period of the PCR shall not include any changes in requirements beyond those made in the normative document. Large updates that do not prolong the validity period PCR do not have to follow the updating process as described in Sections 9.2 to 9.5, i.e., they can be done without open consultation and review.

When an updating process for a large update with a prolonged validity period has been initiated and announced, the Secretariat may prolong the validity period of the current version of the PCR with the time period expected for the PCR update to be finalised, but not exceeding one year from its previous expiration date. Such an extension of the validity period of an existing PCR may also be done when a new PCR is being developed that will fully, or partly, replace the existing PCR. An extension of the validity period should be communicated to the PCR Moderator and at www.environdec.com, and, normally, not be done more than once for the same first-digit version of the PCR. If there is a delay in the PCR development process, the validity period may be prolonged a second time, but not exceeding 1.5 years from the expiration date before it was prolonged the first time.

 

## 9.7 DEPUBLICATION

Expired PCRs shall be available in the PCR library at www.environdec.com as long as there are valid EPDs published under the PCR. Once there are no valid EPDs published under a PCR, it should be depublished, to ensure an up-to-date, consistent and useful PCR library. Depublished PCRs may be made available upon request, for example to be used as input to the development of new PCRs or for research purposes.

The Secretariat should inform the PCR Moderator about depublication. If an updating process is initiated within one year from depublication, the PCR may once again become published, either by prolonging the validity period of the existing version during the updating process (see Section 9.6.2) or when the updated version of the PCR is published.

## 9.8 ADOPTION

PCRs in other EPD programmes or in international standards may be adopted in the International EPD System. Adoption of PCRs from other EPD programmes may require a MRA, and other EPD programmes can only adopt PCRs of the International EPD System if there is an MRA (see Section 5.8).

Anyone who identifies a PCR that may be relevant to adopt may contact the Secretariat. If the Secretariat decides that adoption of the PCR is relevant (e.g., a relevant scope with a market demand for EPDs) and may be possible (e.g. dependent on the MRA status), it shall initiate an adoption process. The adoption process should be announced at the website (www.environdec.com).

For adoption of PCRs of another EPD programme, a review and approval process shall be initiated following the description in Section 9.5. If the existing PCR is approved by the PCR Review Panel and the use of the PCR is approved by the other programme operator, the PCR shall be considered adopted, and information about the adoption of the PCR shall be published at the website (www.environdec.com). The information at the website may include further requirements, specifications of the rules in the PCR, and restrictions to the use of the PCR (which, e.g., may be an output of the review process). The adopted PCR may, thereafter, be used to develop and register EPDs within the International EPD System. If the PCR is not approved, the reason for non-approval shall be submitted to person/organisation that suggested the PCR to be adopted and to the programme operator issuing the PCR, for consideration in for future updates of the PCR, upon which the PCR may again be considered for adoption.

For adoption of PCRs in international standards, the decision to adopt such documents shall be made by the Secretariat and may be supported by the TC, when relevant. The quality of the standard and whether it is, or expected to be, widely used by the market shall be considered in the decision. After adoption, information about the adoption of the PCR shall be published at the website (www.environdec.com).

An adoption of a PCR is valid, regardless of any updates done during the validity period of the PCR. The adoption is also valid for versions of the PCR with (short-term) extended validity periods done due to an initiated updating process. Once the updating process has been finalised, with a (long-term) extended validity period, a new adoption process is required to adopt the new version of the PCR.

# 10 CONTENT AND FORMAT OF PCR

PCRs should contain the following information:

- Cover page
- Introduction
- General information
  - Name of PCR
  - Registration number and version
  - Identification of programme (International EPD System), programme operator (EPD International AB), logotype, contact information, and reference to www.environdec.com
  - Information about PCR Committee and PCR Moderator, including contact information for PCR Moderator,
  - Date of publication and latest revision
  - Date of validity
  - Schedule for renewal
  - Standards conformance, including version of the GPI
  - PCR language(s)
  - Definitions of terms, if relevant for the product category
- Scope of PCR
  - Product category definition and description (e.g. synonyms, function/use/application,and technical performance )
  - Classification of product category using UN CPC code(s), and other relevant classification schemes
  - Products not covered by the PCR, if relevant
  - Geographical scope of the PCR
  - Maximum period of validity of EPDs based on the PCR
- PCR review and background information
  - Information about review, e.g. dates, review panel, chair of PCR review, and contact information
  - Information about open consultation
  - Existing PCRs for the product category and reasoning for developing the PCR
  - Reasoning for development of the PCR
  - Underlying studies used for the PCR development
- Goal and scope, life cycle inventory, and life cycle impact assessment
  - Declared/functional unit
  - Technical specification, lifespan, and reference service life (RSL), if applicable
  - System boundary, including cut-off rules and information on life-cycle stages not considered and omitted in the EPD, if relevant
  - System diagram
  - Allocation rules
  - Data and data quality rules
  - Other rules on LCA and scenario development, if relevant
  - Specific rules per life-cycle stage and module D, if relevant

  - Environmental performance indicators, with reference to website for default list of indicators and information on inventory and impact assessment methods, and adjustments or amendments of default list, if relevant
  - Rules for including multiple products in the same EPD
  - Rules for EPDs published by traders
- Instructions for the content and format of EPDs based on the PCR
- Requirements for comparability between EPDs
- Additional information
  - Rules for the product content declaration, if applicable
  - Rules for provision of additional environmental as well as social and economic information
  - Mandatory statements, e.g. regarding validation and verification
- List of abbreviations
- References
- Version history of PCR

If any of above information is not included in the PCR, it shall be justified in the PCR and approved during the PCR review.

PCRs should not repeat any content of Section 7, Annex A or www.environdec.com/indicators. For example, if the PCR prescribes the same allocation rules as in Annex A, its section on allocation rules should simply refer to Annex A and not repeat any rules and guidance in Annex A.

## 10.1 PCR LANGUAGES

PCRs shall be published in English but may be translated into other languages. Translated versions of PCRs are considered to be duplicates of the English version and shall therefore not be subject to additional review. The version date (i.e., the date of its publication) of the translated PCR shall be included in the document. In the event of any discrepancy between versions, the English version shall take precedence. Valid translations of PCRs shall be available at www.environdec.com.



 

# 11 DEVELOPMENT OF GPI

## 11.1 VERSION HISTORY

This document has been issued in the following versions:

- 2008-02-29: Version 1.0
- 2013-06-04: Version 2.0, with minor revision 2013-09-18
- 2015-05-11: Version 2.5
- 2017-12-11: Version 3.0
- 2019-09-18: Version 3.01
- 2021-03-29: Version 4.0
- 20YY-MM-DD: Version 5.0.0 (this document)

Before publication of Version 1.0 of the GPI for the International EPD System, the rules for the administration and operation of the preceding programme were MSR 1998:1 and MSR 1999:2.

## 11.2 CONTRIBUTING PARTNERS

Several contributing partners were involved in the preparation of the GPI. The following agreed to be listed as contributors:

- Version 1.0: AssoSCAI, CE.SI. S.P., European Commission (Joint Research Center), Five winds International, IVL Swedish Environmental Research Institute, Swedish Environmental Management Council, Vattenfall.
- Version 3.0: 3M USA, Aequilibria di Pernigotti Daniele, Ambiente Italia S.r.l., Bombardier Transportation, Bureau Veritas CODDE, CTME, DNV GL, Life Cycle Engineering, Serenity SpA, start2see, thinkstep Italy.
- Version 4.0: CTME; Energiföretagen Sverige, Fortum Oslo Varme, Göteborg Energi AB, NCC, NORSUS, Stockholm Exergi, Studio Fieschi & soci S.r.l., Studio LCE, Söderenergi AB
- Version 5.0.0: Remains to be added Special thanks to Elia Rillo from Studio Fieschi & soci S.r.l. for his valuable contribution to the development of the framework on tools for EPD development.



 

# 12 ABBREVIATIONS AND TERMINOLOGY

## 12.1 ABBREVIATIONS

| | |
|---|---|
| ANZSIC | Australian and New Zealand Standard Industrial Classification |
| CLC | Co-location centre |
| CPC | Central product classification |
| CPR | Construction product regulation |
| CPV | Common procurement vocabulary |
| EPD | Environmental product declaration |
| EU | European Union |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| GPI | General Programme Instructions |
| GTIN | Global trade item number |
| IAB | International Advisory Board |
| ISO | International Organization for Standardization |
| LCA | Life cycle assessment |
| LCI | Life cycle inventory |
| NACE/CPA | Classification of products by activity |
| ND | Not declared |
| PCR | Product category rules |
| PEF | Product environmental footprint |
| REACH | Restriction of chemicals |
| RSL | Reference service life |
| SI | The International System of Units |
| TC | Technical Committee |
| UN | United Nations |
| UNSPSC | United Nations standard products and services code |

## 12.2 TERMINOLOGY RELATED TO VALIDATION AND VERIFICATION

For definitions of terms relates to validation and verification, see Table 8.

*Table 8. Definition of terminology related to validation and verification.*

| Term | Section | Description |
|---|---|---|
| Claim | | Information declared by the declaration owner. |
| EPD document assessment | 8.4.6, **Error! Reference source not found.** | An internal activity within the organisation that assesses the EPD document to certify its appropriateness before publication. |
| EPD process | 8.5 | Chain of activities within an organisation that links together in a certain systemised pattern, from an initial start-up to a result as the launch of the EPD. |
| EPD process assessment | 8.5.2 | An internal activity within the organisation that regularly with certain frequency assesses the EPD process to certify it appropriateness. |
| EPD process assurance | 8.5.2, 8.5.3 | An internal activity within an organisation that assures the reliability, the relevance and independence in the handling of the EPD process. The assurance of the EPDs shall have same value as if EPD has been certified by a third-party verifier. |
| EPD process certification | 4.1.4, 4.2.2, 5.10, 7, 7.4.2 | Certification issued by an accreditation body stating that the EPD process and EPD process assurance activity follows the GPI. The certificate shall specify the PCR(s) used in the EPD Process Certification. |
| EPD process owner | 8.5.2 | Personnel having authority and responsibility in managing the EPD process from start to final EPD. |
| EPD responsible publisher | 8.5.1 | Personnel having authority and responsibility regards when publish EPD to external party |
| Pre-verified EPD tool | 8.6, **Error! Reference source not found.** | A validated tool which generates an EPD including indicator results and all EPD-related information that are mandatory according to GPI, applicable PCR(s), and relevant standards. |
| EPD verification report (adopted from ISO 14025:2006) | 8.4.6, 8.6.4, 8.6.8 | A document with a checklist for the verifier to check the conformity of the first, second, and following EPDs to relevant rules and standards. This includes validation and verification of claims. |
| LCA report (ISO 14044:2006+A1:2018+A2:2020) | 4.2.2, 4.2.3, 8.2.1, 8.2.2, 8.3.1, 8.6.7. | A report describing the underlying LCA of the EPD. Is, along with the EPD, subject to validation and verification. Is normally non-public but may be public. Termed “project report” in EN 15804. |
| Pre-verified LCA tool | 7.4.2, 8.6 | A validated tool which generates a list of indicator results required for an EPD |
| Pilot EPD validation and verification | 8.6.7. | Individual EPD validation and verification on a fictive or real product that shall be a part of the tool validation and follow the EPD validation and verification procedure in section 8.4. The procedure shall also check the tool’s intrinsic safeguard to ensure data integrity with respect to the parts that are pre-verified and fixed. |
| Scope of pre-verification | 8.6.1, 8.6.4, 8.6.7 | Collection of pre-verified elements in a tool such as background LCA data. |
| Tool administrator (Eco-platform) | 8.6.7 | The tool owner or someone mandated by the tool owner |
| Tool owner | 8.1, 8.6.1, 8.6.3, 8.6.5, 8.6.6, 8.6.7, 8.6.8. | An individual or organization who is the owner and accountable of the tool |
| Tool project report | 8.6.1, 8.6.4, 8.6.7 | A document which describes the tool’s functionality (e.g., algorithms), the LCA and the scope of the pre-verification. |
| Tool verification report | 8.6.4, 8.6.7. | A document with a checklist for the verifier to check the conformity of the tool to relevant rules and standards. |
| Tool verifier | 8.6.1, 8.6.5, 8.6.7, 8.6.8. | An approved verifier who has been permitted by the Technical Committee to perform tool validation and verification. The person is also the team leader who manage a team of verifiers. |
| Top management | 8.5.1, 8.5.2 | Personnel who direct and control the organization, or the part of the organization that is covered in the EPD process certification, at the highest level. |
| Validation (ISO 17029) | | Confirmation of a claim, through the provision of objective evidence, that the requirements for a<br>specific intended future use or application have been fulfilled. |
| Verification (ISO 17029) | | confirmation of a claim, through the provision of objective evidence, that specified requirements<br>have been fulfilled. |

# 13 REFERENCES

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the version cited applies. For undated references, the latest version of the referenced document (including any amendments) applies.

European Commission, 2018. European Waste Directive 2008/98/EC, version from 2018-07-05.

EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

EN 15941

EN 15942 Sustainability of construction works - Environmental product declarations - Communication format business-to-business

EPD International, 2023a. PCR 2019:14 Construction products. www.environdec.com.

EPD International, 2023b. Brand book. Available upon request (contact the Secretariat).

ISO 8601 Data elements and interchange formats – Information interchange – Representation of dates and times

ISO 14025:2006, Environmental labels and declarations – Type III Environmental declarations – Principles and procedures

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

ISO/TS 14029 Environmental statements and programmes for products – Mutual recognition of environmental product declarations (EPDs) and footprint communication programmes

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

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

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

ISO 14067:2018, Greenhouse gases – Carbon footprint – Requirements and guidelines for quantifiaciton

ISO 19011 Guidelines for Auditing Management Systems

ISO 21930:2017 Sustainability in building construction – Environmental declaration of building products

ISO/TS 14027:2017, Environmental labels and declarations -- Development of product category rules

ISO/IEC 17011 Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodiesISO/IEC 17029:2019

ISO/IEC 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes, and services

ISO/TS 14067:2018, Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication

ISO/TS 14071 LCA Critical Review Process and Reviewer Competencies

# ANNEX A – GENERAL LCA METHOD

This annex describes the typical application of the LCA method in the International EPD System.

An LCA study according to ISO 14040/14044 consists of four phases: goal and scope definition, inventory analysis, impact assessment, and interpretation. In general-purpose LCA studies, all background conditions regarding the LCA calculations are defined from the onset of the study and revised in an iterative way. For the application of LCA in an EPD, some of the preconditions are already set by this Annex and the PCR to increase comparability between products in the same product category.

If there is a need to meet market demand for life cycle-based environmental information for certain markets, product categories or applications, a method that deviates from this annex may be adopted. Such deviations shall be described in the PCR or standards referred to in the PCR and be subject to review and approval in the PCR development process.

## A.1 MODELLING APPROACH

The LCA modelling approach of the International EPD System is attributional LCA (in contrast to consequential LCA), meaning that:

- specific or average data shall be used (i.e., not marginal data), and
- allocation problems that cannot be avoided by sub-dividing the unit process into two or more sub-processes, shall be solved via allocation (i.e., not via system expansion beyond the system boundaries set by the PCR; so-called “substitution” or “credits” for avoided environmental impact shall not be used to solve allocation problems).

The purpose of using this approach is to make information traceable, documented, and possible to verify, and to support the modular use of EPDs.

If the PCR permits the declaration of benefits and loads beyond the product system boundary in module D (see Section A.3.1), this represents consequential LCA modelling and shall therefore be separately declared.

## A.2 DECLARED/FUNCTIONAL UNIT

The declared or functional unit is the reference unit to which the environmental performance of the product is related. Functional unit is defined as a quantified performance of a product and a declared unit is defined as a quantity of a product. The declared/functional unit to use for a specific product category shall be specified in the PCR. The PCR may allow several declared/functional units, for different subcategories of products. In each EPD, however, the declaration of results shall only be done for one declared/functional unit.

The declared/functional unit shall be clearly defined and measurable. In practice, the declared/functional unit consists of a qualitatively defined function or property (e.g., for paint, a surface covered with a certain level of brightness, or other quality) and its quantification via one or several units (e.g., 1 $m^2$ covered for 10 years). The declared/functional unit should be expressed in SI units (kg, J, meters, etc.), however, other units may be used if they are considered more relevant to address the information (e.g., kW for power and kWh for energy). Conversion factors shall be provided to convert from declared/functional unit to one unit of product, where relevant.

If the function of the product in the use phase is known and can be clearly defined, a functional unit shall be defined in the PCR. Examples of functional units are:

- For transportation modes or services: transportation of a given number of passengers over a given distance, e.g., transport of 1 passenger for 1 km,
- For cleaning items or services: cleaning of a given item or area for a given time, e.g., 1 $m^2$ building area kept cleaned for a period of 1 year,
- For products applied on surfaces: coverage of given surface area over a given time. e.g., 1 $m^2$ wall surface covered for 10 years,
- For energy products: provision of a certain type and quantity of energy, e.g., 1 kWh of electricity delivered to the customer.

If the function of the product in the use phase is unknown, if the product can be used for several divergent functions, or if the function cannot be clearly defined, a declared unit may be used. A declared unit may, for example, be suitable for

intermediate products which can be further processed, or combined with other products, into different end products. Although a declared unit is defined as a quantity of the product rather than its quantified performance, the definition of declared unit shall be relevant in relation to the typical applications the product. Examples of declared units are:

- an item or an assemblage of items, e.g., 1 brick or 1 mobile phone,
- mass of a product, e.g., 1 kg of cement, and
- volume of a product, e.g., 1 litre of water or 1 $m^3$ of ready-mixed concrete.

Note that the use of a declared unit may reduce comparability between EPDs. To increase comparability between EPDs based on a declared unit, it is therefore important to specify technical properties of relevance for the application/use of the product.

### A.2.1 TECHNICAL SPECIFICATION, LIFESPAN, AND REFERENCE SERVICE LIFE (RSL)

A PCR may establish rules of declaring technical specifications of the product, for example as part of describing its function. The technical specification shall include sufficient information for a user of the EPD to assess the technical performance and usefulness of a product in each context.

The technical specification may include a product lifespan, which can be a technical lifespan of the product, i.e., the average time for which the product has been designed or proven to last, and/or an actual lifespan, i.e., the average time for which the product has been shown to be in use. Product lifespans shall be expressed in relevant units such as years, operating hours, or kilometres travelled. Note that the technical lifespan is not identical or related to guarantee time whether legally binding or offered voluntary.

The PCR may include requirements or guidance on how to estimate product life spans.

Note that a technical or actual lifespan of a product is not necessarily the same as the reference service life (RSL) of the product category to which the product belongs. The RSL of a product category is the reference time to which the performance of all products of a product category shall be related as part of the definition of the functional unit. If relevant, an RSL may be defined in the PCR. For example, a PCR may specify the RSL of product category to be 10 years (e.g., because that is a typical technical lifespan for that product category) and the functional unit to be to fulfil a certain function over that RSL. If a product then has a (proven) technical lifespan of 5 years, two such products (or a replacement product or refurbishment of the product, depending on product) are needed to fulfil the functional unit. Likewise, if a product has a (proven) technical lifespan of 20 years, only half such a product may be needed to fulfil the functional unit.

The RSL shall refer to the declared technical and functional performance of the product, be specified under defined reference in-use conditions, and be justified and verifiable. For further guidance on RSL of construction products, see EN 15804.

## A.3 SYSTEM BOUNDARY

The system boundary of the product life cycle determines the processes to be included or excluded in the LCA. Which system boundary to apply for a specific product category shall be set in the PCR.

All environmentally relevant processes from “cradle to grave” should be included, so that at minimum 95% of the total energy use, mass of product content, and environmental impact is accounted for (see Section A.3.3).

For raw materials, intermediate products, or other products for which further processing and/or the end use is unknown, the system boundary may be limited to “cradle to gate.” The following criteria shall be fulfilled for the end-of-life stage to be excluded[42]:

- the product is physically integrated with other products in subsequent life-cycle process (e.g., during installation in a building) so they cannot be physically separated from them at end of life,
- the product or material is no longer identifiable at end-of-life because of a physical or chemical transformation process,
- the product or material does not contain biogenic carbon, and

[42] The first three criteria are adapted from EN 15804, and the fourth criteria is adapted from ISO 14025.

- the EPD shall not be used for business-to-consumer communication.

If deviations from a “cradle to grave” system boundary are allowed for a product category, and if deviations from the above criteria for excluding end-of-lite treatment are made in a PCR, these shall be described in the PCR and justified in the PCR development process.

In case end-of-life is included and a “cradle to grave” system boundary shall be used, the use stage may still be excluded, if allowed by the PCR. Such exclusion may be relevant for raw materials, intermediate products, or other products for which the end use is unknown and shall be justified in the PCR development process. For products used by end users, the use stage shall always be included.

### A.3.1 LIFE-CYCLE STAGES AND MODULES

For different data quality rules and for the presentation of results, the product life cycle shall be divided into the following life-cycle stages and modules (adopted from EN 15804), unless the PCR says otherwise:

- Product stage, modules A1-A3:
  - A1: Raw material extraction and processing (e.g., mining, agricultural and forestry operations), production of intermediate materials and components, processing of secondary material input (e.g., recycling processes), production of distribution and consumer packaging, etc.
  - A2: Transports to the manufacturer of the product.
  - A3: Manufacturing of the product (often the processes managed by the organisation that owns the EPD).
- Distribution and installation stage, modules A4-A5:
  - A4: Transport of the product to the building/installation site/user, including storage of product (e.g., warehouse and retail operations).
  - A5: Installation of the product, for example in a building as part of the construction of the building (e.g., including transports and waste processing of material and product losses arising in A5).
- Use stage, modules B1-B7
  - B1: Use/application/operation of the product (e.g., including direct emissions associated with its use).
  - B2: Maintenance of the product.
  - B3: Repair of the product.
  - B4: Replacement.
  - B5. Refurbishment.
  - B6: Energy use in use/application/operation.
  - B7: Water use in use/application/operation.
- End-of-life stage, modules C1-C4
  - C1: De-construction/demolition/deinstallation.
  - C2: Transport to waste processing.
  - C3: Waste processing for reuse, recovery and/or recycling.
  - C4: Disposal.

Above description of processes included in each module is not complete and there are exceptions, as is described below (e.g., raw material extraction and processing may appear in other modules than A1).In addition to above life-cycle stages and modules, a PCR may permit the declaration of environmental consequences (in terms of benefits and loads) of reuse, recycling and/or recovery of materials and energy beyond the product system. If permitted, these results shall be separately declared.

An EPD shall include all unit processes that are relevant to include for each module. A PCR may include further specifications and guidance on which life-cycle stage, modules, and processes to include.

Each module shall include the generation of electricity and production of fuels, steam and other energy carriers used in the module. Also, each module shall include the waste processing of waste generated in the module up to the end-of-waste state or final disposal; except waste processing of the product itself, which is included in module C. Also, each module shall include the upstream production and transport of such waste, i.e., any environmental burden related to a loss shall be included in the module in which the loss occurs (this is adopted from EN 15804). This means that if there is a loss of material or product in, for example, module A3 or module A5, the production, transport, and waste processing (until the end-of-waste state) or final disposal of that loss shall be included in module A3 or module A5, respectively. Because of this, there may be upstream processes that occur in several modules – such processes shall be consistently modelled (e.g., in terms of use of specific/proxy data, allocation method applied, electricity modelling) irrespective of the module in which they occur. This principle of assigning losses and their production is illustrated in Figure 2.

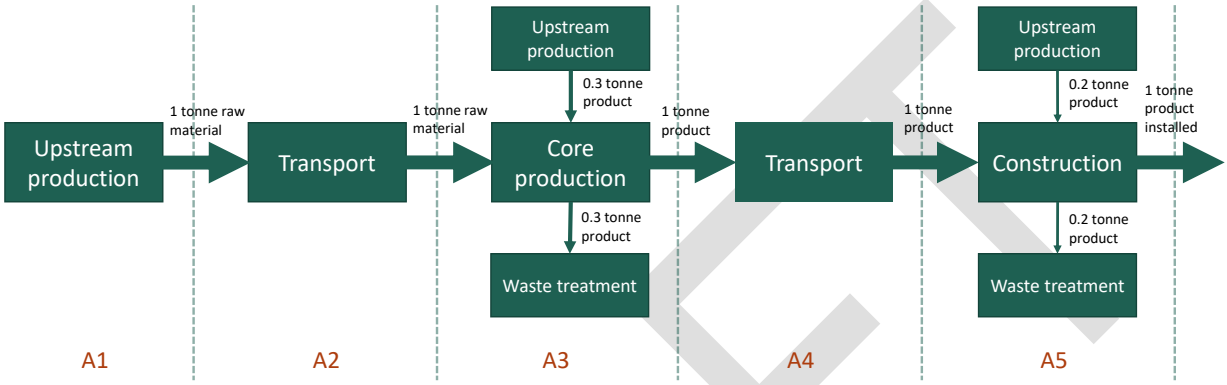


*Figure 2. Illustration of principle for assigning losses and their production.*

Each B module includes the production and transport of all material, components, and product inputs to the module, except the input of the studied product and its packaging from module A. For example, this includes production and transport of consumables used in maintenance (B2) or new product components/spare parts used in replacement (B4). Also, each B module shall include the waste processing of waste generated (including, e.g., replaced components/parts) in the module up to the end-of-waste state or final disposal. There may be processes in module B that also occur in module A (e.g., production of replacement components/parts); such processes shall be modelled as in module A (e.g., in terms of use of specific/proxy data, allocation method applied, electricity modelling).

Based on market needs, a PCR may require division into other life-cycle stages and/or modules. For example, the division into life cycle stages upstream, core and downstream. A PCR may also assign processes to life-cycle stages/modules differently than indicated above. For example, the above-described assignment of processes to life-cycle stages/modules may not be applicable for EPDs of services and the PCR may therefore include additional and deviating guidance.

The PCR shall specify which life cycle stage/module division to use and specify the typical processes of each stage/module.

*Here a figure illustrating the general processes of modules A-D will be added later in the GPI development process.*

A.3.1.1 Excluded processes

Business travel of personnel, travel to and from work by personnel, and research and development activities shall be excluded, unless the PCR says otherwise.

Processes excluded based on the rules in this section shall not be considered when calculating the percentages for applying the cut-off rules of Section A.3.3.

A.3.1.2 Infrastructure and capital goods

In general, the production and end-of-life processes of infrastructure or capital goods[43] used in the product system shall not be included within the system boundaries. In the following exceptions to this rule, infrastructure/capital goods shall be included:

- For electricity datasets, at least the construction of the powerplant shall be included. This applies also to electricity used as input to other datasets.
- If infrastructure/capital goods are produced with the intention to be used one or a few times only, for example a manufacturing plant or machinery constructed to produce only one product.
- If a generic LCI dataset includes infrastructure/capital goods, and it is not possible, within reasonable effort, to subtract the data on infrastructure/capital goods from this dataset.
- If a PCR says otherwise.

If infrastructure/capital goods are included within the system boundaries, this shall be described in the EPD, unless it is shown in a sensitivity analysis that they contribute less than 10% to the cradle-to-gate results for all the environmental impact indicators declared in the EPD. This description shall include which life-cycle stages, or processes, that infrastructure/capital goods are included for. Furthermore, the description should[44] include the type of infrastructure/capital goods included (e.g., factory building, manufacturing machinery, transport vehicles, transport infrastructure, energy infrastructure). If some or all of these types of infrastructure/capital goods are included in a generic LCI dataset used, the name of the dataset (including the database it has been derived from) shall be declared in the EPD if the full dataset (i.e., not just the infrastructure/capital goods) contributes more than 5% to the cradle-to-gate results of any of the environmental impact indicators.

The above rule to, in general, exclude infrastructure/capital goods is primarily because LCI data on infrastructure/capital included in generic datasets often are of inadequate quality, for example in terms of technical, geographical, and temporal representativeness, which may significantly increase the uncertainty of the results declared in the EPD. The rule may change in the future if the quality of LCI data on infrastructure/capital goods improves.

Processes excluded based on the rules in this section shall not be considered when calculating the percentages for applying the cut-off rules of Section A.3.3.

If infrastructure/capital goods are included, the following disclaimer shall be included in the results sections of the LCA report and in the EPD (land use and toxicity indicators shall only be mentioned if declared in the EPD):

*The impact categories of "abiotic depletion of minerals and metals", "land use", "human toxicity, cancer", "human toxicity, non-cancer" and "ecotoxicity, freshwater" may be invalid in LCAs that include capital goods and infrastructure based generic datasets. This is because the LCI data of infrastructure and capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.*

A.3.2 SPECIFICATIONS OF OTHER BOUNDARY SETTINGS

The following are the default system boundary for the LCI. These requirements may be further described or revised in a PCR.

**Boundary in time**. The period for which inputs to and outputs from the product system is accounted for shall be 100 years from the year that the LCA model best represents, considering the representativeness of the inventory data. This year shall, as far as possible, represent the year of the publication of the EPD.

**Boundary to nature and other product systems**. Flows shall in general be traced so that the main inputs to the LCI are resources from nature and outputs are emissions to nature. Co-products, and waste that is processed until the end-

[43] Examples of infrastructure and capital goods are the building in which the studied product or upstream materials or components are produced, machinery used in the manufacturing of the product or its materials or components, or vehicles used in transports in the product system. For example, if the EPD is on wind power, the power plant itself is considered the studied product and not infrastructure/capital goods. However, the buildings and machinery that make the wind turbine components are considered infrastructure/capital goods. Similarly, if the EPD is on a means of transport, the vehicle is considered the studied product and not infrastructure/capital goods.

[44] A reason not to declare this information can, for example, be that this information is not available in the LCI dataset documentation.

 

of-waste state is reached, may enter/leave the product system from/to other product systems; see Section A.4 for rules on how to set boundaries between product systems. Agriculture, forestry, aquaculture, and similar production systems are part of the technical system, i.e., elementary flows that originate from applied substances (e.g., fertilizers) and eventually leaves to water, soil or air shall be accounted for.

**Geographical boundary.** The geographical boundary shall reflect the physical reality of the product under study, accounting for the representativeness of technology, input materials and input energy.

### A.3.3 CRITERIA FOR THE EXCLUSION OF INPUTS AND OUTPUTS (CUT-OFF RULES)

The default cut-off rule is 5% at the level of modules (A, B and C). In other words, the included LCI data shall together cover at least 95% of the inputs of mass and energy, respectively, per module. Furthermore, inputs that are known to contribute significantly to results shall be included, even if below the 5% cut-off rule. In general, the cut-off of LCI data should be avoided, and all available inventory data shall be used. Using cut-off rules shall not be done to "hide" data but rather to facilitate the data collection. The 5% cut-off does not include LCI data that are explicitly outside the system boundary according to the GPI, the PCR or any normative reference standard referenced to in the PCR (e.g., EN 15804 for construction products).

If less than 100% of the inputs are accounted for, proxy data or extrapolation should be used to achieve 100% completeness. Inputs not included in the LCA shall be reported in the EPD.

Exclusion of LCI data based on the cut-off rule shall be based on a sensitivity analysis and/or conservative assumptions in combination with plausibility considerations and expert judgement. This shall be documented in the LCA report in a way that makes it verifiable (it is the verifier that decides what information is necessary).

Deviations from the above cut-off rules may be done in a PCR. If so, this shall be justified in the PCR development process.

## A.4 ALLOCATION RULES

Sections A.4.1 and A.4.2 provide rules for the allocation of co-products and waste, respectively. Co-products are "any of two or more marketable materials, products or fuels from the same unit process, but which is not the object of assessment"[45] and waste is a "substance or object which the holder discards or intends or is required to discard" (definitions from EN 15804[46]). A further clarification is that waste, if eventually used for a specific purpose, requires processing to cease being waste and thus leave the product system. A material or energy flow ceases being waste when all the criteria for end-of-waste state are fulfilled, see Section A.4.2. In other words, if any of the criteria is not fulfilled at some point, it is a waste and the waste allocation procedures of A.4.2 shall be applied; if all criteria are always fulfilled, it is a co-product and the co-product allocation procedures of A.4.1 shall be applied. This is the general rule for how to distinguish between co-products and waste, and thus decide which allocation procedure to use. There is an exception to this general rule (a PCR may include further exceptions):

- All outputs from maintenance, repair, replacement, or refurbishing processes (or similar processes in module B/use-stage), and from dismantling, deconstructing, or demolition of the product in module C/end-of-life stage, shall at first be waste (this rule is adapted from EN 15804). In other words, such outputs form modules B and C shall be modelled as waste and be assumed to leave the product system when the end-of-waste criteria have been fulfilled, without an environmental burden (following the rules for waste allocation in Section A.4.2).

Irrespective of the allocation between product systems, the inherent properties of the product and the packaging, such as calorific content or biogenic or fossil carbon content, shall not be allocated away and shall always follow the physical downstream flow and the product system that finally uses it.

Note that the allocation rules shall be followed for the entire product system, i.e., also for processes modelled with generic datasets from databases. Therefore, generic datasets may have to be modified before they can be used in the LCA model. Such modifications can include conservative assumptions; guidance on this is included in Section A.4.1.

The PCR should specify the allocation method to use in each key process of the product category where an allocation problem may be expected. This should follow the rules in this section; deviations shall be justified in the PCR

[45] In industry vocabulary, the terms by-product, non-core products or sub-products are sometimes used to refer to co-products.

[46] The definition of waste is originally from European Waste Directive 2008/98/EC (European Commission 2018).

development process. If economic allocation is prescribed by the PCR, it shall explain the reference values (e.g., revenue) to be used.

Figure 3 illustrates when to apply co-product and waste allocation, respectively.

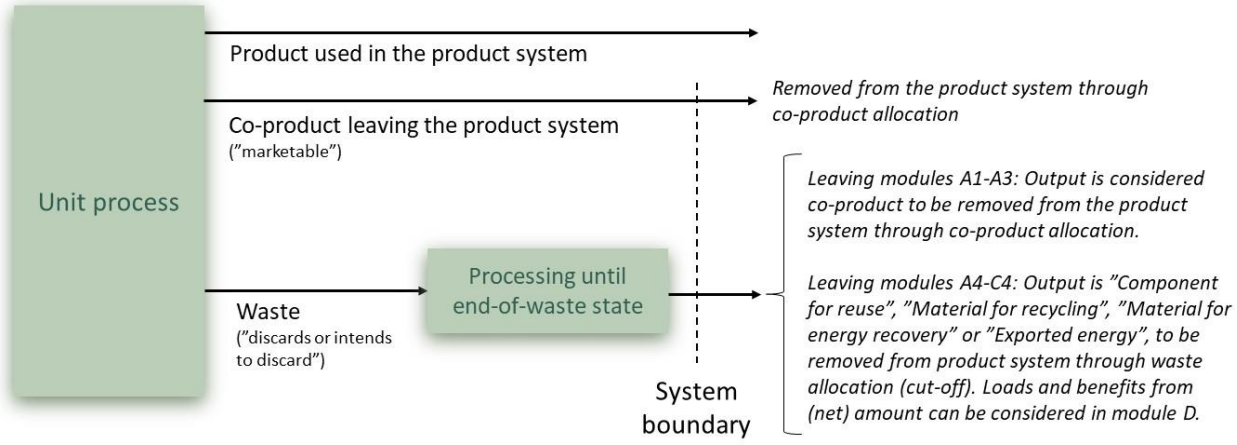


*Figure 3. Illustration of when to use co-product or waste allocation.*

### A.4.1 ALLOCATION OF CO-PRODUCTS

In co-product allocation, the sum of the allocated inputs and outputs to the products shall be equal to the total inputs and outputs from the same unit process, and consistent allocation procedures shall be uniformly applied to similar inputs and outputs of the system under consideration. This means that no double counting or omission of inputs or outputs through allocation is permitted (unless a conservative assumption is made, see below).

The following stepwise procedure shall be applied for allocation of co-products:

1. Allocation shall be avoided, if possible, by dividing the unit process into two or more sub-processes and collecting LCI data for each sub-process. This option shall not be used for *joint* co-production processes, which ISO 21930 describes as follows: "…if each of the co-products can be produced without the other(s) or the ratio of the co-products typically varies in normal production, then it is not a joint co-production process. By-products cannot be avoided and processes producing by-products are therefore joint co-production processes."
2. Allocation shall be based on physical properties (e.g., mass, volume) when (i) there is a relevant underlying physical relationship between the products and co-products, and (ii) the difference in revenue per mass (or per energy unit in case of electricity, heat or similar) from the products and co-products is low. A relevant underlying physical relationship exists when the amounts of inputs and outputs are changed by quantitative changes in the amounts of products or functions delivered by the system.
3. In all other cases, allocation shall be based on economic values of the products and co-products when they leave the unit process. Economic values may, for example, be the revenue generated by each product and co-product. The revenue is the price multiplied by the output. For both price and output, representative values should be identified (e.g., rolling annual averages). If economic allocation is used, a sensitivity analysis exploring the influence of the choice of economic value shall be included in the LCA report.

If option 3 in the above stepwise procedure is applied and the input has no or negative economic value, it will not be allocated any environmental burden, which will yield the same result as applying waste allocation (the cut-off method) of Section A.4.2. If applying co-production allocation yields the same result as applying waste allocation, the LCA report and the EPD shall still describe the applied allocation method as co-product allocation.

In co-product allocation, conservative assumptions may be made when the effort of allocation is disproportionate to any improvement in accuracy. For example, flows leaving the studied product system can be assumed to have no economic value and thereby allocated no environmental burden. Furthermore, if a co-product of a previous product system is an input to the product system under study, the conservative assumption is that it comes with an environmental burden. In

 

the end, a conservative assumption shall always allocate more environmental burdens to the product that is the object of the EPD than would have been allocated with a strict application of the allocation procedure.

An example of when a conservative assumption is reasonable is when it is unknown whether an input from a previous product system leaves that system as a co-product or as waste that ceases to be waste at the system boundary. Then the conservative assumption is to assume the input is a co-product that is assigned an environmental burden. This may, for example, be the case when the input is an unknown mix of pre- and post-consumer scrap, where pre-consumer scrap will often be allocated as co-products (e.g., if it has a positive economic value) while post-consumer scrap shall be allocated as waste.

If the PCR allows the declaration of module D, allocated co-products shall not be considered in the modelling of module D.

### A.4.2 ALLOCATION OF WASTE

The allocation of waste shall follow the polluter-pays principle that is made operational according to the following rules.

The system boundary to the subsequent product system is set where the waste (e.g., the discarded product) reaches the end-of-waste state, i.e., when the material has become a usable flow (e.g., for reuse, energy recovery and/or recycling). The end-of-waste state is reached when all the following criteria are fulfilled:

- the recovered material, component or product is commonly used for specific purposes;
- a market or demand, identified e.g., by a positive economic value, exists for such a recovered material, component, or product;
- the recovered material, component or product fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- the use of the recovered material, product or construction element will not lead to overall adverse environmental or human health impacts.

Note that the “specific purpose” in this context is not restricted to the function of a certain product but can also be applied to material or energyware serving as input to the production process of another product.

At the system boundary, cut-off allocation shall be applied, i.e., all unit processes before the point of end-of-waste shall be assigned to the product system generating the waste and all unit processes after the point of end-of-waste shall be assigned to the subsequent product system.

If a waste flow does not fulfil all the end-of-waste criteria, and thus does not cross the system boundary, all waste treatment processes including those of disposal shall be assigned to the product system generating the waste.

Treatment of waste classified as hazardous, if not treated/upgraded and by legalisation reclassified as a product, will be based on the above criteria always be allocated to the system generating this waste.

If it is unknown whether the end-of-waste criteria are fulfilled, a conservative assumption shall be made. This means that in case the product under study has generated the waste, the end-of-waste criteria shall be assumed not to be fulfilled and the further waste processing and waste incineration/disposal shall be assigned to the product.

As said in the introduction to Section A.4, certain outputs from modules B and C leaving the product system shall at first be considered being waste and leave the product system when reaching the end-of-waste state. If such an output never ceases to fulfil the end-of-waste criteria, the system boundary to the subsequent product system shall be set after the last joint unit process.

Waste may have a negative economic market value, and then the end-of-waste stage is typically reached after (part of) the waste processing and further refinement, at the point at which the waste no longer has a negative market value. This allocation method is (in most cases) in line with a waste generator’s juridical and financial responsibilities. The method is illustrated in Figure 4 for a case where the market value of the waste always is positive, in which the end-of-waste stage is reached when the waste has its lowest market value. Common cases of allocation of waste treatment processes are described below.

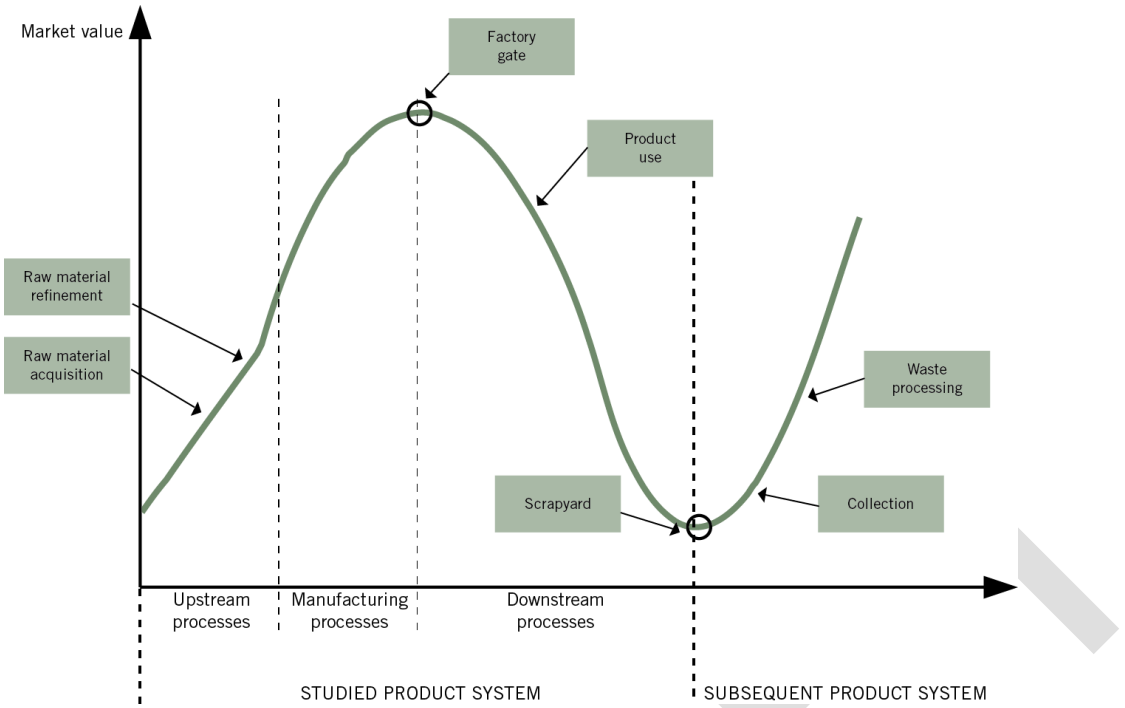


*Figure 4. An example of where the system boundary between subsequent product systems involving reuse, recycling and recovery processes may be set based on the allocation procedure described in the text.*

For waste being recycled or reused, the environmental burden of processes until the end-of-waste state shall be assigned to the product system generating the waste, and processes after the end-of-waste state, if any, shall be assigned to the product system using the recycled/reused material flow (recycled materials are thereafter considered secondary materials). Internal scraps recycled in a manufacturing process shall not be considered an input of secondary material.

For waste incinerators that are paid for incinerating the material (i.e., the wasted material has a negative economic value), the end-of-waste state is reached after the incineration (regardless of thermal efficiency). This means that all the environmental burden of collection, pre-processing and incineration of the waste shall be assigned to the product system generating the waste, and that all the environmental burden of processes after the end-of-waste has been reached, for example related to making use of the energy, shall be assigned to the product system using the energy. In contrast, if the end-of-waste state is reached before the incineration/combustion, the environmental burden of incineration/combustion (as well as processes occurring before incineration but after the end-of-waste has been reached, if any) shall be assigned to the product system using the energy. For example, this is the case if the waste incinerator pays for the material (i.e., the economic value of the material is positive) or receives it for free, and all other criteria for the end-of-waste state are also fulfilled. For waste incineration without energy recovery, the environmental burden of collection, pre-processing and incineration of the waste shall be assigned to the product system generating the waste.

For landfilling waste, the environmental burden of landfilling and capturing and combustion of landfill gas, if any, shall be assigned to the product system generating the waste. Burdens related to making use of the energy, if any, shall be attributed to the product system using the energy.

For waste that has not reached the end-of-waste state prior to its incineration, the thermal efficiency of the incineration process determines whether it shall be assigned to modules C3 or C4. If the thermal efficiency is higher than 60%, the incineration process is an energy recovery process and shall be assigned to C3. If the thermal efficiency is lower than 60%, the incineration process is a disposal process and shall be assigned to C4. An exception is incineration of hazardous waste, which always shall be assigned to C4.

## A.5 DATA AND DATA QUALITY RULES

For specific data quality rules per life cycle stage, see Section A.7.

### A.5.1 DATA CATEGORIES

Life cycle inventory data are classified into specific data and proxy data[47]. The data categories are 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;
  - actual data from other parts of the life cycle traced to the product under study, for example site-specific data on the production of materials provided by contracted suppliers;
  - transportation data on distances, means of transportation, load factor, fuel consumption, etc., of contracted transportation providers; and
  - data from databases on transportation or energyware (e.g., electricity[48], fuels, and heat) that are combined with actual transportation and energy parameters as listed above.
- **proxy data** (sometimes referred to as "secondary data" or "generic data") from e.g., commercial databases, free databases, or literature**.**

Specific data shall be used for (at least) the processes for which the producer has operational control. Specific data shall be used also for other processes, when available, otherwise proxy data may be used. The PCR may set stricter rules for using specific data in selected processes outside the producer's operational control, for example to produce consumer packaging. Also, for EPDs registered by traders/retailers, there are stricter rule for using specific data, see Section A.10. Proxy data should be used in cases in which they are representative for the purpose of the EPD, for example for bulk and raw materials on a spot market, if there is a lack of specific data on the final product or if a product consists of many components.

The share of GWP-total results in modules A1-A3 (or upstream and core, or A1-A5 for services) coming from specific data shall be reported in the EPDs. If more than 90% specific data is used, ">90%" may be reported.

### A.5.2 DATA QUALITY REQUIREMENTS FOR SPECIFIC DATA

For specific data, the following rules apply:

- data should be based on one-year averaged data (the one year does not need to be a calendar year); deviations shall be justified (e.g., a deviation may be justified if the year-to-year variations are large, so that, for example, five-year averaged data may be more representative for the coming year, or if the product is not yet, or recently, on the market, see Sections 6.1.1 and 6.1.2),
- the period for data collection should be as recent as possible; deviations shall be justified,
- the data shall not be more than five years old, and shall be representative for the validity period of the EPD (if not, the EPD shall be updated, see Section 6.5),
- inputs to and outputs from the product system shall be accounted for over a period of 100 years, and
- data shall comply with the rules on system boundaries and the cut-off rule of this GPI and applicable PCR.

### A.5.3 DATA QUALITY REQUIREMENTS FOR PROXY DATA

For proxy data to used, the following rules apply (which may be further specified in the PCR):

- datasets shall be based on attributional LCA modelling (e.g., not be based on marginal data and not include credits from system expansion);
- the reference year (which does not need to be a calendar year) shall be as current as possible, and not represent a reference year more than 10 years old, and should be representative for the validity period of the EPD;

[47] In versions 4.0 of the GPI, proxy data was termed "generic data," which in turn consisted of "selected generic data" or "proxy data."

[48] Data on electricity modelled by contractual instruments or a residual grid mix shall be considered specific data. If there is no contractual instrument for demonstrating the origin of the electricity on the market, that fulfils the requirements in Section A.6.2, data on the consumption mix of the market shall be considered specific data.

- the 5% cut-off rule (as described in Section A.3.3) shall be met on the level of modules;
- technological, geographical, and temporal coverage shall as much as possible reflect the physical reality of the declared product/product group; and
- shall be checked for plausibility (e.g., by mass or energy balance, or by comparisons with other relevant sources of information).

Note that “reference year” is not necessarily the year of data collection, but may, for example, be the latest year for which the dataset provider deems the dataset to be fully representative.

A PCR may provide examples of datasets to be used, of specific relevance for the product category, if these are considered to fulfil the above requirements on proxy data. Listing such databases in the PCR does not replace the need for data quality assessment during the LCA study.

### A.5.4 DATA QUALITY DECLARATION

EPDs may include a declaration of the quality of data used in the LCA calculations (in addition to the required declaration of the share of specific data, see Section 7.4.6). The PCR may set requirements on such a declaration.

## A.6 OTHER LCA RULES

For specific LCA rules per life cycle stage, see Section A.7.

### A.6.1 MASS BALANCE

Mass balance approaches (MBAs) are sometimes used in LCA contexts to claim biobased, renewable, recycled, or other types of product content. MBAs are based on organizations (e.g., integrated chemical production systems) and not on single product systems, and they apply calculations and mass balance criteria that are not based on the physical relationship between input resources and product content. With MBA, the content of the product may be claimed to be, for example, biobased, renewable, or recycled, even if biobased, renewable, or recycled raw materials are not physically present in the product. Because of this, the current position of the International EPD System is that MBAs do not follow the ISO 14040 series, EN 15804 and related standards and shall not be used in EPDs. If MBAs are further developed, exemptions may be done in specific PCRs. Such exemptions shall be justified and approved in the PCR development process.

**Note:** The above rules on MBA concerns not only the content of the main product studied, but also content of materials and products used in the product system. However, biogas supplied through grids and used for energy purposes in the product system are exempt from these rules as results generated using MBAs for biogas may be declared in addition to the main results (see Section A.5.4).

### A.6.2 ELECTRICITY MODELLING

Electricity used in the product system can be internally generated, from a directly connected supplier, or from the grid (this division of used electricity is adopted from ISO 14067).

For the modelling of internally generated electricity, data for that electricity shall be used in case no contractual instrument demonstrating the origin of that electricity has been sold to a third party. If such contractual instruments have been sold to a third party, the electricity shall be modelled as it was from the grid.

For the modelling of electricity from a directly connected supplier, data for that electricity, obtained from the supplier, should be used, or proxy data representing the same power source may be used, if there is a dedicated transmission line between the supplier and the facility using the electricity and no contractual instruments have been sold to a third party. If there is no dedicated transmission line or contractual instruments have been sold to a third party, the electricity shall be modelled as it was from the grid.

For the modelling of electricity from the grid, market-based modelling shall be used (except for specific processes, see Section A.7). In market-based modelling, contractual instruments (e.g., Guarantees of Origin) may be used to demonstrate that a specific electricity mix has been used. The contractual instrument shall ensure reliability, traceability, and the avoidance of double counting. To ensure this, the contractual instrument shall

 

- convey the information associated with the electricity delivered: generator/provider of the electricity, type(s) and quantity of electricity, purchaser of the contractual instruments, period for issue and validity of the contractual instruments,
- be assured with a unique claim,
- be tracked and redeemed, retired, or cancelled by or on behalf of the reporting entity,
- be produced in the country, or within the market boundaries where electricity use occurs if the grid is interconnected[49], and
- be valid for at least the upcoming six months from the publication of the EPD and the manufacturer shall make a commitment to buy contractual instruments for the full validity period of the EPD.

Furthermore, the contractual instrument should specify the addresses of the power plants, tracking numbers, and information on the existence of a certificate on direct coupling (yes/no)[50]. If not specified, this shall be justified in the LCA report.

The amount of electricity represented by the purchased contractual instrument in one year, shall correspond to the amount of electricity (for which contractual instruments are claimed) used to produce the corresponding annual sales volume of the product.

Above criteria on contractual instruments merge the criteria of ISO 14067 and ECO Platform verification guidelines version 7.

The EPD shall contain information on how electricity has been modelled for electricity used in A3 processes and other processes under the control of the EPD owner, for example including whether a contractual instrument and/or the residual electricity mix has been used. The EPD should also contain information on how electricity has been modelled for other upstream processes (in A1-A2) and downstream processes (A4-C4), if relevant and the information is available.

After specific electricity backed up by a contractual instrument, the residual mix or the consumption mix on the market are the next options in the hierarchy for electricity modelling (see specific rules per life cycle stage in Section A.7). 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 consumption mix. If the residual grid mix of the market is not publicly available, it can conservatively be assumed be the consumption mix of the market minus the renewable and nuclear electricity of that mix. The market shall be defined as being the (residual or consumption) grid mix of the country where the electricity is used, with exceptions for specific countries for which a sub-national electricity grid mix shall be used: Australia, Brazil, Canada, China, India, and USA.

If the electricity mix changes during the EPD validity (e.g., if the contractual instruments are no longer valid or if the electricity mixes they represent change) in a way that has an impact on the results or other contents of the EPD, the rules in Section 6.5 shall be followed. Such updated may be done even if the change has not been in place for one year.

Contractual instruments shall not be assigned to specific products or processes within one entity with one energy contract. This means that if the contract for purchased electricity is done at a site level, any contractual instruments purchased shall be evenly assigned to all processes and product outputs of that site. If a site produces several products, the purchased contractual instruments in one year shall, thus, correspond to the electricity used to produce the corresponding annual sales volume of all these products.International EPD System

Further electricity modelling guidance for specific markets may be added to future updates of the GPI or at www.environdec.com.

**Note:** The contractual instrument of the EU, Guarantees of Origin, fulfil the above criteria if the required documentation is made available to the verifier. However, the contractual instrument of the US, Renewable Energy Certificates (REC), do not fulfil the criteria as the residual mix is not publicly disclosed.

**Note:** The composition of the residual grid mixes on the market are available for all EU countries and a few additional European countries through the Association for Issuing Bodies (AIB) at https://www.aib-net.org/facts/european-residual-mix

[49] In Europe, the European Continental (UCTE), Nordic, United Kingdom, Ireland, and Baltic electricity grids shall be considered to be interconnected.

[50] A certificate on direct coupling says that the contractual instrument is linked to the underlying electricity and that the electricity generator (the power plant) delivers it together with the electricity to the electricity provider.

**Note:** For electricity markets without contractual instruments fulfilling the above criteria, the residual mix will be identical to the consumption mix.

### A.6.3 BIOGAS MODELLING

For the modelling of biogas supplied through a grid, market-based modelling is not allowed for calculating the main results. Results of market-based biogas modelling, following the rules in EN 15941 [this refers to the upcoming version; which will be clarified once it has been published], may be separately declared in a subsection of the environmental performance section of the EPD (see Section **Error! Reference source not found.**).

## A.7 SPECIFIC RULES PER LIFE-CYCLE STAGE AND MODULE D

Below are the default data quality requirements and other LCA rules per life-cycle stage and for module D. Further specifications of, or deviations to, these rules may be included in the PCR.

### A.7.1 PRODUCT STAGE, A1-A3

The product stage extends from the extraction of any energy or materials resources from nature (see Section A.3.2) upstream in the supply chain until the product leaves the final factory gate of the product stage.

For the product stage, the following data quality requirements apply:

- Specific data shall be used for upstream processes over which the EPD owner has operational control.
- Data of main parts, packaging, or main auxiliaries should be requested from the supplier as specific data, where relevant.
- Data on transport of main parts and components along the supply chain to a distribution point (e.g., a stockroom or warehouse) from which the final delivery to the manufacturer take place, should be specific and based on the actual transportation mode, distance from the supplier, and vehicle load.
- Data on transport of raw materials, chemicals, main parts, and components from the distribution point to the manufacturing plant/place of service provision should be based on the actual transportation mode, distance from the supplier, and vehicle load.
- For EPDs of goods: Specific data shall be used for the assembly of the product and for the manufacture of main parts as well as for on-site generation of steam, heat, electricity, etc..
- For EPDs of services: Specific data shall be used for the consumption of materials, chemicals, steam, heat, electricity, etc., necessary for the execution of the service.
- Specific data shall be used for the production and distribution of consumer packaging if it is under operational control of the EPD owner or if its contribution to the environmental performance results of the product life cycle is more than 10%. In other cases, proxy data may be used. When consumer packaging shows the logo of the EPD owner, the LCA report should report the exerted/non-exerted direct control on the production of this packaging by the EPD owner.
- Waste treatment processes of manufacturing waste should be based on specific data. If specific data is not used, this shall be justified in the LCA report.
- In case specific data is not available and not required according to above bullet points or applicable PCR, proxy data may be used (see Section A.5.1).
- For electricity used in A1-A3 processes, generation of electricity used shall be modelled according to this priority:
    1. Specific electricity mix as generated, or purchased from an electricity supplier, demonstrated by a Guarantee of Origin or similar as provided by the electricity supplier.
    2. Residual electricity mix on the market.

3. Electricity consumption mix on the market. This option shall not be used for electricity used in A1-A3 processes over which the manufacturer (often the EPD owner) has direct control, when the composition of the residual grid mix has been publicly disclosed[51].

### A.7.2 CONSTRUCTION/INSTALLATION STAGE, MODULES A4-A5

The construction/installation stage extends from the moment the product leaves the final factory gate of the product stage (A1-A3) until the end user starts using the product.

Note that this stage includes the production, transport, and end-of-life processes of any waste that in generated in this stage, as was explained in Section A.3.1. This means that some processes in this stage may be the same as in the product stage A1-A3, and thus are subject the same data quality requirements and LCA rules as A1-A3 processes, as consistent modelling shall be done for a process regardless of where it occurs.

For modelling of the construction/installation stage, the following rules apply:

- Data for the construction/installation stage are usually based on scenarios, but actual data should be used when available and relevant. For example, actual data may be relevant for EPDs of buildings, civil infrastructure, or certain services, as should be specified in the PCR. Any scenarios used shall be clearly described in the EPD.
- The electricity use in transports or construction/installation shall be modelled using the electricity consumption mix on the market. This electricity mix shall be documented in the EPD, if relevant.
- For processes in the construction/installation stage under operational control of the EPD owner, the electricity modelling hierarchy of Section A.7.1 shall be followed.
- For processes that also occur in modules A1-A3 (e.g., production and end-of-life processes of losses that occur in construction/installation, the electricity modelling hierarchy of Section A.7.1 shall be followed).

### A.7.3 USE STAGE, MODULES B1-B7

The use stage extends from the moment the end user starts using the product (after, e.g., installation) until it leaves its place of use and enters the next process (e.g., an end-of-life process or a transport to end-of-life). Note that this stage includes the production of consumables, replacement parts, etc., used in the use stage, as well as end-of-life processes of any waste that is generated in this stage.

To ensure consistency between EPDs for the same product category, the PCR shall:

- clearly indicate if the use stage shall, should or may be included,
- define which use-stage processes that shall be included or excluded (any exclusion shall be justified),
- clearly indicate if the use stage shall be modelled with scenarios or not, and if scenarios are to be used:
- provide default data/scenarios (e.g., PCRs for food products that require cooking shall report a default scenario for energy used for cooking).

For modelling the use stage, the following rules apply:

- Data for the use stage are usually based on scenarios, but actual data should be used when available and relevant; for example, it may be relevant for EPDs of certain services. Any scenarios used shall be clearly described in the EPD.
- Data on the emissions from the use stage should be based on documented tests, validated and verified studies in conjunction with average or typical product use, or recommendations concerning suitable product use. Whenever applicable, test methods shall be internationally recognised.
- The electricity use for the use/operation of the product shall be modelled using the electricity consumption mix on the market. This electricity mix shall be documented in the EPD, if relevant.

[51] If the composition of the residual grid mix has not been publicly disclosed, it can conservatively be assumed to be the consumption mix on the market minus the renewable and nuclear electricity of that mix.

 

- For processes that also occur in modules A1-A3 (e.g., production of replacement components/spare parts), the modelling shall follow the data quality requirements and LCA rules for A1-A3 processes, as the same process shall be consistently modelled.
- For processes in the use stage that are under operational control of the EPD owner, the electricity modelling hierarchy of Section A.7.1 shall be followed instead. For example, this may be the case for EPDs of certain services.
- The transport of the product to the customer shall be described in the EPD, where relevant, and be accounted for in this priority:
    1. Actual transportation modes and distances to a specific customer or market, representing the geographical scope of the EPD.
    2. A weighted average of transportation modes and distances, based on transportation to several customers or markets, representing the geographical scope of the EPD.
    3. A default transportation scenario of relevance to the product category and (for the product category) common markets, as specified in the PCR.

### A.7.4 END-OF-LIFE STAGE, MODULES C1-C4

End-of-life treatment processes of the product and its packaging may depend on the destination of the product and on the end-of-life treatment alternatives available where the product and/or the packaging are expected to be disposed. For these reasons, the end-of-life may be evaluated using one or several scenarios. If several scenarios are used, the results of the most probable scenario shall be declared in the main results of the environmental performance section and the other scenarios shall be declared in a separate subsection (see Section 7.4.7). The following general rules (adapted from EN 15804) shall be considered when defining end-of-life scenarios:

- scenarios shall be realistic and representative for the most probable end-of-life treatment alternatives considering the geographical scope of the EPD,
- scenarios shall not include processes or procedures that are not in current use, or which have not been demonstrated to be practical, and
- scenarios used shall be described in the EPD, in a way that makes it clear that they reflect possible and realistic end-of-life treatment alternatives in specific markets.

Any scenarios used shall be clearly described in the EPD.

Furthermore, the electricity use in the end-of-life stage shall be modelled using the electricity consumption mix on the market. This electricity mix shall be documented in the EPD, if relevant.

Rules in PCR may deviate from above. Such deviations shall be justified in the PCR development process.

### A.7.5 CONSEQUENCES OF RECOVERED MATERIAL/ENERGY BEYOND THE PRODUCT LIFE CYCLE (MODULE D)

Module D assesses the environmental consequences of the net flows of recovered materials (for reuse, recycling, or energy recovery) or exported energy (recovered energy from, e.g., waste incineration with energy recovery) that have fulfilled the end-of-waste criteria and leave modules A-C. These potential net benefits outside the product life cycle are conceptually different from the modelling approach used in modules A-C. The results of module D shall therefore be declared and considered separately from the results of modules A-C, not be included in any declaration of aggregated results.

The PCR shall define if module D is required, recommended, permitted, or not permitted for the product category.

The following modelling rules apply for module D:

- Assumptions in the modelling of module D shall be transparently declared in the LCA report and in the EPD.
- Net output flows of recovered material/energy from module A-C shall be considered in module D, i.e., the outputs minus the inputs of the same flow in the LCI. Outputs from module A-C that have been allocated as co-products shall not be considered in module D (see Section A.4.1).
- Module D shall include the benefits from avoiding the production (including the upstream environmental burdens) of materials/energy substituted by the recovered materials/energy. The substituted material/energy, and its

 

production, shall be assumed to be the average on the market as defined by the geographical scope of the EPD. D. The substituted material/energy, and its production, shall not be modelled using marginal LCI data (as often done in consequential LCA modelling).

- Module D shall include the environmental burdens of further processing of the recovered energy/material until it is functionally equivalent to the assumed substituted material/energy. The yield of these processing steps shall be accounted for.
- If the recovered energy/material is of lower quality than the substituted energy/material and thus not functionally equivalent, a quality adjustment factor (0-100%) may be applied, e.g., based on the price ratio.
- Module D is based on a scenario and the results are highly dependent on the assumptions made. The net results for module D can be both negative (an environmental benefit) as well as positive (an environmental burden). As a conservative approach, the net results from module D may be assumed to be zero.

**Information to stakeholders commenting in the open consultation**

An adjustment of above modelling rules for module D, is to say that the net flow of recovered material/energy can not only be positive, but also negative, so that module D is not necessarily about substituted material/energy (if the net is positive) but can be about additional material/energy needed to compensate for a net loss of recovered material/energy in the product system. Then the “conservative assumption” above would not be a conservative assumption and should not be allowed.

The original standards defining module D (EN 15804, ISO 21930) are not clear on this matter. And we are therefore interested to hear what our stakeholders think. Please comment on this in the open consultation.

## A.8 ENVIRONMENTAL PERFORMANCE INDICATORS

The results of the environmental performance indicators shall be declared per declared or functional unit and per included module, or per life-cycles stage (A1-A3, A4-A5, B1-B7, C1-C4 or upstream, core, downstream) plus module D. Whether results shall be declared per module or life-cycle stage shall be specified in the PCR.

Also, the total results over all included life-cycle stages shall be declared, if allowed by the PCR.

A PCR may require or recommend certain processes to be declared separately from other processes in a module/life-cycle stage, if relevant for the product category.

The website (www.environdec.com/indicators) specifies which indicators and accompanying inventory and impact assessment methods that shall be used as default. Deviations from the default list, as well as additional indicators to be declared, may be specified by the PCR. The website also specifies specifications and clarifications of inventory and impact assessment methodology of relevance for specific indicators. Furthermore, the website specifies additional requirements to fulfil to comply with ISO 14067.

Older versions of the default indicators and methods shall be valid in parallel to the latest version during a transition period. The transition period shall be at least 90 days (about 3 months). Information about such transition periods shall be published at www.environdec.com/indicators.

Apart from the mandatory indicators as specified by the PCR, additional LCA-based environmental performance indicators may be declared in the EPD, if they are relevant for the product category, their inclusion is justified in the EPD, appropriate methods are used, and the results are verifiable. The additional indicators shall be separately declared from the mandatory indicators. If the additional indicators appear to the reader to display duplicate information, the EPD shall contain an explanation of the differences between the declared indicators.

Apart from the inventory indicators listed at the website or otherwise required by the PCR, other inventory data may also be declared in the EPD, if relevant and useful for EPD users. Such data shall, however, not be declared in the main body of the EPD, but in an annex.

Conversion factors may be included in an EPD for the purposes of:

- converting the declared results of a product group to results for specific products within the group, or
- converting the declared results to results for another declared/functional unit.

 

For the first of the above two purposes, the declared conversion factors can be applicable for the results of all declared modules or for a subset of modules (e.g., A1-A3), and for all declared indicators or for a subset of indicators (e.g., the GWP-total indicator). Such limitations in the applicability of the conversion factors shall be clearly stated in the EPD. For the modules and indicators to which the conversion factors are applicable, the results shall scale linearly with the conversion factor.

The conversion factors shall be verifiable, i.e., the underlying data for the conversion factors shall be provided in the LCA report.

The conversion factors shall be included in the section with additional environmental information (see Section 7.4.8), although they may be referred to in the environmental performance section.

Conversion factors can, however, not be included for the purpose of converting the declared results into results for products not covered by the EPD. The EPD is for a specific product or product group, and only the EPD content of that product/product group has been validated and verified and may be considered EPD information.

# A.9 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

## A.9.1 MULTIPLE PRODUCTS FROM THE SAME COMPANY

Several sets of results, reflecting different products, shall not be declared in the same EPD. However, similar products from a single or several manufacturing sites covered by the same PCR and manufactured by the same company with the same major steps in the core processes and identical or similar functions may be grouped and thereby included in the same EPD. For such an EPD, there are three options:

- For each indicator, declare the average results of the included products. This average shall be weighted according to the production volumes of the included products, if relevant. In this option, the average content shall be declared in the content declaration.
- Declare the results of one of the included products – a representative product. The choice of the representative product shall be justified in the EPD, e.g. be based on production volumes. In this option, the content of the representative product shall be declared in the content declaration.
- For each indicator and module, declare the highest result of the included products (i.e., the results of a “worst-case product,” which may be the results of one or several of the included products). In this option, the content declaration shall include the lowest amounts of recycled and biogenic content of the included products and their packaging, respectively, and the information on environmental and hazardous properties of substances shall reflect the highest share and most hazardous such substances contained in the any of the included products.

For all options, the range of the content of the included products should be included in the content declaration, in addition to the average/representative/worst-case content as specified above.

For EPDs claiming compliance with ISO 21930, the above options are only possible if none of the declared environmental impact indicator results, aggregated over all included modules (from A to C), differ by more than 10% between any of the included products. If the EPD does not claim compliance with ISO 21930, variations above 10% are allowed, if justified in the LCA report and the EPD declares the variation of each impact indicator results for which the variation is above 10%.

The option chosen shall be clearly described at the cover page of the EPD, as “EPD of multiple products, based on the average results of the product group,” “EPD of multiple products, based on a representative product,” or “EPD of multiple products, based on worst-case results.”

In an EPD of multiple products based on “worst-case product”, the GWP-total results, defined as the product with lowest GWP-total results, may be optionally reported in a subsection of the environmental performance section (see Section 7.4.7), and the content declaration of the “best-case product” may be optionally reported in a subsection of the content declaration section (see Section 7.4.5).

Note that above paragraphs concern grouping of similar products, but not grouping of identical products (e.g., produced at different manufacturing sites or at different production lines at one site). Identical products here refer to products which

are not marketed as different products and/or are in no other way distinguishable by a downstream customer[52]. For identical products, variations due to, for example, manufacturing at several sites shall be treated as any other variation in production, by averaging over (normally) 1 year of production (and in such cases, variations above 10% are allowed also when claiming compliance with ISO 21930).

Although a variation above 10% is allowed in EPDs of identical products manufactured at several sites, it is recommended to separate the EPDs per site so that a variation below 10% is met, as certain national regulation considers an EPD to be “product-specific” only when the variation between sites is below 10%.

### A.9.2 SECTOR EPD

Industry association or any other group of companies may develop an EPD in the form of a sector EPD. A sector EPD declares the average product of multiple companies in a clearly defined sector in a clearly defined geographical area. Products covered in a sector EPD shall follow the same PCR and the same declared/functional unit shall be applied.

Sector EPDs shall describe the products and companies that are covered by the EPD. If the GWP-total results of a sector EPD differ by more than 10% for modules A1-A3 (A1-A5 for services) between represented products and sites, these variations shall be reported in the EPD and the reason for the variations shall be qualitatively described. If the variation is below 10%, the actual variation or “<10%” shall be declared. The variation shall be calculated with the largest value as the denominator.Any communication of the results from a sector EPD should contain the information that the results are based on averages obtained from the sector as defined in the EPD. The communication shall not claim that the sector EPD results are representative for a certain manufacturer or its product.

## A.10 EPD PUBLISHED BY TRADERS

Traders (e.g., retailers, wholesalers) whose products are produced by one or several other organisations (the manufacturer(s)) may publish an EPD under their own name. The EPD can be based on one or several valid EPD registered by the original manufacturer(s) or based on specific data obtained from the manufacturer(s). The EPD shall be follow the same data quality requirements and other rules as EPDs published by a manufacturerunder the same PCR.

In addition, the transportation from the manufacturer(s) to a central warehouse or to the border of the market of the EPD scope shall be included and shall be based on specific data. In case of retailer/wholesaler, also the transportation to the store of the retailer/wholesaler shall be included and based on specific data. Transportation from central warehouse/ the border of the market/retail store to an average customer may also be included. If the trader uses its own packaging, the production of the packaging shall be included and be based on specific data.

If the product is produced by several manufacturers, the variation in GWP-total shall be declared, if the variation is above 10%. If the variation is below 10%, the actual variation or “<10%” shall be declared. The variation shall be calculated with the largest value as the denominator.

If the EPD published by the trader is based on EPD(s) of manufacturer(s), the validation and verification shall be done based on the same PCR with the same version number in terms of the first digit (e.g., an EPD based on version 1.0.0 of a PCR can be used as input to an EPD based on version 1.1.0 of the same PCR). All the information in the EPD shall be validated and verified, which means that the verifier shall have access to the underlying EPD and its LCA report. In case the manufacturer’s EPD is updated, the trader’s EPD shall also be updated and, re-validated and re-verified. This is to prevent liability issues that may occur.

[52] This means that product variations that are different with regard to colour, content, size, configurations, or similar, normally shall be considered to be similar, and not identical, products.

# ANNEX B – GUIDANCE ON COMMUNICATING EPD INFORMATION

An EPD is an informative communications tool that organisations may use to disseminate information regarding the life cycle environmental performance of their products. The EPD owner and/or the body making the claim is always responsible to ensure that all applicable requirements for environmental claims are met. The information provided in this annex is only intended as general guidelines and may not be complete.

Any environmental claims based on the EPD and use of the EPD logotype should meet the requirements in ISO 14021 (*Environmental labels and declarations - Self-declared environmental claims*), national legislation, and best available practices in the markets in which the EPD is intended to be used.

## B.1. LICENSEES

The licensees of EPD International are required to follow the communication guidelines in the brand book (EPD International 2023b).

## B.2. DIFFERENT TARGET AUDIENCES

It is important to consider the information needs and level of awareness of different stakeholder groups and target audiences, such as large businesses, small and medium-sized enterprises, and public procurement agencies. An organisation developing an EPD cannot precisely determine the audience for the document. For an EPD intended for B2C communication, ISO 14025 sets up additional principles that shall apply. An EPD owner may choose to publish information from several EPDs in a single report or document, e.g., to facilitate communication or fulfil requirements from procurement processes for similar products. Requirements from Annex B.2 shall be applied.

## B.3 THE INTERNATIONAL EPD SYSTEM LOGOTYPE

A logotype has been developed to ensure a well-known identity for the International EPD System (see Figure 5). The logotype should be used on all official printed materials and declarations connected to the programme to avoid confusion with other types of product-related environmental labels and declarations. See the brand book (EPD International 2023b) for communication guidelines and examples on how to use the logotype.


*Figure 5. Logotype of the International EPD System.*

S-P-XXXXX www.environdec.com

*Figure 6. Example of how to use the EPD logotype with reference to an EPD registration number and the website.*

If an organisation chooses to use data/information from an EPD in communication material, this should be clearly shown. The organisation shall state that the data is taken from a certified environmental declaration, with the primary logotype and refer to the EPD number and/or link to the EPD.

This product/service has a certified Environmental Product Declaration (EPD) giving information about the environmental performance, contents, and recycling, which has been controlled, validated and verified according to the requirements of the International EPD System.

Registration number: S-P-XXXXX

More information is available at www.environdec.com.

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This product/service has a certified Environmental Product Declaration (EPD) giving facts about the environmental performance without valuation. The declaration has been controlled, validated and verified according to the requirements of the International EPD System.

Registration number: S-P-XXXXX

More information is available at: www.environdec.com

*Figure 8. Example of information label.*

## B.3 COMPARABILITY OF EPDS

ISO 14025, Section 6.7 sets the requirements for comparability between EPDs, such as belonging to the same product category and being based on the same method (e.g., set by the PCR(s) and GPI). EPDs from different EPD programmes may not be comparable. Likewise, EPDs based on different versions of PCRs, GPI, and the default list of indicators at www.environdec.com may not be comparable.

This information may be relevant to include when communicating the EPD.

## B.4 LINKING TO THE EPD

Sharing the EPD document directly is not permitted anywhere else except for on the Environdec website, all reference must be done through links to the original EPD page or by presenting selected data from the EPD. The EPD shall only be used with a reference to the registration number and the website of the International EPD System (www.environdec.com).

For the latest information about how to link directly to the EPD, please contact the Secretariat.

 