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GENERAL PROGRAMME INSTRUCTIONS FOR THE INTERNATIONAL EPD® SYSTEM

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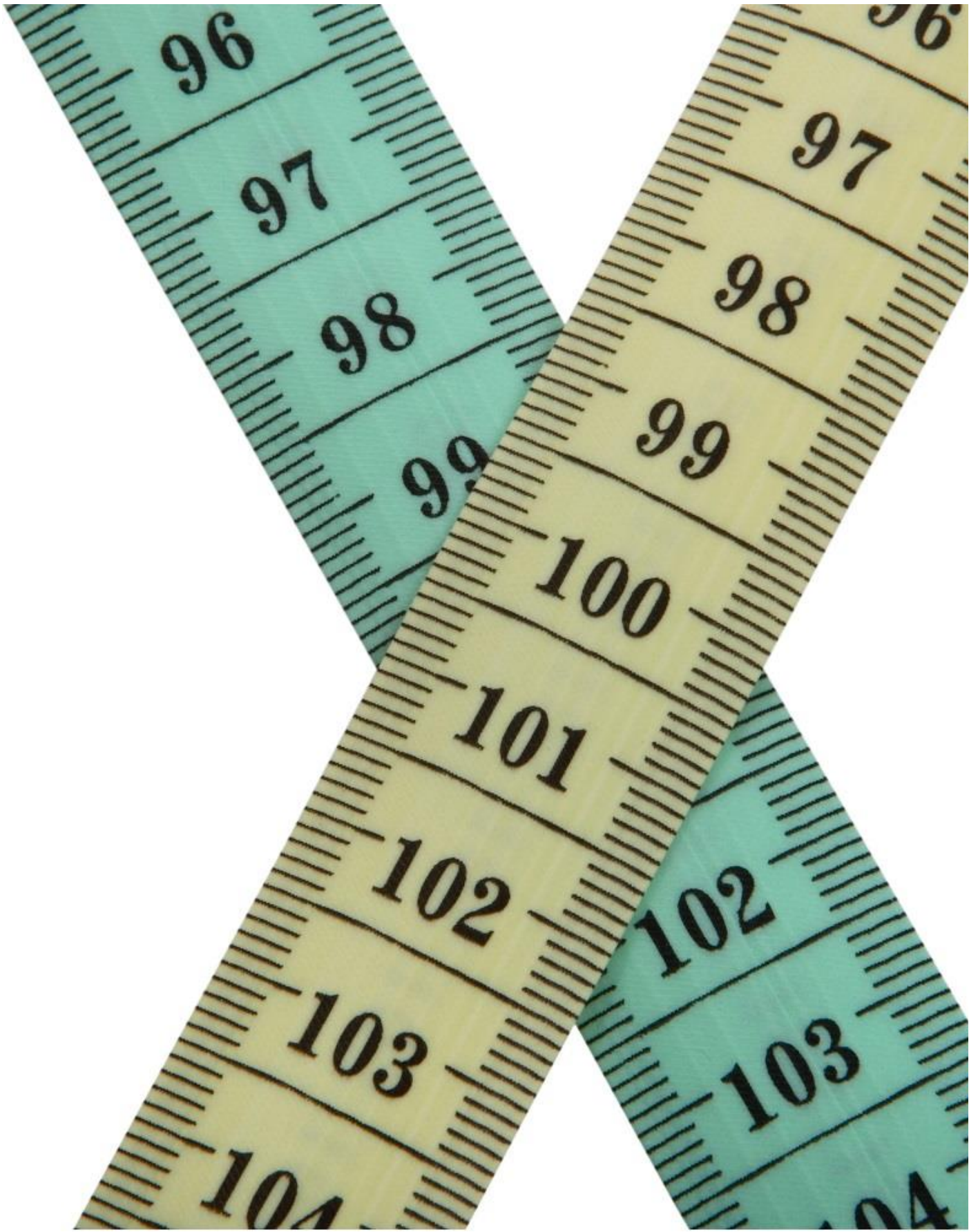

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1 INTRODUCTION

This document, including its annexes, constitutes the General Programme Instructions 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 (2019) General Programme Instructions for the International EPD® System. Version 3.01. www.environdec.com.*

Within the present document, the following terminology is adopted:

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

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

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 International EPD® System has, as a main objective, the ambition to enable and support organisations in any country to 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 guides, including but not limited to:
  - EN 15804 and/or ISO 21930 for construction products and construction services,
  - ISO/TS 14027 for the development of Product Category Rules, and
  - ISO/TS 14067 and ISO 14046 for the calculation of carbon footprint- and water 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
- seeking cooperation and harmonisation with other environmental declarations programmes and initiatives (national, regional, sectorial, etc.) to help organisations broaden the use of EPD on an international market. This activity includes:
  - establishing regional programmes based on and fully aligned with the International EPD® System, including the General Programme Instructions, but allowing additional regional requirements,
  - bilateral mutual recognitions with established programme operators as encouraged by ISO 14025, and
  - participation in the European Commission Product Environmental Footprint (PEF) pilot and transition phases, international collaboration platforms (e.g. the ECO Platform), international PCR harmonisation activities, and standardisation.

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 EPD registrations for certain product categories or countries, e.g. in case of current or future sanctions regimes prompted by the United Nations, the European Union or others.

The resulting EPDs are open to a number of applications and target audiences, including but not limited to business-to-business and business-to-consumer communication. It is the responsibility of the company making any claims to ensure that they are compliant with national laws or regulations in the relevant geographical area.

The scope of an EPD in the programme may be both for the product of a single company 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-issue EPDs”, such as climate declarations, may be published in parallel to an EPD as a complementary communication format.

EPDs are based on Product Category Rules providing rules, requirements, and guidelines for a defined product category. As an option, a “pre-certified EPD” may be published during PCR development.

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

3 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 (see Figure 1):

1. Programme administration (see Section 3.1) led by the Secretariat assisted by a Technical Committee and an International Advisory Board.
2. PCR development (see Section 3.2) led by a PCR moderator who coordinates the work of a PCR Committee (LCA/PCR and industry experts) and with an invitation sent to a broader PCR stakeholder consultation group.
3. EPD development (see Section 3.3) by organisations, such as manufacturing companies, or trade associations.
4. Verification (see Section 3.3) involving organisations developing EPDs, and independent verifiers (accredited certification bodies or approved individual verifiers).

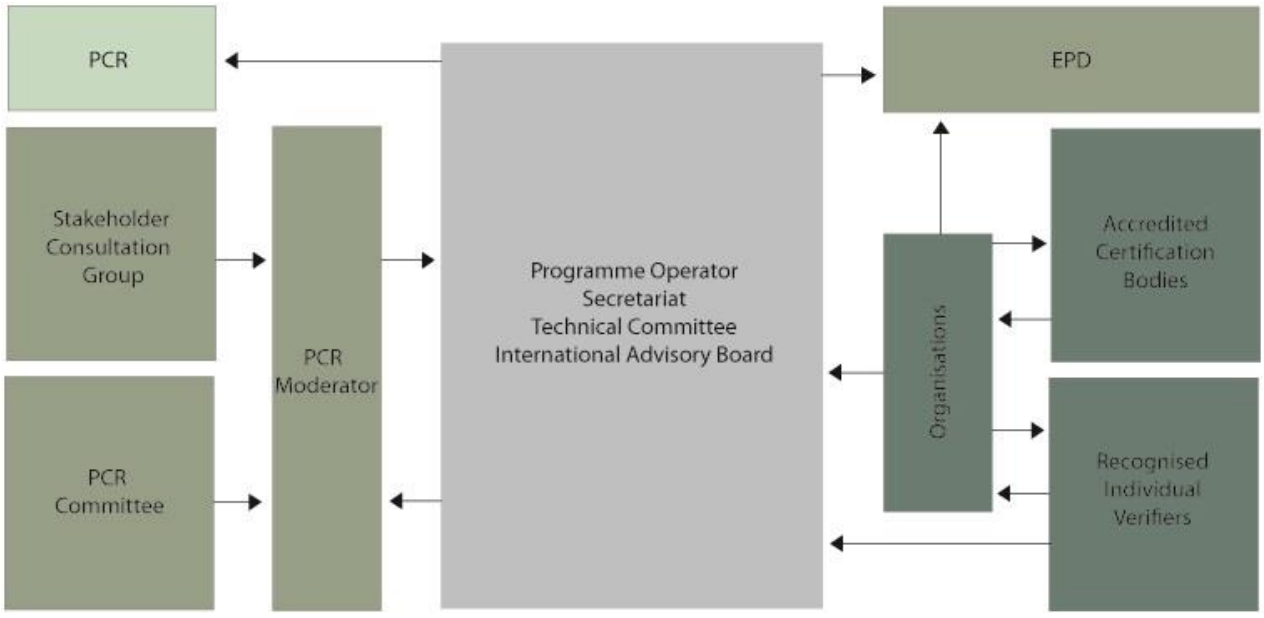

Figure 1. Organisational structure of the International EPD® System indicating the activities related to programme administration (grey box), PCR development (light green boxes), EPD development, and Verification (dark green boxes).

3.1 ROLES IN PROGRAMME ADMINISTRATION

3.1.1 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.

The programme operator has a number of mandatory obligations according to ISO 14025. These duties are mainly divided between the Secretariat, the Technical Committee (TC), and the International Advisory Board (IAB).

[2] Terms and conditions may apply.

3.1.2 SECRETARIAT

The programme operator shall have a Secretariat in order:

- to prepare, maintain, and communicate the General Programme Instructions,
- to ensure that the General Programme Instructions are followed,
- to monitor changes in procedures and documents and modify the programme and the General Programme Instructions, 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 Product Category Rules (PCR) documents and to act as the contact between the PCR moderator/PCR Committee and the Technical Committee,
- 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 ensure the consistency of transparent verification procedures for PCR review, verification of LCA, and verification of EPD,
- to define additional tasks for the PCR review procedure and for the external individual verifiers (if found necessary),
- to maintain a list of independent verifiers and guide an organisation in the selection procedure,
- to decide upon the necessity of using third-party verifications via rules in the General Programme Instructions,
- to receive EPD registration applications and decide whether to accept an EPD for publication based on the verification report and other documentation,
- to manage and maintain the website of the programme (www.environdec.com),
- 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 registered 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 Technical Committee 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 Technical Committee,
- 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 registered in the programme.

The Secretariat is staffed by the programme operator. The programme operator may delegate parts of the tasks of the Secretariat in specified regional markets to local organisations, e.g. the registration of EPDs.

3.1.3 TECHNICAL COMMITTEE

The Technical Committee (TC) shall assist the Secretariat in order:

- to act as the PCR review panel for the review and approval of final draft PCRs,
- to propose a general LCA methodology for declarations and suggest measures for the further development of technical and LCA-oriented issues within the framework of the programme,
- to support the Secretariat in technical issues,
- to consider applications and approve LCA/EPD/PCR experts to act as individual verifiers and suggest measures for the surveillance of their competences, and
- to perform sample checks to ensure that verifications done by individual verifiers are carried out according to the General Programme Instructions.

The TC has a chair, which shall also be a member of the International Advisory Board. The TC shall operate according to routines specified in more detail in a separate procedure.

3.1.4 INTERNATIONAL ADVISORY BOARD

The International Advisory Board (IAB) shall advise the Secretariat in order:

- to follow the market acceptance and uptake of the International EPD® System and suggest activities and events aimed at promoting its establishment and applicability,
- to consider and propose new potential audiences and applications for EPDs, and
- to provide input to the work of preparing the General Programme Instructions and other activities to revise and update the programme.

3.1.5 ACCREDITATION BODIES

Accreditation bodies shall have the role of accrediting certification bodies for carrying out EPD verification and/or EPD process certification.

3.2 ROLES IN PCR DEVELOPMENT

3.2.1 SECRETARIAT AND TECHNICAL COMMITTEE

PCR development is guided and overseen by the Secretariat to ensure that the process follows the requirements in ISO 14025, the General Programme Instructions, and other relevant standards or PCR harmonisation initiatives. The Technical Committee acts as the PCR review panel. For more information about these roles, see Section 3.1.

3.2.2 PCR MODERATOR

The PCR moderator[3] has a number of tasks related to the development of PCR documents, primarily:

- to lead and be responsible for the overall preparation of draft PCR documents by the PCR Committee,
- to invite LCA/EPD/PCR experts, industry experts, and other relevant stakeholders to take part in the development of PCR documents as part of the PCR Committee,
- to promote collaboration between PCR Committee members and seek contributions from them,
- to act as the contact person for the PCR Committee,
- 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,

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

- to inform the Secretariat about relevant industry and trade publications or forums where PCR development should be announced,
- to propose the scope of product category and identify relevant codes in the UN CPC scheme,
- to propose stakeholders to be invited to the open consultation as part of the PCR stakeholder consultation group,
- to guide stakeholders in the open consultation process via the PCR Forum,
- to collect and respond to stakeholder comments,
- to revise the PCR document according to comments received, make a summary of comments included and rejected (and their rationale), and publish the summary on the PCR Forum,
- to lead the preparation of the final draft PCR by the PCR Committee,
- to review the comments from the PCR review panel and update the PCR,
- 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 document is being used on the market for, e.g. 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 take the initiative to start the updating phase of the PCR about six months before the end of its current validity.

3.2.3 PCR COMMITTEE

The tasks of the PCR Committee are to prepare draft PCR documents and to assist the PCR moderator.

3.2.4 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 draft PCR documents during the open consultation phase.

3.2.5 SECTOR PCR COORDINATOR

The programme operator may appoint a sector PCR coordinator for certain product sectors (e.g. the food and agricultural sector). The task of the coordinator is to assist the programme operator and the PCR Committee by providing feedback on the alignment of different PCR documents in the sector.

3.3 ROLES IN EPD DEVELOPMENT AND VERIFICATION

3.3.1 SECRETARIAT AND TECHNICAL COMMITTEE

The roles of the Secretariat and Technical Committee in relation to EPD development and verification are described in Section 3.1.

3.3.2 ORGANISATIONS DEVELOPING EPDS

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.

Organisations developing EPD shall have the responsibility:

- to be the sole owner and to have the liability and responsibility of the EPD. This means that the verifier and the programme operator neither make any claim nor have any responsibility for the correctness of the information, the legality of the product, its production process or its supply chain.
- to collect and calculate LCA-based information/indicators and other information to be included in the EPD as prescribed in the General Programme Instructions and the reference PCR document,

- to prepare a project report,
- to have the LCA-based data, additional environmental information and EPD independently verified (see Section 7.3) either via:
  - EPD verification by an accredited certification body or approved individual verifier, or
  - EPD process certification by an accredited certification body
- to establish and maintain follow-up procedures during the validity period of the EPD as defined during the initial verification,
- to apply for EPD registration and publication with the Secretariat by providing the prescribed documentation,
- to provide the Secretariat with correct invoicing information and to timely pay fees,
- to inform the Secretariat in case of updated contact or invoicing information,
- to use the International EPD® System logotype based on the guidelines in Annex D and in accordance with applicable laws, rules, and standards, and
- to inform the Secretariat when the EPD is to be de-registered and no longer published.

3.3.3 INDEPENDENT VERIFIERS – ACCREDITED CERTIFICATION BODIES AND APPROVED INDIVIDUAL VERIFIERS

Only approved individual verifiers or accredited certification bodies may carry out verification. The current list of approved individual verifiers is available on www.environdec.com.

Independent verifiers shall have the role:

- to independently seek verification assignments.
- before accepting a 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 verification, and
  - to ensure that they have the necessary language skills for the verification task (e.g. English and the language used in the project report).
- after being contracted to perform a verification task:
  - to review the EPD based on the General Programme Instructions and a valid reference PCR, including:
    - the underlying data used for the LCA calculations,
    - the way the LCA-based calculations have been carried out and their compliance with the calculation rules,
    - the presentation of environmental performance in the declaration,
    - the presentation of additional environmental 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 registration and 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 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 verification assignments. They will then be removed from the listing at www.environdec.com.

4 PROCESS FOR PROGRAMME ADMINISTRATION

4.1 GENERAL PROGRAMME INSTRUCTIONS

The Secretariat shall prepare, maintain, and communicate the General Programme Instructions and ensure that they are followed. The programme instructions should be updated about every three years, to ensure market stability, and to follow the latest developments in standardisation, LCA methodology, etc.

Older versions of the programme instructions should be valid in parallel to a new version during a transition period. Information about such transition periods shall be published at www.environdec.com.

4.2 PUBLICATION OF PCRS AND EPDS

PCRs and EPDs registered in the programme shall be published by the Secretariat at www.environdec.com together with relevant complementary information and supporting materials. The Secretariat shall also manage any other databases of EPD information registered in the programme, e.g. in machine-readable formats. To ensure that only the latest version of the EPD is published, EPDs should not be cross-published in any external databases or websites.

4.3 WEBSITE

The website of the International EPD® System shall be www.environdec.com. It shall be kept up-to-date with information about the programme and should provide explanatory material. Communication via the website should be complemented by other communication channels, such as an e-mail newsletter and social media.

4.4 TRANSPARENCY AND STAKEHOLDER INVOLVEMENT

Interested parties shall have the possibility to give comments on draft PCR documents on the website. Each PCR should have a forum for discussion and information on the appointed PCR moderator and on which organisations that have contributed to the PCR development. The language used in the forum shall be English.

The General Programme Instructions shall be available via www.environdec.com. Appropriate consultations shall be held when updating the General Programme Instructions to maintain the credibility of the programme. Names of organisations involved in programme development should be published. Minor changes or corrections of errors to the programme instructions should be done when appropriate.

4.5 MEMBERSHIP IN THE TECHNICAL COMMITTEE

The Technical Committee (TC) shall consist of a group of at least five LCA/EPD/PCR experts to be constituted in such a manner that their expertise covers as many product categories as possible to ensure the independence and quality of PCR reviews. Diversity in geographical location and other competences of the TC members should also be strived for. If there is need for additional expertise, e.g. during a PCR review, external experts may be consulted.

Membership in the TC shall be based on unsolicited applications, needs expressed by the TC in terms of skills or capability to fulfil its roles, and nominations by EPD stakeholders.

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

4.6 MEMBERSHIP IN THE INTERNATIONAL ADVISORY BOARD

The International Advisory Board (IAB) should consist of a group of EPD stakeholders from different industry sectors and countries.

Membership in the IAB shall be based on the assessed need to fulfil its roles and nominations by EPD stakeholders.

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

4.7 FEEDBACK OR COMPLAINTS

It is possible to contact the Secretariat with feedback or complaints about registered and published EPDs, other documents published by the programme, or the appointment of individual verifiers. 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 General Programme Instructions, ISO 14025, or other standard or 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 no corrective action is taken within a reasonable time period, the EPD may be de-registered by the Secretariat (see Section 6.6).

4.8 AVOIDING MISUSE

The Secretariat should strive to avoid misuse of the programme and its logotype, ISO 14025, and information provided in the EPDs registered in the programme, e.g.:

- 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.
- The International EPD® System logotype is a registered trademark in selected markets, and its use is limited to EPDs registered 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. Using the logotype separately with no other information is, therefore, only allowed on official documents prepared within the framework of the International EPD® system, such as on PCRs. Other ways of using the logotype separately may be accepted after approval by the Secretariat.

  An organisation is allowed to make use of the EPD logotype in other different ways, e.g. on official documents, such as letter heads and envelopes. In some cases, an organisation may want to include a more explanatory and informative text describing what an EPD is and its main intent. The Secretariat shall be consulted to accept such a text. For more information about use of the logo, see Annex D.

4.9 ESTABLISHMENT OF REGIONAL HUBS

If parts of the tasks of the Secretariat in specified regional or national markets have been delegated to local organisations, the programme operator shall establish routines to ensure that any registered EPDs via such regional hubs fulfil the rules in the General Programme Instructions. EPDs registered via such regional hubs shall fulfil the rules in these programme instructions, be published at www.environdec.com and be considered equivalent in all other aspects. The list of current regional hubs shall be available at www.environdec.com.

4.10 MUTUAL RECOGNITION WITH OTHER PROGRAMMES

Mutual recognition agreements with other established programmes shall, when relevant, include:

- the scope of the mutual recognition (e.g. only for environmental declarations for a specific product category),
- licensing fee structures,
- procedures for the harmonisation of PCRs and PCR development,
- procedures for verification,
- procedures for registration and publication, and

- procedures to ensure that the conditions for the mutual recognition are kept valid.

A mutual recognition agreement does not necessarily mean that the information contained within the EPDs is comparable as EPDs from different programmes may not be comparable.

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

The list of current mutual recognition agreements shall be available at www.environdec.com.

4.11 GENERAL LCA METHODOLOGY

The general LCA methodology of the International EPD® System is described in Annex A. Methodological aspects needing more frequent update than the programme instructions may be presented on the website as supplementary requirements, recommendations, or clarifications. One such example is the list of prescribed characterisation factors for the default impact categories.

In case there is a need to meet market demand for life cycle-based environmental information for certain markets, product categories, or applications, the programme operator may adopt other methodological guides to complement or overrule the general LCA methodology in Annex A.

4.12 CHECKING COMPETENCE AND QUALIFICATIONS OF VERIFIERS

Only approved individual verifiers or accredited certification bodies may carry out verification. Their competence and qualifications shall be checked, approved, and supervised by either the programme operator (via the Technical Committee supported by the Secretariat) or by accreditation bodies in accordance with Table 1.

TYPE OF VERIFICATION	POSSIBLE VERIFIERS FOR TYPE OF VERIFICATION	BODY EXAMINING COMPLIANCE WITH PRESCRIBED COMPETENCE REQUIREMENTS
EPD verification	Approved individual verifiers	Technical Committee supported by the Secretariat
	Accredited Certification bodies	Accreditation bodies
EPD process certification	Accredited Certification bodies	Accreditation bodies

Table 1. Body examining the competence and qualification of different types of verifiers.

The checking of competence requirements and the supervision of the verifiers 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 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.

4.12.1 COMPETENCE REQUIREMENTS OF VERIFIERS

The verifier (individual or team of individuals within a certification body) shall be independent (see Section 7.1) and have the following competences:

- General product certification competences; the general requirements regarding competence for certification bodies are specified in ISO/IEC 17065:2012 "Conformity assessment – Requirements for bodies certifying products, processes and services", Sections 6.1 and 6.2.
- Specific competences related to EPD and verification, including:
  - general knowledge of industry and product-related environmental matters,

- good process and product knowledge and/or experience, including relevant standards, within the product sector in which the verifier intends to perform verifications,
- in-depth knowledge and/or experience of LCA methodology, including ISO 14040/14044,
- in-depth knowledge of the relevant standards in the field of environmental labelling and declarations, including ISO 14020 and ISO 14025,
- in-depth knowledge of the International EPD® System, including the General Programme Instructions,
- 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, and
- experience in reviewing LCAs, verification of EPDs, or the equivalent.

- Sufficient proficiency in English to read and understand the General Programme Instructions, PCR, and EPD and to document the verification in a verification report in English.

4.12.1.1 Specific competence requirements for certification bodies

In general, the team of personnel carrying out the 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 verifier is a body that lacks the necessary competence among its own employees, they shall have such competence at the management level that makes it possible:

- to determine the extent of sufficient competence (as described above) needed for carrying out the verification,
- to recruit or contract competent personnel for carrying out reviews and to ensure that they receive adequate training and introduction, and
- to ensure that review and verification are carried out in a correct manner.

4.12.1.2 Specific competence requirements for individual verifiers

The requirements for the qualification of an individual verifier are:

- at least five years of documented experience in the LCA field, and
- at least five documented critical reviews of LCA studies according the ISO 14040 series of standards, verification of Type III environmental declarations in other programmes, or the equivalent.

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

If the independent verifier participates in a training course organized by the International EPD® System (physical or online), requirements on performed reviews will be reduced to three.

In addition to the competence requirements to become an approved individual verifier, the verifier shall in each assignment 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 verification task.

4.12.2 ACCREDITATION OF CERTIFICATION BODIES

Certification bodies may be accredited for EPD verification and/or EPD process certification. Checking the competence requirements of certification bodies should follow a procedure set forth in ISO/IEC 17065:2012, which contains the general requirements for the certification bodies and their work, should focus on these programme instructions and may refer to a specific product category or sector.

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)[4], International Accreditation Forum Multilateral Recognition Arrangement (IAF MLA)[5], or the corresponding multinational cooperation agreements.[6] Such accreditation bodies commit to conformity with the current version of ISO/IEC 17011 Conformity assessment – General requirements for bodies providing assessment and accreditation of conformity assessment bodies.

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 verification and EPD process certification.

4.12.3 APPROVAL OF INDIVIDUAL VERIFIERS

Experts in LCA and EPD may be approved to carry out EPD verification (i.e. not EPD process certification) as individual verifiers. The approval as individual verifiers not limited to specific product categories, but competence in a specific product category is covered by a self-declaration of competence for each verification task. The approval as individual verifier is general for EPD, pre-certified EPD, and sector EPD.

As ISO/IEC 17065:2012 is not applicable for individuals, a special procedure described below is used for examining/checking single LCA/EPD experts, following the rationale of the standard, 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 4.12.1, and
  - any formal qualifications or training related to LCA, EPDs, and/or auditing practice,
- a description of the verifier's own processes for managing verification activities, including:
  - a process for managing, storing, and maintaining client-confidential data and information,
  - 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 verification task, and
  - a process for maintaining the independence of the verification and the role as individual verifier, including identifying and disclosing conflicts of interest.
- relevant references.

The evaluation of the credentials and approval of the applicant are carried out by the Technical Committee (TC) supported by the Secretariat. Any feedback or complaints on the approval of individual verifiers shall use the procedure described in Section 4.7. The approval of individual verifiers may be withdrawn due to misconduct or other reasons.

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

Verifiers should develop, maintain, and improve their competence through continual professional development and regular participation in audits. 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 verification tasks. To uphold recognition as an individual verifier, the verifier shall annually:

- carry out at least one EPD verification,
- carry out one LCA study leading to an EPD, or
- prepare one PCR document in the role of PCR moderator.

[4] www.european-accreditation.org

[5] www.iaf.nu

[6] Other corresponding agreements will be added to future versions of the General Programme Instructions.

The Secretariat shall carry out the task of checking that verifiers remain active and report the results to the Technical Committee. Inactive verifiers shall no longer perform verifications 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 verification tasks, he/she shall contact the Secretariat to be removed from the listing at www.environdec.com.

5 PROCESS FOR PCR DEVELOPMENT

Product Category Rules (PCR) are documents that provide rules, requirements, and guidelines for developing an EPD for a specific product category. They are used as complements to the programme instructions, e.g. in terms of calculation rules, scenarios, and EPD contents. A PCR should enable different practitioners using the PCR to generate consistent results when assessing products of the same product category.

The General Programme Instructions shall be the main reference for PCR development. Any nonconformity with the General Programme Instructions shall be documented and is subject to approval during the PCR review phase. The procedure described in the following sections aims to be compliant with the Guidance for Product Category Rule Development (2013) and ISO/TS 14027, with some minor exceptions.

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.

The PCR shall be based on one or more life cycle assessments conducted in accordance with ISO 14044 and other relevant 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.

PCR documents developed in the International EPD® System should aim for a global scope, being as internationally applicable as possible thereby avoiding unnecessary barriers to trade. They shall also aim to take into account all relevant aspects of the life cycle of the product.

PCR documents shall be developed with the intention of publishing and enabling others to publish EPDs. The development should be done by a PCR Committee, led by a PCR moderator, while the programme operator shall guide and oversee the process (see Section 3.2 for a description of roles). The programme operator may terminate the development of a PCR, e.g. in the event of repeated delays or the non-fulfilment of review comments.

The PCR development shall be done in an internationally-accepted manner based on an open, transparent, and participatory process either by:

- companies and organisations in co-operation with other parties, such as trade associations and interest organisations,
- institutions involving LCA/EPD experts in close cooperation with companies or trade associations and interest organisations, or by
- single companies or organisations in the event they have the necessary in-house competence or choose to engage outside LCA/EPD experts.

Reasonable efforts should be made to achieve consensus throughout the process.

The programme operator shall maintain the copyright of the draft and final documents to ensure that it is possible to publish, update when necessary, and available to all organisations to develop and register EPDs. Stakeholders participating in PCR development should be acknowledged in the final document and on the website.

Developing a PCR is a procedure consisting of the following phases:

1. Initiation (see Section 5.1),
1. Preparation (see Section 5.2),
2. Consultation (see Section 5.3), and
3. Approval and publication (see Section 5.4)

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

After publication, a PCR may be updated (see Section 5.5) and later de-registered if expired and no longer relevant. (See Section 5.6).

5.1 INITIATION

5.1.1 DEFINITION OF THE PRODUCT CATEGORY

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

- primary functions of the product,
- secondary functions of the product,
- price elasticities, i.e. the exchangeability of two products in the way that an increase in price for one leads to an increase in the price of the other,
- results from screening study/existing LCA literature for the product group,
- UN CPC code(s), and
- product category definition and scoping used in other similar or related systems, such as the criteria used for Type I environmental labels, criteria for green public procurement, or to meet international and national standards.

The product category definition should be made so that the development of the PCR is practical and feasible taking into account existing PCRs, the 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, PCR Committee, Secretariat, and Technical Committee, with the aim to reach consensus, as far as possible. The scope of the product category of a PCR may be reconsidered during PCR development, when PCRs are updated, or when new PCRs are proposed, and it should be based on the experience gained when using the PCR. The programme operator reserves the right to decline EPD registrations for certain product categories. A definition of a product category should include synonyms as well as information about which similar or related products that are not included in the scope.

To facilitate discovery of PCRs, they should be classified at a three, four, or five-digit level in the latest version of UN Central Product Classification (UN CPC)[7]. 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), United Nations Standard Products and Services Code® (UNSPSC), Classification of Products by Activity (NACE/CPA), or Australian and New Zealand Standard Industrial Classification (ANZSIC).

5.1.2 CONSIDER AVAILABLE PCRS

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, e.g. 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 PCR documents prepared by other programme operators operating in accordance with ISO 14025 if they fulfil the requirements of the General Programme Instruction with particular regards to:

- compliance with relevant standards,
- definition of product category,
- definition of functional unit or declared unit,
- general application of LCA compared to Annex A, e.g. the use of an attributional LCA approach, system boundary, allocation rules, impact categories, characterisation models, and approach for the system boundary setting for recycled material and material for recycling,

[7] http://unstats.un.org

- rules for inclusion of similar products in the same EPD,
- time of EPD validity, and
- process used to develop the document, e.g. inclusion and involvement of interested parties, open consultation, and review.

The programme operator may establish mutual recognition agreements with other programmes related to PCRs. Information about such agreements should be available on the website.

If a PCR with a relevant scope is identified in another programme, the Secretariat shall be contacted to plan the next step. If the existing PCR is approved by the review panel and the use of the PCR is approved by the other programme operator, the PCR will be considered adopted, and information about the PCR will be published at www.environdec.com. The adopted PCR may, thereafter, be used to develop and register EPDs within the International EPD® System.

If other internationally standardized methodologies exist that act as PCRs or give guidance on PCR development for certain product categories, and the guidelines are widely accepted and used by the market, it should be possible to develop and certify EPDs according to such a standard or guideline even though it is not fully compliant with the International EPD® System. The decision to adopt such documents shall be made by the programme operator and may be supported by the Technical Committee, when relevant.

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

5.1.3 APPOINT A PCR MODERATOR

PCR development is coordinated by a PCR moderator (see Section 3.2.2 for a list of the roles). The PCR moderator is appointed by the programme operator based on applications or nominations from stakeholders interested in developing a PCR for a new product category.

The PCR moderator should have good project management skills, familiarity with the EPD approach and the industry/product category, and at least a basic understanding of LCA.

5.1.4 SEEK COOPERATION WITH OTHER PARTIES TO TAKE PART IN 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 include as many interested parties as possible from the geographical scope of the PCR, e.g. representatives from different companies and trade associations, to ensure broad acceptance and high quality of the final PCR. The attempt to involve other stakeholders is especially important in the event single companies initiate the work to develop a PCR.

The PCR Committee should include members representing the geographical scope of the PCR and interested in the product under study. 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 financial 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 PCR developers,
- are experts in the field of product sustainability, and

- are non-governmental organisations (NGOs) or other organisations interested in societal wellbeing or environment protection.

A stakeholder identification worksheet (see Table 2) may be used to ensure that all affected parties and individuals are considered as potential stakeholders for the PCR Committee and the PCR stakeholder consultation group (see Section 5.3.1).

NAME	STAKEHOLDER TYPE	INTERESTS AT STAKE	PARTICIPATION TYPE (PCR MODERATOR, PCR COMMITTEE, OR STAKEHOLDER CONSULTATION GROUP)

Table 2. Example of a stakeholder identification worksheet. Adopted from the Guidance for PCR development (2013).

The PCR Committee as a whole shall have competence in LCA and the key technologies and processes that contribute to the life cycle of those products that belong to 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 should be announced within the PCR Committee.

5.1.5 PLANNING THE PCR DEVELOPMENT

The PCR moderator shall develop a time plan for the PCR development, including any physical or web-based meetings. The time plan shall provide estimated dates for important milestones, e.g. when the draft PCR is expected to be available for open consultation. If the time plan is revised, the PCR moderator shall inform the Secretariat.

5.1.6 ANNOUNCEMENT OF PCR DEVELOPMENT

When a decision is taken to start the work developing a PCR document, the PCR 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 should announce PCR developments in relevant industry forums or industry publications, and by contacting the potential stakeholders identified in Section 5.1.4.

5.2 PREPARATION

5.2.1 USE OF PCR BASIC MODULE AS GUIDELINES AND PCR TEMPLATE

The Secretariat and Technical Committee have developed PCR Basic Modules[8] for a number of divisions (two-digit level) within the UN CPC scheme. The PCR Basic Modules are not PCRs in themselves – unless otherwise stated – but serve as a template and contain the information required to develop a PCR.

The PCR Basic Module shall be used as a PCR template, when available. Any nonconformity with the PCR Basic Module shall be documented and is subject to approval during the PCR review phase.

[8] Not to be confused with the “information modules” used in the standard EN 15804.

A description of the content of a PCR is described in Section 8.

5.2.2 SPECIFACTION OF LCA-BASED CONTENT OF THE PCR DOCUMENT

PCRs shall be based on the general application of the LCA methodology of the International EPD® System as described in Annex A, but they should provide further specifications as needed for the product category.

Supporting studies and literature review shall be used to specify the LCA-based content of the PCR that remains to be defined, including:

- definition of functional unit or declared unit,
- definition of reference service life when applicable,
- description of system boundary, including a system diagram,
- cut-off criteria,
- allocation rules,
- data quality requirements and underlying specific or generic data,
- selection of a specific database if some data are very significant for the final result, and
- parameters/indicators for the description of environmental performance (see Section 5.2.3).

To ensure coordination across related PCRs in the same supply chain, a PCR sector coordinator may be appointed for certain product sectors, such as the food and agricultural sector. The coordinator should assist the programme operator and the PCR Committee by suggesting ways to harmonize new and existing PCRs.

Existing PCRs covering a part of the life cycle of the product in question, e.g. agricultural products for processed food items, should be referenced to encourage harmonisation across product categories and in supply chains.

5.2.3 SELECTION OF LCA-BASED PARAMETERS/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 the EPDs based on the PCR. If the aspects considered as relevant do not cover all of the life cycle, this shall be stated and justified. For aspects that are relevant but not covered by the LCA-based parameters/indicators, see Section 5.2.4.

Section 9.5.5 describes the default set of LCA-based parameters to use for PCRs and EPDs of all product categories. In addition, the PCR Basic Module provides guidance on which additional parameters to use for all PCRs based on the same PCR Basic Module.

The default indicators and indicators from the PCR Basic Module shall be supplemented with additional indicators relevant to the product category 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 (LCA and non-LCA) of relevant impacts for the product category, and
- 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.

The selection of other parameters and impact categories shall be focused on their environmental relevance for the product category. The selection shall also take into consideration the scope of the EPD, regional aspects or requirements, and the maturity of the methods to ensure that they are not misleading. In addition, they shall only apply to those life cycle stages in which the information is appropriate. The PCR should contain justification for the selection of LCA-based parameters/indicators as well as methods and references to the source and version of characterisation models and factors.

5.2.4 SELECTION OF ADDITIONAL ENVIRONMENTAL INFORMATION

Relevant environmental aspects that are not covered by the LCA-based parameters shall be addressed using other appropriate methods.

The PCR shall provide instructions for additional environmental information, such as:

- data that are not part of the LCA study,
- information on existing management systems or other certification programmes that apply to the product,
- information on preferred waste management options, and
- information on activities related to social responsibility.

5.2.5 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 contradictions to these programme instructions exists, to make editorial changes and to suggest other improvements for clarity.

The Technical Committee, via the Secretariat, may also provide guidance on how to interpret the General Programme Instructions before the consultation.

5.3 CONSULTATION

5.3.1 CONSTITUTE THE PCR STAKEHOLDER CONSULTATION GROUP

Relevant parties to be involved in the consultation process shall be identified so that the PCR stakeholder consultation group covers the principal stakeholders. This task should be carried out in cooperation between the PCR moderator, the PCR Committee, and the Secretariat based on a proposed list of stakeholders 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. The stakeholder identification worksheet in Section 5.1.4 may be used to ensure and document that this has been done.

The consultation approach of the International EPD® System shall secure a fairly strict and generally accepted procedure enabling all interested parties to interact. The open consultation procedure is considered to be satisfactory when a PCR stakeholder consultation group consisting of persons/organisations sufficiently covering the industrial sector under study both on a national and regional basis have been accurately notified of the PCR work and the documents to be commented on. The procedure carried out shall guarantee credibility and shall be easy to take part in for any interested party, Hence, it shall be carried out in a transparent way that gives anyone concerned easy access to information and documents.

Organisations/stakeholders contributing during the open consultation may be listed on the PCR page at www.environdec.com if they agree to the publication of their name or organisation.

5.3.2 PREPARE THE OPEN CONSULTATION PROCEDURE

Open consultation should be carried out as an open internet-based participatory process that makes use of the PCR Forum. The open consultation may also include a public meeting or a webinar to collect stakeholder feedback. The PCR moderator shall inform the Secretariat of any planned meetings or webinars to publish information at www.environdec.com. Aspects to consider are the following:

- Invitations should be sent to representatives for authorities, trade associations, interest organisations, companies and organisations relevant to the product or service and other parties with an interest in participating in the meeting, including all relevant international parties.
- It shall be possible to provide written comments.

- A presentation of the International EPD® System shall be available for the audience.
- Comments received at the meeting shall be documented and considered in the final draft version of the PCR.

5.3.3 INVITE STAKEHOLDERS TO TAKE PART IN THE OPEN CONSULTATION

Open consultation via the PCR Forum shall be carried out in cooperation between the PCR moderator and the Secretariat, including:

- the preparation and 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 document is available and open for comments. The announcement should include a deadline for the consultation period and information on how to provide comments. Stakeholders should be encouraged to spread information about the consultation to other relevant stakeholders.

The open consultation period shall last for eight weeks for new PCRs but may be shorter for updates (see Section 5.5).

5.3.4 COLLECT COMMENTS DURING OPEN CONSULTATION

During the open consultation period, the PCR moderator shall guide stakeholders in the open consultation process via the PCR Forum, and collect stakeholder comments.

5.4 APPROVAL AND PUBLICATION

5.4.1 PREPARATION OF FINAL DRAFT PCR

The PCR moderator and PCR Committee shall prepare the final draft PCR. The final draft shall take the comments received during the open consultation procedure into due consideration and endeavour to resolve conflicting responses from the open consultation.

The PCR moderator and PCR Committee shall make a summary of the comments received and the proposed changes to the document and publish the summary on the PCR Forum. Names or contact information shall only be published for those stakeholders that have agreed to this. The PCR moderator and PCR Committee should also reply individually to all stakeholders that have provided comments during the consultation.

The PCR moderator and PCR Committee shall prepare a report that includes a description of the open consultation process, the parties invited to and participating in the consultation, the comments received and how they have been handled. In case certain comments are not considered, this shall be justified.

The PCR moderator shall send the final draft PCR and the associated report to the Secretariat for review by the Technical Committee.

5.4.2 PCR REVIEW

The final draft PCR shall be reviewed by the Technical Committee (see Section 3.1.3) functioning as the PCR review panel, supported by the Secretariat. Members of the panel shall recuse themselves from the PCR review in the event they have any conflicts of interest. The review shall have a chair who shall be independent of the industries producing and supplying the products covered by the product category or supplying to them.

The review shall address:

- whether the choices regarding LCA-based content (system boundary, allocation rules, etc.), parameters/indicators, and additional environmental information are made according to the General Programme Instructions,
- whether the PCR development process has been done according to the General Programme Instructions, and

- how the PCR moderator and PCR Committee handled the feedback received during the open consultation.

The results of the review should be documented in a PCR review report and shall lead to:

- the full acceptance of the draft PCR,
- the acceptance of the draft PCR with comments to be fulfilled, or
- the need for further clarification and amendments.

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

The PCR moderator and PCR Committee shall ensure that the review comments are considered in the preparation of the final version of the PCR document. In the event the TC needs further clarifications or amendments to the text, the PCR moderator is responsible for providing a new draft version of the PCR.

5.4.3 PUBLICATION OF PCR

When the PCR document has been approved, the Secretariat shall prepare the final editorial changes, assign a registration number, and publish it on the website together with associated information. This information includes PCR name, scope, UN CPC code(s), registration number, version number, contact information for the PCR moderator, and a list of members in the PCR Committee.

The Secretariat shall set a period of validity for the PCR in the range of three to five years. The period of validity of the PCR should be set at a reasonable and sufficient length of time not only to safeguard market stability but to ensure that the rules and guidance are current.

5.4.4 ANNOUNCEMENT OF PUBLICATION

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

5.5 UPDATING

A PCR is valid for a pre-determined period of time to ensure that it is updated at regular intervals. Any interested party may comment on a published PCR document via the PCR Forum or send comments via e-mail to the PCR Moderator and the Secretariat. Such comments may lead to an update during the period of validity (Section 5.5.1), or should be recorded and used as input when the PCR document is subject for a later update (Section 5.5.2).

An expired PCR shall not be used to develop and register new EPDs, and shall not be used to update a published EPD to give the EPD a prolonged period of validity. To be possible to use for these purposes, the expired PCR shall first be updated or have its period of validity prolonged according to Section 5.5.2.

Updated PCRs shall either have an updated version number or be assigned a new registration number.

5.5.1 UPDATE DURING VALIDITY

A PCR document may be revised during its period of validity provided significant and well-justified proposals for changes or amendments are presented. This includes editorial changes, clarifications, correction of errors, and alignment of the PCR to a new version of the General Programme Instructions. The PCR may also be updated during its period of validity based on new LCA-based information generated in the relevant industry sector, or special market demands not covered in the existing PCR document, or other comments that are of sufficient technical relevance.

Minor changes shall be handled by the Secretariat. Questions of more methodological relevance should be processed through the Technical Committee. A shorter open consultation period may be relevant in the event of changes requiring stakeholder input or stakeholder notification.

5.5.2 UPDATE TO PROLONG VALIDITY OF PCR

5.5.2.1 Initiation of update

When the PCR is about to expire, the PCR moderator shall initiate a discussion with the Secretariat on how to proceed with updating the document and renewing its period of validity. The Secretariat should issue reminders to the PCR moderator of a PCR up to a year before its expiration. There should be a market demand to create EPDs to initiate the updating phase.

The PCR moderator shall lead the updating process of a PCR document with support from the PCR Committee. If no PCR moderator exists for the PCR, the Secretariat shall initiate the process or try to engage another person to accept the role as PCR moderator.

In case of a market need for an expired PCR, the Secretariat may prolong the period of validity of the expired PCR with the time expected for the PCR update to finalize, not to exceed one year from the previous expiration date. Such an extension of the period of validity should be communicated to the PCR Committee and the PCR stakeholder consultation group, and at www.environdec.com. The period of validity of an expired PCR shall not be extended if the PCR is based on a withdrawn version of the General Programme Instructions. Such an extension of the period of validity shall not be done more than once for the same PCR version.

5.5.2.2 Preparation of update

The latest version of the General Programme Instructions and the relevant PCR Basic Module shall be used as a basis for the PCR update. Recent developments in LCA methodology and indicators, standardisation, and alignment with other PCRs published in the International EPD® System or other ISO 14025 programmes shall also be considered.

The scope of the PCR to cover the relevant product category shall also be considered during the update process.

5.5.2.3 Consultation

A draft version of the updated PCR should be made available for open consultation during the update process based on an updated list of stakeholders in the PCR stakeholder consultation group. The need for and the length of the open consultation should depend on the magnitude of the proposed changes.

5.5.2.4 Review

In the event of significant methodological changes compared to the previously published version, the updated draft shall be subject to review by the Technical Committee before publication. A review may not be relevant for changes made only to comply with the latest General Programme Instructions, the latest PCR Basic Module, or for editorial purposes.

5.5.2.5 Publication of update

The Secretariat shall prepare the final editorial changes and publish the updated PCR at www.environdec.com with an updated period of validity and version number.

The PCR moderator shall inform the PCR committee and other stakeholders involved in the process about the final outcome of the work and the publication of the updated PCR. The Secretariat should announce the publication of the update at www.environdec.com, newsletter or via other communication channels.

5.6 DE-REGISTRATION OF PCR

Expired PCRs should be de-registered by the Secretariat if they have been replaced by PCRs with an overlapping scope or for other reasons to ensure an up-to-date, consistent, and useful library of PCRs.

De-registered PCRs may be made available upon request.

6 PROCESS FOR EPD DEVELOPMENT

Developing an Environmental Product Declaration 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. Verification (see Section 6.3), and
4. Registration and 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 de-registered (see Section 6.6).

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 a life cycle assessment (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. To avoid conflicts of interest between a consultant and the verification, the cost of verification shall be set up and paid between the company and the verifier, and not be included in the offer from the consultant.

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 General Programme Instructions, and
- the Product Category Rules (PCR) applicable for the product category.

The PCR used shall be listed at www.environdec.com and valid at the time of the verification.[9] 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 Technical Committee. If a PCR does not exist for the product category of interest, it shall be developed based on the process in Section 5. For new product categories, a pre-certified EPD may be published in parallel to PCR development (Section 6.1.1).

6.1.1 PRE-CERTIFICATION AS AN ELEMENT TO DEVELOP PCR DOCUMENTS

The International EPD® System includes the possibility for pre-certification of EPDs as an initial step to publishing environmental information of a product during the development of a PCR for a new product category. Pre-certification is not applicable for a product category in the event of an existing PCR (valid or expired) at www.environdec.com.

A pre-certified EPD may serve as a practical example and thus facilitate the PCR development process in the discussions between the parties involved. The pre-certification also gives an organisation the possibility to, early on, inform the market about the environmental performance of their products.

For pre-certified EPDs, the following additional requirements shall apply:

- The LCA study shall comply with the international accepted principles, framework, methodology and practices for LCA established by ISO 14040 and ISO 14044, and fulfil the requirements in Annex A.
- The format and contents of the pre-certified EPD shall comply with Section 9 with an additional focus on transparency of LCA methodology and data used. It shall also include information related to pre-certified EPDs (see Section 9.5.7).

[9] The “time of 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 period of validity shall be set to a maximum of one year, which cannot be renewed.

The relevant parties, e.g. the PCR Committee, trade associations or interest organisations, should be informed about the pre-certification, where relevant.

6.2 COMPILE INFORMATION IN THE EPD REPORTING FORMAT

The results of the LCA study and other information mandated by the reference PCR and General Programme Instructions shall be compiled in the EPD reporting format (see Section 9). This may be performed by the organisation itself (in-house) or with the help of a consultant.

6.3 VERIFICATION

Verification shall be carried out in accordance with the principles and procedures in Section 7.

During verification, the organisation developing the EPD, or the verifier, may contact the Secretariat to pre-book a registration number for the upcoming EPD. Pre-booked registration numbers should result in an EPD registration within a period of three months, or they should be reassigned to other companies by the Secretariat.

6.4 REGISTRATION AND PUBLICATION

After completed verification, the organisation developing the EPD shall submit the EPD to the Secretariat together with other mandatory documentation[10], such as a registration form and the verification report. Terms and conditions may apply. The latest templates and instructions on what information to provide are available at www.environdec.com. The publication date (issue date) in the EPD shall be equal to the day when the verified EPD is submitted for registration.[11]

Upon receiving complete and correct documentation, the Secretariat shall issue a registration number (if not already pre-booked; see Section 6.3) and publish the EPD at www.environdec.com, supplemented with information about the organisation, contact details, etc. The programme operator may also publish the EPD in alternative formats or managed databases to enable further use of EPD information.

Upon publication of the EPD, it will be valid to be used by the organisation until it has expired or is de-registered (see Section 6.6). During this time, the organisation may also use the International EPD® System logotype as described in Annex D.

6.4.1 COST AND FEES

There is a fee structure associated with the registration and 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 registration, publication, and continued use of their 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 registration form.[12]

6.4.2 CERTIFICATE

An EPD owner may request an electronic certificate to demonstrate that the EPD is registered and published within the International EPD® System. The certificate is issued by the Secretariat upon request and after outstanding fees have been paid.

[10] The organisation developing the EPD may delegate the task of submitting the documentation to their LCA consultant or the verifier, but the registration form always needs to be signed by an authorized signatory of the EPD owner.

[11] Please note that the publication (issue) date is different from the “approval date” (the date of the verification report). The latest possible period of validity of the EPD is based on the approval date, not the publication date.

[12] The costs of fees should, therefore, not be included in the offer of the LCA consultant or verifier of the EPD owner.

6.4.3 SINGLE-ISSUE EPD

After publication of an EPD, the International EPD® System includes the possibility to adapt the information given to specific user needs and market applications with the concept of “single-issue EPDs”. A single-issue EPD may, for instance, have the form of a climate declaration, extracting the information related to climate change based on the indicators in the EPD. A single-issue EPD may only be published if an EPD is published for the same product.[13]

The single-issue EPD shall contain the following information as a minimum:

- information about the product,
- information about the company,
- declaration of the environmental impact for the chosen issue based on relevant indicator and impact category as displayed in the EPD,
- mandatory statements according to Section 9,
- information on how to obtain information about other environmental impacts of the declared product through the published EPD, and
- a statement that: “This single-issue EPD only addresses one environmental impact category and does not assess other potential social, economic, and environmental impacts arising from the provision of this product. These aspects may be of equal or greater importance than the single impact category displayed”.

6.5 CHANGES, CORRECTIONS, OR AMENDMENTS TO PUBLISHED EPDS

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

- an increase of 10% or more of any of the indicators listed in Section 9.5.5.1 as declared in the EPD,
- errors in the declared information (see Section 4.7 for the procedure to handle complaints), or
- significant changes to the declared product information, content declaration, or additional environmental information.

If such changes have occurred, but the EPD is not updated, the organisation shall contact the Secretariat to de-register the EPD (see Section 6.6).

An EPD owner may also choose to make amendments or other changes to an EPD during its period of validity. For changes concerning any of the verified data in the EPD, e.g. the indicators for environmental performance, verification (EPD verification or EPD process certification) shall be performed. This verification may be based on one of the following options:

1. The same version of the General Programme Instructions and reference PCR as were used in the original verification, even if they are not the current version or if the PCR has expired. The revised EPD shall then maintain its original period of validity.
2. The current version of the General Programme Instructions and a current, valid reference PCR. Such verification shall be treated as in Section 7, and a new period of validity for the EPD may then be set based on the new approval date.

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

In addition to these situations, the EPD owner may make editorial changes to a published EPD, such as the change of a logotype or correction of spelling errors, by sending the revised EPD directly to the Secretariat without verification.

A revised EPD shall contain a description of the differences versus the previous version (see Section 9.5.9) and include a “revision date” normally set as the date for submitting the updated EPD document to the Secretariat.

[13] This requirement did not exist in previous versions of the General Programme Instructions, why older Climate declarations may still be published without an EPD.

6.6 DE-REGISTRATION OF EPD

An EPD will remain registered and published until the EPD owner contacts the Secretariat via e-mail or in writing for de-registration of the EPD. Alternatively, the Secretariat may de-register an EPD if fees are not paid in time, or if the EPD contains errors that are not corrected by the EPD owner. A de-registered EPD may no longer be used as it no longer is administered by a programme operator and thus does not fulfil the requirements of ISO 14025.

The EPD owner may choose to let an EPD that has passed the period of validity to continue to be published. This may be relevant for products that are discontinued but remain available on the market or in use. In such cases, the organisation is not allowed to use the expired EPD in marketing unless an exception is made by the programme operator.

The Secretariat shall maintain a list of de-registered EPDs in the programme. De-registered EPDs can be made available upon request, provided the EPD owner accepts this.

7 PROCESS FOR VERIFICATION

There are two types of verification procedures in the International EPD® System as one of the steps in developing an EPD (see Section 6):

- **EPD verification** (Section 7.4): verification of LCA-based data, additional environmental information, and other information presented in an EPD based on the General Programme Instructions and a valid reference PCR. EPD verification shall be conducted by an approved individual verifier or an accredited certification body.
- **EPD process certification** (Section 7.5 and Annex B): verification of an internal organisational process aimed to develop EPDs based on the General Programme Instructions and valid reference PCRs covered under the scope of certification. EPD process certification shall be conducted by an accredited certification body.

It is possible to have an EPD calculation tool “pre-verified” (see Annex C). This shall not replace the need for EPD verification according to one of the options above.

The 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 4.12 for information on the process of checking the competence and qualifications of verifiers.

7.1 INDEPENDENCE OF VERIFICATION

All types of information and data shall be impartially and independently verified. This means that the independent verifiers shall not have been involved in the execution of the LCA or the development of the declaration, and they shall not have conflicts of interest resulting from their position in the organisation. For the credibility of verification, verifiers should not take on verification tasks in which their impartiality and independence may potentially be questioned even if this requirement has been fulfilled.

To avoid potential problems with independence between the execution of the LCA and the EPD verification, LCA practitioners shall not include the cost of verification in their offer of LCA services to the company.

Verifiers shall independently seek out assignments from companies 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. The verifier shall report any perceived pressure by the EPD owner or LCA practitioner to influence the outcome of the verification to the programme operator, who may assist with arbitration, if necessary.

7.2 PRINCIPLES FOR VERIFICATION

Based on the General Programme Instructions, the reference PCR and relevant standards, the verification shall cover the following main areas:

- the underlying data collected and used for the LCA calculations,
- the way the LCA-based calculations have been carried out,
- the presentation of environmental performance in the EPD, and
- the presentation of additional environmental information and any other information included in the EPD.

In case of the existence of already verified background information in the LCA results (carried out in accordance with the ISO standards for LCA and critical review of LCA) or verified EPD, this information shall not be subject to further verification provided that the information is updated and valid through the EPD validity.

When a large variety of products are subject to verification, it is likely unrealistic to have background data (and assessments) available about all the products. In such a case, the development and application of sampling methods for the LCA study may be a practical solution. If a specific sampling method has been developed by an organisation, this method shall be verified by the verifier and declared in the EPD.

Verifications of EPD updates shall focus on changes in the background conditions for the EPD that might have occurred or other types of changes with regard to the organisation's internal procedures with relevance to the declaration. When there is a variation higher than ±10% in one or more indicators reported in the EPD, the verification should focus on parameters and data generating the variation.

The verification procedure may be seen as being divided into two separate parts:

- Documental review (Section 7.2.1), and
- Validation (Section 7.2.2).

7.2.1 DOCUMENTAL REVIEW

The documental review shall focus on the analysis of all documents that justify input data and information included in the EPD, both the underlying LCA study and documents describing additional environmental information.

The objectives of the documental review are:

- to assess the compliance of the LCA and the EPD with the General Programme Instructions and the reference PCR,
- to verify procedures established for updating the information in the LCA and EPD, and
- to verify procedures established for an assessment of the conformity to all relevant process and product-related environmental laws (where appropriate).

7.2.2 VALIDATION

The validation shall focus on an assessment of the validity of data and information included in the LCA study and the EPD. This phase is conducted by sampling activities focused on those processes and activities that may have significant influence on the overall environmental impact.

The objectives of the validation are:

- to assess the accuracy of the information contained in the LCA and the EPD,
- to assess the application of documented procedures established for updating the information in the LCA and EPD, and
- to assess compliance with relevant process and product-related environmental laws (where relevant).

The verifier shall justify in the verification report the way the organisation conducted the validation phase especially considering the following factors:

- type and complexity of product and associated processes,
- presence of a certified environmental management system (e.g. in the form of a monitoring data management system),
- data sources and format of presentation,
- legal complexity and risk, and
- specific requirements by the reference PCR.

The verifier may choose to organise the validation phase either as an "on-desk" or "on-site" exercise. An on-site audit should be conducted if the manufacturing processes are dominant with regard to the overall environmental impact.

7.2.3 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 made public as the EPD typically only provides data aggregated over full or relevant portions of the life cycle. Therefore, business data identified as confidential and provided during the verification process shall be kept confidential. Verifiers shall not disseminate or otherwise retain for use, without the permission of the organisation, any information disclosed to them during the course of the review work**.**

7.3 ORGANISATIONS' OBLIGATIONS FOR VERIFICATION

Organisations developing an EPD shall

- ensure that the LCA-based data, additional environmental information, and the EPD, are independently verified,
- present data for verification (Section 7.3.1), and
- establish internal follow-up procedures (Section 7.3.2).

7.3.1 PRESENTATION OF DATA FOR VERIFICATION

Data for verification shall be presented in the form of a project report – a systematic and comprehensive summary of the project documentation that supports the verification of an EPD. The project report is not part of the public communication. The project report shall be written in a language that is understood by the verifier.

In the presentation of data for verification, references shall be made to the reference PCR, the General Programme Instructions, as well as other background documents used. Any deviations from making use of these documents shall be described and justified. In the event the verifier finds the LCA study 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.

The presentation of the results from the LCA-based calculations 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-based calculations.

For construction product EPDs compliant with EN 15804, the requirements for a project report in Section 8 ("Project report") of the standard apply.

7.3.1.1 Layout of the presentation

The presentation of data from the LCA-based calculations 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/information modules shall be described in a transparent way. The same rules apply regardless of the type of data, i.e. whether the data are specific or generic, from literature sources, from questionnaires, or from personal information.

Results from the inventory analysis should be presented separately in the form of a table. A summation of the various parameters may be included for different life cycle stages. Inventory results may be presented together with the characterisation factors used for converting the inventory data into indicators for potential environmental impacts.

Results from the impact assessment should be presented in a way that illustrates the calculation procedure from raw data collected in the inventory analysis phase to the final conversion of the data into the impact categories.

7.3.1.2 Description of the LCA-based calculations

Quality assurance of data and data handling is a central part of the presentation of the LCA-based calculations provided to the verifier. Specific data from manufacturing processes or equivalent data shall be documented on the site level. Unit processes/information modules and generic data shall be reported on the level of aggregation available for use in the calculation, but more detailed data can be reported, if found relevant.

All data relevant for the EPD shall be documented as follows:

- a description of the technical system (type of system, geographical location, and description of the function of the unit processes/information module),
- a description of data collection (objectives, reference function and reference flow, name of person in charge of the data collection, system boundary, allocation, judgement of data quality and its relevance and accuracy, checks of data collection being performed, and various information of an administrative nature),

- a description of data collection (time period for data collection, type of methods used and a description thereof, identification and assessment of the relevance of eventual data gaps and how these are handled, references, and other information), and
- a presentation of data (presentation of all input and output data and how they relate to reference functions and reference flows separated into the data categories chosen for the LCA-based calculations).

References should be made to existing critical reviews of LCA data already being examined and approved.

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

- functional unit or declared unit, system boundary, and allocation rules,
- data collection (collection procedures, questionnaires, specific/generic data, and reference to documentation),
- validation of data (internal quality assurance procedures, routines for identification, follow-up, and corrections of data gaps),
- inventory analysis results (calculation procedures, results for different life cycle stages, and the final aggregated results), and
- key assumptions made.

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

- key inventory parameters and data on use of resources,
- assignment of the results from the inventory analysis (classification), and
- results of the characterisation and impact assessment calculations.

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

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

7.3.2 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 7.4.9). 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 made part of an existing quality or environmental management system.

7.4 EPD VERIFICATION PROCEDURE

EPD verification (in contrast with EPD process certification in Section 7.5) is the verification of LCA-based data, additional environmental information, and the information presented in an EPD based on the General Programme Instructions and a valid reference PCR. The verifier shall also, to the extent possible depending on practical circumstances, ensure that the product, including its production process, does not violate relevant legislation.

EPD verification shall be conducted by an approved individual verifier or an accredited certification body.

7.4.1 LCA AND PCR COMPLIANCE

The verifier shall check that the LCA-based calculations have been performed in accordance with the General Programme Instructions, the reference PCR, and relevant standards, and they shall specifically focus on:

- the collection of LCA-based data and that the choice of methods used are carried out in accordance with ISO 14040 and 14044 and the reference PCR, and that
- the results from the inventory analysis and the impact assessment calculations have been made using prescribed methods.

In verifying the underlying data from the inventory analysis, the verifier shall examine that:

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

In verifying the results from the impact assessment, the verifier shall check that the calculations are made in a correct way based on the inventory analysis results and prescribed characterisation factors.

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 conformance 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.

Sample checks may preferably be carried out for:

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

With regard to verifying information about the impact assessment, the verifier may make use of sample checks to check that the calculations of one or more impact category indicators have been made in a correct way. A selected number of impact categories should to be chosen that focus on the most dominant parameters within each category. Such parameters shall be identified by evaluating their relative contribution to the total environmental impact of the product.

7.4.2 EPD INFORMATION

The verifier shall check the consistency of the information in all parts of the EPD related to the General Programme Instructions, the reference PCR and relevant standards, information about the product, the environmental performance, additional environmental 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 the recommended overall layout,
- information in other presentation formats, e.g. machine-readable EPDs, correspond with the verified information, and that
- information and guidance are given on where to find supplementary explanatory materials.

7.4.3 COMPLIANCE WITH RELEVANT ENVIRONMENTAL LEGISLATION

The verifier and the programme operator do not make any claim on nor have any responsibility for the legality of the product, its production process, or its supply chain. A basic evaluation of compliance with relevant environmental legislation is, however, part of the EPD verification.

The verifier shall evaluate the documentation of compliance with process- and product- environmental laws applicable to the organisation requesting the EPD verification, with a main focus on the list of materials and chemical substances and information related to pollution permits included in the EPD. The verifier shall check that the organisation has procedures in place for keeping itself updated with relevant process- and product-related legislation and has access to

all specific information of relevance concerning processes and products for the actual product category issued by central legislative authorities.

7.4.4 VERIFICATION OF PRE-CERTIFIED EPD

The verification procedure for a pre-certified EPD shall in addition ensure that the requirements in Section 6.1.1 are met.

7.4.5 VERIFICATION OF SECTOR EPD

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

- a verification procedure based on sample tests whereby a verifier can assure the full inclusion of all operations and manufacturing sites over a certain number of review cycles, 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, e.g.:

- to consider the 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 either the upstream processes or the manufacturing processes – and if so, make a representative sample out of each such category,
- to randomly look at 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, e.g. 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 reference PCR.

7.4.6 EPD VERIFICATION REPORT

The verification procedure shall be transparent and result in a verification report in English. A single verification report may be used for multiple EPDs that are verified together based on the same PCR. The report shall be dated and signed by the verifier, and it shall document the verification process while adhering to the rules of data confidentiality. The verification report shall be submitted during the EPD registration and be available to any person upon request. The date of the verification report (the “approval date”) is the basis for the period of validity of the EPD (see Section 7.4.8).

For individual verifiers, the verification report shall state if the verification is the verifier’s first such task in the scope of the International EPD® System as this verification may be subject to an additional check by the Technical Committee (see Section 4.12).

For construction product EPDs compliant with EN 15804, a mandatory verification report template is available at www.environdec.com.

7.4.7 PROVIDING INFORMATION ABOUT EPD REGISTRATION AND PUBLICATION

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

7.4.8 SETTING EPD VALIDITY

An EPD is valid from its publication date (see Section 6.4) and for a five-year period starting from the date of the verification report ("approval date"). The publication date and the period of validity shall be stated in the EPD (see Section 9.5).

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

7.4.9 FOLLOW-UP DURING THE EPD VALIDITY PERIOD

As part of the verification, a procedure to follow-up and monitor any changes that would require an update of the EPD during its period of validity shall be made (see Section 6.5 and Section 7.3.2). It is not necessary to perform a full LCA, only a screening that focusses on the parameters that were identified in the initial preparation of the EPD, the LCA study and the sensitivity analysis to have an impact on the indicators in Section 9.5.5.1 is required. The surveillance 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 verification, or
2. as the responsibility of the EPD owner, but with a contracted surveillance verification in which the original verifier is contracted to take part in the follow-up throughout the period of validity of the EPD.

7.5 EPD PROCESS CERTIFICATION

To simplify the process for organisations in collecting data, conducting LCAs, and developing EPDs on a large scale, the International EPD® System includes the possibility of "EPD process certification". With EPD process certification, the organisation may handle the management of EPD data involved in the verification procedure by themselves and issue EPDs without a third-party verifier being involved in each case.

The increased implementation of environmental management systems in many organisations will automatically lead to the establishment of reliable internal follow-up routines, which very well meets many of the needs in the procedure of EPD process certification. Well-managed internal EPD routines will make data collection and its conversion into EPDs more rational and less resource- and time-consuming.

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

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

Detailed requirements for EPD process certification are given in Annex B.

8 CONTENT AND FORMAT OF PCR

PCR documents 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 General Programme Instructions
  - PCR language(s)
- Scope of PCR
  - Product category definition and description (e.g. synonyms, function, technical performance, reference service life, and use)
  - Classification of product category using UN CPC code(s), and other relevant classification schemes
  - Products not covered by the PCR, where 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
- Goal and scope, life cycle inventory, and life cycle impact assessment
  - Functional unit/declared unit
  - Reference service life or product lifetime, where applicable
  - System boundary, including information on life cycle stages not considered and omitted in the EPD, where appropriate
  - System diagram
  - Cut-off rules
  - Allocation rules
  - Data quality requirements
  - Recommended databases for generic data, where relevant, including name and version number
  - Impact categories and impact assessment methodology

  - Other calculation rules and scenarios
- Instructions for the content and format of EPDs based on the PCR
- Additional information
  - Materials and substances to be declared in a product content declaration
  - Rules for provision of additional environmental information
  - Mandatory statements, e.g. regarding verification
- Glossary
- References
- Version history of PCR

If any of these issues are not considered, it shall be justified in the PCR and approved during the PCR review.

9 CONTENT AND FORMAT OF EPD

The International EPD® System includes the requirements for the EPD reporting format in terms of contents, while some flexibility is allowed in the formatting and layout provided that the EPD still includes the prescribed information. A generic template for EPDs is available at www.environdec.com. Additional requirements may be put on the reporting format in the reference PCR, or for the EPD to be used in certain applications.

As a general rule, the EPD content:

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

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

For EPDs for construction products compliant with EN 15804, the communication format of the EPD shall be in accordance with EN 15942, *Sustainability of construction works — Environmental product declarations — Communication formats: business to business*.

9.1 EPD LANGUAGES

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

9.2 UNITS AND QUANTITIES

The following requirements apply for units and quantities:

- The International System of Units (SI units) shall be used, e.g. kilograms (kg), Joules (J), and metres (m). Reasonable multiples of SI units may be decided in the PCR to improve readability, e.g. grams (g) or megajoules (MJ). The following exceptions apply:
  - Resources used for energy input (primary energy) should be expressed as kilowatt-hours (kWh) or megajoules (MJ), including renewable energy sources, e.g. hydropower, wind power, and geothermal power.
  - Water use should be expressed in cubic metres (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.
- Three significant figures[14] should be adopted for all results. The number of significant digits shall be appropriate and consistent.
- Scientific notation may be used, e.g. $1.2*10^2$ for 120.
- The thousand separator and decimal mark in the EPD shall follow one of the following styles (a number with six significant figures shown for illustration):
  - SI style (French version): 1 234,56
  - SI style (English version): 1 234.56

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

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.

- Dates and times presented in the EPD should follow the format in ISO 8601. For years, the prescribed format is YYYY-MM-DD, e.g. 2017-03-26 for March 26th, 2017.
- The result tables shall:
  - only contain values or the letters “INA” (Indicator Not Assessed). It is not possible to specify INA for mandatory indicators. INA shall only be used for voluntary parameters that are not quantified because no data is available.[15]
  - contain no blank cells, hyphens, less than or greater than signs, or letters (except “INA”).
  - use the value 0 only for parameters that have been calculated to be zero.
  - use footnotes to explain any limitation to the result value.

9.3 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

9.3.1 PRODUCTS FROM THE SAME COMPANY

Similar products covered by the same PCR and manufactured by the same company with the same core process may be included in the same EPD if the following requirements are met:

- Similar products with differences between the environmental indicators in Section 9.5.5 lower than ±10% may be presented in the same EPD using the impacts of an environmentally representative product. The criteria for the choice of representative product shall be presented in the EPD, using, where applicable, statistical parameters.
- Similar products with differences between the environmental indicators in Section 9.5.5 higher than ±10% may be presented in the same EPD but presenting the results separately for each product, while adhering to the rules about a reasonable number of pages for the intended audience and use.

9.3.2 SECTOR EPD

The International EPD® System allows for an industry association to develop an EPD in the form of a sector EPD.[16] A sector EPD declares the average product of multiple companies in a clearly defined sector and/or geographical area.

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.

9.4 USE OF IMAGES IN EPD

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

9.5 EPD REPORTING FORMAT

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

- Cover page (see Section 9.5.1),

[15] This requirement does not intend to give guidance on which indicators are mandated (“shall”) or voluntary.

[16] In the context of EN 15804 and elsewhere, a sector EPD is sometimes referred to as an “average EPD”, an “industry-wide EPD”, or a “generic EPD”.

- Programme information (see Section 9.5.2),
- Product information (see Section 9.5.3),
- Content declaration (see Section 9.5.4),
- Environmental performance (see Section 9.5.5),
- Additional environmental information (see Section 9.5.6), and
- References (see Section 9.5.10).

The following information shall be included, where applicable:

- Information related to pre-certified EPDs (see Section 9.5.7),
- Information related to sector EPDs (see Section 9.5.8),
- Differences versus previous versions (see Section 9.5.9), and
- An executive summary in English (see Section 9.5.11)

9.5.1 COVER PAGE

The cover page shall include:

- Product name and image
- Name and logotype of EPD owner
- The text “Environmental Product Declaration” and/or “EPD”
- Programme: The International EPD® System, www.environdec.com
- Programme operator: EPD International AB
- Logotype of the International EPD® System
- EPD registration number as issued by the programme operator[17]
- Date of publication (issue): 20XX-YY-ZZ
- Date of revision: 20XX-YY-ZZ, where applicable,
- Date of validity; 20XX-YY-ZZ. For clarification, a note may be added that “An EPD should provide current information and may be updated if conditions change. The stated validity is, therefore, subject to the continued registration and publication at www.environdec.com”.
- A statement of conformity with ISO 14025
- For construction products: a statement of conformity or non-conformity with EN 15804+A1 and/or ISO 21930

In the case of EPDs registered through a regional hub (a regional or national programme based on and fully aligned with the International EPD® System through an agreement with the programme operator), “Programme”, “Programme operator”, and Logotype shall be expanded to include a reference to the regional programme and the organisation responsible for it.

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

- ECO EPD logotype and reference number as issued by the programme operator as approved by the ECO Platform,
- information about dual registration of EPD in another programme, such as registration number and logotype, and
- a statement of conformity with other standards and methodological guides.

[17] 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.

9.5.2 PROGRAMME INFORMATION

The programme information section of the EPD shall include:

- the address of the programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, E-mail: info@environdec.com,
- the following mandatory statement from ISO 14025: “EPDs within the same product category but from different programmes may not be comparable”,
- for EPDs of construction products claiming compliance with EN 15804+A1: “EPDs of construction products may not be comparable if they do not comply with EN 15804”,
- a statement that the EPD owner has the sole ownership, liability, and responsibility for the EPD, and
- information about verification[18] and reference PCR according to Table 3.

For EPDs compliant with EN 15804: CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): *<name, registration number, version and UN CPC code(s)>*
PCR review was conducted by: *<name and organisation of the review chair, and information on how to contact the chair through the programme operator>*
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☐ EPD verification
Third-party verifier: *<name, and organisation of the third-party verifier. The signature may also be included>* *In case of certification bodies:* Accredited by: *<name of the accreditation body and accreditation number, where applicable>.* *In case of individual verifiers:* Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third-party verifier: ☐ Yes ☐ No

Table 3. Information about verification and reference PCR.

9.5.3 PRODUCT INFORMATION

The product information section of the EPD shall include:

- the address and contact information of the EPD owner,
- a description of the organisation. 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),
- the name and location of the production site,

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

- product identification by name, and an unambiguous identification of the product by standards, concessions, or other means,
- identification of the product according to the UN CPC scheme system. Other relevant codes for product classification may also be included, e.g.
  - Common Procurement Vocabulary (CPV),
  - United Nations Standard Products and Services Code® (UNSPSC),
  - Classification of Products by Activity (NACE/CPA), or
  - Australian and New Zealand Standard Industrial Classification (ANZSIC),
- a description of the product, its application/intended use and technical functions, e.g. expected service lifetime,
- the geographical scope of the EPD, i.e. for which geographical location(s) of use and end-of-life the product's performance has been calculated,
- the functional unit or declared unit,
- the reference service life (RSL), where applicable,
- the declaration of the year(s) covered by the data used for the LCA calculation and other relevant reference years,
- a reference to the main database(s) for the generic data and LCA software used, where relevant,
- a system diagram of the processes included in the LCA, divided into the life cycle stages,
- a description of the EPD system boundary is "cradle-to-gate", "cradle-to-gate with options", or "cradle-to-grave",
- information on which life cycle stages are not considered (if any), with a justification for the omission, and
- any relevant websites for more information or explanatory materials.

This section may also include:

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

9.5.4 CONTENT DECLARATION

The content declaration section shall contain information about the contents of the product. A content declaration may not be appropriate for EPDs for intangible products, such as services, and should be excluded from PCRs for such product categories.

The content declaration shall have the form of a list of materials and chemical substances including information on their environmental and hazardous properties. A harmonisation is recommended if similar information is issued from central authorities, initially preferably based on international regulations and legislation. In such a case, it is important to complement a list of materials and chemical substance product content in quantitative terms.

The content declaration does not apply to proprietary materials and substances such as those covered by exclusive legal rights including patent and trademarks. As a general rule, an indication that a product is "free" of a specific hazardous material or substance should be done with caution and only when relevant, following the rules in ISO 14021 on self-declared environmental claims.

Information on the hazardous properties of materials and chemical substances should follow the requirements given in the latest revision of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS),[19] issued by the United Nations or national or regional applications of the GHS. As an example, the following regulations should be used for EPDs intended to be used in the European Union:

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

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

Additional requirements for the content declarations may be set by the PCR, e.g. which materials and substances to declare.

For construction product EPDs compliant with EN 15804, the content declaration shall list, as a minimum, substances contained in the products that are listed in the “Candidate List of Substances of Very High Concern for Authorisation” when their content exceeds the limits for registration with the European Chemicals Agency.

9.5.4.1 Information about recycled materials

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

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

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

9.5.4.2 Information about packaging

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

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

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

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

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

9.5.5 ENVIRONMENTAL PERFORMANCE

The environmental performance section shall include information about the environmental impacts, use of resources, waste production and output flows, and additional environmental indicators/parameters given per functional unit or declared unit. Annex A provides details on the general application of LCA methodology used for the calculation of these indicators.

The information below applies in general, while additional indicators may be required by the reference PCR to include quantitative or qualitative information about all relevant environmental aspects of the product category.

For display of the results divided into different life cycle stages/modules (Annex A), the following applies:

- For EPDs for non-construction products, the results shall be presented for upstream, core, and downstream, as well as a total sum when the whole life cycle is included.
- For EPDs for a construction product compliant with EN 15804, the modules A1, A2, A3, etc., shall be used instead of upstream/core/downstream/total. The indicators declared in the individual information modules of a product life cycle (A1 to A5, B1 to B7, etc.) shall not be added up in any combination of the individual information

modules into a total or sub-total of the life cycle stages A, B, C, or D. As an exception, information modules A1, A2, and A3 may be aggregated to “A1-A3”.

9.5.5.1 Environmental impacts

The indicators related to potential environmental impact listed in Table 4 shall be declared per functional unit or declared unit, and per life cycle stage.

PARAMETER		UNIT	NON-CONSTRUCTION PRODUCTS: UPSTREAM/CORE/DOWNSTREAM/TOTAL				CONSTRUCTION PRODUCTS: A1/A2/A3, ETC.			
Global warming potential (GWP)	Fossil	kg CO_2 eq.								
	Biogenic	kg CO_2 eq.								
	Land use and land transformation	kg CO_2 eq.								
	TOTAL	kg CO_2 eq.								
Acidification potential (AP)		kg SO_2 eq.								
Eutrophication potential (EP)		kg PO_4^{3-} eq.								
Formation potential of tropospheric ozone (POCP)		kg C_2H_4 eq.								
Abiotic depletion potential – Elements		kg Sb eq.								
Abiotic depletion potential – Fossil fuels		MJ, net calorific value								
Water scarcity potential		m^3 eq.								

Table 4. Indicators describing potential environmental impacts.

Notes:

- Abiotic depletion potential is calculated and displayed as two separate indicators. ADP-fossil fuels include all fossil resources, while ADP-elements include all non-renewable material resources.

For construction product EPDs compliant with EN 15804, Table 3 in EN 15804 (“Parameters describing environmental impacts”) shall be applied in the PCR and EPD instead of the indicators listed in the tables above. Characterisation factors are available in Annex C of the standard (“Characterisation factors for GWP, ODP, AP, EP, POCP, and ADP”).

See Annex A for further details on the calculation of these indicators, including where to find characterisation factors.

9.5.5.2 Use of resources

The indicators for resource use based on the life cycle inventory listed in Table 5 shall be declared per functional unit or declared unit, and per life cycle stage.

PARAMETER		UNIT	NON-CONSTRUCTION PRODUCTS: UPSTREAM/CORE/DOWNSTREAM/TOTAL				CONSTRUCTION PRODUCTS: A1/A2/A3, ETC.			
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value								
	Used as raw materials	MJ, net calorific value								
	TOTAL	MJ, net calorific value								
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value								
	Used as raw materials	MJ, net calorific value								
	TOTAL	MJ, net calorific value								
Secondary material		kg								
Renewable secondary fuels		MJ, net calorific value								
Non-renewable secondary fuels		MJ, net calorific value								
Net use of fresh water		m^3								

Table 5. Indicators describing use of primary and secondary resources.

Notes:

- To identify the primary energy used as an energy carrier (and not used as raw materials), the parameter may be calculated as the difference between the total input of primary energy and the input of energy resources used as raw materials.
- The energy content of biomass used for feed or food purposes shall not be considered.
- The net use of fresh water does not constitute a “water footprint” as a potential environmental impact because the water use in different geographical locations is not captured. For this indicator:
  - evaporation, transpiration, product integration, release into different drainage basins or the sea, displacement of water from one water resource type to another water resource type within a drainage basin (e.g. from groundwater to surface water) is included.
  - in-stream water use is not included.
  - only the net water consumption (such as the reintegration of water losses) of water used in closed-loop processes (such as a cooling system) and in power generation should be considered.
  - seawater shall not be included[20]

[20] It may be relevant to include seawater if it is used to obtain energy from it, or it is the only source of water in a definite site. This may be displayed separately, e.g. as “seawater for desalinization”.

- tap water or treated water (e.g. from a water treatment plant), or wastewater that is not directly released into the environment (e.g. sent to a wastewater treatment plant) do not count as elementary water flows, but intermediate flows from a process within the technosphere.
- additional transparency in terms of geographical location, type of water resource (e.g. groundwater, surface water), water quality, and temporal aspects may be included as additional information.

9.5.5.3 Waste production and output flows

Waste generated along entire life cycle production chains shall be treated following the technical specifications described in Annexes A.6 and A.7. When the amount of waste or the output flows from the life cycle inventory are declared, the indicators in Table 6 and Table 7 shall be reported per functional unit or declared unit, and per life cycle stage.

PARAMETER	UNIT	NON-CONSTRUCTION PRODUCTS: UPSTREAM/CORE/DOWNSTREAM/TOTAL	CONSTRUCTION PRODUCTS: A1/A2/A3, ETC.
Hazardous waste disposed	kg		
Non-hazardous waste disposed	kg		
Radioactive waste disposed	kg		

Table 6. Indicators describing waste production.

PARAMETER	UNIT	NON-CONSTRUCTION PRODUCTS: UPSTREAM/CORE/DOWNSTREAM/TOTAL	CONSTRUCTION PRODUCTS: A1/A2/A3, ETC.
Components for reuse	kg		
Material for recycling	kg		
Materials for energy recovery	kg		
Exported energy, electricity	MJ		
Exported energy, thermal	MJ		

Table 7. Indicators describing output flows.

Notes:

- The parameters are calculated on the gross amounts leaving the system boundary of the product system in the life cycle inventory. If, e.g. there is no gross amount of “exported energy, electricity” leaving the system boundary, this indicator is set to zero.
- The parameter “Materials for energy recovery” does not include materials for waste incineration. Waste incineration is a method of waste processing, when R1< 60% (European Guideline on R1 energy interpretation), and it is allocated within the system boundary.
- If flows of these types never leave the system boundary for a product category, the indicators may be removed from the PCR.

9.5.5.4 Other environmental indicators

The reference PCR may add other environmental indicators to be included in the product category from the inventory or impact assessment. Such indicators should be based on international standards or similar methodologies developed in a transparent procedure. Reference to the chosen indictors and methodologies shall be reported.

9.5.6 ADDITIONAL INFORMATION

An EPD may contain additional information not derived from the LCA-based calculations. The part of the EPD describing additional information may include various issues. Examples of these are:

- 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,
- 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, and
- a more detailed description of an organisation's overall environmental, such as:
  - the existence of a quality or environmental management system or any type of organised environmental activity,
  - any activity related to supply chain management, social responsibility,[21] etc., and
  - information on where interested parties may find more details about the organisation's environmental work.

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 functional unit or declared unit, which is useful for scaling the environmental impacts of different activities, products, and services.

The PCR shall give further information on relevant additional information to include in the EPD.

9.5.6.1 Declaration of social and economic aspects

For a complete evaluation of a product or a service, the environment is just one of the dimensions of sustainability, which also includes social and economic aspects. Work on minimizing environmental impact may be in conflict with other sustainability issues, e.g. animal welfare, working conditions, and child labour. Even if the International EPD® System is fully devoted to environmental declarations and the primary aim is to fulfil the standard ISO 14025, the EPD may also include other relevant sustainability indicators as additional and voluntary information.

Relevant sustainability indicators for a specific product category shall be discussed during PCR preparation. The same requirements apply for these indicators as for other information; they shall be verifiable, accurate, relevant, and not misleading. Further information on which indicators that could be used can be obtained by the Global Reporting Initiative documents available at www.globalreporting.org.

9.5.7 INFORMATION RELATED TO PRE-CERTIFIED EPDS

For pre-certified EPDs (see Section 6.1.1), the following information shall also be included:

- additional information on the LCA methodology and data used, including:
  - functional unit or declared unit,
  - system boundary,
  - cut-off rules,

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

- allocation rules, and
- data sources.

- an explanatory statement about the pre-certification.

9.5.8 INFORMATION RELATED TO SECTOR EPDS

For sector EPDs (see Section 9.3.2), the following information shall also be included:

- a list of the contributing manufacturers that the sector EPD covers,
- a description of how the selection of the sites/products has been done and how the average has been determined, and
- a statement that the document covers 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.

9.5.9 DIFFERENCES VERSUS PREVIOUS VERSIONS

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

- a description of the differences versus previously published versions, e.g. a description of the percentage change in results and the main reason for the change,
- a revision date on the cover page (see Section 9.5.1).

9.5.10 REFERENCES

This section shall include a list of references, including the General Programme Instructions (including version number), standards, and PCR (registration number, name, and version).

9.5.11 EXECUTIVE SUMMARY IN ENGLISH

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

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

10 VERSION HISTORY OF GENERAL PROGRAMME INSTRUCTIONS

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, with minor revision 2019-09-18 (this document)

Before publication of Version 1.0 of the General Programme Instructions 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 REFERENCES

CEN/TR 16970 Sustainability of construction works – Guidance for the implementation of EN 15804

EN 15804:2012+A1:2013, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

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

European Commission Product Environmental Footprint Guide

European Commission Product Environmental Footprint Guidance

Guidance for Product Category Rule Development, Product Category Rule Guidance Development Initiative Collaborative Work, version 1.0, 2013. www.pcrguidance.org.

ILCD Recommendations for Life Cycle Impact Assessment in the European Context

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/TS 14027 Environmental labels and declarations -- Development of product category rules

ISO 14040 Environmental management – Life cycle assessment – Principles and framework

ISO 14044 Environmental management – Life cycle assessment – Requirements and guidelines

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

ISO 19011 Guidelines for Auditing Management Systems

ISO/IEC 17011 Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies

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

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

ISO/TS 14071 LCA Critical Review Process and Reviewer Competencies

ISO 21067-1:2016 Packaging – Vocabulary – Part 1: General terms

ISO 21930:2007 Sustainability in building construction – Environmental declaration of building products

PAS 2050:2011 Specification for the assessment of the life cycle greenhouse gas emissions of goods and services

UNEP/SETAC Global Guidance for Life Cycle Impact Assessment Indicators Volume 1.

ANNEX A – GENERAL APPLICATION OF LCA METHODOLOGY

This annex describes the general application of LCA methodology in the International EPD® System. These rules follow the international standards ISO 14040/14044, with the intended use in an EPD.

An LCA study according to ISO 14040/14044 consists of different phases: goal and scope definition, inventory analysis, impact assessment, and interpretation. In general-purpose LCA studies, all background conditions with regard to 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 reference Product Category Rules (PCR) to increase comparability between products in the same product category.

In the event there is a need to meet market demand for life cycle-based environmental information for certain markets, product categories or applications, the programme operator may adopt other methodological guides to overrule the general application of LCA methodology. One such example is EN 15804+A1, used for EPDs of construction products.

A.1 SYSTEMS' APPROACH

The systems' 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 shall be solved via allocation (i.e. not via credits and/or avoided emissions).

The purpose of using this approach is to make information traceable, documented, and possible to verify. Attributional LCA also supports the concept of modularity.

A.2 FUNCTIONAL UNIT OR DECLARED UNIT

The functional unit is the reference unit used to relate the inputs and outputs as well as the environmental performance of one or more product systems. It is set in the PCR for a specific product category.

The preferred functional unit shall be defined and measurable. In practice, the functional unit consists of a qualitatively defined function or property (e.g. for paint, a duration of surface coverage with a certain level of brightness, or other quality) and its quantification via a unit (e.g. 1 m^2). The 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). To increase the understanding and usefulness of an EPD, it might be beneficial to define the functional unit according to standardised LCA procedures supplemented with a technical specification of one product unit with parameters relevant for mainly addressing the performance of the product during its use.

For EPDs not covering a full life cycle, e.g. for construction products for which the further fate and function of the products in terms of use are unknown, the concept of functional unit is transferred into a declared unit. In such a case, the declared unit shall relate to the typical applications of products. Examples of these are:

- an item, an assemblage of items, e.g. 1 brick, 1 window (dimensions shall be specified),
- mass (kg), e.g. 1 kg of cement,
- length (m), e.g. 1 metre of pipe, 1 metre of a beam (dimensions shall be specified),
- area (m^2), e.g. 1 square metre of wall elements, 1 square metre of roof elements (dimensions shall be specified), and
- volume (m^3), e.g. 1 cubic metre of timber, 1 cubic metre of ready-mixed concrete.

As a product or product system may have a large number of possible functions, a product classification system, such as the UN CPC scheme in the International EPD® System, may not automatically be used as a reference for comparisons.

A.2.1 DEFINITION OF FUNCTIONAL UNIT/DECLARED UNIT

The functional unit is defined as a quantified performance of the product for use as a reference unit in an environmental declaration of the life cycle of a product. A declared unit is defined as a quantity of a product for use as

a reference unit for an environmental declaration based on an information module, in which an information module is the compilation of data covering a unit process or a combination of unit processes that are part of the life cycle of a product.

A.2.2 TECHNICAL SPECIFICATION

The technical specification shall include sufficient information for a customer to assess and evaluate the technical performance and usefulness of a product. The reference service life of a product should be taken into account in the selection of the functional unit. The lifespan in technical terms, i.e. the time for which a product has been designed to last, expressed in relevant units such as years, operating hours, or kilometres travelled, is preferred. If the technical reference service life is difficult to determine, other approximations of the reference service life may be acceptable. The choice of such a term other than the technical reference service life should be clearly justified. Note that the technical service life is not identical or related to guarantee time whether legally binding or offered voluntary. In the event products have an actual reference service life that is shorter than the technical reference service life, (e.g. due to changes in fashion, the product is discarded before its technical service life has been reached), the estimate on actual reference service life shall be used instead.

A.3 SYSTEM BOUNDARY

The system boundary determines the processes to be included in the LCA and which processes may be omitted. It is set in the PCR for a specific product category, thereby facilitating the LCA procedure while ensuring that no significant information is lost.

In general, all attributional processes from “cradle to grave” should be included using the principle of “limited loss of information at the final product”. This is especially important in the case of business-to-consumer communication. For intermediate products or products for which further use is unknown, e.g. a construction product, a “cradle to gate” approach may be prescribed in the PCR. Any deviations shall be justified in the PCR document and subject to review.

The same general principles apply for EPDs for services since any service activity has to make use of physical resources. In this case, the “production of the service” is regarded as the “core module” instead of the manufacturing processes.

A.3.1 LIFE CYCLE STAGES

For the purpose of different data quality rules and for the presentation of results, the International EPD® System separates the life cycle of products into different life cycle stages (see Figure 2):

- upstream processes (from cradle-to-gate): produce input to the core processes (e.g. raw material acquisition and refinement, and the production of intermediate components),
- core processes (from gate-to-gate) mainly including the processes managed by the organisation that owns the EPD, and
- downstream processes (from gate-to-grave) including the use stage and end-of-life stages/end-of-life treatment of the product.

For construction product EPDs and PCRs compliant with EN 15804, Paragraph 6.2 of EN 15804 shall be applied in the PCR and EPD, i.e. information modules A1-A3, A4-A5, B1-B5, B6-B7, C1-C4, and module D, instead of “upstream”, “core”, and “downstream”.

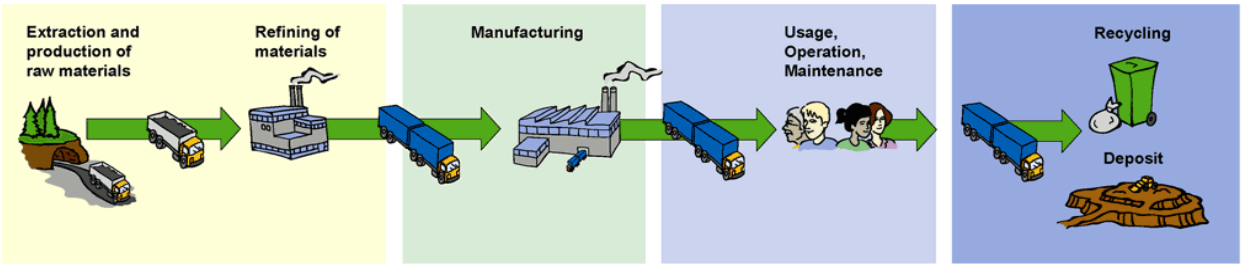

Figure 2. The life cycle of a product divided into different stages: Upstream, Core (Manufacturing), and Downstream (use and end-of-life). Please note that for construction product EPDs compliant with EN 15804, a different division into modules is used.

The processes included as upstream, core, and downstream are described in the following sub-sections. For further details on the information for construction products, see EN 15804 Section 6.2.

A.3.1.1 Upstream processes

All relevant unit processes along the upstream supply chain shall be included. Examples of upstream processes are:

- the extraction and refining of raw materials,
- the production of semi-manufactured goods,
- relevant services, such as transport of main parts and components along the supply chain to a distribution point (e.g. a stockroom or warehouse), and
- Consumer Packaging and Distribution Packaging material production.[22]

A.3.1.2 Core processes

The core process shall include all relevant unit processes that take place within the organisation of the product for which the EPD is issued with particular regard to:

- raw material and auxiliary material transportation to the core process,
- manufacturing processes,
- waste treatment processes of manufacturing waste even if they are carried out by third parties (including transports),
- building (or dismantling) of a production site, infrastructure, production of manufacturing equipment, and personnel activities if they make up a significant share of the overall attributable environmental impact (e.g. for photovoltaic equipment or electricity from wind power),
- impacts caused by the electricity production used in the core processes according the proper energy mix hypotheses, and
- impacts generated by the production of the fuels burned in the core processes.

A.3.1.3 Downstream processes

All relevant unit processes shall be included. For example this may cover:

- the transport of the product to the retailer/consumer,
- the use phase, e.g. use of electricity, use of water or and/or maintenance activities;

[22] If part of the production of the consumer packaging (see ISO 21067 Section 2.2.7) is a part of the manufacturing process, it may be more relevant to include it as part of the core processes. This should be defined in more detail in the PCR.

- end-of-life processes of the used product and its packaging. If a service is identified as a core process, it does not typically have a downstream process as, e.g. generated waste is included in the core module.

A.3.2 SPECIFICATIONS OF OTHER BOUNDARY SETTINGS

The following specifications of different boundary settings are relevant:

Boundary in time shall define the time period for which the life cycle inventory data are recorded, e.g. for how long emissions from waste deposits are accounted.

Boundary towards nature shall define the flow of material and energy resources from nature into the technical system and emissions from the technical system to air, soil, and water. Agricultural and similar production systems are part of the technical system, i.e. the elementary flows that leave the field to water or air are to be recorded.

Boundary towards geography shall define the geographical coverage of the LCA data including possibilities to handle different regional aspects in the supply chain, where necessary.

Boundaries in the life cycle shall define what to be included with regards to, e.g. the extraction and production of raw materials, refining of raw materials, manufacturing of components and main parts, assembly of products, use of products, and end-of-life processes.

Boundaries towards other technical systems shall define the flow of materials and components from the product system under study and the outflow of materials to other systems. If there is an inflow of recycled material to the product system in the production/manufacturing stage, the transport from the scrapyard/collection site to the recycling plant, the recycling process, and the transportation from the recycling plant to the site where the material is being used shall be included. If there is an outflow of material or component to recycling, the transportation of the material to the scrapyard/collection site shall be included. The material or component going to recycling is then an outflow from the product system.

A.3.3. CRITERIA FOR THE INCLUSION OF INPUTS AND OUTPUTS (CUT-OFF CRITERIA)

It is important to clarify and describe the rules for omitting inventory data that are negligible from the point of view of being relevant in the study. Such cut-off criteria are usually expressed as a specific percentage of the total environmental impact for any impact category that is allowed to be omitted from the inventory analysis. The rules set should be based on the inflow of product and elementary flows to the system and the outflow of elementary flows from the system. Other cut-off criteria are discouraged, and if these should be recommended in the PCR this shall be duly justified.

The default maximum cut-off shall be set to 1%. Deviations shall be set and justified in the PCR: It is important to emphasise that, in most cases, all available data shall be used. Using cut-off rules should not give the impression of “hiding” information but rather facilitating the data collection for practitioners. Parts and materials not included in the LCA shall be documented.

In general, the cut-off of environmental aspects should be avoided if possible. Cut-off criteria should be an output of the sensitivity analysis based on the life cycle inventory results, and it shall be discussed during the LCA verification. A PCR may detail some specific rules that should be applied for cut-off criteria in the specific LCA calculation.

It should be noted that the only way to check for cut-off rules in a satisfactory way is through the combination of expert judgment based on experience of similar product systems and a sensitivity analysis in which it is possible to understand how the un-investigated input or output could affect the final life cycle inventory and life cycle impact assessment result.

FOR A CONSTRUCTION PRODUCT EPD COMPLIANT WITH EN 15804, THE REQUIREMENTS REGARDING CUT-OFF CRITERIA IN SECTION 6.3.5 OF THE STANDARD APPLY.A4 –

This section was intentionally left blank and will be removed in the next major revision of the General Programme Instructions.

A.5. DESCRIPTION OF DATA AND DATA QUALITY REQUIREMENTS

An LCA calculation requires two different kinds of information:

- data related to the **environmental aspects** of the considered system (such materials or energy flows that enter the production system). These data usually come from the company that is performing the LCA calculation.
- data related to the **life cycle impacts** of the material or energy flows that enter the production system. These data usually come from databases.

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

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

- **specific data** (also referred to as “primary data” or “site-specific data”) – data gathered from the actual manufacturing plant where product-specific processes are carried out, and data from other parts of the life cycle traced to the specific product system under study, e.g. materials or electricity provided by a contracted supplier that is able to provide data for the actual delivered services, transportation that takes place based on actual fuel consumption, and related emissions, etc.,
- **generic data** (sometimes referred to as “secondary data”), divided into**:**
  - **selected generic data** – data from commonly available data sources (e.g. commercial databases and free databases) that fulfil prescribed data quality characteristics for precision, completeness, and representativeness (see below Section A.5.1),
  - **proxy data**[23] – data from commonly available data sources (e.g. commercial databases and free databases) that do not fulfil all of the data quality characteristics of “selected generic data”.

As a general rule, specific data shall always be used, if available, after performing a data quality assessment. It is mandatory to use specific data for the core process, i.e. “the manufacturing processes for goods or service execution/provision of services” as defined above. For the upstream processes, downstream processes, and infrastructure (as defined in more detail above), generic data may also be used if specific data are not available. The PCR may set stricter rules for using specific data in selected upstream or downstream processes, e.g. for the production of consumer packaging. Generic data should be used in cases in which they are representative for the purpose of the EPD, e.g. 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.

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

A.5.1 RULES FOR USING GENERIC DATA

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

- the reference year must be as current as possible and preferably assessed to be representative for at least the validity period of the EPD,
- the cut-off criteria to be met on the level of the modelled product system are the qualitative coverage of at least 99% of energy, mass, and overall environmental relevance of the flows,
- completeness in which the inventory data set should, in principle, cover all elementary flows that contribute to a relevant degree of the impact categories, and
- the representativeness of the resulting inventory in the given temporal, technological, and geographical reference should, as a general principle, be better than ±5% of the environmental impact of fully representative data.

[23] In earlier versions of the General Programme Instructions, proxy data was referred to as “other generic data”.

For a construction product EPD compliant with EN 15804, the list of data quality requirements in Section 6.3.7 of the standard apply.

Suitable databases for selected generic data include information about the material flows connected to a number of input materials. Admissible data shall respect the system boundary set in the PCR as well as meet the requirements of the International EPD® System for data quality, representativeness, review and scope of documentation. If based on these prerequisites, recommendations are given to use selected generic data, such data sources shall be listed in a table in the reference PCR document. Listing such databases in the PCR does not replace the need for data quality assessment during the LCA study. Before making use of suitable databases, it is important to primarily select information provided separately for the different life cycle stages and to check that the data are free from the inclusion of data and calculations outside the system boundary. Data calculated with system expansion should not be used.

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

A.5.2 DATA QUALITY REQUIREMENTS EXPLANATIONS

Below are the main rules for the LCA calculations. Exceptions to these rules shall be managed by the verifier if the PCR does not give any further details.

Upstream processes:

- Data referring to processes and activities upstream in a supply chain over which an organisation has direct management control shall be specific and collected on site.
- Data referring to contractors that supply main parts, packaging, or main auxiliaries should be requested from the contractor as specific data, as well as infrastructure, where relevant.
- The transport of main parts and components along the supply chain to a distribution point (e.g. a stockroom or warehouse) where the final delivery to the manufacturer can take place based on the actual transportation mode, distance from the supplier, and vehicle load.
- In case specific data is lacking, selected generic data may be used. If this is also lacking, proxy data may be used – see Section A.5.1.
- For the electricity used in the upstream processes, electricity production impacts shall be accounted for in this priority when specific data are used in the upstream processes:

    1. Specific electricity mix as generated, or purchased, from an electricity supplier, demonstrated by a Guarantee of Origin (or similar, where reliability, traceability, and the avoidance of double-counting are ensured) as provided by the electricity supplier. If no specific mix is purchased, the residual electricity mix from the electricity supplier shall be used.[24]
    2. National residual electricity mix or residual electricity mix on the market
    3. National electricity production mix or electricity mix on the market.

    The mix of electricity used in upstream processes shall be documented in the EPD, where relevant.
- Packaging: specific data shall be used for the consumer packaging production if it is under the direct control of the organization or if the environmental impact related to the consumer packaging production is more than 10% of the total product environmental indicators. In other cases, generic data may be used. When consumer packaging shows the organization's logo, the LCA report should report the exerted/non exerted direct control on the production of consumer packaging by the organization.

[24] The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total production mix of the electricity supplier.

Core processes:

- 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., where relevant.
- Services: Specific data shall be used for the consumption of materials, chemicals, steam, heat, electricity, etc., necessary for execution of the service
- For the electricity used in the core processes, electricity production impacts shall be accounted for in this priority:
    1. Specific electricity mix as generated, or purchased, from an electricity supplier, demonstrated by a Guarantee of Origin (or similar, where reliability, traceability, and the avoidance of double-counting are ensured) as provided by the electricity supplier. If no specific mix is purchased, the residual electricity mix from the electricity supplier shall be used.25
    2. National residual electricity mix or residual electricity mix on the market
    3. National electricity production mix or electricity mix on the market.

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

Downstream processes:

- Data for the use stage are usually based on scenarios, but specific data should be used when available and relevant.
- Data on the pollutant emissions from the use stage should be based on documented tests, 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 use of electricity in the region/country where the product is used (as specified in the geographical scope of the EPD) shall be accounted for in the following priority:
    1. National residual electricity mix or residual mix on the market
    2. National electricity production mix or electricity mix on the market

    The mix of electricity used in the downstream processes shall be documented in the EPD, where relevant.
- The transport of the product to the customer shall be described in the reference PCR, which should reflect the actual situation to the best extent possible. The following priority should be used:
    1. Actual transportation distances and types.
    2. Calculated as the average distance of a product of that product type transported by different means of transport modes.
    3. Calculated as a fixed long transport, such as 1 000 km transport by lorry or 10 000 km by airplane, according to product type.
- Scenarios for the end-of-life stage shall be technically and economically practicable and compliant with current regulations in the relevant geographical region based on the geographical scope of the EPD. Key assumptions regarding the end-of-life stage scenario shall be documented.

[25] The residual electricity mix is the mix when all contract-specific electricity that has been sold to other customers has been subtracted from the total production mix of the electricity supplier.

A.5.3 DATA QUALITY DECLARATION

Different EPDs may have different quality levels depending on the data sources, why EPDs may include an indicator that demonstrates the share of the contribution of specific data, selected generic data, and proxy data to the environmental impacts.

This indicator may be in the form of an illustration of life cycle stages and the percentage of environmental impact that arises from specific data, selected generic data, and proxy data, e.g. as a statement of achievement of one of the following levels of data quality:

- very high: more than z% of the overall environmental impact is from specific data,
- high: y-z% of the overall environmental impact is from specific data,
- medium: x-y% of the overall environmental impact is from specific data, or
- low: less than x% of the overall environmental impact is from specific data.

The relevant levels of x, y, and z may be set in the PCR.

A.6 ALLOCATION RULES

Allocation is the partitioning of input or output flows of a process or a product system between the product system under study and other product systems. Allocation rules are one of the key aspects set in the PCR for a specific product category.

A.6.1 CO-PRODUCT ALLOCATION

As a general rule, the allocation method should be valid for the whole product system. However, allocation within the manufacturing processes and downstream processes may be treated differently.

Allocation rules shall be defined when processes result in different kinds of products and where there is only aggregate information available about the total level of emissions. The following step-wise procedure shall be used, with further specification in the PCR:

1. Allocation shall be avoided, if possible, by dividing the unit processes to be allocated into different sub-processes and collecting the input and output data related to these sub-processes. The method of avoiding allocation by expanding the system boundary,[26] as advocated in ISO 14044, is not applicable within the framework of the International EPD® System due to the rationale of attributional LCA used and the concept of modularity.
2. If allocation cannot be avoided, the inputs and outputs of the system should be partitioned between its different products or functions in a way that reflects the underlying physical relationships between them, i.e. they should reflect the way in which the inputs and outputs are changed by quantitative changes in the products or functions delivered by the system.
3. Where physical relationships alone cannot be established or used as the basis for allocation (or they are too time consuming), the inputs should be allocated between the products and functions in a way that reflects other relationships between them. The PCR shall clearly specify the allocation method for each key process stage where an allocation problem may be expected and provide guidelines on how they should be handled.

   For example, input and output data might be allocated between co-products in proportion to the economic value of the products. If economic allocation is used, a specific sensitivity analysis shall be provided to the verifier, and the monitoring of the relationship between results and current and/or historical economic value shall be documented and updated. In the event of economic allocation, the PCR shall explain the reference values that shall be used.

For construction product EPDs compliant with EN 15804, Section 6.4.3 of the standard shall be applied.

[26] "System expansion" here refers to both expanding the system to incorporate more co-products and the interpretation of avoiding allocation by "substituting" co-products with the same amount of product from a mono-functional alternative production technology.

A.6.2 ALLOCATION PROCEDURE FOR REUSE, RECYCLING, AND RECOVERY

In the framework of the International EPD® System, specific methodological choices concerning waste handling have been set. Issues such as upstream and downstream system boundary, open-loop recycling allocation, multi-input allocation, and time-frame should be considered when LCAs are applied to solid waste management systems.[27]

The methodological choices defined below have been set according to the polluter pays principle (PPP). This principle was adopted by OECD[28] in 1972 as an economic principle for allocating the costs of pollution control:

> "*[T]he principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment…this principle means that the polluter should bear the expenses of carrying out the above-mentioned measures decided by public authorities to ensure that the environment is in an acceptable state. In other words the cost of these measures should be reflected in the cost of goods and services which cause pollution in production and/or consumption*".

This approach links together different product systems in which wastes, fully or to some extent, are being further processed to become input materials for subsequent product systems. The delineation between two product systems is considered to be the point at which the waste has its "lowest market value". This means that the generator of the waste shall carry the full environmental impact until the point in the product's life cycle at which the waste is transported to a scrapyard or the gate of a waste processing plant (collection site). The subsequent user of the waste shall carry the environmental impact from the processing and refinement of the waste but not the environmental impact caused in the "earlier" life cycles. This approach referred to as the "Polluter-Pays (PP) allocation method" has the following definition: *The "PP allocation method" designates the responsibility to carry upcoming environmental impact for individual product systems and separates interlinked product systems at the pointing in the life cycle where they have their lowest market value resulting in a business-related approach regarding the differentiation of environmental impacts*. The "PP allocation method" is also (in most cases) in line with a waste generator's juridical and financial responsibilities. The method is illustrated as a general approach in Figure 3:

[27] Finnveden G (1999): Methodological aspects of life cycle assessment of integrated solid waste management systems. Resources, Conservation and Recycling 26, 173–187

[28] OECD (1972) Guiding Principles concerning International Economic Aspects of Environmental Policies.

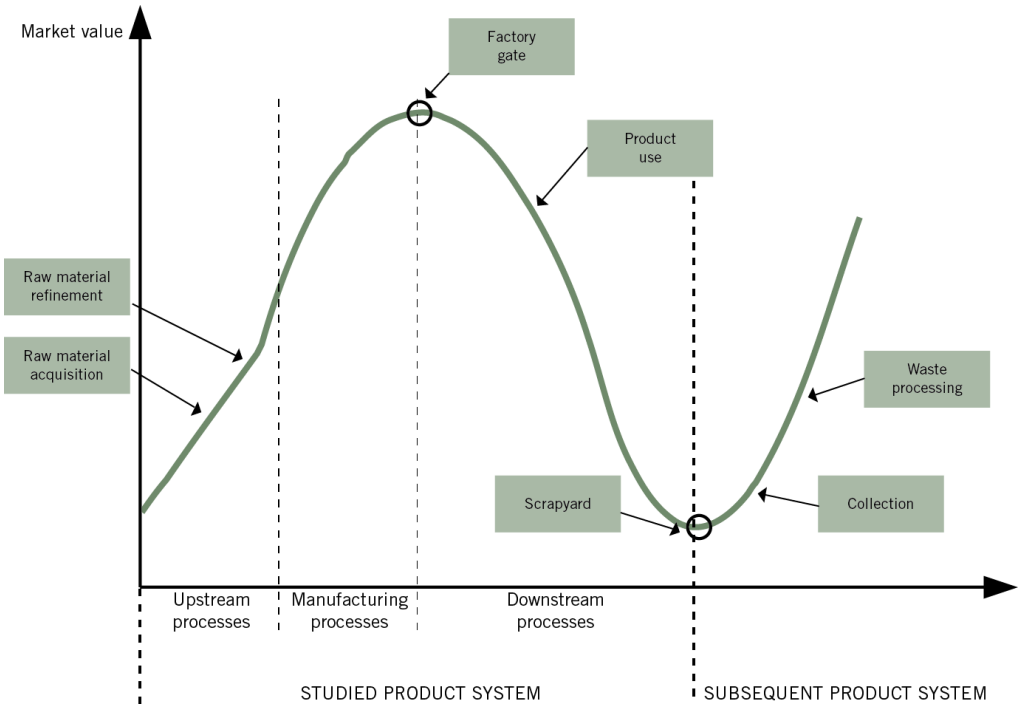

Figure 3. Outline of where to set the system boundary between product systems in the "PP allocation method".

The "PP allocation method" is further illustrated in Figure 4, which describes the consequences of the different types of handling of wastes, treatment of worn-out products, and output flows that are reused or recycled.

If the suggested "PP allocation method" causes problems from the point of view of giving an accurate description of the environmental benefits of a product, there is the possibility to address product-specific allocation rules and justify this in the PCR document and present an additional approach with quantitative information in the EPD under "Additional environmental information".

For construction product EPDs compliant with EN 15804, Section 6.4.3 of the standard shall be applied.

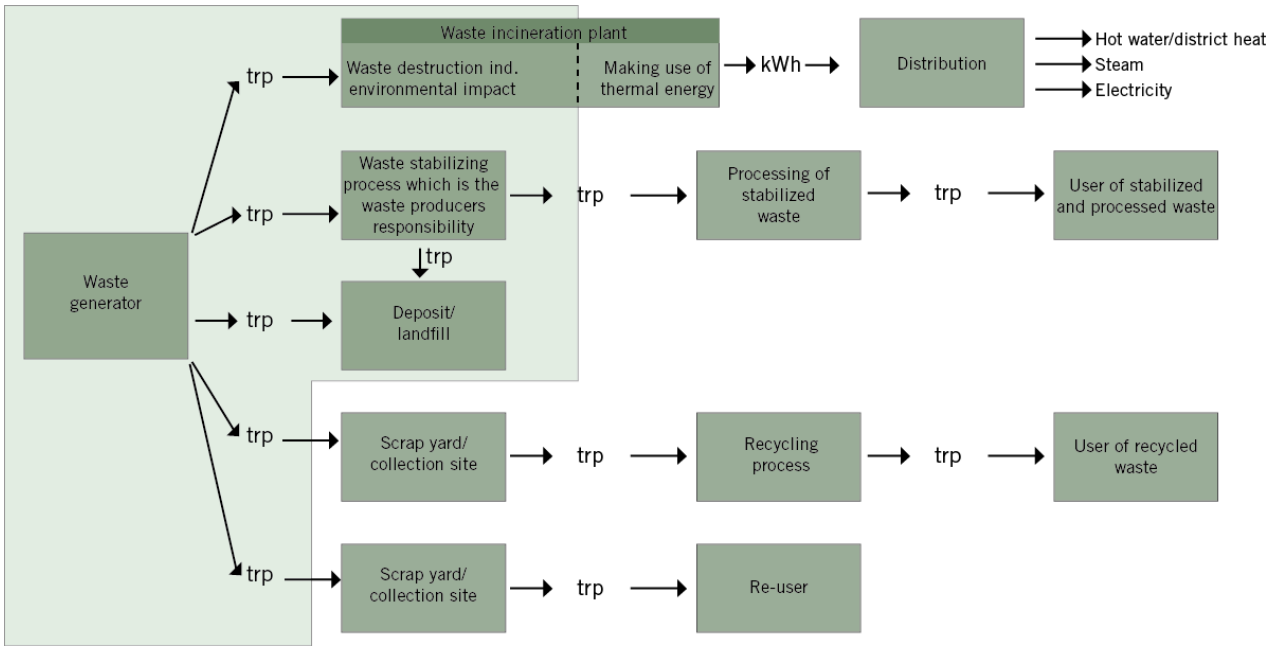

Figure 4. The “PP allocation method” illustrated for the various types of waste treatment options included in different process stages. The area in green indicates the environmental impact that shall be carried by the waste generator

A.7 HANDLING OF WASTES, WORN-OUT PRODUCTS, AND OUTPUT FLOWS THAT ARE REUSED OR RECYCLED

A.7.1 MANAGEMENT OF WASTES GENERATED ALONG THE PRODUCTION CHAIN

The treatment processes (final disposal) of wastes generated by the activities included in the system boundary should be included in the LCA calculation as any other process and not reported as wastes. When it is not possible for some reason (such as the database framework or lack of information), the amount of wastes and the destination shall be declared as outflows from the system.

The calculation of the environmental impacts caused by the management of the product and its packaging at the end-of-life may be quite variable depending mainly on the destination of the product (if it is B2B or B2C) and on the waste treatment chains available where the product and or the packaging must be disposed. For these reasons, the end-of-life may be evaluated using the scenario approach showing the results for different possible options.

For the purposes of the EPD preparation, the final disposal processes include:

- landfilling that is attributed to the studied process (see Figure 4),
- incineration. For the calculation of impacts related to incineration with energy recovery, the environmental impact of waste destruction shall be attributed to the waste generator, and the impacts related to making use of the thermal energy shall be attributed to the next product life cycle (see Figure 3). In the event of incineration without energy recovery or with an efficiency rate below 60%, the product system generating the waste shall include all of the environmental impacts from incineration.

  If the efficiency rate is above 60%, but data are missing, as a default option, 50% of the impacts of the waste incineration plant may be attributed to waste treatment and 50% to the energy recovery.

In in the event that waste flows are sent to material recycling, energy recovery, or other recovery (e.g. composting), impacts should be borne by the product under study until it enters the facility gate where the recycling or recovery processes take place (e.g. transportation to the facility shall be included). Even if benefits related to the material recovery must be considered out of the system boundary, an estimation of the avoided impacts resulting from such recovery may be made and declared separately as additional environmental information:

- The recovery of materials shall be declared as quantity of secondary material potentially obtainable by waste or product flows.
- The recovery of energy shall be declared as the quantity of energy potentially obtainable by waste or product flows.
- The negative environmental values shall not be used to express potential credits from recycling or recovery processes.

Deviations may be accepted and declared. All assumptions on the inclusion or not of waste treatment processes shall be declared in the EPD.

A.7.1.1 Clarification about downstream processes

The calculation of the environmental impacts caused by the management of the product and its packaging at the end of useful life may be variable depending mainly on the destination of the product (if it is B2B or B2C) and on the waste treatment chains available where the product and or the packaging must be disposed.

For these reasons, the end-of-life could be evaluated using the scenario approach showing the results for different possible options. Even if further details shall be discussed during the PCR preparation, the following general rules shall be considered:

- A specific scenario should be defined and impacts calculated.
- Qualitative information may be acceptable when a scenario cannot be defined.
- When some average scenarios are considered, they shall be representative for the area for the end-of-life of the product.

Further information may be added in the PCR preparation.

A.7.2 INPUT OF RECYCLED MATERIALS/RECOVERED ENERGY

In the event recycled materials or recovered energy are used as input resources in a product system, impacts arising from all processes that took place to deliver the material/energy should be borne by the product under study (e.g. the treatment of waste prior to recycling and/or waste incineration shall be included). A 50% / 50% economic allocation between earnings from waste treatment service and heat/electricity produced may be used as the default scenario for incineration with energy recovery. The risk of double-counting and the risk that some impact will not be attributed to any product shall be taken into consideration.

Any deviations from these rules shall be handled in the specific PCR or clearly justified.

A.7.2.1 Clarification of input of recycled materials and recovered energy

Secondary materials used in the production system shall be accounted for by adopting the following approach:

- The environmental impacts related to the “previous life cycle” shall not be considered.
- The processes needed to prepare a secondary material for new use shall be considered.

It is important to consider that internal scraps are not considered as secondary material.

A.7.3 OUTPUT TO MATERIAL RECYCLING/ENERGY RECOVERY PROCESSES – WASTE AND BY-PRODUCT

The calculation approach is different between wastes and by-products from a process as by-products carry some of the environmental impacts (through allocation). The decision tree in Figure 5 may be useful to determine whether a product is a waste or by-product.

Outputs of the system used for energy production processes (waste to energy processes) shall never be considered by-products.

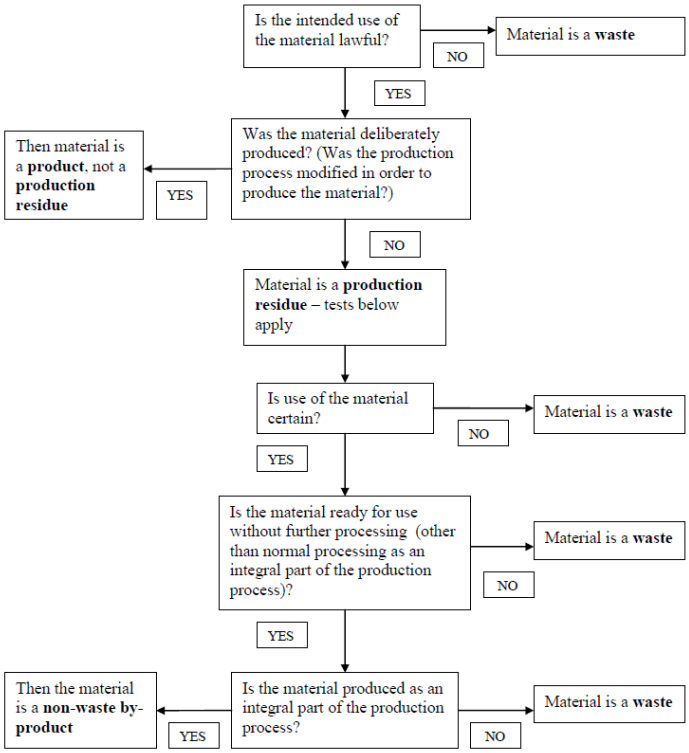

Figure 5. Decision tree for definition of waste and by-product. Adopted from Commission of the European Communities, 2007. Communication from the Commission to the Council and the European Parliament on the Interpretative Communication on Waste and By-products.[29]

A.8 MODELLING OF USE STAGE

The use stage describes how a product is expected to be used by the end user. The use stage extends from the moment the end user uses the product until it leaves its place of use and enters the end-of-life life cycle.

The use stage shall always be included for final products. It may be excluded for intermediate products, but it shall be justified in the PCR.

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

- clearly indicate if the use phase shall be included or excluded,
- define which processes belonging to the use stage shall be included in the system boundary and which shall be excluded (any exclusion shall be justified), and
- provide default data/scenarios (e.g. PCRs for food products that require cooking shall report a default scenario for energy used for cooking).

The website (www.environdec.com) may provide default data to be used when preparing PCRs for modelling use phase activities that might be crosscutting for several PCRs. The default data shall be used to fill in the data gaps and ensure consistency among PCRs. Better data may be used but shall be justified in the PCRs.

[29] Even if the reference document for the decision tree is not the latest updated European document in terms of waste, it is used here as a reference because of its clarity. The latest EU waste directive is directive 2008/98/EC, which adopts the same definition of by-product as in Article 5.

A.9 ENVIRONMENTAL IMPACTS

This Section provides details on how to calculate the indicators for environmental performance presented in Section 9.5.5.

The characterisation models and factors to use for the default impact categories are available on the website (www.environdec.com) and shall be updated on a regular basis based on the latest developments in LCA methodology and ensuring the market stability of EPDs. The source and version of the characterisation models and the factors used shall be reported in the EPD. Alternative regional life cycle impact assessment methods and characterisation factors are allowed to be calculated and displayed in addition to the default list. If so, the EPD shall contain an explanation of the difference between the different sets of indicators, as they may appear to the reader to display duplicate information.

To better characterise the environmental performance of a product category, the PCR shall indicate the mandatory or voluntary use of other indicators of potential impacts. All environmentally-relevant indicators for the product category shall be included. Examples of such environmental impact categories to include in the PCR are:

- emission of ozone-depleting gases, and
- land use and land use change.

Examples of reports that provide recommendations on impact categories and indicators are UNEP/SETAC Global Guidance for Life Cycle Impact Assessment Indicators and the ILCD Recommendations for Life cycle impact assessment in the European context.

A.9.1 GLOBAL WARMING POTENTIAL (CARBON FOOTPRINT)

The calculation of the carbon footprint using Global Warming Potential 100 years (GWP100) needs some clarifications because of some complexities that may be encountered during the calculation procedures. In addition to the rules and guidance provided here, ISO/TS 14067 and PAS 2050:2011 should be considered as the main references for the GWP calculation during PCR preparation.

A.9.1.1 Greenhouse gas emissions and removals to be included in the carbon footprint

The carbon footprint shall include emissions and removals of greenhouse gases arising from fossil sources, biogenic sources, and direct land use change. The reporting shall be done in separate sub-indicators for the different sources, unless other guidance is provided in the reference PCR.

For human food and animal feed, emissions and removals arising from biogenic sources that become an ingested part of the product shall not be included. Greenhouse gas emissions (except carbon dioxide, CO_2) arising from the degradation of waste food and feed and enteric fermentation shall be included.

Where a secondary material with a stored carbon content enters the system boundary, the quantity of stored carbon within it should be accounted in the same way as if it were a primary material. Thus accounting for the total quantity of carbon that the new product will contain and continue to store.

A.9.1.2 Carbon sequestration and stored carbon

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

- Carbon storage might arise where biogenic carbon forms part or all of a product (e.g. a wooden product) or where atmospheric carbon is taken up by a product over its life cycle (e.g. cement).
- While land and forest management activities might result in additional carbon storage in soil or managed forests through the retention of soil carbon or forest biomass, the linking of this potential source of carbon storage to the product level is not included in the scope of the International EPD® System.

A.9.1.3 Offsetting

Greenhouse gas emissions offset mechanisms shall not be used in the assessment of the carbon footprint indicators. The EPD owner may declare their participation in offsetting programmes or purchase of carbon neutral products separately in the additional information section of the EPD, where these effects also may be qualified.

A.9.2 WATER SCARCITY POTENTIAL

Net freshwater use is included as an indicator in the section of resource use, calculated from the life cycle inventory. The water scarcity potential provides further information related to the availability of water in different geographical locations.

The WSI and AWARE methods should be used. Information about the method to use is available at www.environdec.com.

ANNEX B – EPD PROCESS CERTIFICATION: REQUIREMENTS

B.1 INTRODUCTION

Section 7.5 describes an activity in which organisations can develop EPDs without a third-party verifier being involved in each case: EPD process certification. This annex clarifies how companies shall apply a systemised manner and, specifically, the demands that must be verified by a third-party verifier.

This clarification contains generic information in Sections B.1 – B.3 and normative claims in Sections B.4 – B.6. Upon a third-party verification, the claims in the normative Sections B.4 – B.5 will be verified primarily.

B.1.1 DESCRIPTION OF THE EPD PROCESS

The activity to develop EPD shall follow a certain process pattern as displayed in Figure 6.

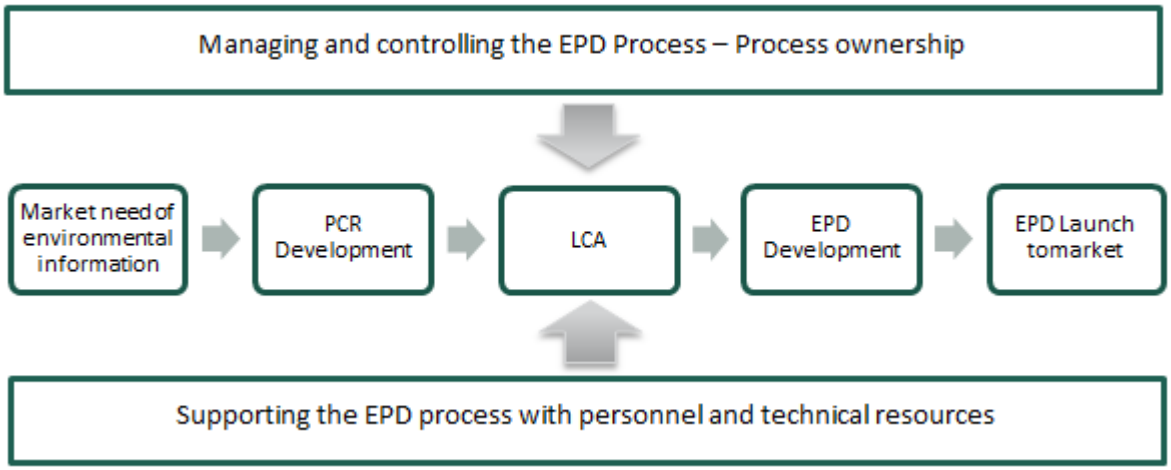

Figure 6. The EPD Process.

Such a process shall be established and controlled by necessary procedures and activities.

B.1.2 DESCRIPTION OF THE EPD PROCESS CERTIFICATION ACTIVITY

The internal EPD process certification process shall be outlined according to the “PDCA 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.

B.1.3 DESCRIPTION OF THE EPD DOCUMENT ASSESSMENT

An internal verifier shall verify the EPD documents developed inside the EPD Process before publication. Internal verifier competences evaluation shall be defined and recorded inside EPD process documents.

B.1.4 DESCRIPTION OF THE EPD PROCESS THIRD-PARTY VERIFICATION ACTIVITY

The EPD process shall be verified by an independent third-party verifier that is accredited for the audit of management systems, and the verifications shall be done as an accredited service under the supervision of an accreditation body.

B.2 NORMATIVE REFERENCE

See ISO 14001:2004, ISO 9001:2008, ISO14040 series and the General Programme Instructions. For construction product EPDs that claim compliance with EN 15804, this standard is also a reference.

B.3. TERMS AND DEFINITIONS

TERM	DEFINITION
EPD	Environmental product declaration
PCR	Product category rules
CPC	UN Central Product Classification, classification system used for PCR
LCA	Life cycle assessment
EPD process	Chain of activities within an organisation that links together in a certain systemised pattern, from an initial start-up to a final result as the launch of the EPD.
EPD process owner	Personnel having authority and responsibility in managing the EPD process from start to final EPD.
EPD responsible publisher	Personnel having authority and responsibility regards when publish EPD to external party.
EPD process assurance	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 assessment	An internal activity within the organisation that regularly with certain frequency assesses the EPD process to certify it appropriateness.
EPD document assessment	An internal activity within the organisation that assesses the EPD document to certify its appropriateness before publication.
EPD process certification verification	An external third-party verification made by an accredited body, to verify the internal EPD process assurance.

Table 8. Terms and definitions.

B.4 THE EPD PROCESS

B.4.1 GENERAL REQUIREMENTS

The organisation 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 company,
- 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.

B.4.2 DOCUMENT REQUIREMENTS

The documentation of the EPD process shall include:

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

B.4.3 MANAGEMENT RESPONSIBILITY

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

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 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.

B.4.4 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 as regards 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
- LCA competence as listed in Section 4.12.1.2

B.4.5 PLANNING THE EPD PROCESS

The organisation shall plan and develop the EPD process for the EPD realisation. Planning EPD realisation shall be consistent with the requirements of the General Programme Instructions. In planning the EPD realisation, the organisation shall determine the following, where appropriate:

- sources and version of PCR / UN CPC requirements,
- sources and version of the General Programme Instructions,
- the need to specify activities within the EPD process and to provide specific resources for these (i.e. data collection, LCA calculation, LCA result review, EPD preparation, EPD review, maintenance of the period of validity of EPDs, and representativeness),

- required verifications of the content of the EPDs delivered from the EPD process, and
- records needed to provide evidence that the EPD realisation process meets the EPD process certification requirements.

B.4.5.1 PCR/UN CPC development or status check

The organisation shall determine the requirements related to the PCR/UN CPC and review the EPD to be launched, prior to the realisation of EPDs, and this shall ensure that:

- PCR/UN CPC requirements exist, and
- the organisation has the ability to meet the defined requirements.

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

In the event of no existing PCR for the actual product category, the organisation shall initiate the development of such rules according to the General Programme Instructions.

B.4.5.2 Planning the LCA activity and development of EPDs

B.4.5.2.1 Planning the LCA activity
The organisation shall plan the LCA activity according to the ISO14040 series, requirements in the relevant PCR and other norms in the General programme instructions.

B.4.5.2.2 Planning EPD development activity
The organisation shall plan the EPD development activity according to the requirements in PCR/UN CPC and other norms in the General Programme Instructions.

In the event of pre-certified EPDs, these shall be included in the EPD process as well.

If an EPD process owner intends to develop “single-issue EPDs”, i.e. climate declarations, these shall also be covered by the EPD process.

B.4.6 OPERATION OF THE EPD PROCESS

B.4.6.1 Collecting information

The organisation shall ensure that collected data conforms to specified data need 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.

B.4.7 OPERATION OF THE LCA ACTIVITY AND DEVELOPMENT OF EPDS

B.4.7.1 Operation of the LCA activity

The organisation shall plan and carry out LCA activities 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.

B.4.7.2 Operation of the EPD development activity

The organisation shall plan and carry out EPD activities 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 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 General Programme Instructions, EPDs shall include mandatory statements. The part concerning a third-party verifier, in this context, means the third-party verifier certifying the EPD process.

B.4.7.3 Maintenance of the EPD during its validity

The organisation shall preserve the developed EPDs representativeness during its scheduled period of validity by keeping an EPD register for valid EPDs.

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.

B.5 EPD PROCESS ASSURANCE

B.5.1 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 of this annex to the General Programme Instructions, 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 verification of the actions taken and the reporting of these results.

B.5.2 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.

B.5.2.1 Review input

The input to management review shall include information on

- results from internal assessments,
- reaction from EPD audience and other stakeholders,
- EPD process performance and EPD conformity verifications done by third-party verifier,
- status on preventive and 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.

B.5.2.2 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 General Programme Instructions and this annex.

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.

B.6 EPD PROCESS CERTIFICATION

During the period of validity of the EPDs following the EPD process, as a complement to the internal assurance activity, there shall be a verification done by an independent third-party verifier. The verification is an accredited service and is done under supervision of an accredited body.

The verification shall be done annually and cover the EPD process and the internal EPD process assurance activity. The verification shall follow the praxis from audit management systems, i.e. ISO 14001 or ISO 9001. The verification shall also include sample checks of EPDs launched by the organisation and their compliance to the GPI.

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 General Programme Instructions and reference PCR(s) as determined based on the scope of the process certification,
- develop EPDs according to the General Programme Instructions and reference 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.

The result is an EPD process certificate, stating that the EPD process and EPD process assurance activity follows the General Programme Instructions. A valid certificate is a necessity for an organisation to be allowed to act under Section 7.5, and shall be submitted during EPD registration.

EPDs developed in a certified EPD process according to this annex to the General Programme Instructions shall be considered as equal to a third-party certified EPD.

ANNEX C – PRE-VERIFIED LCA TOOL

To offer industry associations and similar organisations a way to assist their members in developing EPDs, the International EPD® System allows the pre-verification of LCA tools. For tools developed by or for single companies, EPD process certification shall be used instead.

A pre-verified LCA tool contains data and calculation models to simplify the LCA calculation procedure based on a reference PCR. It is pre-verified to ensure that it produces correct data, given the correct input. Please note that while using a pre-verified LCA tool simplifies the procedure for developing an EPD, it does not replace the need for verification according to Section 7.

C.1 VERIFICATION OF LCA TOOL

The aim of the pre-verification of the tool is to check the compliance with a reference PCR and the General Programme Instructions. The pre-verification shall follow the process in Section 7, excluding the verification of the final EPD.

The verifier of the tool shall check the following according to the requirements in the General Programme Instructions and reference PCR:

- the choice of data and datasets,
- data quality, sources, and references
- data security
- LCA modelling hypotheses, including
  - system boundary
  - cut offs
  - allocation rules
  - calculation rules
- a description of all indicators and the methods behind them
- the functionality for the production of the EPD background report
- procedures established for updating the information in the tool
- software usability and security

The verifier shall report the results in an LCA tool verification report. The tool verification report shall present how the tool meets the relevant requirements in the PCR and General Programme Instructions.

The LCA tool verification report shall be presented to the Technical Committee of the International EPD® System who shall give the final approval of the tool's compliance with the International EPD® System. Once the tool is approved it shall be considered "pre-verified", and should be listed in the PCR as a source of selected generic data.

Information about the pre-verified LCA tool and additional information for companies and EPD verifiers shall be published on the website, www.environdec.com.

C.2 REQUIREMENTS ON VERIFERS OF LCA TOOLS

A case-by-case approval is granted for the pre-verification of a tool by the Technical Committee before the work has started. Only approved individual verifiers or accredited certification bodies will be considered. An application to act as the verifier of a tool should be submitted to the Secretariat.

C.3 VERIFICATION OF EPDS PRODUCED USING LCA TOOLS

EPDs developed using the LCA tool shall still undergo verification according to Section 7.

Data generated using the LCA tool may be considered equivalent to specific or selected generic data, and do not need further verification during the verification of the EPD. This will reduce the time needed by the EPD verifier as part of his/her job is already performed, and is, thus, expected to reduce the cost for verification of an EPD.

The EPD verifier shall ensure that data uploaded in the LCA tool are in line with the verified LCA core model implemented in the tool. The verification report shall include information on what data were uploaded to the tool to produce the EPD.

ANNEX D – 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 will be used.

D.1. 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.

D.2 THE INTERNATIONAL EPD® SYSTEM LOGOTYPE

A logotype has been developed to ensure a well-known identity for the International EPD® System (see Figure 7). 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.

Figure 7. Logotype of the International EPD® System.

The logotype symbolizes a yardstick, a standardized tool for objective measurement. The EPD measures the environmental performance of products and services in an objective and standardized way. The logotype is available for download in different file formats from www.environdec.com or via the Secretariat.

The logotype may be used for different applications:

- On the EPD: the logotype shall be included on the cover page and/or as part of the programme-related information.
- On products and packaging materials: the logotype may be used together with the EPD registration number and with a reference to www.environdec.com to find the EPD and for more information. It may also be relevant to state the UN CPC code or provide an explanation of what an EPD is.
- On information materials: if an EPD owner wants to use selected information from the EPD for various purposes, they shall indicate that the data is taken from an EPD, use the logotype together with the EPD registration number and refer to the website (www.environdec.com) for more information. It may also be relevant to state the UN CPC code or provide an explanation of what an EPD is.

Other uses of the logotype are only allowed based on special agreements with the programme operator.

An example of how to use the logotype on an EPD is illustrated below.

CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION

S-P-XXXXX www.environdec.com

Figure 8. Example of how to use the EPD logotype with reference to an EPD registration number and the website.

If a company/organisation chooses to use information from the declaration in other information material, they shall state that the data is taken from a certified environmental declaration, use the logotype, and quote the given registration number and web site for more information as the examples below illustrate.

An information label may be used in conjunction with advertising a product or services and on products or on the packaging of products. The reason for the information label is to provide the party that comes into contact with the product with information that the product has a registered environmental product declaration and that additional information on and a description of the contents in the declaration are available on the Internet. This information label shall have the following wording:

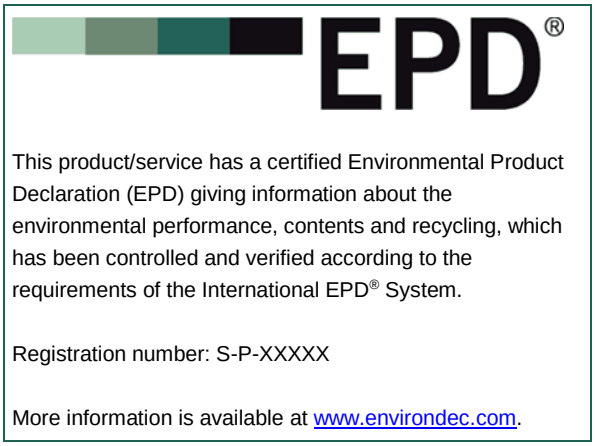

Figure 9. Example of how to use the logotype on other information materials.

Clarifications:

- The words “contents” and “recycling” shall be used only if such information is included.
- The registration number is shown here as S-P-XXXXX, to be replaced by the registration number as assigned during the registration and publication of the EPD.
- The words “This product/service” can be replaced with the name of the product/service provided that the full designation of the product/service is used in the same way as in the certificate issued by the certification body.

If only an information label is used to give information on the environmental product declaration and in conjunction with or in a manner that may affect consumers, the following wording shall be used:

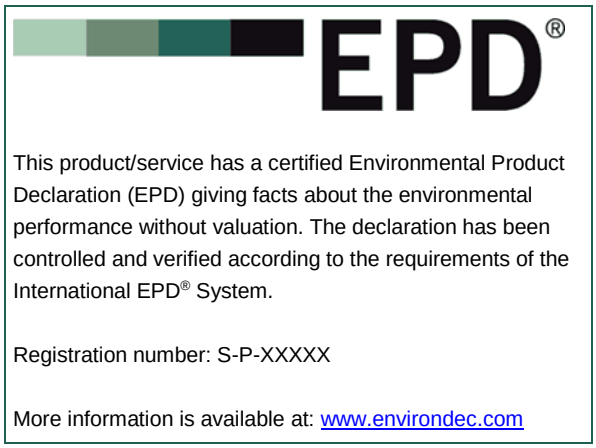

Figure 10. Example of information label.

D.3 COMPARABILITY OF EPDS

ISO 14025, Section 6.7 sets the requirements for comparability between EPDs, such as having the same product category and based on the same methodology and rules (set by the PCR and General Programme Instructions). Environmental declarations from different programmes may not be comparable.

This information may be relevant to include when communicating the EPD.

D.4 LINKING TO 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 page, please contact the Secretariat.

