

EPD CHINA GENERAL PROGRAMME INSTRUCTIONS



VERSION 3.1

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Terms and abbreviations

Environmental product declaration (EPD): providing qualified environmental data using predetermined parameters and, where relevant, additional environmental information. The predetermined parameters are based on the ISO 14040 series of standards, which is mainly concerning ISO 14040 and ISO 14044. The additional environmental information may be quantitative and qualitative.
[ISO 14025]

Product category rules (PCR): set of specific rules, requirement and guidelines for developing Type III environmental product declarations and footprint communications for one or more product categories.
[ISO 14025]

Carbon footprint of a product (CFP): sum of GHG emissions and GHG removals in a product system, expressed as CO₂ equivalents and based on a life cycle assessment using the single impact category of climate change.
[ISO 14067]

Carbon footprint of a product-product category rules (CFP-PCR): set of specific rules, requirements and guidelines for CFP or a partial CFP quantification and communication for one or more product categories.
[ISO 14067]

PCR review: process whereby a third-party panel verifies the product category rules.
[ISO 14027]

Life cycle assessment (LCA): compilation and evaluation of inputs, outputs and potential environmental impacts of a product system throughout its life cycle.
[ISO 14044]



Version history

Version	Commentary	Date
1.0	Fundamental revision and update with the implementation of the newly created verification regulations.	2021/06/01
1.1	Revision based on comments received from technical advisory member.	2022/01/24
2.0	Update and maintenance.	2022/10/20
3.0	Content updates	2023/04/25
3.1	The advice from ECO Platform auditors (Dr. Eva Schmincke and Mr. Bastian Wittstock) was considered to assure the EPD China fulfill all requirements as the ECO EPD Programme Operator and the quality of each ECO EPD.	2024/01/22



1. Introduction

1.1 Background

Type III environmental declarations are a type of environmental label that have become an important measure for countries to guide green consumption, production and communication on important environmental impacts such as climate change. EPDs provide quantifiable and verifiable environmental impact information, such as climate change impact and water consumption, through quantitative life cycle assessment (LCA) of a product. In recent years, certain EU countries such as France, Italy, Germany and Sweden have made EPDs a mandatory policy requirement during product tendering and public procurement in order to meet carbon neutral and sustainable development targets.

However, there is not yet an established program for environmental product declarations (EPDs) in China in line with international standards and regulations. The lack of relevant programs and regulated practice of EPDs in China will jeopardize the potential for market-driven environmental improvement through encouraging the demand for, and supply of, products that cause less stress on the environment. Ultimately this may hinder the progress of towards carbon neutrality in China.

The adoption of a proper EPD scheme in China is also limited. In the building industry, use of EPDs for building-related products is mostly limited to achieving certification points under green building schemes or as incentive items. In the business bidding process, EPDs are not regarded as a mandatory requirement, which has made EPDs in China to largely go as unregulated labels with an intended effect of promoting consumption and production of products that cause less impact on the environment. Outside building industry, the adoption of EPD scheme is rare and the promotion of EPD in China remains a task in the forthcoming years for EPD China.

Even though EPDs have undervalued in China in previous years, the importance of EPDs can be recognised in many ways, which includes promoting sustainable market, providing essential environmental information, and design scientific carbon reduction plan. In addition, EPDs, including single metric labels such as carbon footprints (CFP), water footprint (WFP) is becoming a prerequisite for products entering the market of developed countries in Europe and some other regions. The Chinese government and industries should give priority to products with eco-labels by adopting green procurement initiatives and setting policies favoring EPDs.

According to the governmental news, EPD China is a non-profit organization initially established with following organizations (Link: <https://app.sheitc.sh.gov.cn/gydt/686684.htm>):

- One Belt One Road Environmental Technology Exchange and Transfer Center (Shenzhen)
- China Green Industry Foundation
- Ecovane Environmental
- The China-UK Low Carbon College of Shanghai Jiaotong University
- Shanghai Green Manufacturing Alliance
- The Green Ark

1.2 Objectives

The establishment of EPD China aims to address above-mentioned deficiencies. EPD China is a non-profit platform jointly founded by a number of private and public professional organizations



in China in order to ensure that EPDs published in China meet the relevant requirements of international EPD standards, to help business overcome the environmental performance barriers during international trade and drive more sustainable product and service innovation and development in the world. EPD China aims to establish an authoritative and fair platform for environmental information disclosure in China, including carbon footprints, while also helping Chinese businesses meet the China "30/60 goal" of carbon peak and carbon neutrality.

The objectives of EPD China include:

- ▶ Provide relevant and reliable data on the environmental impacts of a product or a service throughout its life cycle.
- ▶ Provide quantified, multi-criteria, objective, and comparable environmental data, based on transparent and scientifically validated methods to help clients or decision makers choose among products.
- ▶ Encourage the demand for products with less impact on the environment, especially within the scope of Eco-responsible public procurement.
- ▶ Support companies in relevant sectors controlling the environmental impacts of their products or services, through approaches such as design, R&D, manufacturing and innovation of green products and services.
- ▶ Support compliance with existing and upcoming regulatory requirements for environmental declarations or environmental product labeling, ensuring the conditions for fair competition are present.
- ▶ To enhance collaboration and jointly serve the interests of consumers, the market, and relevant stakeholders with open and transparent information on environmental impacts of products and the sustainable development of the company.
- ▶ Participate in relevant international collaboration platforms, international PCR harmonization activities, and standardization.

1.3 EPD China Programme Scope

This document intends to clarify the rules for the development and operation of the ISO 14025-compliant Chinese environmental product declaration programme, i.e., EPD China programme. The rules of governance of this programme, commonly referred to as the "General Programme Instructions" (GPIs) present the voluntary procedures implemented to ensure that every EPD issued by companies are correctly generated, verified and published according to the requirements of standard ISO 14025 and EN15804.

The GPI document is developed by EPD China, which is responsible for updating and publishing these General Instructions. Programme documents are available on the website: www.epdchina.cn

The programme of EPD China aims to support the development and dissemination of EPDs created by manufacturers in China, consulting agencies, evaluation, and assessment agencies, and eventually registered and issued on EPDChina platform.

The EPD China programme is structured in three levels:

- Level 1: General Programme Instructions that define the general framework of the approach and set out the procedures used to draft, verify and publish EPDs in accordance with ISO 14025 and EN15804 or ;



- Level 2: PCR - Product Category Rules. Developing rules and procedures in accordance with ISO 14025 and ISO 14027 that provide a method of environmental data collection and analysis and the declaration format used to report data in the form of an EPD China template. These rules generally consist of common Rules applicable to all products or services covered by the Programme and a set of supplementary rules specific to the product categories, called "Product-Specific Rules-PSR or c-PCR, stands for complementary PCR". EN 15804 is the core PCR for construction products.
- Level 3: The publication of Type III EPDs in accordance with the requirements of the EPD China Programme.

1.4 Area of applicability

The EPD China GPI regulates services in the context of the execution and preparation of EPDs made in China in accordance with ISO 14025 and other standards provided in the Normative References section of this document.

The General Programme Instructions are mainly for:

Declaration holders: companies and supportive organizations who wish to provide environmental data about their products and more particularly the services involved in the design, development, and promotion of the products.

Data users: parties wishing to know how the data have been generated to understand and use them more effectively (project owners, prime contractors, industrial designers, design offices, etc.).

Researchers and policy makers: government think tank and policy decision makers who want to better understand the economic circularity, carbon footprint and water footprint, and other environmental and social sustainability of a certain industry, product, or service, to make proper policies to promote sustainable development in a given region e.g., City or province, or in a specific industry, through public green procurement, tax reduction or exemption, or green bonds or investment etc.

1.5 Language

GPI, PCRs, EPDs and other complementary documents will be developed in Chinese and/or English.

2. Programme information and administration

2.1 Programme information

EPD China Programme is launched by a non-profit entity organized in a multi-stakeholder engagement approach across the product and business value chain that promotes collaboration for to achieve the programme objectives.

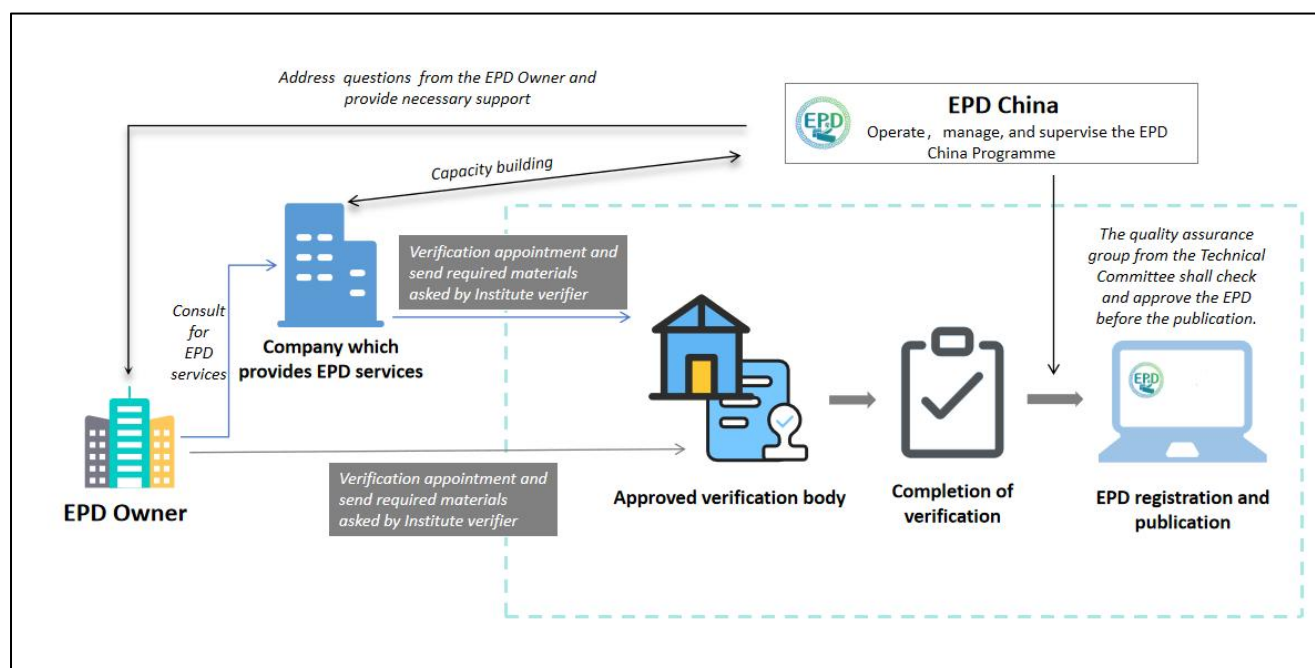


Figure 1: The flowchart of EPD China Programme

EPD owner has the need of environmental declaration of the product can carry out EPD based on resources from EPD China by engaging internal or external experts from company which can provide professional EPD services.

2.2 Programme Administration

As defined in ISO 14025, the programme operator must fulfill a number of responsibilities via different roles. The successful operation of the EPD China programme depends on the contribution from the following entities detailed in Figure 1. Key involved bodies to the EPD China programme are listed in sections 2.2.1 – 2.2.4 with main roles in details.



2.2.1 EPD China secretary (EPD China office)

The general secretary is the EPD China office are responsible for the following tasks:

- To publish and communicate general programme instructions;
- To publish the names of entities involved as interested parties in program development;
- To publish PCR documents and Type III environmental declarations developed under the programme and maintaining publicly available lists of those documents;
- To manage the registration and deregistration of the EPDs;
- To respond to the requests and questions regarding the programme by phone or via email;
- To assign verifiers for LCA and EPD verification;
- To establish procedures to avoid misuse of references to ISO 14025, the EPD China programme, EPDs and footprints developed under the program, and where relevant, the EPD China logo.

In addition, together with the administrative office, the task of general secretariat also includes:

- To communicate with other EPD operators in other regions to conduct mutual recognition;
- To organize activities to promote EPD China and training for capacity building in China;
- To collaborate with relevant stakeholders to enhance cooperation and development.

2.2.2 Technical committee

Technical committee is comprised of a minimum of three, and maximum of five members to deal with technical issues. Their responsibilities include:

- Preparation and maintenance of the General Programme Instructions;
- Support the Secretariat in technical issues and complaints;
- Establish a transparent process for PCR reviews;
- Review and approve the final PCRs;
- Identifying and approving competent, independent verifiers;



- Monitor procedural changes in other environmental declaration programmes and Revise procedures and documentation as necessary;
- Ensure environmental declaration requirements are followed.

There are several key groups in the technical committee:

PCR group

PCR group in technical committee is responsible for the PCR research, PCR advise and provide the professional advice for the development of new PCR at EPD China. There will a specific small PCR committee of each PCR project.

PCR committee is to develop PCR documents. It should be comprised of

at least one representative from PCR group members of EPD China Technical Committee
at least two relevant industry representatives from at least two independent entities
at least one representative from other interested parties or stakeholders

PCR committee chair is responsible for the development of PCRs. Their responsibilities include, but are not limited to, the following tasks:

- Lead the PCR development procedures and act as primary contact for the PCR committee;
- Invite LCA/EPD/PCR experts, industry experts, and other relevant stakeholders to take part in the development of PCRs as part of the PCR Committee, at least one representative from business shall be in the committee;
- Develop the time schedule and assign work to compile the PCR draft document, make sure the open consultation phase lasts two months minimum;
- Organize responding to comments from public and stakeholders and revise the PCR document accordingly;
- Submit the final PCR document to the programme technical committee for approval;
- Organize the update of PCRs in case of technical innovation and before the end of its validity, and alert PCR stakeholders at least one month prior to the PCR expiration.

Quality assurance group

The programme quality assurance group is responsible for maintaining and enhancing the standard and quality of the programme operation through periodic review and regular monitoring of the general programme instructions and is also responsible for conducting investigations regarding complaints and appeals from the public.

Industry specialist group

The tasks of the industry specialist group include but not limit to write the industry overview report, summarize the technical change in production process of targeted industry, and provide advice for the PCR targeting the industry.

Research and policy group

The tasks of the research and policy group include but not limit to the LCA methodologies researching, systematic reviewing, national and international standards analysis, and policy brief.



2.2.3 Verification body

The verifier must be an individual or entity completely independent from the manufacturers, institutions, or persons that created the LCA and EPD, with no conflicts of interest. The person or organization must be recognized by EPD China to carry out the verification work of LCA and EPD reports. The task of assigning verifiers for verification is the responsibility of the General Secretariat. Please see www.epdchina.cn for the detailed list of approved independent third-party verifiers.

2.2.4 Advisory board

The advisory board shall fulfill the following tasks:

Conduct market research and provide input from the market and different stakeholders;
Provide advice on the necessary update and revision of the general programme instructions, including development of PCR procedures and EPD verification processes;
Promote the EPD China programme across various industries to increase programme applicability and acceptability.

2.3 Website

EPD China's official website is www.epdchina.cn and functions of the website include:

- Publish GPI;
- Search for published PCRs;
- Publish PCRs developed and approved by the Technical Committee Review Panel and EPDs;
- Search published EPDs under EPD China Programme or the EPDs under Mutual Recognition Scheme between EPD China and other program operators);
- Search the applicable documents and organization news;
- Search for third-party independent verifiers or qualified verifying institution.

2.4 EPD China Logotype

The logo of the EPD China Programme is shown below:



Figure 3: The Logo of EPD China Programme.

A logotype has been developed to ensure a well-known identity for the EPD China. 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.

The logotype symbolizes 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.epdchina.cn. 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. And other uses of the logotype are only allowed based on special agreements with the programme operator. The EPD can be used only with reference to the EPD registration number, the date of validity and the website of the EPD China Programme.

Logotype is a registered trademark and is limited to EPDs registered within the programme. The Secretariat shall contact organisations using the logotype without fulfilling the requirement and permission.

2.5 Fees

There is a fee structure associated with the PCR development, LCA and EPD verification, and registration and publication of EPDs in the EPD China platform, and it can 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.epdchina.cn. The fee structure and fees should be reviewed or/and revised annually.

2.6 Arbitration

When a dispute is submitted or raised by a client, the arbitration to the impartial and efficient alternative dispute resolution or agreement is suggested to have and involved parties from EPD China may differ depending on the complexity of the situation and the extent of dispute. When the client refuses the decision, EPD China will suggest the client move to the legal procedure.

3. Procedures for PCR development

Product Category Rules (PCR) contain specific instructions detailing LCA-based data collection methods for different product groups, conversion of the collected data to the pre-set indicators, and the format for presentation of the information. PCR enable EPDs to have a consistent framework for calculating and presenting results for different products within the same product category. PCRs under the framework of EPD China shall be developed in Chinese and/or English.

3.1 Types of PCRs

Under the EPD China framework, several types of PCR may be developed and used when creating EPDs. The product category covered by a PCR shall be based on the function of the product, and shall follow the classification rules of China GB standard. The PCR types and their differences are listed below:

Main PCR/ Core PCR: specifies the rules for developing EPDs based on more industrial-specific requirements, the industrial PCR can be referred to by EPD developers if a product-specific PCR is not available.

Note: EN15804 is the main PCR of construction products.

Complementary PCR/specific product PCR (c-PCR/ PSR): provides more specific rules e.g. functional units, scope and other information and requirements (e.g., methodological aspects of specific relevance for its scope, such as recommendations on allocation or modelling of end-of-life scenarios) for a subset of the product category covered by the general PCR, and when suitable, industry PCR. A specific PCR should be in line with the industry PCR, when applicable, when there is deviation, it should be noted in the specific PCR.

3.2 Application of existing PCR outside China

EPD applicants may apply directly the existing PCR requirements from other EPD programme operators if the EPD programme operator in other countries or regions has already signed mutual recognition with EPD China. If it is a PCR from an EPD programme that has not been included in the mutual recognition agreement, it is recommended to send the PCR document to the email address secretary@epdchina.cn with the subject "XXX product PCR application". The technical team at EPD China will start evaluating the quality and the feasibility of the PCR.

3.3 Development of new PCR

A strict procedure should be followed for the developing a new PCR, including a multi-phase approach for application, preparation, approval and publication, maintenance and updating, detailed below (also refer to ISO 14027 for further reference).

- **Application:** Development of a new PCR may be applied for by a single company, a group of companies, the technical committee of EPD China or by interested industry groups. After receiving the application for developing a new PCR, a PCR moderator can be designated by the technical committee of EPD China or the EPD applicant to lead the PCR committee. The moderator shall invite related specialists, industry experts, and other stakeholders (e.g., suppliers and related manufacturers, NGOs) to take part in the development of PCR documents as part of the PCR Committee.



- ▶ **Preparation:** The development of PCR needs to comply with the requirements of ISO 14025 and any other relevant standards. The secretariat and technical committee have developed a product specific PCR template (EPD China PCR Templates) as a reference for developing PCRs. The PCR template can be downloaded on the EPD China website. The PCR moderator shall be responsible for organizing the schedule and assigning PCR development tasks, which shall be in line with the core PCR, industrial PCR, or specific PCR requirements established by EPD China.
- ▶ **Approval and publication:** When the PCR draft document is ready, the PCR moderator should submit the draft to the technical committee of EPD China for review and approval (email: secretary@epdchina.cn). After receiving the draft PCR, EPD China will publish the PCR draft document on the EPD China website for open consultation for two months. Comments received during the public consultation period shall be documented and considered in the final draft version of the PCR before the official publication on the EPD China website. The PCR development group should review and make reasonable revisions according to the comment before the technical committee approves and issues the final version of PCR. The technical committee should be responsible for the final approval of PCR.

3.4 Ownership, responsibility and liability for the PCR

EPD China has the authority and responsibility to maintain a copyright of PCR documents to ensure it is possible to publish, update when necessary, and make available to all organizations to develop and register EPDs. Stakeholders participating in PCR development under EPD China shall be acknowledged in the final PCR document and on the website.

EPD China strives to harmonize PCRs with other international EPD programme operators. This is in line with the mutual recognition agreement (MRA) given in chapter 7 which means PCRs from those EPD programme signed MRA with EPD China may be used to create EPDs for the same product category, provided the necessary adaptation of the PCR is made and MRA rules are followed.

3.5 Content of PCR

The content of PCR shall be based on the general LCA methodology, and shall include the following information (according to ISO 14040, ISO 14025, ISO 21930, ISO 14027):

- Product and/or service category to which the PCR applies
- Classification rules according to China national (GB) standard
- Goal, scope and definition for the LCA of the product
- Selection and definition of the functional and/or declared unit
- Selection and description of the system boundaries and life cycle stages
- Data quality requirements
- Cut-off rules
- Allocation rules
- Other relevant calculation procedures
- Selection of specific parameters (e.g. life cycle inventory and life cycle impact assessment parameters) to describe the environmental performance (in addition to the mandatory parameters given in the PCR template)
- Guidance on materials and substances to be declared
- Description of additional environmental information to be reported
- Description of the type of information that should be included in the use phase of the declaration on environmental characteristics



- Guidance on scenarios on transports, installation, use and End-of-life processes
- Choice of units for expression of results
- EPD comparability requirements
- Period of validity

During the development of a specific PCR, if not all the information presented in this section is to be considered, or there are any nonconformity to the PCR content requirement, such deviation should be documented and approved by the technical committee of EPD China.

3.6 PCR Validity, Update and Maintenance

A PCR is generally valid for five years from the effective (updated) release date unless specified differently in the PCR. The PCR may be used to publish EPDs within the validity period. If there is no application submitted for updating the PCR prior to expiration, the validity period will be automatically extended for one year. The PCR will become invalid after the extension expires and may not be used until the updated version is available.

The PCR may be updated due to editorial changes, clarifications, correction of errors, changes to underlying normative references, and/or alignment of the PCR to a new version of the GPI. Any interested party may comment on an active, published PCR by sending comments via e-mail (secretary@epdchina.cn) to the PCR moderator and the secretariat. 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 by the existing PCR, or other comments that are of sufficient technical relevance.

The frequency of significant PCR updates (e.g., concerning the LCA method) during the validity shall be kept to a minimum to ensure market stability. PCRs may be revised as required.

Companies or organizations that have an EPD may demonstrate such a need for revision, but others may also do this. Notification of the need for changes within the period of validity shall be addressed by the technical committee.

The maintenance of a PCR includes the translation of the PCR document into other languages and further interpretation of technical sentences and terms. Any major revisions of existing PCR documents should be approved by the technical committee. The Secretariat shall prepare the final editorial changes and publish the updated PCR at www.epdchina.cn with an updated period of validity and new version number.



4. Procedures for EPD development

4.1 EPD process

EPD China shall ensure the quality, reliability, and applicability of published EPDs through a scientific and systematic procedure. The EPD process includes the following main steps:

- 1) **Identify a relevant, valid and applicable PCR:** choosing the most relevant, proper, and qualified PCR will be the first step for the EPD preparation. The main PCR to use for construction products is EN 15804: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products and c-PCR documents for specific product categories developed by EPD China can be found on the website.
- 2) **Conduct an LCA study conforming with the identified PCR, ISO 14025, ISO 14044, and any other applicable regional, national, and international standards:** the organization may perform the LCA study internally or with the help of an external consultant with expertise in LCA.
- 3) **Compile the LCA report and EPD report:** write an EPD report which compiles LCA results and the finalised EPD reports shall meet all requirements listed in the core PCR or/and c-PCR. It is suggested for EPD consultants to check the quality of EPD and complementary evidence before delivering EPD reports to approved third-party verifier(s)/institutes.
- 4) **Verification:** the LCA and EPD reports shall be verified by an independent third party recognized by the EPD China programme. The verification report shall be compiled according the EPD China verification report template. (To be updated based on core PCR)
- 5) **EPD registration and publication:** prior to EPD publication, the organization must register with the EPD China programme. The LCA report, EPD report, and the verification report must be submitted to the General Secretariat for final EPD publication. EPDs are assigned a unique declaration number, published and accessible to the public at the EPD China website.

4.2 EPD ownership, responsibility and liability

The EPD owner has the sole ownership, liability, and responsibility for the EPD. Published EPDs are open to the public, and the user must respect copy rights and the protection of intellectual property. When an organization wants to develop an EPD based on an existing EPD that is owned by their Original Equipment Manufacturer (OEM), EPD China suggests the organization to receive approval from the OEM, and this is an optional provision not a mandatory requirement. It is the obligation of the verifier of an EPD to validate any data sources, including existing EPDs, and the appropriate use of such data sources.

The verifier of the LCA and EPD reports must be an independent third-party recognized by EPD China. The relevant participants of the EPD project must ensure that the submitted information (including data and materials) and related evidence are authentic and reliable. The EPD China technical committee will organize annual spot checks and auditing protocols on the published EPDs randomly, the check could be either online or on-site. Once the committee has investigated and confirmed that the company, the consultant, or the verifier has deliberately falsified or cheated



in the process of LCA and/or EPD reporting, EPD China will suspend the programme cooperation with the participating organization. They are not allowed to register or use the EPD China platform to support any environmental statement activities for three (3) years. If the same case happens again, the membership of the organization will be permanently canceled.

4.3 EPD validity and EPD updating

An EPD is valid for five (5) years from the date of issue. Upon EPD expiration, the underlying LCA and EPD shall be recalculated with updated data before an EPD may be republished.

Minor amendments or changes such as changes of product name or product marketing image, are allowed to an EPD during its period of validity without verification. However, if significant changes have occurred to the declared product information, content declaration, or additional environmental information, and have led to a change of $\pm 10\%$ or more of any of the environmental indicators, the LCA background report and EPD must be adjusted and reverified.

4.4 Amendments of published EPDs

In the cases of minor changes of EPD reports, such as changes of logotype, company website, or spelling correction, EPD owner can revise EPD directly to the Secretariat without re-verification. While the cases of significant changes, EPD shall be timely updated and re-verified during its validity. Significant changes are listed as follows:

- Significant changes to the declared product information in terms of production process;
- Significant changes to the content information of declared product from containing materials, to packaging materials, to SVHC substances etc;
- An increase of 10% or more of environmental impacts indicators.
- EPD owners can contact EPD China Secretariat about other situations of amendments which are not listed in the GPI.

4.5 De-registration of EPDs

EPDs may be de-registered if fees are not paid in due time, or in the case of non-conformance with the terms and condition, or EPD contains errors that are not corrected by the EPD owner duly. A de-registered EPD shall no longer be used and the assigned registration number shall not be re-used.



5. EPD format and content

5.1 EPD types

Within the EPD China programme, manufacturers or groups of manufacturers may declare their products with the following types of EPDs:

Manufacturer's EPD

Declaration of a specific product from a specific manufacturer's plant

Declaration of a specific product as an average from several of the manufacturer's plants

Declaration of an average product from a specific manufacturer's plant

Declaration of an average product as an average from several of the manufacturer's plants.

Sector EPD

Declaration of a specific product as an average from several manufacturers' plants Declaration of an average product as an average from several manufacturers' plants

Similar products included in average EPDs should not differ in their environmental impact indicators by more than $\pm 10\%$. Where larger impact differences are found for the companies/sites and/or products evaluated, these need to be justified in the project report or the system separated, or separately report the results of each product.

5.2 EPD modules

According to EN15804+A2, construction products and materials shall declare modules **A1-A3, modules C1-C4 and module D**. Only in the case that products fulfill all three following conditions shall be permitted to be exempt from this module requirement:

- ◆ the product or material is physically integrated with other products during installation so they cannot be physically separated from them at end of life;
- ◆ and the product or material is no longer identifiable at end of life as a result of a physical or chemical transformation process;
- ◆ and the product or material does not contain biogenic carbon, which suggest any product containing biogenic carbon shall include declaration of modules C1 – C4 and module D.

Life cycle stages indicated in EPDs can be concluded as follows (see Appendix B):

cradle to gate with modules C1–C4 and module D (A1–A3, C and D). These stages are the minimum to be declared for the default type of EPD. They shall be based on a declared unit;

cradle to gate with options, modules C1–C4, and module D (A1–A3, C, D and additional modules. The additional modules may be A4 and/or A5 and/or B1–B7). This type of EPD shall be based on a functional unit or declared unit. If B-modules and use scenarios are not declared the EPD shall be based on a declared unit;

cradle to grave and module D (A, B, C and D). This declaration shall be based on a functional unit or declared unit;

cradle to gate (A1–A3). These stages are the minimum to be declared for all construction products that are exempt from declaring modules C and D and shall be based on a declared unit. This type of EPD is not allowed for products containing biogenic carbon;

cradle to gate with options (A1–A3 and additional modules. The additional modules may be A4 and/or A5). This type of EPD is only possible for construction products that are exempt from declaring modules C and D. This type of EPD shall be based on a functional unit or declared unit. This type of EPD is not allowed for products containing biogenic carbon.



5.3 EPD content

The content of an EPD report shall be structured to fulfill the requirements of the relevant PCR. It is recommended to use the EPD China platform to carry out the LCA study and compile the EPD report. The platform will incorporate the corresponding report templates based on the PCR requirements of different product categories. The EPD developer will be able to generate the EPD report on the EPD China platform after correctly inputting product-related information. An EPD report shall include the following information while details and instruction can be found within EPD China Programme template:

- Programme information
- General information
- Detailed product description
- LCA results
- Supplementary information
- References
- Annex



6. Verification

6.1 Verification principles

The process for verification and establishing the validity of an EPD shall be in accordance with EN ISO 14025 and ISO 21930. During the development of Type III environmental declaration programme, the rules for verification shall be set up in accordance with this International Standard and with ISO 14020 and the ISO 14040 series. The verification procedure shall be transparent and independent verifier shall generate a report documenting the verification process, while adhering to the data confidentiality rules.

6.2 Independence of verification

The independent verification procedure shall as a minimum be appropriate to determine whether the Type III environmental declaration is in conformance with

- ISO 14025 and the relevant requirements of this International Standard,
- general programme instructions
- current and relevant PCRs and EN 15804 is the core PCR for construction products

6.3 Verification process

Before October 2023, two types of verification can be found at EPD China Programme which includes accredited verification body verification by the approved institute verifier (hereby institute verification in short) and individual verifier' verification. Accredited institutes and approved individual verifiers will independently conduct the verification for without the direct involvement of EPD China secretary. On 1st November 2023, only approved institute verifier can conduct the verification of EPD China Programme This is due to the concern that EPD China can not fully guarantee whether the competent individual verifier has any business contracts with LCA practitioner or EPD Owner before or during the verification.

EPD verification is conducted by an approved institute verifier who meet requirements of independence and competence (section 6.4) . Only approved verification body can carry out verification of EPD China Programme. The current list of approved verification body is available at <http://www.epdchina.cn/>.

Important notes:

EPD owner or/and LCA practitioner can directly choose any approved verification body based on their preference. In the situation that EPD owner or/and LCA practitioner in the same organization with any approved verification body, EPD China secretary shall randomly appoint the other approved verification body to avoid potential interests and conflicts among verification bodies.

6.4 Independence and competence of approved verifiers

As the type III environmental labelling, the technical and managerial independence of the verifier from the LCA practitioner and the EPD owner shall be guaranteed. In order to fulfill the mandatory requirements of independent third party verification from ISO 14025, EPD China sets the following rules when supervising the verifying process:



The institute verifier shall not be the same organization as LCA practitioner and EPD owner;
The institute verifier shall not participate or be involve the LCA study of the EPD report;
Only approved institute verifier can conduct the verification of EPD China Programme This is due to the concern that EPD China can not fully guarantee weather the competent individual verifier has any other business contracts with LCA practitioner or/and EPD owner before or during the verification.

To avoid the financial pressure to verifier, the EPD Owner shall sign the contract and pay the verification fee to the approved verification body before the verification

The minimum requirements on verifier competence are as follows:

- In-depth understanding of the key review process of ISO/TS 14071 LCA and the competence of assessors, ISO 19011 Guidelines for Audit Management Systems;
- In-depth knowledge of LCA(ISO 14040 /14044) and EPD (ISO 14020 and ISO 14025);
- Understand the overall regulatory framework on which the EPD concept is based (refer to the requirements of EPD China's GPI verification rules);
- At least five years of documented experience as a practitioner and/or reviewer in the field of LCA and EPD;
- At least three LCA/EPD review projects that they have be participated.
- If verifiers have participated in training courses organized by the EPD China and pass the examination, the requirements for LCA/EPD review projects will be reduced to 2;
- In addition to these requirements,English proficiency, verifier skills, regular verification, and certification experience recognized by other institutions or countries are also an advantage, but they are not mandatory requirements;
- In addition to the competence requirements to become an approved verifier, the verifier should also ensure that they understand the product types, industries and related product standards and their geographic scope covered by the EPD in each verification task before performing the verification task.



7. Mutual recognition with other programme operators

With the purpose of promoting the cooperation and communication with other EPD programme operators, EPD China strives to cooperate with other EPD programme operators. A mutual recognition agreement (MRA) is a bilateral agreement between two EPD operators that provides an assurance that EPD operators recognize consistency between each other's policies and procedures. MRAs aim to:

- Enable greater efficiency by harmonizing PCRs (make better use of available PCRs and reduce the risk of PCR proliferation for the same product categories);
- Increase programme operating efficiency;
- Increased comparability and reliability of EPDs and footprints provided from different programmes;
- Encourage international harmonization, leading to a structured and cost-effective way of cooperation;
- Reduce the barriers of facilitating market access.

MRAs with other established programmes shall, when relevant, include:

- Alignment of GPIs
- Appropriate level of compatibility and consistency required between EPD programmes (e.g. equivalent or identical)
- Scope of EPD, footprint, and PCR recognition and additional requirements, if needed
- Procedures for harmonization of PCRs and PCR development,
- Equivalence of data quality and integrity of data used in EPDs and footprints
- Alignment of verification and quality assurance procedures
- Procedures for registration and publication, including additional requirements if specified in an MRA
- Procedures to ensure that the conditions for the mutual recognition are kept valid (e.g. monitoring procedures) icensing fee structures

EPDs published by EPD program operators who have signed an MRA with EPD China may be registered simultaneously under the EPD China programme if all requirements are met according to the MRA, and any relevant fees are paid between parties.

An MRA does not necessarily mean that the information contained within different programme EPDs is comparable, given EPDs from different programmes may not be comparable.

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

A list of current EPD program operators with signed MRAs with EPD China is available at the EPD China website: www.epdchina.cn.

MRA shall follow requirements below:

- ISO 14029 "Mutual recognition agreements between Type III Environmental Declaration (EPD) Programme Operators — Principles and procedures" (in development as of October 8, 2021)
- ISO/TC 207/SC 3 N 665, ISO/NP TS 24375 Mutual recognition agreements between Type III Environmental Declaration (EPD) Programme Operators -- Principles and procedures.



8. Tools for generating EPDs

There is no doubt for the application of current main stream LCA software for the LCA study and modelling. While the EPD generator which can directly produce EPD report based on one/ more PCRs shall be verified and approved before listing on the EPD China website. The verification requirements for the EPD reports produced by EPD generator shall follow the same strict rules (see section 6).

The procedure for verifying the new EPD generator follows ECO Platform requirements on automated software systems (tools) for generating and verifying EPDs.

The verification for the EPD generator includes the compliance of GPIs and defined PCRs, methodology options for analysis, calculated results, and included databases for use. EPD China secretary will assign auditor(s) for the technical committee to be responsible for the verification of EPD generator and following documents are suggested to be prepared in advance:

- Applicability in terms of PCRs and products;
- Description of how goals, assumption, allocation, and calculation etc is identified
- Documentation of database, data source, data quality, and data security for users;
- Documentation of methodologies for LCA study;
- Software copyright;
- Output of results tables;
- Additional information which is not included above.

The approved EPD tools shall be announced and be available at EPD China website after the tool verification is completed and approved by the auditor(s). EPD China Secretary shall inform the owner of the approved EPD generator changes in the GPI, PCR for tool updates timely.



ECO EPD Programme Operators and ECO Platform announcement

Being one of ECO EPD Programme Operators under the ECO Platform, EPD China shall follow the same principles and verification guidelines and be audited regularly to ensure the compliance of its Programme with the common ECO Platform quality requirements.

ECO Platform decided on 19 January 2023 that Mass Balance Approaches(MBA) shall not be used in any ECO EPD. Mass Balance Approaches also applies to the allocation of Guarantee of Origin to products using a MBA and to output flows with specified characteristics was made by the ECO Platform Board on 19th October 2023. Please check the full statement at ECO Platform website.



References

- [1] CEN EN 15804, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.
- [2] EN 15804, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.
- [3] EPD China (2021) General Programme Instructions for the EPD China. Version 1.0, dated 2021-03-29.
- [4] ISO 14001, Environmental management systems – Requirements with guidance for use.
- [5] ISO 14020, Environmental labels and declarations – General principles.
- [6] ISO 14021, Environmental labels and declarations - Self-declared environmental claim (Type II environmental labelling).
- [7] ISO 14024, Environmental labels and declaration – Type I environmental labelling – Principles and procedures.
- [8] ISO 14025, Environmental labels and declarations – Type III environmental declarations – Principles and procedures.
- [9] ISO 14026, Environmental labels and declarations — Principles, requirements, and guidelines for communication of footprint information
- [10] ISO 14027, Environmental labels and declarations — Development of product category rules
- [11] ISO 14029, Environmental statements and programmes for products — Mutual recognition of environmental product declarations (EPDs) and footprint communication programmes
- [12] ISO 8601, Data elements and interchange formats – Information interchange – Representation of dates and times.
- [13] ISO 14040, Environmental management – Life cycle assessment – Principles and framework.
- [14] ISO 14044, Environmental management – Life cycle assessment – Requirements and guidelines.
- [15] ISO 14046, Environmental management – Water footprint – Principles, requirements and guidelines.
- [16] ISO/TS 14067, Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication.
- [17] ISO 9001, Quality management systems – Requirements.
- [18] ISO 21067-1, Packaging – Vocabulary – Part 1: General terms.
- [19] ISO 21930, Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services.
- [20] EN 15942: 2021 Sustainability of construction works - Environmental product declarations - Communication format business-to-business.



Appendix

Appendix A

Appendix A describes the general application of LCA methodology under the EPD China framework. These rules follow the international standards ISO 14040/14044 with intended use in an EPD.

The LCA methodology consists of:

- Goal and Scope (including functional/declared unit and other assumptions needed indicators for LCA calculation)
- System boundary (including system boundary diagram and life cycle stages)
- Key assumptions
- Excluded processes
- Cut-off rules
- Data quality assessment
- Life cycle impact categories
- LCI analysis and LCIA
- Results interpretation

The following international standards shall be used for data collection:

- ISO 14040: Environmental management – Life cycle assessment – Principles and framework
- ISO 14044: Environmental management – Life cycle assessment – Requirements and guidelines

In addition to the standards above, the requirements of the EPD China's GPI and the requirements given in the relevant PCR shall be met.

Appendix B

Appendix B cites the figure on types of EPD with respect to life cycle stages covered and life cycle stages and modules for the construction works assessment in EN15804.

CONSTRUCTION WORKS ASSESMENT INFORMATION																		
CONSTRUCTION WORKS LIFE CYCLE INFORMATION														SUPPLEMENTARY INFORMATION BEYOND CONSTRUCTION WORKS LIFE CYCLE				
A1 - A3			A4 - A5		B1 - B7							C1 - C4				D		
PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
Raw material supply	Transport	Manufacturing	Transport	Construction - Installation process	Use	Maintenance	Repair	Replacement ¹	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, recovery, recycling, potential		
scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario	scenario		
Mand.	Mand.	Mand.										Mand.	Mand.	Mand.	Mand.	Mandatory		
Mand.	Mand.	Mand.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Mand.	Mand.	Mand.	Mand.	Mandatory		
Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mand.	Mandatory		
Mand.	Mand.	Mand.																
Mand.	Mand.	Mand.	Opt.	Opt.														