THE INTERNATIONAL EPD COOPERATION (IEC)

EPD®

GENERAL PROGRAMME INSTRUCTIONS

FOR ENVIRONMENTAL PRODUCT DECLARATIONS, EPD

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This part of the documentation to the International EPD®system deals with work to be carried out by organisations developing PCRs, creating EPDs, review PCR documents and verify EPDs and is separated into four chapters.

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1 PROGRAMME ORGANISATION

1.1 OBJECTIVES

The main objective with the international EPD®system is to support organisations in any country to disseminate verified product-related information for a number of market applications. In doing this, the international EPD®system can be regarded as a supplement to existing national EPD programmes in a cooperative and coordinating effort to meet the need of those organisations wanting to make use of their EPDs on a global market. As EPDs from different EPD programmes in most cases may not be comparable, an important aspect of the international EPD®system is to offer general accepted programme requirements building on common and recognised LCA calculation rules for as many product categories as possible as well as to provide a uniform reporting format. Another very important aspect of the international EPD®system is simplicity and practical usefulness still complying with the requirements in ISO 14025.

As EPDs from different programmes may not be comparable, ISO 14025 recommends programme operators to facilitate harmonisation when developing the Product Category Rules (PCR). This is of vital importance to avoid creating trade obstacles. As the international EPD®system is meant to provide a tool for relevant and credible product-related environmental information around the world, it has two principal objectives in this context, as presented below:

The international EPD®system has, as a main objective, the ambition to help and support organisations to communicate the environmental performance of their products (goods and services) in a credible and understandable way by

- offering a complete programme for any interested organisation in any country to develop and communicate EPDs according to ISO 14025, and
- to support other EPD programmes (i.e. national, sectorial etc.) in seeking cooperation and harmonisation and helping organisations to broaden the use of their EPDS on an international market.

The international EPD®system is a member of the Global Type III Environmental Product Declarations Network (GEDnet) and cooperate to achieve the GEDnet objectives.

1.2 ORGANISATIONAL STRUCTURE

The international EPD®system builds on an organisational structure including several parties at selected levels in different countries all having separate and mutual interrelated tasks and responsibilities divided into three different types of work.

For the EPD system administration

The *International EPD Consortium (IEC)* acting as the Programme Operator having a *Steering Committee (SC)*, a *Technical Committee (TC)* also serving as the PCR review panel, and a *Secretariat* for handling routine administrative work.

For PCR development

A *PCR Moderator* coordinating the work of *LCA/PCR experts* and *the Product Category Stakeholder Consultation Group.*

For EPD verification

Bodies checking the competence requirements of verifiers/organisations, verifiers and the organisations creating EPDs.

A flowchart over the organisational structure based into these three types of work is given below in Fig. 1.1.

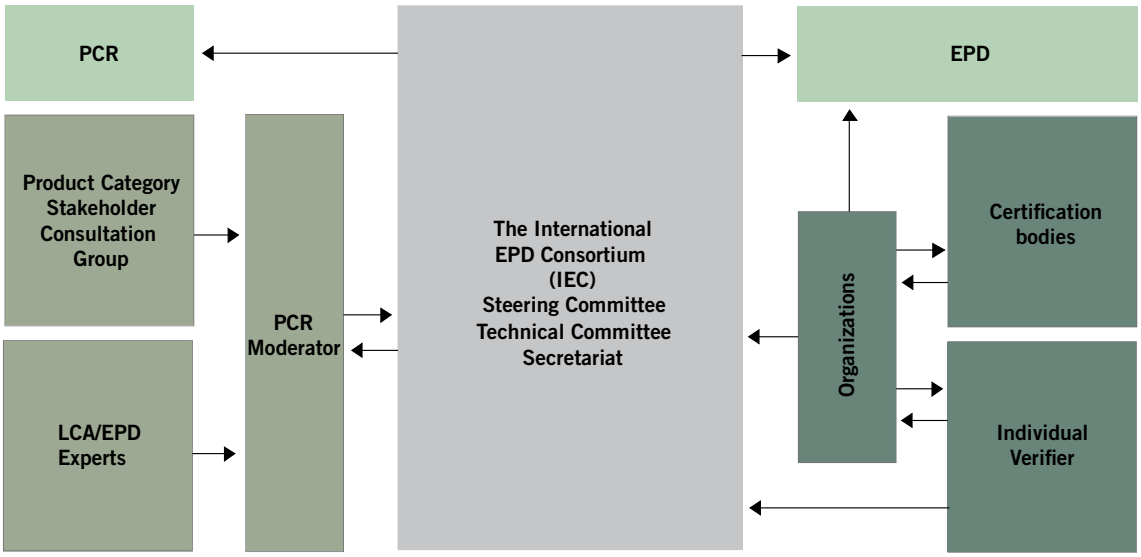

Fig. 1.1 Flowchart over the organisational structure of the international EPD®system indicating the activities related to EPD system administration (grey box), PCR development (light green boxes) and EPD verification (dark green boxes).

A summary of the duties and activities for the various parties involved in PCR development and EPD verification are given below with cross-references where to find more detailed information.

1.2.1 THE INTERNATIONAL EPD CONSORTIUM (IEC)

The International EPD Consortium is a non-profit global organisation acting as a network for the parties interested in joining the activities. The IEC acts as the Programme Operator and has the overall responsibility of the international EPD®system.

According to ISO 14025, an EPD programme operator has a number of mandatory obligations when fulfilling the duties to manage the international EPD®system. These duties will be divided by the SC, the TC and a Secretariat, which is further described below.

The International EPD Consortium is constituted of *permanent members* and *associate members*. Permanent members are organizations or association that are interested in development and diffusion of EPDs, while associate members are other interested parties stakeholders interest or having in-depth and valuable knowledge of PCR- and LCA- related matters.

All permanent members are allowed to nominate individuals to act as representatives of the Steering Committee (SC). At the onset of the activities of the IEC, it should be possible for permanent members to nominate more than one person to the SC. Depending of the ability of the IEC to cover a broad range of countries a future scenario might be to restrict the number of individuals in the SC.

Permanent and associate members may also appoint individuals to act as representatives of the Technical Committee (TC).

1.2.2 THE STEERING COMMITTEE (SC)

The SC shall be in charge of and assist the Secretariat in the overall management of the international EPD®system in order:

- to support the work to prepare the General Programme Instructions as well as in activities to revise and update the programme,
- to appoint members of the TC,
- to consider new potential audience and applications EPDs, and
- to follow the market acceptance and uptake of the programme and suggest activities aimed at promoting the establishment of the system.

The SC can decide to place additional selected activities to be carried out by the Secretariat.

1.2.3 THE TECHNICAL COMMITTEE (TC)

The TC shall consist of a fairly small group of LCA/EPD experts (3-5 people) to assist the SC and Secretariat in order:

- to act as the PCR review panel for considering and approving PCR proposals,
- to suggest measures for further development of technical and LCA-oriented issues within the framework of the programme, and
- to consider applications and appoint LCA/PCR experts to act as external verifiers and suggest measures for the surveillance of their competences.

1.3 ADMINISTRATIVE WORK BY THE IEC PROGRAMME OPERATOR

The IEC programme operator has a *Secretariat* for the overall management of the international EPD®system in order:

- to prepare and communicate the General Programme Instructions,
- to ensure that the General Programme Instructions are followed,
- to ensure appropriate consultations for maintaining credibility of the programme,
- to facilitate participation and involvement of interested parties,

- to ensure a credible procedure to safeguard the consistency of data handling,
- to guide the development of the PCR documents,
- to establish a transparent procedure for the definition of product categories,
- to establish an accepted open consultation procedure for the programme structure and the Product Category Rules, PCRs,
- to facilitate harmonisation when developing PCRs,
- to ensure the consistency of transparent verification procedures for PCR review, verification of LCA and verification of EPDs,
- to guide an organisation in the selection procedure of competent independent verifiers (if requested) and appoint PCR review panel members,
- to define additional tasks for the PCR review procedure and for the external individual verifiers (if found necessary),
- to decide upon the necessity to use third-party verifications (specifically in the case of "business-to-consumer communication),
- to guide the Secretariat whether to accept an EPD for publication based on the verification report,
- to make publicly available lists and records of PCRs and EPDs within the programme,
- to monitor changes in procedures and documents and modify the programme and programme instructions if necessary,
- to publish all PCRs and EPDs registered in the programme,
- to issue an *"International EPD Newsletter"* on a regular basis,
- to make publicly available explanatory materials,
- to establish procedures to avoid misuse of the programme and information in the EPDs, and
- to carry out a procedure for updating and publishing existing EPDs.

1.3.1 EXAMINATION/APPROVAL OF EXTERNAL INDIVIDUAL VERIFIERS

The international EPD®system accepts individual LCA/EPD experts to act as external verifiers. It offers a procedure for examining/approval of these experts following the rationale of ISO/IEC Guide 65 specifically securing their independence.

For the evaluation procedure, the verifier shall provide the programme operator with an application, which is available at the website www.environdec.com. The evaluation of the credentials of the applicant is carried out by the programme operator supported by the TC.

The application form includes the following information to be provided:

- a CV stating compliance with the prescribed qualifications detailed in Chapter 4.6.5,
- experiences in the field of LCA/EPD,
- assignments of similar tasks of verification of LCA an EPD(if existing),
- information indicating independence of potential verification tasks, and
- relevant references, as appropriate.

In connection to the evaluation of the competence and qualification criteria of individual verifiers Sample checks may be carried out randomly to review the verifier´s work at site. A list of experts approved to act as verifiers to the international EPD®system will be maintained and made publicly available by the programme operator on the website www.environdec.com.

For more information – see Chapter 4.8.2.

1.3.2 PCR AND EPD REGISTRATION AND PUBLICATION

The programme operator shall publish a list of approved PCRs, in order to make them available to all interested parties, together with complementary information about the parties involved in developing the PCR and contact details of the PCR moderator on a so-called *PCR Data Sheet*. During the gradual build-up of PCR modules of general use based on the CPC classification system, the Secretariat shall duly inform about the status of these modules and the way they can be used as already accepted inputs to PCR documents for specific products.

The Secretariat shall register and publish approved EPDs on the international EPD website supplemented with complementary information about the organisation and the overall management work, contact details of reference persons etc. to be included on a so-called *EPD Data Sheet* and keep this information continuously updated in a list of all registered EPDs. The documents shall be available in English and other languages if the organisations so wish.

Additional to the list of registered EPDs, the Secretariat shall also keep a list of EPDs withdrawn from the official EPD register, however, not publicly available. Withdrawn EPDs can be made available upon request, provided the acceptance by the organisation having the EPD.

EPD validity

The validity of EPDs can vary dependent if they are internally or externally verified and the accuracy of existing surveillance and follow-up routines in an agreement with the verifier. The validity period can either be specified according to:

- a pre-set time period, usually a period of three years in the case of external verification, or
- pending as a result of the internal verification as a part of the EPD process certification

It is important to simplify the validation maintenance procedure. In most cases the validity of the EPD can preferably be adjusted to the time period(s) for verification of existing management systems, but should also reflect the dynamics of the analysed product systems and its industry, resulting in shorter or longer validity. Advising about the EPD validity should be a part of the work developing the reference PCR document. For details about the validity of PCR documents, see Chapter 2.5.4.

1.3.3 THE EPD® LOGOTYPE

As EPDs from different programmes may not be comparable, it is important for the market to be able to identify which programme an EPD belongs to. The organisations having registered EPDs in the international EPD®system therefore has to carry the official EPD logotype. The logotype for the international EPD®system is the following:

Note: Information about where to find more information shall be added in close connection to the EPD®logotype in the form of the following text: *www.environdec.com/Reg No xxxx*

The EPD logotype is meant to provide added market value for the organisations having an EPD by means of being generally recognised for providing verified, factual-based and relevant environmental product information by using it in connection with e.g. advertisement, on products and on packaging material. If the organisation has an environmental management system (EMS) according to standards or a less formal EMS, information acknowledging this can be added underneath the logotype.

Using the logotype separately with no other information is only allowed on official documents prepared within the framework of the international EPD®system, such as on PCR or guidance documents. Other ways of using the logotype separately can 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 on 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.

The Secretariat shall provide the rules to follow that regulates the rights and the terms that shall apply for using the logotype and information. These rules also contain provisions concerning possible withdrawal of the right to use the logotype in case of misuse.

For examples of the use of the EPD logo, see Annex E: Guidance on communicating EPD information.

1.3.4 COST AND FEES

There is fee a structure connected to the registration and publication of approved EPDs within the framework of the international EPD®system including a registration (as a once-and-for-all cost) and an annual fee. The fees are intended to cover the costs for managing the international EPD®system including the global marketing of organisations having EPDs. The fees also cover the costs for the Secretariat to correct and amend information in the published EPDs at any time, if requested.

The international EPD®system includeds a “price mechanism” reducing the costs for those organisations wanting to register several EPDs as well as for SME´s.

1.4 1.4 PCR DEVELOPMENT

The development of PCR documents involves work by a *PCR Moderator* coordinating the work of *LCA/PCR experts* and *the Product Category Stakeholder Consultation Group.*

1.4.1 PCR MODERATOR

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

- to invite LCA/PCR experts (see below 1.4.2) to take part in the development of PCR documents,

- to be responsible for the overall drafting of the PCR proposals,
- to help in appointing a Product Category Stakeholder Consultation Group (se below 1.4.3),
- to take actions to guide people in the open consultation process via the Global PCR Forum,
- to collect comments,
- to revise the PCR document according to the comments received,
- to draft the final PCR proposal,
- to alert all people being involved in the process about the final outcome of the work and publication of the document on the international EPD website, and
- to maintain 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.

For more information, see Chapter 2.5.1 – 2.5.5.

1.4.2 LCA/PCR EXPERTS

All interested parties taking part of the work to develop PCR, both companies and organisations. Typically LCA/EPD experts contribute in the process of the PCR development with their knowledge and expertise in business sector of relevance for the PCR category under study. This might include technical input to the LCA-based information as well as views on the proper way of presenting the results in the EPD.

For more information, see Chapter 2.5.

1.4.3 THE PRODUCT CATEGORY STAKEHOLDER CONSULTATION GROUP

The Product Category Consultation Group are expected to respond and comment on the PCR proposals sent to them for review. The members should be selected to representatively cover knowledge and skills in different sectors of society both nationally and internationally relevant for the PCR under development.

For more information, see Chapter 2.5.3.

1.5 EPD VERIFICATION

The EPD verification work involves bodies checking the competence requirements of verifiers/organisations, verifiers and the organisations creating EPDs.

1.5.1 BODIES CHECKING THE COMPETENCE REQUIREMENTS OF VERIFIERS/ORGANISATIONS

Examining the compliance of external verifiers with the prescribed competence requirements as well as carrying out supervisions of verifiers are vital parts in an EPD programme for raising and maintain market acceptance of EPDs. In the international EPD®system, there are two possibilities to fulfil these tasks:

- to be carried out by organisations officially appointed to act as so-called accreditation bodies, which are valid in cases of *external verification*, where the verifier is a

certification body, and in the case of *internal verification* where the verification procedure is carried out by an organisation having an “EPD process certification”.

- to be carried out under the auspices of the programme operator, which is valid in the case of *external verification* of individual LCA/PCR experts.

For more information, see Chapter 4.8.2.

1.5.2 INDEPENDENT VERIFIERS

Independent verifiers shall review EPDs from different viewpoints including:

- the underlying data used for the LCA calculations,
- the way the LCA-based calculations has been carried and their compliance with the calculation rules set up in the PCR,
- the presentation of environmental performance in the declaration,
- any other additional environmental information included in the declaration, and
- document the review and positions taken in a verification report.

For more information, see Chapter 4.4 – 4.6.

1.5.3 ORGANISATIONS CREATING EPDS

Organisations creating EPDs for registration and publication shall carry out the following tasks:

- to collect LCA-based information and other relevant additional environmental information to be included in the EPD according to the instructions in the relevant PCR document,
- to convert input data into the prescribed information to be included in an EPD,
- to have the EPD examined by an independent verifier (not applicable if the organisation has an EPD process certification),
- to carry out routine work to follow-up the accuracy of the information in the EPD and to report to the verifier in case of significant changes in the input data occur causing a need for modifying the information in the EPDs when found necessary (not applicable if the organisation has an EPD process certification when it is supposed to handle such a situation on a regular basis), and to
- provide the programme operator with relevant associated information and the EPD to be published on the EPD website.

For more information, see Chapter 4.4.

2 DEVELOPMENT OF PRODUCT CATEGORY RULES, PCR

2.1 INTRODUCTION

To be able to fulfil high market expectations for a number of practical applications, EPDs have to meet and comply with specific and strict methodological prerequisites. These expectations include the possibility to add up LCA-based information in the supply chain and to compare different EPDs. To achieve this goal, common and harmonised calculation rules have to be established to ensure that similar procedures are used when creating EPDs.

However, groups of products, usually differ in their inherent environmental performance requiring specific rules to the product group, so-called Product Category Rules (PCR), to be developed. The PCR documents shall be regarded as complementary to the General Programme Instructions and LCA calculation rules of the international EPD®system. For more information about the hierarchy of documents to follow for the international EPD®system, see Introduction, Chapter I.1).

Trade of products and services often extends national borders which call for a need to harmonise the PCR documents being prepared in various countries by different companies and branch organisations as well as independent bodies operating or implementing EPD programmes.

2.2 PCR DEFINITION

It is important to establish a market-accepted, pragmatic and transparent procedure for identifying and defining product categories into a useful PCR structure. To meet these demands the international EPD®system introduces the so-called *PCR Module Initiative* (PMI) based on an UN-based scheme for statistical division of product categories and service types referred to as CPC (*Central Product Classification*).

A description of the CPC scheme and motives for its specific usefulness in the LCA-based approach characterising any EPD programme are given in Annex C: PMI – A classification scheme for product categories - indicating its relationship to other types of classification schemes. It is fully possible to relate a product classification according to the CPC scheme to any other existing classification scheme. It is especially important to make a comparison with the CPV nomenclature (more closely related to the industrial activity classification) in case of the EPD being used for purchasing to follow general rules in the European Union for advertising tender documents in upcoming public purchasing over the threshold values. A table of comparisons between the structure of the CPC scheme with other classification schemes are presented on the international EPD website – www.environdec.com.

Following the CPC scheme for giving the PCR work a clear and logical structure easy to communicate, the PCR documents will be based on separate “information modules” (as advocated in ISO 14025) to supplement other modules building up a logical PCR structure. A PCR structure following the CPC scheme can be used to clearly specify what type of data quality criteria to fulfil for each information module. It also will give clear instructions about which product groups or system boundaries to choose in upcoming PCR development work. The CPC scheme will also help in separating the type of general PCR rules that are valid for

many similar types of products and, hence, could be included in the overall PCR rules for a cluster of products with the same origin.

A tailor-made PCR structure to suit the specific needs of EPD has a great influence on the PCR management as a whole and will substantially contribute to facilitate the workload and associated costs for developing PCR documents. Hence, the PMI concept is a key element in the international EPD®system and has the following main advantages:

- It results in a clear definition of information modules after an international recognised division of industry sectors, enabling the separation of “responsibilities of PCR work” between different sectors as well as a base for specifying data quality requirements in other parts (upstream and downstream) of the products life cycle
- LCA calculation rules can be described on different hierarchic levels within one specific information module. Even if a PCR document refers to a “small” product, the calculation rules can, in a stringent way, be defined for a much “broader” product group. As long as the PCR document clearly describes the relevant calculation rules (linked to a well-defined CPC code) some of these can also be valid for fairly similar products
- An accepted and general applicable PCR structure based on CPC codes will give clear indications about what type of product categories or system boundaries to recommend for upcoming PCR work
- The overarching structure referring to a “core information module” for gate-to-gate conditions, i.e. the manufacturing processes, as the basic foundation of a PCR document could well support the development of an upcoming SME-oriented staged approach for EPD work

2.3 CONTENT OF PCR DOCUMENTS

The PCR shall define the criteria according to assigning a product to a specific category, which parameters are set out to prepare the EPDs, the data quality requirements and the collection and calculation rules for data to be included in the EPD, as well as what kind of information suitable to convey to the primary audience of the EPD.

The PCR document shall include:

- Product category definition and description (e.g. function, technical performance and use)
- Goal and scope of the PCR(e.g. functional unit/declared unit, system boundaries, description of data and data quality, cut-off rules and units to be used)
- Materials and substances to be declared in a content declaration
- Inventory analysis results (e.g. data collection and calculation procedures, and allocation of material flows and releases)
- Pre-determined parameters for reporting LCA data (e.g. inventory data categories and impact category indicators), as appropriate
- Impact category selection and calculation rules, if applied
- Description of the type of information to be included for the downstream processes, i.e. the use and end-of-life stages
- Rules for provision of additional environmental information
- Instructions for converting the background data for the EPD format

- Instructions of the content and format of the EPD
- Information if life cycle stages are not considered and omitted in the EPD, if appropriate
- Validity of the document

If any of these issues are not considered, this shall be justified.

It might be useful to add information about possible benchmarks, whether they are available, to which the EPD results can be evaluated.

LCA studies usually includes a so-called life cycle interpretation, to describe the final phase in which the inventory analysis and the impact assessment are summarized and discussed as a basis for conclusions, recommendations and decision-making in accordance with the goal and scope definition. Typically most of these considerations are being handled within the PCR work.

A more detailed description of the content of PCR documents is given in Annex D: Guidance on developing PCR documents.

2.4 INTERNATIONAL DIMENSION

EPDs are meant to serve the business sector with means for a broad communication about the environmental performance of products and services on an international market. As a consequence, the new potential market applications related to EPD have lead to an increased interest among various stakeholders in many countries to take part in the work related to the PCR development. The ambition is to make the PCR documents as internationally applicable as possible, thereby avoiding unnecessary trade implications.

The ISO 14025 states that harmonisation particularly of the Product Category Rules should be strengthened between different programmes to meet the principle of comparability and to enable the possibility to add up information in the supply chain. Programme operators are therefore encouraged to work cooperatively to achieve harmonisation of the programmes. Following this, ISO 14025 strongly recommends programme operators to consider readily available PCR documents in the same product category and in the appropriate market area when developing their PCRs.

The Global PCR Forum introduces the possibility to secure an open internet-based international participatory process enabling all interested parties and stakeholders to give comments on proposals for PCR documents. The overall purposes of the Global PCR Forum are to:

- be used as a marketplace for an open and transparent communication and dialogue to take place between PCR stakeholders on any issue related to PCR in general,
- enable questions and answers on any relevant PCR area to be addressed to those parties responsible for the PCR development and to
- offer the possibility to comment on any PCR document open for consultation before approval.

Another important purpose of the Global PCR Forum is to enable any interested party to easily follow the answers and comments given to PCR documents under consultation or direct questions posed to the PCR moderators or programme operators during the consultation process.

As an element to secure a proper handling of the Global PCR Forum, any person wanting to give comments has to register indication name, country, organisation and E-mail address.

Following registration the person will automatically receive its individual username and password to be used in the future as login information when revisiting the Global PCR Forum.

2.5 DEVELOPING A PCR DOCUMENT

PCR documents shall be developed in an internationally-accepted manner based on an open and participatory process either by:

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

Developing PCR is a procedure including a staged approach with the following elements:

- Initiation
- Preparation
- Consultation
- Approval and publication
- Updating

2.5.1 INITIATION

The initiation phase includes the following elements:

- Appoint a PCR moderator
- Consider available PCRs
- Seek cooperation with other parties
- Constitute the Product Category Stakeholder Consultation Group
- Announcement of the initiation of the PCR work on the international EPD website

Appoint a PCR moderator

There is a need to closer link external experts to help and support the programme operator in developing and updating PCR documents, as for the foreseeable future, there will be a number of countries with no national programmes running. Also the intended applicability of the international EPD®system on a global market might lead to a too high workload for programme operator in case PCR development has to be handled with limited external help.

The work to be carried out for the PCR development process needs strong coordination. Therefore, it is of vital importance that the work is led by a person familiar with the EPD approach as well as having the necessary basic LCA understanding. This work shall be carried out in close cooperation with the programme operator. To safeguard a successful outcome of the PCR development work, it is recommended to involve a so-called *PCR moderator* to actually take on the role as a leading person in the PCR preparation process. The official appointment of the PCR moderator could be done by the programme operator if

suitable competence and commitment to the tasks ahead is obvious in the contacts between the person involved in the PCR work and the programme operator. In case there is any doubt about the credentials of the person to be selected as the PCR moderator, the ITC could be involved in the designation of this leading person.

Among the tasks to undertake for the PCR moderator would be:

- to invite parties to take part in the development of PCR documents,
- to be responsible for the overall drafting the PCR proposal,
- to help in appointing a Product Category Stakeholder Consultation Group,
- to take actions to guide people in the open consultation process via the Global PCR Forum,
- to collect comments,
- to revise the document accordingly to the comments received,
- to draft the final PCR proposal,
- to alert all people being involved in the process about the final outcome of the work and the publication of the document on the international EPD website, and
- to maintain as the contact person during the time when the PCR document is being used on the market for e.g collecting suggestions for upcoming revisions (in case this is not duable, the PCR moderator is requested to suggest another person capable of taking over the duties).

It might be recommendable that the PCR moderator also can take on the task to review relevant scientific papers available or submitted during the consultation, as appropriate.

Consider available PCRs

Harmonisation of PCR documents is a cornerstone in the international EPD®system due to its international applicability. Therefore, the development of PCR for a product category should be done considering readily available PCR documents in the same product category and the appropriate market area, as advocated in ISO 14025. When starting up PCR work, it is therefore important as a first step to search for available PCR documents, which could be done by making use of the existing PCRs developed within the framework of the internaiona EPD®system. If a relevant PCR document already exists in another EPD programmeit is important to examine the basic LCA approach taken to find out if the degree of consistencies with the approach taken in the international EPD®system. As a general rule appropriate information from other PCR document should be used to the extent possible. If a PCR does not exist for the product category of interest, this has to be prepared and approved in accordance to the procedure for developing a PCR document within the framework of the international EPD®system.

The specific approach for structuring PCR documents taken in the international EPD®system based on the PMI-concept could lead to a staged approach in the development work. After the definition of the product category under study giving it the relevant CPC code, it might be possible to identify a PCR module at a lower more basic (e.g. on a two-digit level) already existing and valid. In such a situation the identified PCR module shall be used, resulting in less work and costs to develop the PCR.

Seek cooperation with other parties

Developing PCR documents should always be done as a co-operative effort including as many interested parties as possible, e.g. representatives different companies and branch organisations to ensure a broad acceptance and reproducibility of the calculation rules. In case of single companies initiating the work to develop PCR, it is especially important to seek co-operation with other parties that may be interested to participate in the work. This work can be supported by the programme operator.

Constitute the Product Category Stakeholder Consultation Group

The seeking of cooperation with other parties should be followed by an activity carried out jointly by the PCR moderator and the programme operator to form a core expert group - referred to as the *Product Category Stakeholder Consultation Group* - representing the product category and willing to help in the consultation process to provide comments etc. The constitution of such a group is of vital importance to meet the demands for open consultation on international premises. The programme operator has a special responsibility to ensure that relevant stakeholders are being contacted.

The establishment of the Product Category Stakeholder Consultation Groups should be followed by a special activity to those persons involved in the group directly contacting them via their E-mail informing them individually on activities related to the specific product category under study and the upcoming open consultation process. This arrangement will safeguard to alert people involved prior to the open consultation process is actually taking place as well as on any other activity on the *Global PCR Forum* related to the specific product category.

A list of persons included in the Product Category Stakeholder Consultation Group is intended to be given in the *PCR Data Sheets* with the possibility for other persons or organisations to join the group.

Announcement of the initiation of the PCR work on the international EPD website

When a decision is taken to start the work developing a PCR document, this shall be announced to the programme operator being responsible for handling such an announcement. The announcement may be accompanied by selected information of relevance for the PCR work. It is compulsory to indicate the PCR moderator to contact.

The programme operator will make information public available about the upcoming PCR work on the website (in the *PCR Data Sheet*) and in the searchable database. The immediate publication of a PCR document under preparation is important due to several reasons, e.g. to inform and engage interested parties to be involved in the work (which should be done by contacting the PCR moderator) and to avoid parallel work within the same product category in another EPD programme, if found relevant.

2.5.2 PREPARATION

The preparation phase includes the following elements:

- Identify the pre-set categories of parameters to be included in the EPD
- Specify the LCA-based content of the PCR document
- Select relevant additional environmental information

- Check consistency with the PCR Guide

Identify the pre-set categories of parameters in the EPD

The international EPD®system describes a minimum set of pre-set categories of parameters applicable to all product categories. These categories of parameters might be supplemented by other categories of parameters if found relevant to the product group under consideration. The complete set of pre-set categories of parameters may not therefore be identical for all product categories. Pre-set categories of parameters may also include other data not derived from the LCI/LCA-based calculations which are to be reported as additional environmental data.

Specify the LCA-based content of the PCR document

Most of the information included in an EPD is derived from LCA-based calculation. It is therefore important that a PCR document covers the relevant key LCA information, such as:

- Choice and definition of functional unit or declared unit
- Choice and description of system boundaries
- Choice of specific cut-off criteria
- Choice of allocation rules
- Choice of underlying data, to indicate specific and generic data used
- Choice of selected parameters for description of environmental performance (additional to the ones described to be included in the general format)
- The preparation of PCRs shall focus on these issues that are complementary to the General Programme Instructions and specific to the product category under study.

Select relevant additional environmental information

The EPD shall include, where relevant, additional information related to environmental issues e.g.:

- Data that is not part of the LCA study
- Information on existing management systems or other certification programmes applied to the product
- Information on preferred waste management options
- Information on activities related to Social Responsibility

Fore more information about issues to consider, see the Chapter 3.

Check consistency with the PCR Guide

It is important to find agreement on a conceptual form for information in a PCR document. A general accepted concept will prohibit too different lay-outs of PCR documents to appear on the market for the same product category thereby avoiding confusion on the market. It will also facilitate the work to prepare PCRs and speed up the process for administration and approval of PCR documents.

To be able to meet these demands special guidelines have been developed within the framework of the international EPD®system – see Annex D: Guide to develop PCR documents (under preparation).

2.5.3 CONSULTATION

All proposals for PCR documents developed must be subject to an open consultation procedure before officially being approved. The consultation phase includes the following elements:

- Identify the consultation parties to be involved
- Prepare the open consultation procedure
- Invite/alert people to take part in the open consultation
- Modify the draft PCR document according to comments received

The consultation approach of the international EPD®system will secure a fairly strict and generally-accepted procedure enabling all interested parties to interact. Probably the single most important work element is to identify the relevant parties to be involved in the consultation process so that they cover all principal stakeholders, which is suggested to be carried out as a cooperation between the PCR moderator and the programme operator in creating the Product Category Stakeholder Consultation Group.

The open consultation procedure is considered to be satisfactory in case the PCR work and the documents to comment on have been accurately notified to a Product Category Stakeholder Consultation Group consisting of persons/organisation sufficiently covering the industrial sector under study both on a national and regional basis. The procedure carried out shall guarantee credibility and easy to participate for any interested party, Hence, it has to be carried out in an transparent way giving anyone concerned easy access to information and documents to avoid criticism of being selective, non-understandable and difficult to join.

Identify the responsible parties to be involved

The following parties should be involved in the open consultation procedure:

- *Any interested part* asking specific questions about PCR or to comment on PCR document subject for open consultation
- *The Product Category Stakeholder Consultation Group* for covering and handling specific issues related to the relevant product category under study/discussion
- *The PCR moderator* responsible for administrating the comments received during the consultation phase. The PCR moderator may also continue selected duties later on when the PCR document is subject for update.
- *The programme operator* responsible for administrating the website and cover any activity related to the PCR development process during their approval, publication and updating phases.

Prepare the open consultation procedure

Open consultations should be carried out as an open internet-based participatory process making use of *the Global PCR Forum*. Open consultations can also, supplementary to this procedure, have the form of a public meeting.

An open internet-based consultation via The Global PCR Forum expands the possibility to broaden the participation of stakeholders from different parts of the world. The use of the Global PCR Forum also has the advantage that it facilitates participation from interested parties having difficulties to attend meetings, e.g. NGOs and environmental groups.

A public meeting provides the possibility for interested parties to actually meet and discuss the PCR proposal. It also gives the possibility for the company/branch organisation to early inform about upcoming EPDs to appear on the market.

A public announcement of the open consultation shall be presented on the international EPD website by the programme operator and preferably also by the parties preparing the PCR as appropriate. It is therefore important for the PCR moderator to be in close contact with the programme operator prior to the open consultation.

Invite/alert people to take part in the open consultation

Open consultation via the Global PCR Forum shall be carried out in cooperation between the PCR moderator and the programme to make the necessary preparations on the Internet. This cooperative effort involves:

- the preparation of the PCR proposal to be discussed,
- the launch of the document on the Global PCR Forum and
- direct contact with members of the Product Category Stakeholder Consultation Group with information that the PCR document is open for discussion and comments.

At the onset of the open consultation procedure all members of the Product Category Stakeholder Consultation Group may preferably receive a separate mail informing them about the upcoming consultation to take place with guidance on where to find the relevant document as well as information on how to respond and give comments via the Global PCR Forum. A deadline for the consultation period shall also be given.

It is the ambition of the international EPD®system to maintain contact with the members of the Product Category Stakeholder Consultation Group even after the consultation process in order to keep them informed about experiences and progress made by using the PCR in practise. This activity will hopefully motivate members of the Product Category Stakeholder Consultation Group to maintain as group members until a revision of the PCR is about to take place.

Open consultation via public meetings shall be arranged by the parties involved in the preparation of the PCR. Aspects to consider include:

- Invitations sent to representatives for authorities, branch- or interest organisations, companies and organisations relevant to the product or service and other parties with an interest to take part of the meeting including all relevant international parties
- Possibilities shall be given to provide written comments
- An overall and understandable 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 version of the PCR proposal

Modify the draft PCR document according to comments received

Following changes or amendments in the PCR proposal as a result of the open consultation procedure, the PCR moderator shall submit a final version of the PCR proposal to the TC acting as the PCR review panel for approval.

It is to prefer that the PCR moderator makes a short summary of the comments received and the resulting changes in the document and publishes it on the Global PCR Forum.

2.5.4 APPROVAL AND PUBLICATION

The approval and publication of PCR documents include the following elements:

- Finalisation of PCR proposal
- The PCR review procedure
- Disclosing open information about the approval of the PCR document
- Setting the validity of PCR documents

Finalisation of the PCR proposal

The PCR moderator is responsible for drafting the final PCR proposal taken into due consideration to the comments received during the open consultation procedure. A draft report shall be prepared including a short description of the open consultation process carried out, the parties participating in the consultation, the main comments received and how these have been handled. In case certain comments have not been considered, this has to be justified.

The PCR moderator shall inform about the finalisation of the PCR proposal via the Global PCR Forum and send the proposal and the associated PCR draft report to programme operator for review by the TC.

The PCR review procedure

The PCR review procedure is carried out by a panel associated to the international EPD®system called the *Technical Committee* (TC). The TC consists of selected persons knowledgeable in the field of LCA/PCR/EPD and working both in official organisations, companies and research organisations. The members of the TC and the acting chairperson are presented at the website to the international EPD®system.

The TC shall meet regularly to be able to efficiently carry out the review of proposed PCR documents. The review procedure can either lead to:

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

In case the TC gives comments on PCR proposals, it is the responsibility of the PCR moderator to follow up that these comments are considered in the preparation of the final version of the PCR document. In case the TC needs further clarifications or amendments to the text, the PCR moderator is responsible for providing the TC with a new version of the PCR document.

Disclosing open information about the approval of the PCR

As soon as the PCR document is approved, the programme operator shall publish it on the international EPD website with associated information presented in *the PCR Data Sheet* including general information about the scope of the PCR and CPC codes, registration identity, PCR moderator, participating partners in the preparatory work etc. together with the possibility to directly comment on the document via the Global PCR Forum. The comments and recommendations made by the ITC in the approval procedure of the PCR shall be publicly available upon request. The responsible parties may provide more detailed background materials and reports developed in the process of preparing the PCR document, if found relevant.

Validity of PCR documents

The validity of PCR documents is usually specified for a pre-determined period of time from the date of the approval. The validity is announced in the PCR Data Sheet. It is important that a PCR document has a validity time with a reasonable sufficient length to safeguard market stability.

A PCR document may consist of several PCR modules at different hierarchic levels according to the CPC classification scheme. The period of validity may differ between separate PCR modules due to the consistency over time with regard to the prescribed LCA calculations. The period of validity should preferably be linked to the hierarchic level of the PCR modules in the CPC classification scheme, where PCR modules on a lower digit level (being less product-specific) may be accurate for a longer time period. The period of validity shall be subject for a judgement of the consistency of the LCA calculation on a case-by-case basis with input from the PCR moderator and settled by the programme operator.

A reasonable average period of validity may be in the range of five years. When the validity time is about to expire the PCR moderator shall initiate a discussion with the programme operator how to proceed with extending the period of validity.

2.5.5 UPDATING

A PCR document is valid for a pre-determined period of time, whereafter the document shall be revisited in case there is a need for an update. An update prior the time of the official expiration of the PCR document could be initiated due to various reasons such as new LCA-based information generated in the relevant industry sector, special market demands not covered in the existing PCR document or comments received during the validity period of the document being of sufficient technical relevance.

It is important to simplify the procedure for updating a PCR document with the necessary involvement of interested parties. A reminder of the need for an eventual update of a PCR document may be indicated in the PCR Data Sheets. The updating phase includes the following elements:

- Possibilities to give comments on PCR documents
- Updating following comments received
- Prolonging the period of validity following no comments received

Possibilities to give comments on PCR documents

The predetermined validity time for PCR documents enables the possibility to prepare an eventual update of a PCR document at regular intervals. PCR documents can be reviewed whenever needed, provided significant and well-justified proposals for changes or amendments are presented. It is possible for any interested party to comment on the PCR document during the period when the document is in use. These comments will be filed and valuable as inputs when the PCR document is subject for an update.

Comments on the PCR documents can be provided either directly via the Global PCR Forum or from the PCR Data Sheets.

In case of any substantial and immediate change of the document is required, such a request can be sent to the programme operator. The request will be processed through the ITC, which will decide upon the urgency of the matter. In case the request is found appropriate, the programme will inform the PCR moderator and initiate the revision process.

Update following comments received

The PCR moderator shall be engaged in the updating of a PCR document and lead/supervise the revision process. In case no PCR moderator exists for the product category under study, the programme operator shall initiate the process also trying to engage another person to accept taking the role as PCR moderator.

The revision process should start well before the validity time for PCR document expires to give due time for announcing and collecting comments. An update of an existing PCR document usually takes less time compared with the preparation of the initial document.

The PCR moderator shall announce the updating process over the Global PCR Forum clearly indicating the time for providing comments. In case a Product Category Stakeholder Consultation Group exists, they shall be engaged in the work and informed about the possibility to give comments on the document.

Prolonging the period of validity following no comments received

In case no comments have been received on available PCR documents, the programme operator can prolong the validity of the document, providing there are good reasons for extending the validity of the document, e.g. by a special market request. In such a case, a less formal open consultation is to recommend for checking the accuracy of the document by means of consulting the parties initially engaged in the preparation of the original document or by involving the Product Category Stakeholder Consultation Group, if existent.

2.6 PRE-CERTIFICATION AS AN ELEMENT TO DEVELOP PCR DOCUMENTS

The international EPD®system includes so-called pre-certification of EPDs as an element in the process to develop PCR documents. A practical example of an EPD in the form of a pre-certification may facilitate the PCR development process in the discussions between parties involved in the work. Besides, the pre-certification gives an organisation the possibility to early inform the market about the environmental performance of their products.

For pre-certification the following specific requirements shall apply:

- The underlying LCA-data shall be collected and calculated in accordance with ISO 14040 and ISO 14044 and meeting the requirements set out in Section 1. Deviations from the general requirements shall be justified and stated in the pre-certified EPD
- The EPD format and contents shall comply with the requirements laid down in Chapter 3.6
- Examination and review of the results from the LCA study and the declaration shall be carried out by an external verifier
- Relevant parties, e.g. industrial associations and interest organisations, shall be informed about the pre-certification, if found appropriate

It is likely that data gaps exist in the underlying background information to EPDs subject to pre-certification. Somewhat lower demands on the accuracy of the input data in the supply chain are accepted, provided that the data gaps are insignificant related to the organisations activities that they have management control over. Existence of such data gaps shall be reported in the pre-certified EPD in the form of a qualitative assessment of the type of environmental impact that might occur from the activity lacking data.

The pre-certified EPD shall make use of the general recommended EPD format, as appropriate.

Pre-certified EPDs are valid for a specific period of time in most cases equivalent to the time needed to develop the PCR, which as a recommendation should not exceed one year. Deviations from this rule shall be justified.

3 DECLARATION REQUIREMENTS AND FORMAT

An EPD is an informative communication tool that organisations may use to disseminate information regarding the environmental performance of their products or services. EPDs are meant to communicate verified product-related information to a diverse group of audiences, being both related to business-to-business (B2B), business-to-public authorities (B2P) and business-to-consumers (B2C).

EPDs are primarily intended for use in B2B-communication, but it can effectively be used in B2P- and B2C-communication when the customer needs detailed and reliable environmental information on the supplied products and services, or even in environmental communication towards the stakeholders, if this is considered as a competitive opportunity. It is important to consider the information needs of different purchaser and user groups, such as large business, small and medium-sized enterprises and public procurement agencies. One of the main objectives of EPDs is to assist purchasers to make informed comparisons between products belonging in the same product category.

In order to ensure a common degree of homogeneity of contents and presentation of the EPDs, certain requirements for the reporting format have to be defined. However, due to specific needs of some organisations to their key audiences as well as for internal use in the organisation, a certain flexibility is allowed in the reporting format provided the EPDs still include the prescribed information.

The reporting format of an EPD shall include the following five parts:

1. Programme-related information
2. Product-related information
3. Environmental performance-related information
4. Additional environmental information
5. Mandatory statements

3.1 PROGRAMME-RELATED INFORMATION

The programme-related part of the EPD shall include:

- Name of the programme and programme operator
- The reference PCR document upon which the EPD is based identified according to CPC codes and other relevant codes as appropriate, e.g. the corresponding CPV code to be used for identifying the product within the framework of public procurement
- Registration number
- Date of publication and validity (preferably with a indication of the year(s) the LCA data represents)
- Geographical scope of application of the EPD if deviating from an international coverage
- Information about the year or reference period of the underlying data to the EPD
- Reference to relevant websites for more information

For sector EPDs specific indication shall be given upfront stating that the document covers average values for an entire product category and, hence, is not available for purchase on the market.

3.2 PRODUCT-RELATED INFORMATION

The product-related part of the EPD should include the following information:

- Trade name (if found relevant)
- Unequivocal identification of the product according to the CPC classification system
- Short description of the organisation, including information on products- or management system-related certifications (e.g. ISO Type I ecolables, ISO 9001- and 14001-certificates, EMAS-registrations etc.) and other relevant work the organisation wants to communicate (e.g. SA 18000, supply-chain management, social responsibility - SR etc.)
- Description of the intended use
- A technical description of the product in terms of functional characteristics, expected service life time etc.,
- The relevant functional unit or declared unit,
- Short description of the underlying LCA-based information (e.g. summary of an existing LCA study or similar studies), and
- A content declaration covering relevant materials and substances.

3.2.1 CONTENT DECLARATION

The content declaration should have the form of a list of materials and chemical substances relevant for the environmental issues covered in the declaration and based on their inherent and environmental 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 substances in quantitative terms e.g. related to their weight on their functional/declared unit or their percentage weight.

The content declaration does not apply to proprietary materials and substances such as those covered by exclusive legal rights including patent and trade marks. It may also not be appropriate for declarations concerning intangible products. As a general rule an indicating that a product is “free” of a specific hazardous material or substance should be done with caution and only when relevant (following the rules set in ISO 14021 on self-declared environmental claims).

Specifications used for listing the composition of materials and chemical substances usually have a regional application based on different types of legislation. As an example in the European Union the following recommendations are recommended to use:

- *Council Directive 67/548/EEC* of June 1967 on approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances;
- *Directive 1999/457 EEC* of the European Parliament and of the Council of 31 May 1999 concerning the approximation of laws, regulations and a approximation of laws,

regulations and administrative provisions of the Member States relating to the restriction on the marketing and use of certain dangerous substances and preparations.

If such specifications are not relevant or if the product is manufactured, traded and used in a specific region or part of the world where other rules are predominant, other specifications valid in countries outside Europe shall be referred to and justified.

3.3 ENVIRONMENTAL PERFORMANCE-RELATED INFORMATION

The environmental performance-related part of the EPD, representing the LCA-based information, shall include information about the use of resources, energy consumption, polluting emissions from the life cycle inventory work (if found relevant) and the resulting potential environmental impacts.

The more clear guidance of suitable information to include is a task associated with the work to prepare PCR, in case the information needed goes beyond the general requirement and format described below.

3.3.1 USE OF RESOURCES

The collected raw data for resource consumption from the life cycle inventory work should be reported under the following headings:

- Non-renewable resources
  - Material resources
  - Energy resources (used for energy conversion purposes)
- Renewable resources
  - Material resources
  - Energy resources (used for energy conversion purposes)
- Water use

All parameters for resource consumption shall not be aggregated but reported separately and expressed in g (or its multiples for a better understanding), with the exception of renewable energy resources used for the generation of hydroelectric, wind electricity and solar energy, which shall be expressed in MJ.

Water use may be expressed in litres.

Note: Resources which contribute for 5% or more of the total shall be listed and detailed for each category (renewable and non renewable, with and without energy content). Furthermore, the PCR can define other resources (for example rare materials originating from the LCI data) which may be listed and detailed in the EPD for each specific product category.

3.3.2 POTENTIAL ENVIRONMENTAL IMPACT

Different forms of resources use and pollutants emissions identified in the life cycle inventory work usually have different potential environmental impacts within so-called impact categories. The potential environmental impact can be calculated using characterisation methods that make it possible to associate the scale of a pollutant emission

to selected so-called characterisation/conversion factor. Based on this background data and conversion factors the associated environmental impact can be calculated. The recommended characterisation factors to use are presented in Annex B: Conversion and characterisation factors.

The potential environmental impacts associated with the various types of use of resources and pollutant emissions shall be reported into the following impact categories:

- Emission of greenhouse gases (expressed as the sum of global warming potential, GWP, 100 years, in CO_2 equivalents).
- Emission of ozone-depleting gases (expressed as the sum of ozone-depleting potential in CFC 11-equivalents, 20 years).
- Emission of acidifying gases (expressed as the sum of acidifying potential in mol H^+).
- Emission of gases that contribute to the creation of ground-level ozone (expressed as the sum of ozone-creating potential, ethene-equivalents).
- Emission of substances to water contributing to oxygen depletion (expressed as the sum of oxygen consumption potential in kg O_2).

Annex B describes other units for emission of acidifying gases (expressed as Acidification Potential (AP) in kg SO_2 eq; baseline) and emission of substances to water contributing to oxygen depletion (expressed as Eutrophication Potential (EP) in kg PO_4^{3-} eq, baseline). These units have a straight relationships to the ones indicated above and a transformation between the two can easily be done. The reason for the use of the units referenced above is that they represent actual impacts possible to be measure in the environment[1].

In order to better characterise the environmental performance of a product category, the relevant PCR may indicate the use of other categories of potential impacts, providing the general agreed-upon characterisation factors exist.

Format for presentation[2]

Presentation of this information shall separated for the following life cycle stages:

- upstream processes including raw material acquisition and refinement, and production of intermediate components,
- the manufacturing processes,
- downstream processes including the use stage and end-of-life stages/waste treatment

Information aggregated over life cycle stages or the entire life cycle can also be included if found relevant. The presentation shall have the form of illustrating the environmental profile including the five impact categories for each of the stages. It must be noted that such data for certain very specialised manufacturing processes might be controversial because it may indicate confidential information that an organisation do not want to make public, and if so, this has to be respected.

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[1] Note: The European Platform on LCA has an ongoing project for the definition of recommended LCIA framework, impacts and methods, due by mid-2008. These outcomes will result from a broad stakeholder consultation to ensure a general consensus among the LCA community on existing impact categories as well as for additional impact categories to be included in PCRs.

[2] It is important to pay due consideration to confidentiality principles when reporting the information separate for upstream processes and the manufacturing processes.

In specific cases, especially when the EPD is addressed to non-technical audiences, the relevant information can be better explained by adding explanatory comments in written or graphic form. Annex E: Guidance on communicating EPD information and Annex F: Guidance on interpreting EPD information are meant to help organisations and users on how to disseminate and make use of the information in the EPDs.

3.3.3 OTHER INDICATORS

The collected raw data from the life cycle inventory work can be used for a variety of information requirements and indicators, which shall be specified in the reference PCR document. The following indicators may be considered to report on[3]:

- Materials subject for recycling
- Waste generation (in kg) classified into hazardous and other wastes
- Emissions of particle matter of different particle size (PM unspecified in case of less detailed raw data)
- Electricity consumption during manufacturing[4] and use of goods or during service provision
- Land use (e.g. in m^2 or based on more specific definitions as types and quality)
- Toxic emissions

The reference PCR should be more specific in describing the methods to use for reporting on other indicators.

3.4 ADDITIONAL ENVIRONMENTAL INFORMATION

An EPD can contain additional environmental information not derived from the LCA-based calculations. The part of the EPD describing additional environmental information may include various issues e.g. on specific information about the use and end-of-life, which has a special value covering e.g.:

- instruction for a proper use of the product, e.g. to minimise the energy or water consumption or to improve the durability of the product,
- instructions for a proper maintenance and service of the product,
- information on key parts of the product determining its durability
- information on recycling including e.g suitable procedures for recycling the entire product or selected parts and the potential environmental benefits gained,

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[3] The selection of other indicators to include in an EPD has to take into consideration their relevance for the product category under study and the scope of the EPD, that they are not misleading with regard to the mandatory EPD information given and that they shall only apply to those life cycle stages where the information is appropriate. The final selection of recommended other indicators to report on will be done during the PCR development.

4 to be expressed as net consumption, as the energy carriers used for generation of electricity already have been described as non-renewable and renewable resources, with some exceptions for wind-generated and hydropower. The electricity consumption should therefore be described in two groups – electricity for which the consumption of energy carriers has been presented and electricity for which the consumption of energy carriers have not been presented.

- 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, and
- information regarding disposal of the product or inherent materials, and any other information considered necessary to minimise the product's end-of-life impacts.

It is recommended to add information enabling the possibility to make comparisons with sector benchmarks or, if not available, with benchmark of common products and services preferably based on the concept of functional/declared unit, which is useful for scaling the environmental impacts of different activities, products and services.

Additional environmental information can also include a more detailed description of an organisation´s overall environmental work (than indicated above under Chapter 3.2 Product-related information), 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 (SR) etc., and
- information on where interested parties may find more details about the organisation´s environmental work.

3.5 MANDATORY STATEMENTS

The EPD shall include the following information as mandatory, if relevant for the EPD:

- Any omission of life cycle stages not making the EPD cover the full life cycle with a justification of the omission
- Means of obtaining explanatory materials

The EPD shall include the following mandatory statement:

- "EPDs within the same product category but from different programmes may not be comparable"

The EPD shall also include information about the verification procedure practised inserted in the following box.

PCR review, was conducted by: **< name and organization of the chair, and information on how to contact the chair through the programme operator >**
Independent verification of the declaration and data, according to ISO 14025: □ **Internal** □ **External** □ **EPD process certification**
(Where appropriate)

Third party verifier:

<name of the third party verifier>

Accreditation number and body (if relevant):

The terms *internal*, *external* and *third party verifier* is described in Chapter 4.

3.6 INFORMATION RELATED TO PRE-CERTIFIED EPDS

The reporting format for a pre-certified EPD might preferably follow the same lay-out as for EPDs in general. However, a pre-certified EPDs must include key information about the LCA calculation rules that normally is described in a PCR document, due to the absence of a reference PCR. The following information is of special importance:

- Choice and definition of the functional unit
- Choice and description of system boundaries
- Cut off rules
- Allocation rules
- Data sources
- Any deviation from the general requirements regarding the use of specific and generic data.

Organisations having a pre-certified EPD shall ensure that this is clearly indicated upfront the EPD by using the special registration number.

3.7 POSSIBILITIES TO ADD CORRECTIONS/AMENDMENTS IN EXISTING DECLARATIONS

An organisation may want to correct or amend information in its EPD, whenever it finds it appropriate e.g. if input data change substantially affecting the results in the EPD. In such a case new inventories and calculations must be provided according to the recent information.

A requirement of this kind may occur, for example, in conjunction with improvements of the environmental performance of a product. In such a situation, the organisation shall initiate and have a special check being carried out by an independent verifier in order to examine the new information that has emerged. In case the organisation has an internal “EPD process certification” they are allowed to handle such corrections/amendments by themselves.

A notification of changes in the declaration shall be issued to the programme operator, together with a document stating conformance with relevant requirements from the verifier (if not the procedure of internal verification via the EPD process certification is practised). The organisation may want to give the revised EPD a special version number following the registration number to indicate the change in the declaration.

If an EPD is updated or the information changed in any way, the organisation is recommended to explain, in the revised EPD, the differences versus the previous version of the EPD.

3.8 ADJUSTMENT OF THE EPD FORMAT IN CASE OF INCLUSION OF SEVERAL SIMILAR PRODUCTS

The international EPD®system offers the possibility for similar products to be included in the same EPD provided that the difference between their environmental impacts is less than 5 % for each impact category.

Products, which differ more than ± 5 % (or expressed as a ceiling value of 10 %) can still be included in the same EPD provided the acceptance to indicate separately the different environmental performances for each product, e.g. in separate columns in a table. In case a single value is chosen for each impact category for all products, the value reported should be the worst performance within the range of variation.

It is allowed to also show “average data” in an EPD as supplementary information if found relevant. The international EPD®system introduces the possibility to create so-called Sector EPDs which enables the possibility to present average data for a whole industrial branch in a well-defined geographical area. For further information on Sector EPDs – see Chapter 4.6.4.

3.9 “SINGLE-ISSUE EPDS”

The ISO 14025 states that all product declarations in a product category shall follow the same format and include the same data as identified in the PCR provided by the programme operator. This will leave some flexibility to the programme operator to decide about the reporting format as all information does not necessary have to be in a printed consolidated form. Hence, EPD information can be regarded to be “a verified pool of information” to selectively be chosen for different purposes.

The international EPD®system allows for the possibility to adapt the information given to specific user needs and market applications by introducing the concept of “single-issue EPDs”. A “single-issue EPD” can, for instance, have the form of a “climate declaration” extracting the information related to climate change by describing the emissions of green-house gases, expressed as CO_2-equivalents. Other examples could be a “eutrophication declaration” summing up the environmental impact related to nutrient-enrichment of lakes and coastal areas or a “recycling declaration” describing various ways recycle used materials to be used as input for manufacturing of new products.

The collection of data and subsequent calculations for issuing a “single-issue EPD” shall follow the same rules as for creating a “full EPD” based on a PCR document. The reporting format shall, as a minimum, include the following information:

- Information about the product
- Information about the company
- Declaration of the environmental impact for the chosen topic based on relevant impact category in the form of an “Ecoprofile” for the various life cycle stages
- Information about the verification procedure (to be the same as for “full EPDS – see Chapter 3.5)

There are principally two different ways to create “single-issue EPDs”:

1. Based on a “full EPD”, where the necessary information related to the selected topic are digested and summarised in a shorter EPD format
2. Based on a selected calculation procedure, focusing on the elements related to the selected topic chosen

It is mandatory to give on where to find information about the “full EPD” or information about the remaining part of the EPD information covering the other aspects as outlined in ISO 14025.In the case of “pre-certification”, where no PCR exists, the organisation shall be prepared to give additional information about the LCA calculations as described in Chapter 3.6.

Examples of Single-issue EPDS is presented in Annex E: Guidance on communicating EPD information.

4 PCR REVIEW AND EPD VERIFICATION

4.1 DEFINITIONS

Verifier – person or body that carries out a verification

Verification – confirmation, through the provision of objective evidence, that specified requirements have been fulfilled

Third party – person or body that is recognized as being independent of the parties involved, as concerns the issues in question

Note: “Parties involved” are usually supplier (first party) and purchaser (second party interests)

4.2 REVIEW OF PCR

The review of PCR documents shall initially demonstrate that they:

- fulfil the general programme instructions,
- are developed in accordance with the ISO 14040 and 14044 standards, and
- give a relevant description of the significant environmental aspects of the product.

The review of the PCR documents shall also, as a concurrent step, demonstrate that they:

- are consistent with the approach taken with the PCR Module Initiative (PMI),
- include all the mandatory elements as described in Chapter 2.3, and that
- the open consultation procedure has been properly conducted including due consideration of the comments received and reported.

The IEC Technical Committee (ITC), serving as the PCR review panel, is responsible for carrying out the review of PCR documents. Members of the PCR review panel to the international EPD®system is presented at the website www.environdec.com.

4.3 PRINCIPLES FOR EPD VERIFICATION

The verification shall cover the following main areas:

- the underlying data collected and used for the LCA calculations,
- the way the LCA-based calculations has been carried out to comply with the calculation rules described in the reference PCR,
- the presentation of environmental performance included in the EPD, and
- other additional environmental information included in the declaration, if existent.

In case of existence of already verified background information in the LCA results, these shall not be subject for further verification provided that they are up-dated and valid through the so-called revision period.

When a large variety of products (e.g. series of products) are subject for verification, it is likely unrealistic to have background data (and assessments) available about all products.

In such a case development and an application of sampling methods for the LCA study can be a practical solution. If a specific sampling method has been developed by an organisation, this method shall be verified by a third party verifier and specified in the EPD.

Renewed verifications shall preferably 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 +/-5 % in one or more data reported in the EPD document, the verification should focus on parameters and data generating the variation. In case of revision of the reference PCR, a renewed verification shall be conducted within a transition period of 18 months.

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

- a documental review and
- a validation.

4.3.1 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 other environmental information included in the EPD.

The objectives of the documental review are:

- to assess 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
- to verify procedures established for an assessment of the conformity to all relevant process and product-related environmental laws (if appropriate).

4.3.2 VALIDATION

The validation phase 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 focusing, in particular, on those processes and activities having significant influence on results the overall environmental impact.

The objectives of the validation phase are:

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

The verifier shall justify the way the organisation conduct the validation phase especially considering the following factors:

- Type and complexity of product and associated processes
- Presence of an already certified EMS according to ISO14001 or EMAS or less formal EMS (e.g. in the form of a monitoring data management system)

- Data sources and format of presentation
- Legal complexity
- Specific requirements as outlined in the reference PCR

The verifier can organise the validation phase either as an “on desk” and “on site” exercise. In particular, an “on site” audit is usually valuable to conduct if the manufacturing processes are predominant with regard to the overall environmental impact, instead being at the place where data are stored and managed.

4.3.3 DATA CONFIDENTIALITY

Business data could be of confidential nature because of competitive business aspects, intellectual property rights or similar legal restrictions. Such confidential data is not made public as the declaration typically only provides data aggregated over full or relevant portions of the life cycle. Therefore, business data identified as confidential and provided during verification process shall be kept confidential as advocated in the general programme instructions. Hence, verifiers shall not disseminate, without the permission of the organisation, any information disclosed to them during the course of the review work**.**

4.4 ORGANISATION´S OBLIGATIONS FOR EPD VERIFICATION

Organisations creating an EPD are required to ensure that the LCA-based data and, where relevant, additional environmental information, as well as the EPD, are independently verified.

Moreover they have to:

- present data for verification
- establish internal follow-up procedures

4.4.1 PRESENTATION OF DATA FOR VERIFICATION

The ISO 14025 states that the verifier shall generate a report documenting the verification process and that this report shall be available to any person upon request. The *ISO 14044 Life cycle assessment – Requirements and guidelines, Chapter 5.2: Additional requirements and guidance for third party reports* includes the following the statement: "*When results of the LCA are to be communicated to any third party (i.e. interested party other than the commissioner or the practitioner of the study), regardless of the form of the communication, a third-party report shall be prepared*". However, as the verifiers report within the framework of an EPD programme is not primarily meant to be communicated to any interested party, but rather to support the verification procedure, it may not strictly have to follow the requirements and guidance as advocated in ISO 14044, even though the ISO standard contain valuable input to consider for the verifiers report.

In the presentation of data for verification, references shall be made to the reference PCR as well as other background documents used. Any deviations from making use of these documents shall be described and justified. In case 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 activity shall be documented.

The presentation of the results from the LCA-based calculations shall be comprehensive enough 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:

- Lay-out of the presentation
- Description of the LCA-based calculations

Lay-out 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/PCR modules shall be described in a transparent way. The same rules apply regardless of the type of data whether being specific/generic, from literature sources, from questionnaires or from personal information.

Results from the inventory analysis can preferably 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 can be presented together with the characterisation factors for converting the inventory data into category indicators.

Results from the impact assessment can preferably 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.

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 a site level. Unit processes/information modules/PCR modules and generic data shall be reported at 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:

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

The following information about the inventory analysis ought to be included:

- Functional unit alternatively declared unit, system boundary settings 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 results (calculation procedures, results for different life cycle stages and the final aggregated results)

The following information about the impact assessment ought to be included:

- Key inventory parameters and data on use of resources
- Assignment of the results from the inventory analysis (classification)
- Results of the characterisation and impact assessment calculations
- Sensitivity analysis, if found relevant

The procedure for interpreting the results from the LCA-based calculations need not to be too comprehensive as parts of the elements included in the interpretation phase has already been handled when preparing the PCR. References should be made to existing critical reviews of LCA data already being examined and approved.

4.4.2 INTERNAL FOLLOW-UP PROCEDURES

It is the obligation of the organisation to inform the verifier, during the course of a revision period, of any significant changes that have taken place in the information submitted as input data for the information in the EPD. Such changes might include e.g. raw material acquisition, transportation modes, manufacturing processes or changes in product design. Organisations usually favour from having reliable procedures for documentation and follow-up to enable them to identify such changes in the background information to the EPD. Existence of a quality or environmental management system or even less formal management systems is a good help and might reduce the magnitude of renewed verifications as these systems include generally accepted procedures for checking and follow-up. Access to continuously up-dated information on existing legislation from e.g. central authorities will facilitate the follow-up procedures.

If an organisation has no environmental management system in place, other types of internal follow-up procedures usually need to be established. Internal reviews can be performed by in-house experts or experts employed by the organisation. These activities can also be carried out by external experts or organisations that act on behalf of the organisation. Internal reviews and auditing shall be made with a frequency that will allow for an acceptable coverage of changes that might occur.

4.5 PROCEDURES FOR EPD VERIFICATION

There are two types of verification procedures to ensure that EPDs comply with these program instructions:

- external verification: verification of LCA-based data, additional environmental information and the EPD conducted by a third party verifier
- internal verification: verification of LCA-based data, additional environmental information and the EPD conducted by the organisation.

Hence, the verification of LCA-based data, additional environmental information and the EPD could be done either externally or internally as required by ISO 14025. All types of information and data shall be independently verified. This means that the independent verifiers, whether internal or external to the organization, shall not have been involved in the

execution of the LCA or the development of the declaration, and shall not have conflicts of interest resulting from their position in the organization.

The internal verification finalized to issue and update EPDs (EPD process certification) has to be assessed and certified (verified) by a third party.

4.6 EXTERNAL VERIFICATION

4.6.1 LCA AND PCR COMPLIANCE

The verifier shall check that the LCA-based calculations has been performed in accordance with the general programme instructions and specifically focus on that:

- the collection of LCA-based data and the choice of methods used are carried out following the 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/PCR module, i.e. being consistent and understandable to enable an independent evaluation of the relevance of the data in accordance to 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 recommended characterisation factors.

Sample checks

With regard to checking information from the inventory analysis, the verifier can make use of sample checks for the unit processes/information modules/PCR modules to check their conformance to original data sources. The organisation 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/PCR modules having a significant influence on the inventory analysis results, and
- randomly chosen unit processes/information modules/PCR modules.

With regard to verifying information about the impact assessment, the verifier can 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 ought to be chosen focusing on the most dominant parameters within each category. Such parameters could be identified by evaluating their relative contribution to the total environmental impact of the product.

4.6.2 EPD INFORMATION

The verifier shall check the consistency of the information in all parts of the EPD related to the general programme instructions, information about the product, the environmental performance, other environmental information as well as the mandatory statements needed. These rules also apply for any information of 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 lay-out, and that
- information and guidance are given on where to find supplementary explanatory materials.

4.6.3 COMPLIANCE WITH RELEVANT ENVIRONMENTAL LEGISLATION

The verifier shall, to the extent possible depending on practical circumstances, ensure that the product do not violate relevant legislation. As a minimum request, the verifier shall evaluate the 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.

4.6.4 SECTOR EPDS

The verification procedure for Sector EPDs may have to be somewhat stricter compared to 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 need to 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
- The appointment of a responsible person for reporting all significant changes in the underlying material relevant for the Sector EPD for all operations and manufacturing sites that may lead to the necessary adjustments in the EPD

With regard to giving guidance for defining a reasonable size for a representative sample of manufacturing sites as a basis for information in 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 to 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 a possibility to apply basic theories of statistics indicating that reaching a sample size of approximately 25 sites will give reasonable 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 %.

Independent of which approach are taken, the sample size should be adjusted to the inherent uncertainties in traditional LCA studies and included in the reference PCR document.

4.6.5 COMPETENCE REQUIREMENTS

An external verifier, person or body carrying out the verification, shall be independent and with the following competences:

- General product certification competences; the general requirements regarding competence for external verifiers for products are specified in *ISO/IEC Guide 65: General criteria for bodies operating product certification systems. Competence criteria are specified in section 5, items 5.1.1, 5.1.2 and 5.2.1.*
- EPD verification specific competences; the required competences of a verifier include the following aspects:
  - General knowledge of industry and product-related environmental matters
  - Good process and product knowledge within the relevant product or service
  - In-depth knowledge of the principal LCA methodology
  - In-depth knowledge of the relevant standards in the field of environmental labelling and declarations, and life cycle assessment
  - Knowledge in the overall regulatory framework in which the concept of EPDs have been introduced
  - In-depth knowledge of the international EPD®system
  - Experience in verifying EPDs.

4.7 INTERNAL VERIFICATION (EPD PROCESS CERTIFICATION)

There is a need for a new approach to the verification procedure for organisations in their work to collect data, conduct LCA and create EPDs on a regular basis if they would like to expand their EPD activities as the EPDs successively will be subject for recurrent reviews and updating. Of special importance is to make the procedure less time- and resource-consuming, thereby being more cost-effective, still complying with relevant parts of general programme instructions.

In order to meet these needs, the international EPD® system includes the possibility for organisations to internally handle the management of EPD data involved in the verification

procedure by themselves and issue EPDs. This is referred to as *the EPD process certification*.

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 suits many of the needs in the procedure of EPD process certification. Hence, EPD process certification can be of interest of any type and size of organisation. Well-managed internal EPD routines will make data collection and its conversion into EPDs more rational and less costly in an organisation operating it in a resource- and time efficient manner.

An organisation having an EPD process certification assessed and certified by a third party is, on a regular basis, allowed to:

- update existing EPDs and
- create and issue new EPDs for registration.

4.7.1 PROCESS CERTIFICATION ASSESSMENT AND VERIFICATION

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 reference PCR, and to
- create EPDs according to the reference PCR
- have regular follow-up routines in place to accurately check the relevance of the current information in registered EPDs,

An organisation seeking an “EPD process certification” shall demonstrate to an indipendent verifier its capability to manage the following aspects:

Organisational aspects

- Established written guidelines and instructions for the activities related to the EPD process certification
- Secured a reliable enforcement and maintenance of the activities related to the EPD process certification
- Established procedures for collecting information how the activities related to the EPD process certification is operating and carried out
- Relevant parts of the staff engaged in the maintenance of the EPD process certification is well-informed

Data collection, processing and assessment of the need of modifications/updating

- Reliable data handling procedures for the raw material acquisition, quality and mass of the materials in the product, information on processing/assembly, use, waste management and disposal/recycling processes being in accordance with the general programme instructions
- Relevant knowledge and data support in place to calculate the environmental performance from the original raw data

- Efficient routines established for judging the necessity to modify or update information in existing EPDs

Internal audits

- Access to qualified internal auditors (independent of the organisation unit in charge of the data internal collection and processing) for checking the internal EPD process
- Written procedures outlining the responsibilities and duties to be carried out by the personnel involved in the EPD activities
- Documentation of the audit results in a properly and ordered format
- Well-functioning procedures for regularly examining the data in the EPDs e.g. to evaluate the need for updating the information due to modified data in the supply chain or in the product composition itself as well as any error or fault in the published data etc.

Management of documents and records

- Established written procedures for the management of all handling of data to the final processed data including the authorization of the document, the reviewing of the documents, ensuring the appropriate version of the documents are available and the proper identification of documents prepared outside the organisation
- Communication of any observations relevant to the EPDs in an easy and understandable way
- Documenting and responding to queries about EPDs

In order to certificate that the organization has an "*EPD process certification*" a third party verifier shall:

- - assess the capability of the organization to manage the EPD process certification, and
- - check the compliance with the external verification rules for one or several EPDs, as a sample, produced under EPD process certification.

4.7.2 INTERNAL COMPETENCE REQUIREMENTS

Operating the activities related to the EPD process certification shall be carried out by skilled and experienced personnel with the necessary qualifications and competence. The organisation shall provide relevant education and training related to relevant EPD-related matters.

Personnel assigned to take part in activities related to the EPD process certification shall have the EPD verification specific competences as described in Chapter 4.6.5.

4.8 CHECKING COMPETENCE AND QUALIFICATIONS OF VERIFIERS

Examining the compliance of verifiers with the prescribed competence requirements as well as carrying out their supervisions are vital parts in an EPD programme for raising and maintain market acceptance of EPDs. In the international EPD®system, there are two possibilities to fulfil these tasks – to be carried out by either by organisations officially

appointed to act as so-called accreditation bodies or via a procedure carried out under the auspices of the programme operator. These alternatives are illustrated below:

Type of verification	***Examining compliance with prescribed competence requirements by***
External verification - Individual experts - Certification bodies	 - International EPD®system programme operator - Accreditation bodies
Internal verification (EPD process certification) - Certification bodies	 - Accreditation bodies

The checking of competence requirements and 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).
- Supervision (follow-up and review) of the operations of the verifier.

Approval of individual verifiers and accreditation of certification bodies shall accept the fact that an initial mission for EPD verification is needed for the possibility to prove experiences with EPD verification in case such credentials do not exist. Hence, EPD verification is accepted to be carried out and lead to an EPD registration either by an individual person or a certification body seeking approval/accreditation using the EPD verification to prove the necessary competence requirements.

4.8.1 EXAMINATION/APPROVAL BY ACCREDITATION BODIES

If the check of competence requirements of verifiers is carried out by accreditation bodies, they shall to take part in international cooperation and follow multinational agreements such as EA or IAF MLA (Multinational Agreements). There is also a standard for accreditation bodies related to such activities (ISO/IEC 17011).

Checking of competence requirements of verifiers should follow a procedure set forth in the ISO/IEC Guide 65 containing the general requirements for certification bodies and their work.

In case the verifier is a body not having the necessary competence among its own employees, the verifier shall have such competence at the management level that makes it possible within the relevant area:

- to determine the extent of sufficient competence needed for carrying out the verification,
- to recruit 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.

Description of the key details to check for certification bodies both for external and internal verifiers are given above in Chapter 4.6 and Chapter 4.7.

4.8.2 EXAMINATION/APPROVAL BY THE PROGRAMME OPERATOR

ISO/IEC Guide 65 is not applicable for individuals, therefore the programme operator of the international EPD®system, by means of the TC, offers a special procedure for examining/checking single LCA/EPD experts, following the rationale of ISO/IEC Guide 65 specifically securing their independence. In such an evaluation procedure, the verifier shall provide the programme operator with an application including:

- a CV stating compliance with the prescribed qualifications detailed in Part 4.6.5,
- experiences in the field of LCA/EPD,
- assignments of similar tasks of verification of LCA an EPD(if existing)
- information indicating independence of potential verification tasks, and
- relevant references, as appropriate.

The application form for becoming a verifier to the international EPD®system is available at the website www.environdec.com.

The evaluation of the credentials of the applicant is carried out by the programme operator supported by the TC. Sample checks may be carried out randomly to review the verifier´s work at site. The evaluation and review procedure are described in a supplementary document to the General Programme Instructions (to be provided).

The system for approval of persons as being qualified verifiers is relevant parts of the General Programme Requirements to the international EPD®system. If additional guidance documents are needed within the framework of the international EPD®system, these shall be prepared in consultation with the parties involved in the process. The role of preparing and making such additional guidance documents publicly available shall be assigned to the TC.

A list of experts approved to act as verifiers to the international EPD®system will be maintained and made publicly available by the programme operator on the website www.environdec.com.

4.8.3 SCOPE OF ACCREDITATION/APPROVAL

As the required competence of verifiers includes good process and product knowledge within the relevant category of products or services, the scope of accreditation/approval of qualification criteria should be linked to a relevant level of the CPC classification code, preferably on a two-digit level. These levels of classification codes are presented at the website www.environdec.com.

In the case of pre-certifications the verifier may operate out of the accreditation/approval rules if the verifier intends to use the task to seek approval as an EPD verifier.