



ECO Platform – good to have it, valuable to join!

Whoever believes in the life-cycle approach to assess environmental performance of buildings, knows that EPD are needed to provide the required data from the construction products to make an assessment on building level possible and realistic. Transparency is the key word.

There are no benchmarks for environmental performance in an EPD itself, but requirements for the quality of the data. EPD are neutral data sets. Their added-value unfolds, when you use the data from an EPD for a Building LCA or other applications, such as Green Building Rating Schemes, public or private procurement, eco-labelling or BIM.

Unfortunately, EPD were born years before a common standard was published, leading to a variety of different EPD Programmes with different content and quality requirements. As a result, product manufacturers and all other parties of the communication chain have to deal with various different solutions for an EPD. Expensive for most of the manufacturers, as the EPD do not get recognized throughout Europe and they are often forced to produce more than just one EPD.

The main objective of the ECO Platform is to harmonize the EPD throughout Europe. The existing EPD Programme Operators from all over Europe have gathered in the ECO Platform to work towards this goal, supported by European Trade Associations, LCA Practitioners and Green Building Councils or Scheme Operators. And the achievements are astonishing. ECO EPD guidelines were defined together, which are to be considered by all ECO EPD Programme Operators. An audit procedure has been implemented to ensure their compliance. And the “ECO EPD” was established as a sign of common quality, which gets recognized by all EPD Programme Operators within the ECO Platform as well as in many other applications, such as the Green Building Rating Schemes LEED or BREEAM.

No doubt, those results do not yet solve all existing harmonization problems. Further steps are to be taken under the involvement of all ECO Platform members. Therefore, the next projects for the ECO Platform are amongst others:

- Enabling the availability of information on existing PCR documents and PCR under development from product TCs, Programme Operators and other stakeholders
- Supporting the provision of environmental data from EPDs in suitable common formats and contexts for different uses and applications by:
 - Development of a digital solution in line with ILCD+EPD format
 - Development of a BIM compatible and exchangeable solution
 - Participation in the development of an open database network as described by the InData working group
 - Support the development of solutions for model EPD and parametric EPD
 - Contribute to the harmonization of background databases

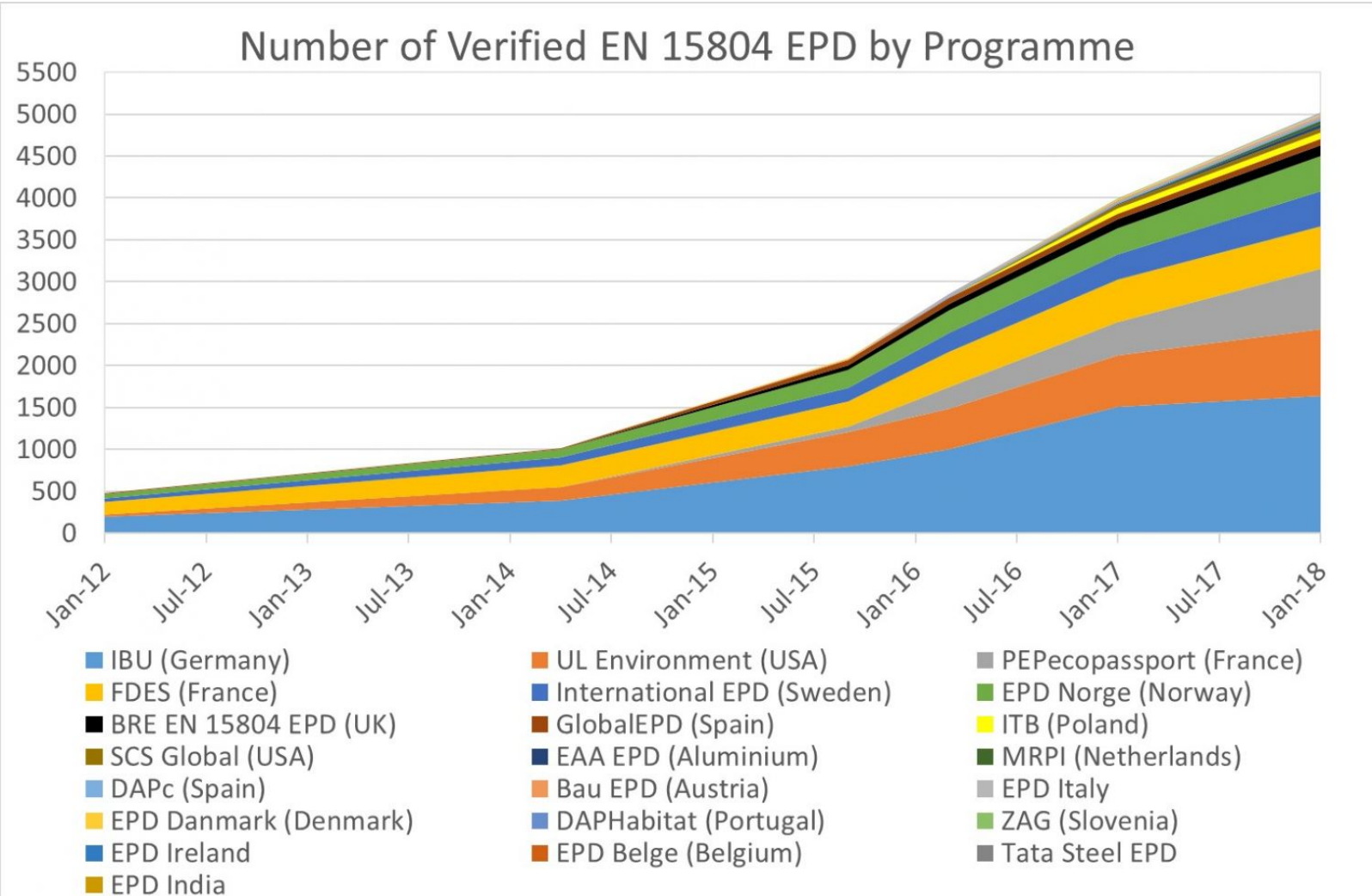
All activities are to consider ISO and CEN activities as well as actual developments of software and databases.

Members of the ECO Platform can participate in all on-going discussions, working groups and activities, they are well informed and have the chance to influence decisions as well as processes with their contribution.

Policies on embodied impacts of buildings increase interest in EPD

By: Jane Anderson, thinkstep Limited and @constructionLCA

I have been charting the growth of EPD globally for several years, and numbers continue to increase, as shown in the diagram. Drivers for EPD growth



to date have included credits for products with EPD in Green Building Certification Schemes such as LEED and BREEAM, and policies such as the French Grenelle which require construction product manufacturers making environmental claims about products to support this with EPD.

The growth in numbers of EPD has also been prompted by policies covering the embodied impacts of buildings, measured using life cycle assessment (LCA). In Germany, a major driver for large number of IBU EPD has been the requirement to undertake an LCA of the building as part of DGNB and BNB certification, as trade associations and manufacturers have moved to provide verified EPD data for use in these assessments. BNB certification is required for all large federally funded buildings, whilst DGNB is voluntary, but both provide credits for buildings with LCA results better than the baseline. Reducing the embodied impacts – impacts associated with construction products rather than operation of the building, is therefore incentivised, and credit can be gained both by building more efficiently, and by using products whose EPD demonstrate they have lower impact.

The Netherlands has had a requirement to undertake an LCA of all housing and office buildings as part of its 2012 Building Act, with many manufacturers providing Dutch MRPI EPD to be used in these assessments. Since the start of 2018, it has introduced limit values to reduce embodied impact.

France is also piloting a new Regulation, “Energie Positive, Carbone Reduction” (E+C-) requiring reductions in whole life greenhouse gas (GHG) emissions impact assessed using Building LCA. Building LCA has been a core part of the HQE assessment for some years, and although many French EPD (FDES) have been produced because of the Grenelle (the requirement to provide EPD to substantiate environmental claims), E+C- is

also driving the increasing numbers of FDES so that generic and specific LCA data is available for all products used in buildings, including PEPECopassport® covering HVAC and electrical products.

Outside of Europe, the Buy Clean California Act was introduced in 2017, requiring all public procurement of steel, glass and insulation to use specific EPD to demonstrate the impacts are below set levels. Both Oregon and Washington State have also tried to implement similar policies, but these did not manage to complete the legislative path. Oregon however did agree Executive Order 17-20 in 2017, which mainly covers the reduction of operational impacts for state buildings, but will require the inclusion of embodied carbon impacts in the assessment from 2022. To help the implementation of this order, Oregon has funded an EPD Tool and database for concrete producers.

Minnesota has also passed legislation in 2017, known as the B3 programme, requiring whole building LCA for state funded new buildings and major renovations. The tools and guidance are also available for private buildings.

In Canada, Vancouver has amended its Rezoning Bylaws to require reporting of the embodied impact for all rezoned building developments, using an LCA process consistent with LEED v4.

In Australia, building LCA has been part of the innovation credits since 2014, but undertaking a building LCA and showing an improvement in embodied impact is now a core credit within GreenStar, and using EPD is an easy way to show that you have selected products with improved environmental performance, achieving additional credits.

In Singapore, GreenMark, the national green building rating tool administered by the Building and Construction Authority (BCA), includes credits for the assessment of embodied carbon for the building, using the BCA Carbon Calculator.

Back in Europe, BREEAM has proposed that Building LCA will be the main focus of the materials credits in BREEAM 2018, with credits for undertaking LCA, improving over benchmarks and using products with EPD. The Irish Green Building Council has also included Building LCA within its Homes Performance Index, alongside credits for using products with EPD, and created an EPD Programme to support the resulting need for EPD Data. In Belgium, the government has developed the Milieugerelateerde Materiaalprestatie van Gebouwelementen (MMG) as a national approach to Building LCA based on EN 15978, linking to its new EPD Programme.

And for Europe overall, Level(s), the EU's voluntary reporting framework to improve the sustainability of buildings, aims to promote life cycle thinking. It guides users from an initial focus on individual aspects of building performance towards a more holistic perspective, with the ultimate aim being the potential for wider use across Europe of two main tools – Life Cycle Assessment (LCA) and Life Cycle Cost Assessment (LCCA), also known as Whole Life Costing (WLC). To achieve this, Level(s) provides a series of tools and guidance to assist with calculating the Bill of Materials, life cycle scenarios and assessment of service life. Level(s) has just commenced a two year test phase, which will inform the EU's Sustainable Building policy going forward.

Policies targeting building LCA, and embodied impacts, are now strongly placed as a major driver for the increasing interest in EPD, not just in Europe but around the world.

Digital EPD data – made possible through the ILCD format

By: **Oliver Kusche, ok*worx**

In the advent of tools that offer LCAs on building level, EPDs have become an important data source for calculating the environmental performance of buildings. Given that a building usually consists of hundreds and thousands of products, materials and components, data from a large number of different EPDs is going to be used for that calculation. In order to be able to efficiently do this, however, the data published in the EPDs is needed in a machine readable way, since without a machine readable representative, all the environmental performance information from an EPD would have to be transferred manually from the EPD document to the building LCA software, which of course would be an unrealistic effort.

Nowadays, the data format of choice that POs use to provide their EPDs in machine readable form is the ILCD+EPD data format. This is a derivative of the original ILCD data format developed by the European Commission's DG JRC, which is a widely used data format for LCI/LCIA data that had been developed as an Internet oriented data format with extension capabilities already foreseen. To allow for modelling some specific requirements of EN15804 compliant EPDs, some extensions to the ILCD data format have been developed, which is why the result is called "ILCD+EPD data format" for short (more precisely, it would be "ILCD data format with EPD extensions").

This data format is already used by two of the largest public databases for EN 15804 compliant EPDs, the ÖKOBAUDAT and IBU.data. The members of the InData Working Group, which represents over two thirds of the currently published EN 15804 compliant EPDs, have chosen this data format for

data exchange on the level of an international data network for EPDs as well.

Providing EPDs in a digital, machine readable way allows for this data to actually be used for conducting LCA on building level, which is already being done in several countries. Such data, when shared on international data networks, gains significant higher exposure to possible users, making the procurement of a product much more likely once its EPD data is available in machine readable way.

Tool validation: a new methodology for improving sustainability spreading

Within the ECO Platform, several program operators such as EPDIItaly, EPD Norge, EPD International or IBU have already had experience using Tools in their verification practice. As a guest article, EPD Italy was asked to describe their solution as an example of how these tools can be handled.

By: Ugo Pannuti and Manuel Mari, EPDIItaly

In order to significantly reduce the costs and times that the Manufacturer faces in publishing the EPDs, EPDIItaly, the first Italian Program Operator, has prepared, in its Regulations, the opportunity to develop various EPDs using the same calculation model (algorithm). This optimises the verification activities for each EPD through a validation process of the algorithm used and the subsequent verification of its correct use to create a specific EPD.

In fact, the calculation algorithm, based on the same LCA model, allows the various impacts of the products to be determined as the input data varies. In this way, verifying the corresponding EPDs is simplified since it is no longer necessary to verify the previously validated calculation model.

The calculation algorithm must be clearly identified in a manual that describes its use, in an appropriate and comprehensive way. The field of application must also be clearly stated. The LCA study and the corresponding EPD must meet all the requirements of the international standards. Therefore, compliance of the LCA study with the ISO 14040 series of regulations, with the EPDIItaly Regulations and with ISO 14025 must be checked.

An audit is to be performed at the Organisation's facility where the data are collected to verify that the EPD produced using the previously validated algorithm complies with ISO 14020, with the relevant ISO 14025 requirements, with EPDIItaly's general instructions and with the reference PCR. During the audit, also verified are the skills and abilities of the personnel authorised to use the tool and handle the data and the methods defined to manage the process of creating EPDs, in order to identify critical points and the relative solutions adopted (risk-based thinking).

This process allows each EPD issued to be verified without having to enter into the specific LCA study provided that the algorithm cannot be modified, that the operator is always the same and that the data used are the actual data.

If the calculation algorithm is modified, in the parts of the code concerning the LCA model implemented or in the types of product managed or in the system limits implemented, this algorithm must be validated once more.

The ECO Platform supports the distribution of the EPDs that can be generated by established and classic activities or through processes or tools, since these tools are useful in implementing a series of initiatives aimed not just at the homogenisation of the Declarations but also of their format. Having a common reading format makes the environmental data accessible to different market users, thus facilitating the data's use, including in emerging design areas such as, for example, the BIM.

Hence, the ECO Platform continues its work towards a system in which EPDs can represent an opportunity for the manufacturer to play an active role in the sustainable design of buildings and infrastructure, examining, together with the appropriate work groups, solutions that combine the needs of the manufacturer with the needs of an increasingly "digital" market.

Congratulation to DAP construction for achieving ECO Platform Audit process

By the end of 2017 the Spanish program operator DAPconstrucción was successfully audited according to the quality system of the ECO Platform. With this step, DAPconstrucción is now the 17th established programme operator, so ECO Platform is looking forward to see ECO EPDs from DAPconstrucción in the future.



Dates and events

- 05.04.2018 **ECO Platform Board Meeting** (Webinar)
- 17.-18.04.2014 **Greenbuild Europe** Berlin/Germany
- 16.05.2018 **ECO Platform General Assembly**
- 19.06.2018 **ECO Platform Board Meeting** (Webinar)
- 27.-28.09.2018 **Physical ECO Platform Board Meeting** Milano/Italy

Greenbuild Europe






Greenbuild, the world's largest green building conference experience, is coming to Europe April 17-18, 2018 and will take place in Berlin, Germany at the Radisson Blu Hotel and Meeting Center. ECO Platform is partner of the Greenbuild Europe and recommends the participation to all interested parties. Please find more info in the [press release](#).

ECO Platform members are eligible for the discounted Member pricing, when they use this code during registration, valid until March 21, 2018: **ECOPLATFORMPARTNER**

Schedule at a Glance

- Monday - April 16* – Pre-Conference Workshops*
- Tuesday - April 17* – Greenbuild Europe, including Opening Plenary, Education Sessions, Certification Work Zone and the Greenbuild Celebration*
- Wednesday April 18* – Greenbuild Europe including Women in Green*, Education Sessions, Certification Work Zone and Closing Plenary

   **#GreenbuildEurope**

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