

Sector initiative: Implementing EN 15804 in a harmonized way with the ECO platform. International activities in ISO TC 207/59

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ECO Platform

- Vision, Mission & Reality
- Legal status
- Membership
- Work



Vision

A comprehensive information system
showing the environmental performance of
construction products
based on LCA and other scientific methods
applicable and accepted throughout Europe and
worldwide



Reality

- **fragmented European EPD landscape and in other world markets:** e.g. PCR Initiative in North America, ISO TC 59/SC17
- Diverging assessment approaches for environmental performance of products (EPD, PEF)
- Regional fragmentation within EPD programs due to
 - voluntary nature of CEN TC 350 standards
 - Varying market expectations with branches
 - Product specific supplements needed in the standard (scenarios, specific allocation rules)
- Different experiences/experiments with simplified EPD: e.g. templates, calculation tools, averages...
- Varying progress, interpretation and implementation of the European standard EN 15804 in the commercial and publicly available national databases.
- Different implementation in member states' regulation



Mission

ECO (The European Construction Organisation) enables mutual recognition of EPDs among all European EPD program operators

with respect to credibility, quality and comparability.

Mutual recognition means:

acceptance of EPD provided by ECO members

without further verification

without restrictions in applicability



ECO Platform legal status

- International non-profit association AISBL
- Members:
 - Full members: established program operators.
 - Supporting members: associations, LC practitioners, emerging PO, experts...
- Tasks:
 - Board: full members + CEPMC, strategic decisions, clearing house function
 - All Members: active in working groups.

ECO Platform work

June 4th 2013 the Association “ECO Platform” was founded and will have its seat in Brussels

There are 3 active working groups, WG I, WG II and WG III

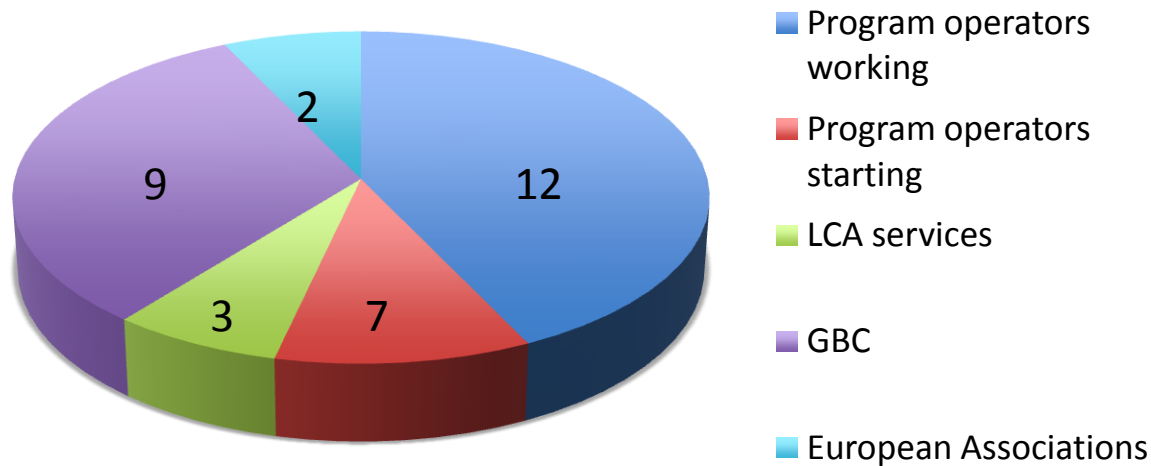
- President: Sven-Olof Ryding,
- CEO: Christian Donath, Treasurer: Burkhard Lehmann
- WG I: Chair Eva Schmincke “technical aspects”
- WG II: Chair Agnes Schuurmans “verification”
- WG III: Oscar Nieto “administration & communication”



ECO Platform work

- Any member may participate in the working groups. Contributions by industry and other experts, LC practitioners, etc. are very welcome
- Consensus based proposals by WGs shall be accepted by the Board
- If no consensus is achieved, the Board has the clearing function

Program operators and supporting members presently involved in ECO Platform



Program operators, full members:

France, Germany, Netherlands, Norway, Poland, Portugal, Slovenia, 2xSpain, Sweden, UK, CEPMC.

WG I “technical aspects”

- Mutual recognition means ideally that the environmental information in an EPD can be drawn from any program on the ECO Platform and applied without restrictions concerning data quality and reliability.
- There are **inherent restrictions to comparability** not to be confused with data quality deficits:
 - Missing context to function in a building, e.g. different use scenarios
 - Representation has to be considered for:
 - *geographic* conditions: EPD of average insulation material cannot be interchanged if it is calculated for Germany or France e.g.
 - An *average* product EPD from members of an association or from a company with many sites
 - A *typical* product or a *specific* product

WG I “technical aspects”

- There are **also technical barriers** to equivalence of data quality
 - Inconsistent databases for background data
 - Varying interpretation of calculation rules, e.g.
 - definition of end-of-waste status,
 - allocation of processes to the modules A, B, C and D
 - definition of limit values for economic allocation of co-products
 - Green energy certificates
 - Different integration into national databases
- WG I ECO Platform addresses the technical barriers, also considering the work of CEN TC 350 WG3
- The handling of inherent barriers is a question of education

WG II “verification”



- Mutual recognition implies a common data quality control
- Common verification procedures and rules are finalised,
- Audits are under way.
- All member POs shall integrate the common procedures and rules into their program rules
- Member POs may then use first generation ECO-logo on their EPD representing an agreed common declaration quality. First mutually recognised EPD with respect to data quality will be published at the general assembly in October



WG III “communication”

- So far WG III organised the legal and administrative work
- Co-ordination and administration is now handled by the managing director, Christian Donath
- WG III focuses on communication (newsletter, homepage, events, cooperation with other institutions e.g. CEN, EOTA etc.) with a new chair
- September 24th 2013 was the official founding event where WGs presented their results
- <http://www.eco-platform.org>



Task-force: a total of 25 organisations representing 17 European countries are involved in establishing the European ECO Platform. Signing the letter of intent

Common Implementation of EN 15804+A1 via Product TCs

- Product TCs are developing PCR documents for their product groups (sawn timber TC 175 EN 16485, insulation TC 88, concrete and related products CEN TC 104)
- A common workshop was held June 20th 2013 at CEN
 - Product specific application of allocation rules, e.g. allocation of processes to especially C or D
 - Specific issues e.g. carbonation in concrete, carbon in bio-based products...
 - Scenarios e.g. for transports, installation, use and end of life,
- Co-operation between CEN TC 350, Product TCs and ECO Platform via liaison, CEN BT resolves process
- CEN TC 350 WG3 is working on a guidance document for the interpretation of EN 15804+A1 based on questions put to the TC after publication of the standard

Comparability between EPD based on EN 15804+A1 and PEF

- **Main differences are:**
 - **in the system boundary** to the product system that follows the system under study:
 - EN 15804+A1 is a cut-off approach. EN 15804 sets rules with little flexibility. Recycling potentials for the next system can be declared in module D. It functions as a core PCR for construction products
 - PEF as a framework leaves more room for different approaches. PCR for specified branches are being developed.
 - **In the selection of indicators and characterisation models:**

Comparison of indicators EN 15804, PEF and new

PEF impact category	Impact assessment	Impact indicators	Source	New TC 350
Climate Change	Bern model – Global Warming Potentials (GWP) 100 year time horizon.	kg CO2 equivalent	Intergovernmental Panel on Climate Change, 2007	
Ozone Depletion	EDIP model based on the ODPs of the WMO infinite time horizon.	kg CFC-11 equivalent	World Meteorological Organisation, 1999	
Ecotoxicity for aquatic fresh water	USEtox model	CTUe (Comp. Toxic Unit for ecosystems)	Rosenbaum et al., 2008	
Human Toxicity - cancer effects	USEtox model	CTUh (Comp. Toxic Unit for humans)	Rosenbaum et al., 2008	
Human Toxicity – non-cancer effects	USEtox model	CTUh (Comp. Toxic Unit for humans)	Rosenbaum et al., 2008	
Particulate Matter/Respiratory Inorganics	RiskPoll model	kg PM2.5 equivalent	Humbert, 2009	
Land Transformation	Soil Organic Matter	SOM model	Kg (deficit) Milà i Canals et al 2007	
Radioactivity				

Comparison of indicators EN 15804, PEF and new

PEF Impact category	Impact assessment	Impact indicator	Source	Neu TC 350
Photochemical Ozone Formation	LOTOS-EUROS model	kg NMVOC equivalent	Van Zelm et al., 2008 as applied in ReCiPe	
Acidification	Accumulated Exceedance model	mol H+ eq	Seppälä et al., 2006; Posch et al., 2008	
Eutrophication – terrestrial	Accumulated Exceedance model	mol N eq	Seppälä et al., 2006; Posch et al., 2008	
Eutrophication – aquatic	EUTREND model fresh water: kg P equivalent	marine: kg N equivalent	Struijs et al., 2009 as implemented in ReCiPe	
Resource Depletion – water	Swiss Ecoscarcity model	m ³ water use related to local scarcity of water	Frischknecht et al., 2008	
Resource Depletion – mineral, fossil	CML2002 model	kg antimony (Sb) equivalent	van Oers et al., 2002	
Resource Depletion – abiotic	CML2002 model	kg antimony (Sb) equivalent	van Oers et al., 2002	

Projects in TC 207 and TC 59

- NP ISO/TS 14027 "Environmental labels and declarations - Type III environmental declarations - Product Category Rule (PCR) development".
- An important reason for providing this TS is the different quality of PCR available on the market which reduces their usefulness and credibility.
- PCR should be specific for a product group on one hand and on the other equivalent on procedural terms as well as in the interpretation of the underlying basic standards ISO 14025 and ISO 14040/44.

Projects in TC 207 and TC 59

- ISO DIS 21930 (under revision): Sustainability in buildings and civil engineering works — Core rules for environmental declaration of construction products and services used in any type of construction works
- ISO 21930: 2007 and EN 15804+A1:2013 are seed documents

Projects in TC 207 and TC 59

- ISO DIS 21930 provides guidance for PCR development in the construction sector

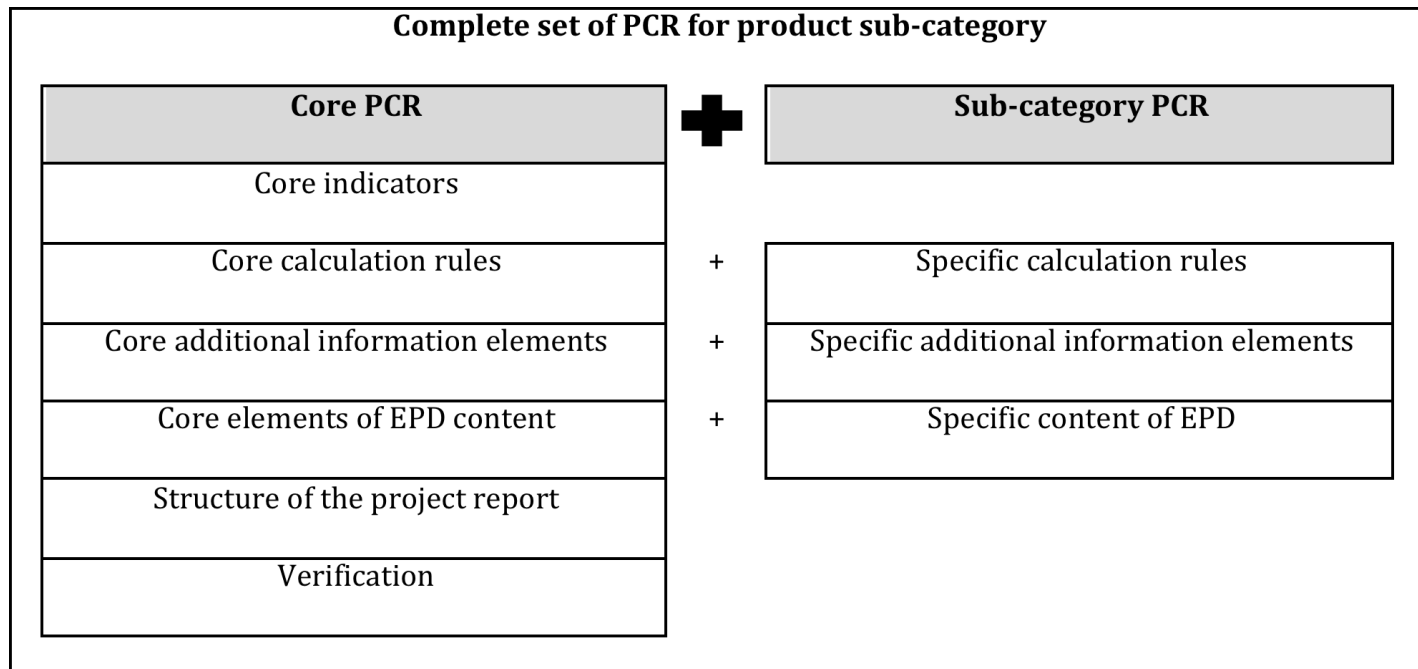


Figure 1 — Elements of the core PCR and expansions leading to a PCR for a product sub-category

Projects in TC 207 and TC 59

- ISO DIS 21930 proposes as additional, non LCA based information for
 - declaration of emissions to indoor air, Release of dangerous substances to soil and water
 - Particulate matter
- Discussion of calculation rules
 - for biogenic carbon
 - for land use change in the context of biobased materials
 - For carbonation in concrete