EPD and LCA – 41° LCA forum

Development of PCR and EPD: experiences in Italy
on furniture and mineral water

Leo Breedveld

Ittigen, 22-6-2010

breedveld@to-be.it, www.to-be.it
2B - Mogliano Veneto TV

Advertising lies

76% of the consumers think that companies don't tell the truth in their advertisements

Source: Yankelowich 2006

To trust or not to trust?

49% of European consumers and 47% of American consumers trust environmental affirmations of companies, while 48% of consumers do not trust them.

➔ Environmental communication should be: transparent, comparable and scientifically sound.

EPD, why?

The benefits of an EPD are:

- Credibility by means of a third party certification
- Consistency through an LCA study providing consistent environmental information for different purposes (eco-design, environmental reporting, client satisfaction);
- Comparability for continuous improvement and benchmarking among competitors;
- Transparency

What is an EPD?

Environmental Product Declaration (EPD) is:

- an ecolabel to communicate the environmental performance of a company's product
- a type III ecolabel, certified by a third party in accordance to ISO 14025
- a voluntary instrument and a starting point for further improvement

What is <u>not</u> an EPD?

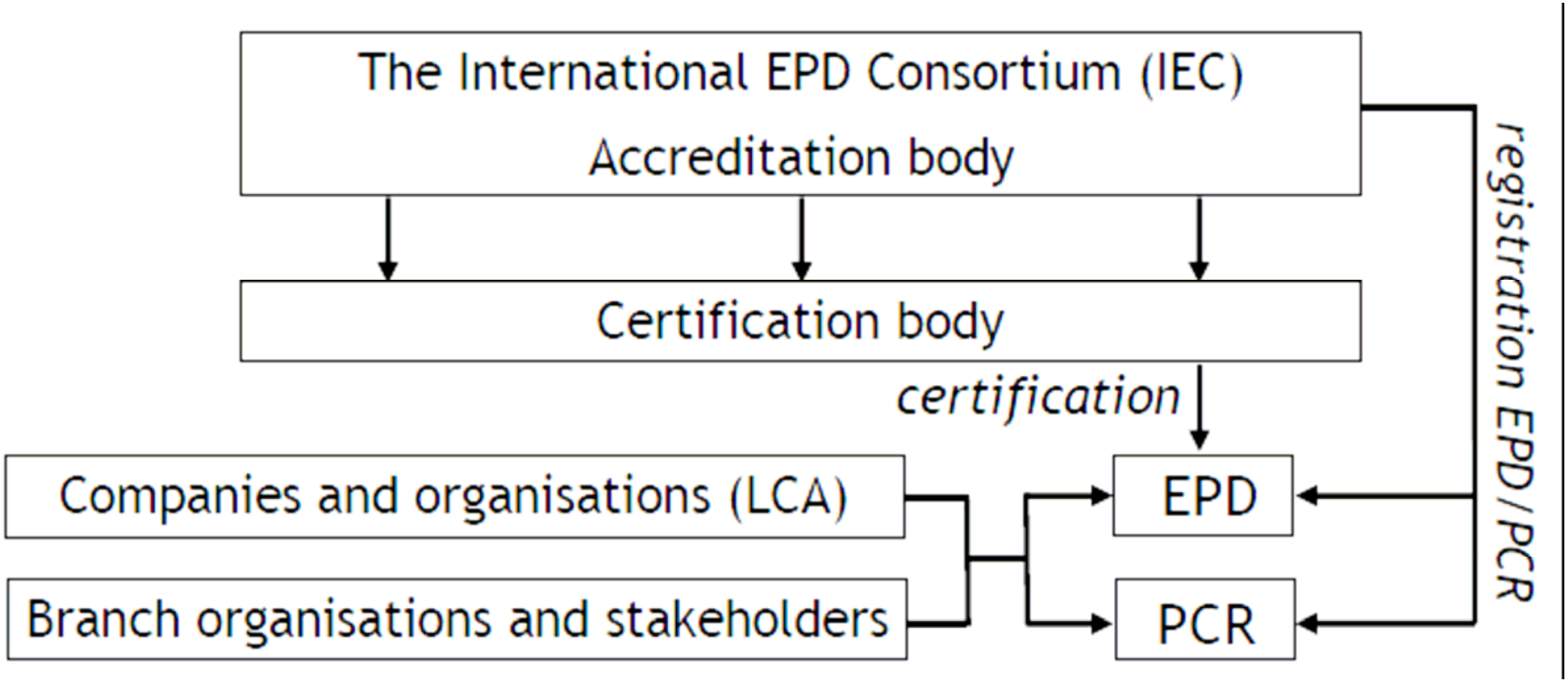
Environmental Product Declaration (EPD) is:

- an ecolabel to communicate the environmental performance of a company's product
- a type III ecolabel, certified by a third party in accordance to ISO 14025
- a voluntary instrument and a starting point for further improvement

Environmental Product Declaration (EPD) **<u>is not</u>:**

- a type I ecolabel
- a marketing tool or a compulsory tool
- an end-point and guarantee of high environmental performance

How do you get an EPD?

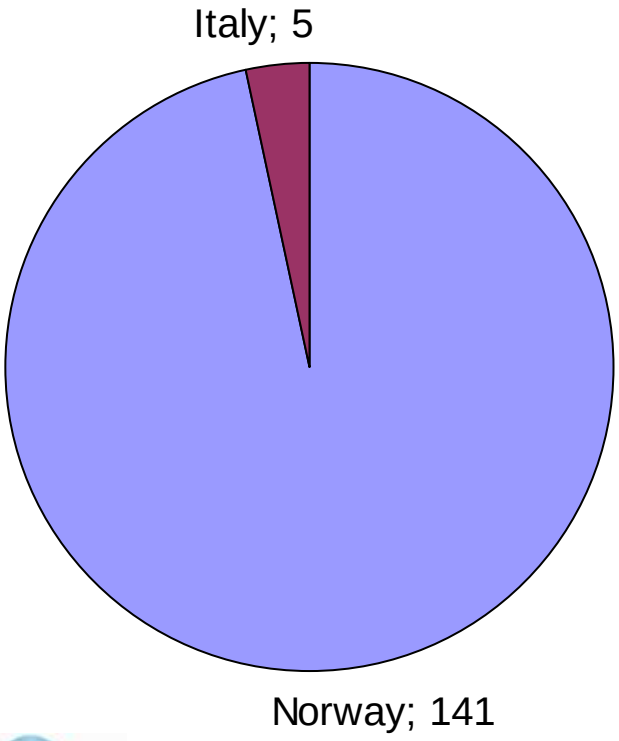


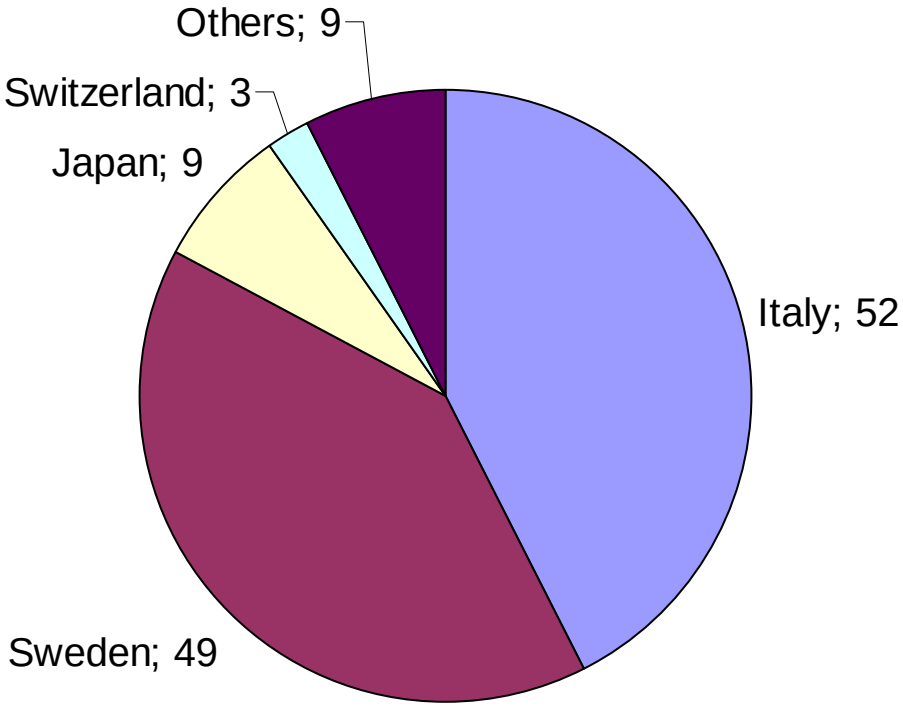
Where: various EPD systems

Where	Name	Nr.	Website	Logo
Japan	JEMAI	147	jemai.or.jp	
Norway	NHO	146	epd-norge.no	
Sweden	IEC	122	environdec.com	
South Korea	KELA	96	koeco.or.kr	

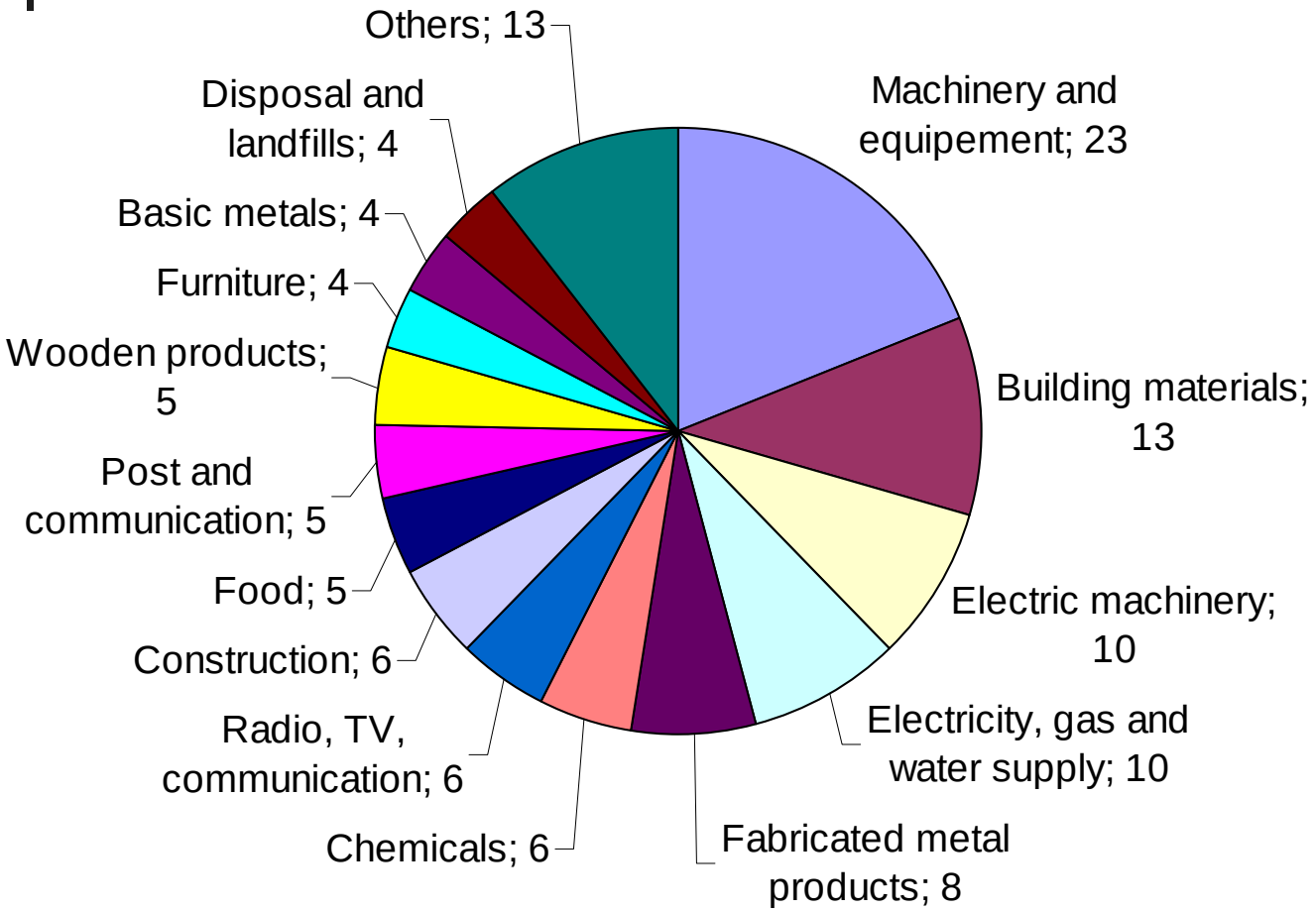
Source: GEDNet, Type III Environmental Product Declarations Network

EPD per country (NHO/IEC)

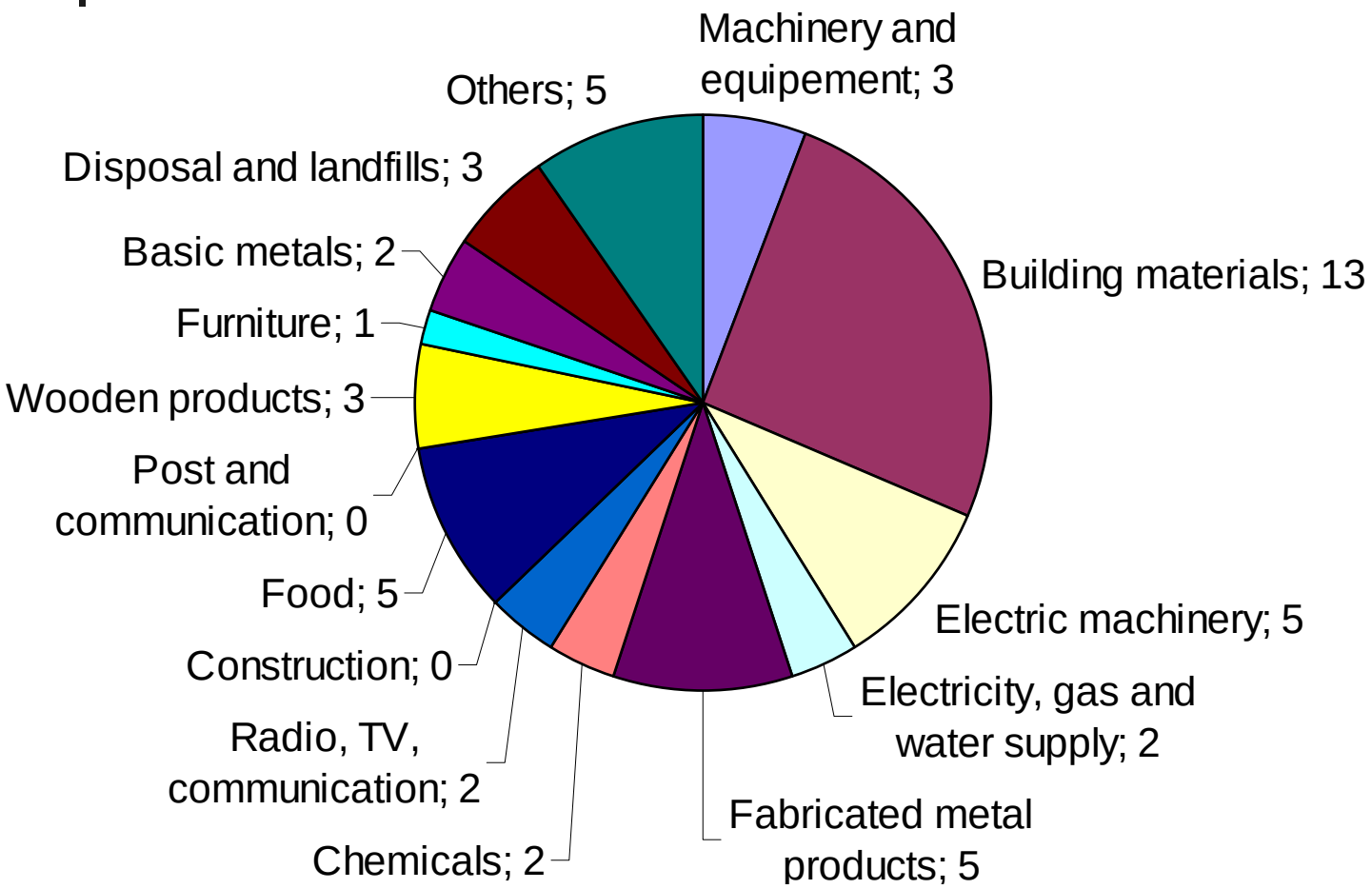




EPD per sector (IEC/world)



EPD per sector (IEC/Italy)



EPD in Italy

- 2001: ANPA EPD-pilot with ABB, ITALTEL and Novamont and first PCRs developed
- 2001-2002: DNV and RINA accredited for Swedish EPD validation
- 2001-2003: first Italian EPDs registered under the Swedish EPD scheme
- 2003-2005: LIFE project on PCR development (INTEND)
- 2006-2007: transition period
- 2008: launch of the International EPD Consortium (IEC)
- 2009: renewed interest in EPD (Sweden, Italy)

EPD example: furniture

NHO

Key environmental indicators:

Global warming potential	27 kg CO_2 eq.
Total energy consumption	622 MJ
Percentage of recycled materials	52%
Percentage of recyclable materials	>99%
Expected lifetime	15 years

Norwegian Environmental Product Declarations

NEPD no.:101

Approved 15.03.2008 according to ISO14025, § 8.1.4
Valid until 15.03.2011

NEPD Verification Committee

PCR seating (NHO)

- PCR seating: NPCR003, approved 15-10-05, valid until 14-10-08.
- System boundaries: cradle to grave, including use phase. The use phase of the seating solution consists of cleaning the chair with a soft cloth and a solution of lukewarm water and neutral soap.
- Product range: the products described by this EPD concerns both single colour and two-tone models ($\Delta < 5\%$).
- Allocation: no allocation is made for materials subject to recycling. The recycling process is included for input of recycled resources. Outputs subject to recycling are regarded as outputs to the next life cycle.
- Indicators: Land use and water consumption have been included as environmental indicators.
- Comparability: EPDs with different choices on system boundaries and data are not comparable to other declarations.

EPD example: mineral water

Environmental Product Declaration

Acqua Minerale Naturale
Oligominerale San Benedetto

In 0,5 l, 1,5 l, 2,0 l PET bottles

Rev.0 – date: 27/01/2010

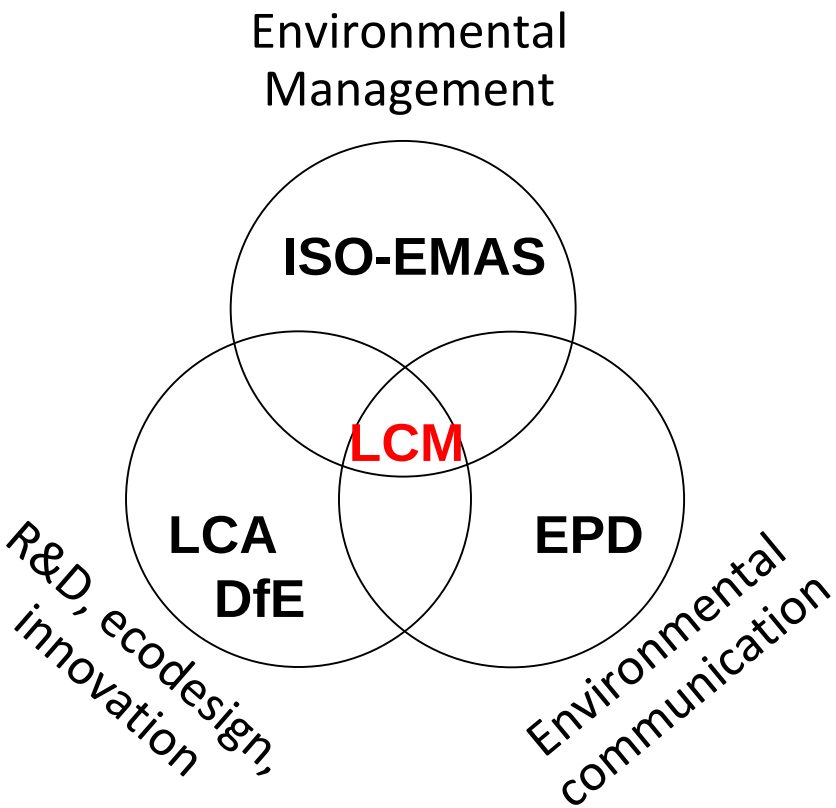
Reg. n°: S-P-00212

EPD®

PCR mineral water (IEC)

- PCR natural mineral water: PCR 2006:07, approved 7-2-2007, valid until 7-2-2010 (IEC).
- System boundaries: cradle to grave, excluding use phase. Transport of the product to distribution centre (standard 100 km), waste collection and waste management are included.
- Product range: San Benedetto mineral water bottled in PET bottles sized 0,5 litres, 1,5 litres and 2,0 litres.
- Allocation: allocation rules like PCR seating. Outputs subject to recycling are regarded as outputs to the next life cycle.
- Indicators: acidification expressed in H^+ eq. and SO_2 eq., eutrophication expressed in O_2 eq. and PO_4^{3-} eq.
- Comparability: comparisons between EPDs for natural mineral water shall be carefully executed, as variations in the system boundaries and the used data sources affect the comparability.

EPD and the bigger picture



Concluding remarks

- EPD should be part of a bigger picture, and the beginning of a journey of continuous improvement.
- Italy is well presented in international EPD schemes.
- EPD schemes are still in their childhood and could benefit both from technical and organisational improvements.
- On the other hand, the current EPD schemes do respond to an actual market demand (that will only grow in the future).
- EPDs provide transparency, consistency and credibility, but comparability remains difficult.

For any further information…

- ✓ Leo Breedveld - 2B (breedveld@to-be.it/www.to-be.it)
- ✓ You're welcome at our office close to Venice!