

# GreenDeLTa

sustainability consulting + software



## *EasyEPD – environmental product declarations for the German sawmill industry*

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# EasyEPD

## What is an EPD?

- Environmental Product Declaration
- Public document describing the environmental effects of building products
- Based on LCA (LCA report)
- EN 15804: Sustainability of construction works – Environmental product declarations

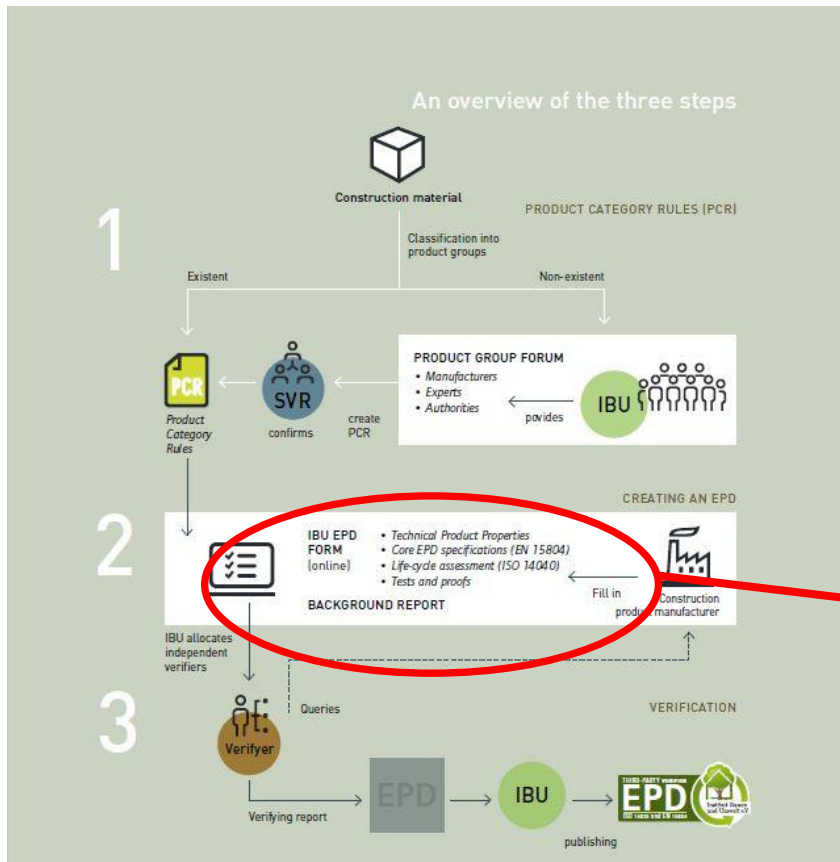
## System boundaries

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE	USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- Recovery- Recycling- potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D

Parameter			Unit
		ENVIRONMENTAL IMPACT ASSESSMENT:	
Global Warming Potential (GWP)			[kg CO <sub>2</sub> -eq.]
Ozone Layer Depletion (ODP)			[kg CFC11-eq.]
Acidification Potential (AP)			[kg SO <sub>2</sub> -eq.]
Eutrophication Potential (EP)			[kg PO <sub>4</sub> <sup>3-</sup> -eq.]
Photochemical Ozone Creation Potential (POCP)			[kg ethene-eq.]
Abiotic depletion potential – elements (ADPE)			[kg Sb-eq.]
Abiotic depletion potential – fossil (ADPF)			[MJ]
		RESOURCE USE:	
Renewable primary energy as energy carrier (PERE)			[MJ]
Renewable primary energy resources as material utilization (PERM)			[MJ]
Total use of renewable primary energy resources (PERT)			[MJ]
Non-renewable primary energy as energy carrier (PENRE)			[MJ]
Non-renewable primary energy as material utilization (PENRM)			[MJ]
Total use of non-renewable primary energy resources (PENRT)			[MJ]
Use of secondary material (SM)			[kg]
Use of renewable secondary fuel (RSF)			[MJ]
Use of non-renewable secondary fuels (NRSF)			[MJ]
Use of net fresh water (FW)			[m <sup>3</sup> ]
		OUTPUT FLOWS:	
Hazardous waste disposed (HWD)			[kg]
Non-hazardous waste disposed (NHWD)			[kg]
Radioactive waste disposed (RWD)			[kg]
Components for re-use (CRU)			[kg]
Materials for recycling (MFR)			[kg]
Materials for energy recovery (MER)			[kg]
Exported electrical energy (EEE)			[MJ]
Exported thermal energy (EET)			[MJ]

# EasyEPD

## IBU



- Work intensive
- Time intensive
- high costs (10 000€ – 40 000 €)

EPD: Data collection & life cycle assessment  
(extensive background report)  
7 500€ – 25 000 €

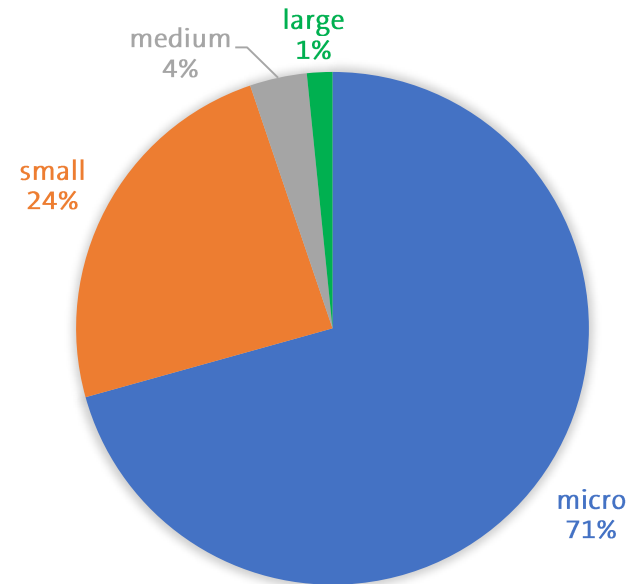
Valid for 5 years

Screenshot: <https://ibu-epd.com/en/epd-programme/>

# EasyEPD

## Sawmill industry in Germany

Size	Employees	Number of businesses
Micro	≤9	1474
Small	10 – 49	503
Medium	50 – 249	76
large	≥250	37



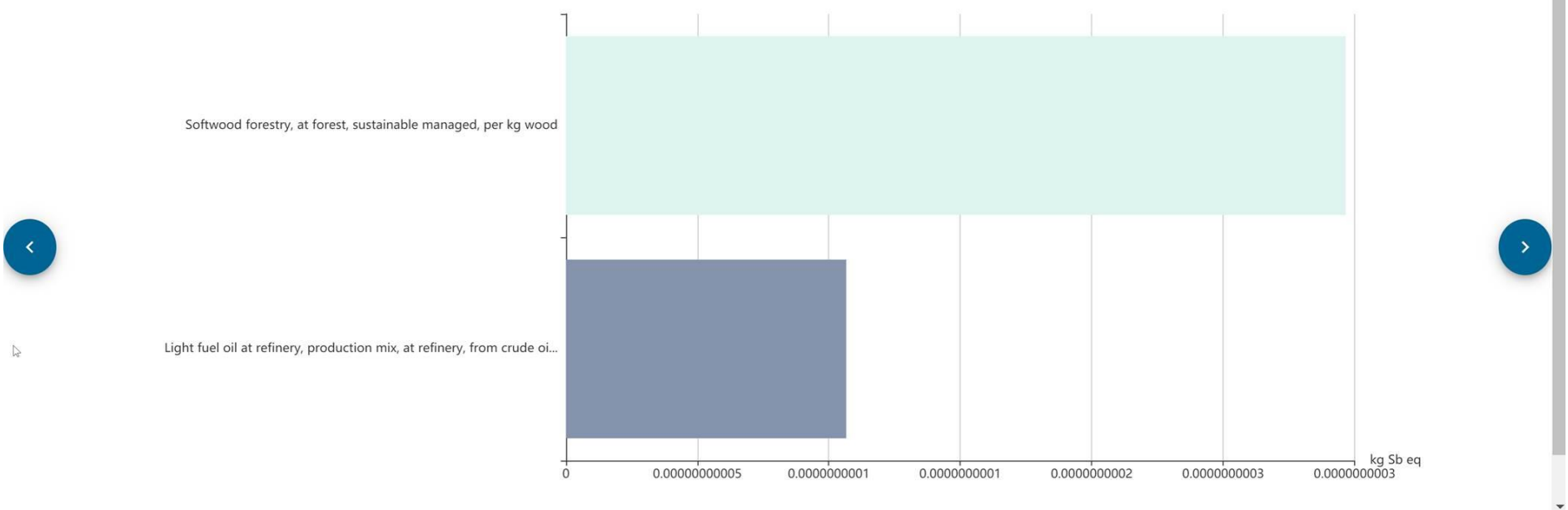
# EasyEPD

## Software

- Half-automated process
- Can be done without LCA knowledge
- Guided



Hotspot analysis (top 80% process results): Abiotic resource depletion - mineral and metals





# EasyEPD - Workshop

## How?

- All businesses use mainly the same process steps
- Enter quantity and type of wood
- Select applicable process steps
- Enter energy and water use
- Auxiliary materials

# EasyEPD

## Automated verification

- Manual verification of one report created by tool
- Comparison with manual report for same product created by TU Munich
- Proof that tool can create reports → just changing numbers

# EasyEPD

## Survey

- DeSH: German sawmill and timber industry association
- Favouring a web based application
- Most business have never done an EPD
- Around 50% of the businesses are interested in getting a EPD → 1000

# GreenDelta

sustainability consulting + software



## *Thank you*

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