

Ecodesign Glossary

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1 Biosphere

Three different definitions are in general use:

- That part of the earth and its atmosphere in which living organisms exist or that is capable of supporting life.
- The ecosystem composed of the earth and the living organisms inhabiting it.
- The sum of all living matter on earth.

2 Corporate Social Responsibility (CSR)

The implementation of social and environmental policies in the day-to-day business of a company, and the commitment of internal and external stakeholders of that company to perform according to these policies.

3 Design for Environment (DfE)

A synonym for 'eco-design'.

4 Eco-efficiency

The productivity of something weighed against its use of resources and its environmental impact. Or: the efficiency with which the earth's resources are used to meet human needs.

5 Eco-label

A label applied to a product or material to show that it is in accordance with environmental standards set by independent organizations. Both national and international eco-labels exist.

6 Eco-design

A product design that takes into account the environmental impact of a product throughout its lifecycle, ranging from extraction of raw materials to production, transportation, use, recycling, and final disposal. It is based on Lifecycle Analysis (LCA) but can also include design changes for social or ethical needs.

Eco-design is a synonym of 'Design for Environment' (DfE).

7 Eco-materials

Materials that provide a maximum performance with a minimum impact on the environment. A material originating from the biosphere should be biodegradable so that it can return to the biosphere. A material originating from the technosphere should be easily recyclable so that it can stay within a closed loop.

8 Ecological footprint

The land, air and water that a city or nation needs to produce all of its resources and to dispose of all its waste. It is a way to determine if the lifestyle of a community is sustainable. It shows if a city or nation is utilizing more or less than its fair sustainable share of the world's resources.

9 Embodied energy

The total energy used to bring a product or material to its present phase in its life cycle. It includes the energy required to extract or produce raw materials, their transport to the place of production, and the energy used for manufacturing. It can also include the energy used in the distribution and retail chain, for maintenance processes, for repair, etc. It is measured in MJ per kg or GJ per tonne.

10 End-of-Life (EoL)

The moment when a product ceases to fulfil the tasks it was designed for. The end-of-life of a product is not the end of its life cycle, since its environmental impact has not yet come to an end; the disassembly, recycling, incineration, and/or disposal phases still remain.

11 Environmental Management Systems (EMS)

Tools that enable an organization to employ a systematic approach to identify, monitor, and control the impact of its activities, products, or services on the natural environment. The international benchmark for EMS is the ISO 14001 standard. Along with the ISO standard, several national EMS standards exist (e.g. BS 7750 in the UK), as well as independent certifying systems (e.g. EMAS in the EU).

12 Environmental Product Declaration (EPD)

An EPD contains quantified data on the environmental impact over the life cycle of a product. These are known as the 'green technical specifications'. It includes pre-set parameters based on ISO 14040 standards, and may sometimes include additional environmental information. It allows prospective customers to compare the environmental performance of competing products on a fair basis. EPDs are also very useful for demonstrating the environmental improvements of a product over time.

13 Green design

A term used in the fields of architecture, construction, and interior design. It is any design that aims to be environmentally sound, without necessarily investigating the complete life cycle. The basic principles are simple: choose energy efficiency wherever possible, work in harmony with the natural features and resources, and use materials that are sustainably grown or recycled rather than new materials from non-renewable resources.

14 Greenhouse gases

Gaseous emissions that contribute to global warming through the greenhouse effect. They include:

- CO_2 (carbon dioxide) from burning fossil and other fuels
- CH_4 (methane) from agriculture, landfill sites, and coke production
- CFC (chlorofluorocarbon), HCFC (hydrochlorofluorocarbon), and HFC (hydrofluorocarbon), used in refrigerants and aerosols
- N_2O (nitrous oxide) from nylon production, nitric acid production, fossil fuel burning, and agriculture
- SF_6 (sulphur hexafluoride) from the chemical industry

15 Life Cycle Analysis or Life Cycle Assessment (LCA)

A calculation of the environmental impact of a product over its complete life cycle. It starts with an inventory of the 'input' (all resources and energy consumption) and 'output' (emissions, solid waste, waste water). The elements in this inventory are grouped into environmental categories, which are quantified according to their environmental impact. The goal is to compare different design strategies within a category.

16 Lifecycle inventory (LCI)

An accounting of the energy input and waste output over the life cycle of a product.

17 Lithosphere

The geological strata that make up the earth's crust and upper mantle.

18 Non-renewable resources

Exhaustible resources that can not be regenerated or renewed by making direct or indirect use of energy from the sun. They include fossil fuels, metals, and plastics. Increasing the recycling rate extends the longevity of these resources.

19 Product Environmental Profile (PEP)

A Product Environmental Profile (PEP) is a document that describes the environmental characteristics of new or modified product. The PEP document typically consists of six sections:

- Product Identification and Description
- Product Energy Information
- Product Composition Information
- Product Consumables and Packaging Information
- Environmental Design and Attributes Information
- Standards Compliance and Emissions Information

20 Product stewardship

A manufacturer's responsibility to ensure that a product not only meets normal business expectations and performance standards but also aspects of health, safety, and environment throughout its complete life cycle (e.g. End-of-Life take-back for the disposal of the product).

21 Rebound effect

The undesirable environmental impact that might be generated directly or indirectly by introducing a so-called eco-efficient product. For example an increased demand for linked products or services, or new behavioural tendencies.

22 Renewable resources

Sources that originate from the storage of energy of the sun in living organisms or in the earths weather system (wind, the rain cycle, etc.). If sufficient water, nutrients, and sunshine are available, these resources are renewed in continuous cycles.

23 Technosphere

The sum of all synthetic and composite materials manufactured by transforming components and materials of the biosphere, geosphere, and atmosphere, but that can not re-enter the biosphere merely by a process of biodegradation.