ECOSIGN

Basic Concepts on Ecodesign

UNIT 10: Introduction to Ecolabelling. Communication.

Objectives

- Know the different options to communicate the environmental performance of a product.

- Know the three types of ecolabel: type I, II y III.

1.1 Ecolabelling

ECOLABELS came up to give an answer to the need of organisations for a system that allowed them to advertise environmental qualities of their products, thus, identifying and comparing them for consumers and competitors.

ECOLABELLING is, according to ISO 14020, a set of voluntary tools with the aim of boosting the demand of products and services with less environmental effects by providing essential information on their life cycle to meet the buyer's demand for environmental information.

<u>Three kinds of mechanisms regulated by international standards</u> were officially created and defined:

- ISO 14020:2000. Environmental labels and declarations. General principles.

- ISO 14024:1999. Environmental labels and declarations. **Type I environmental labelling**. Principles and procedures.

- ISO 14021:2016. Environmental labels and declarations. Self-declared environmental claims (**Type II environmental labelling**).

- ISO 14025:2006. Environmental labels and declarations. **Type III environmental declarations**. Principles and procedures.

10.2 Objectives of Ecolabels

MAIN OBJECTIVES OF ECOLABLES

- To promote the defense and protection of the environment, reducing the environmental impact of products or services.

- To inform and encourage consumers to choose products and services with less impacts on the environment.

- To encourage manufacturers to produce labelled products or services with the demand of products with labels and to continually improve the environment.

- To encourage designers to apply ecodesign principles in the design and product development processes.

- To improve sales and/or the image of a product, as an "environmental marketing" and distinction strategy among products that cannot get the distinctive.

10.3 Types of Ecolabel
10.3.1 General aspects

FACTORS FOR THE SELECTION OF AN ENVIRONMENTAL RECOGNITION SYSTEM

- Possible legislation that obliges organisations to certify the product with any kind of symbology related to product's environmental problems.

- Scope of labelling (local, regional, state, global, etc.).

- Environmental requirements to accomplish (scope, complexity, etc.).

- Need for an independent third party to verify the veracity of the provided information to the competent body which issues the label.

- Viability of the organisation to meet requirements (resources, competence in the product design, etc.).

- Internal and/or subcontracting costs for compliance with the requirements.

- Cost of certification (initial rate, annual rate, dependence factors, etc.).

- The organisation's aim in possession of such certification must be in line with the scope and opportunities provided by the label.

10.3 Types of Ecolabel
10.3.2 Type I Ecolabel – Ecolabels (ISO 14024)

CHARACTERISTICS OF TYPE I ECOLABELS

¿WHAT IS TYPE I ECOLABELLING?

It is a "voluntary system that officially identifies and certifies that certain products or services, regarding their entire life cycle, have less impact on the environment".

- A voluntary, multicriteria programme developed by a third party.
- It indacates that a product is more environmentally suitable according to considerations based on its **life cycle**.
- Environmental criteria established by product categories. Criteria must set achievable limits, considering them relative environmental impacts, and also the capabiilty for measurement and accuracy.
- Compliance with environmental legislation.
- The aptitude for use must be considered.
- Environmental criteria and functional requirements need to be verifiable in a periodic and defined revision.
- Transparency through all stages of their development and operation involving all interested parties.

10.3 Types of Ecolabel
10.3.2 Type I Ecolabel – Ecolabels (ISO 14024)

ADVANTAGES

- Credibility:

  - Certified by an accredited third party.

  - Scientific methods (LCA methodology).

- Reliable and differentiating:

  - Certification ensures that the functionality is as good as other products with greater environmental impact.

- Visibility:

  - Logo on the product packaging.

- If accompanied by other tools, other advantages are derived as:

  - In an EMS, the ecolabelling criteria may be used as improved significant environmental aspects. EMS credibility is increased.
  - Green purchasing. For public and private buyers, having an ecolabel displays easily that the requirements are met.
  - Normally, there are subsidies to support the costs of ecolabels.
  - The ecodesign team may use ecolabels criteria to look for opportunities of improvement.

10.3 Types of Ecolabel
10.3.2 Type I Ecolabel – Ecolabels (ISO 14024)

BEST KNOWN TYPE I ECOLABELS

European Ecolabel (Europe)

Nordic Swan (Nordic countries)

Blue Angel (Germany)

French Ecolabel (France)

Hungarian Ecolabel (Hungary)

Dutch Ecolabel (Netherlands)

Environmental Choice (New Zealand)

Environmental Choice (Australia)

Ecomark (Japan)

10.3 Types of Ecolabel
10.3.2 Type I Ecolabel – Ecolabels (ISO 14024)

BEST KNOWN TYPE I ECOLABELS

The **EUROPEAN ECOLABEL (EU ECOLABEL)**, is a voluntary ecolabel scheme promoted since 1992 by the European Union as an important part of the EU policy on voluntary instrument for helping associations and consumers improve their environmental performance.

Objective of the European Ecological Label (Type I Ecolabel):

−Promoting products that can reduce adverse environmental effects compared to other products in the same category, contributing to an efficient use of resources and high level of environmental protection.
−Provision of guidance and accurate, non-deceptive and scientifically based information on such products to consumers.

To get the EU Ecolabel, organisations must:

- Prove their manufacturing and services to be environmentally friendly to the competent environmental body of administration of the State.

- And, the body will audit and verify, based on the applicable product's criteria defined in the regulations, that requirements are met.

10.3 Types of Ecolabel
10.3.2 Type I Ecolabel – Ecolabels (ISO 14024)

BEST KNOWN TYPE I ECOLABELS

Chart of groups of products for which the EU issued regulations

EUROPEAN ECOLABEL (EU ECOLABEL)

EU Ecolabel Product Groups	
Group	**Subgroup**
DO-IT-YOURSELF	Paints and varnishes.
HOUSEHOLD APPLIANCES	Water-based heaters, heat pumps.
ELECTRONIC EQUIPMENT	Imaging equipment, personal, notebook and tablet computers, televisions.
GARDENING	Growing media, soil improvers and mulch.
LUBRICANTS	Lubricants for several types and uses.
FURNITURE	Wooden furniture.
OTHER HOUSEHOLD ITEMS	Sanitary tapware, flushing toilets and urinals.
PERSONAL CARE PROUCTS	Rinse-off cosmetic products, absorbent hygiene products.
CLEANING UP PRODUCTS	Detergents for dishwashers, laundry detergents, soap, shampoos and conditioner, hand dishwashing detergents, multi-purpose cleaners.
PAPER PRODUCTS	Converted paper, newsprint paper, printed paper, copying and graphic paper, tissue paper.
COVERINGS	Wood-based coverings, hard coverings.
CLOTHING AND TEXTILES	Textiles, footwear.
SERVICES	Tourist accommodation services.

10.3 Types of Ecolabel
10.3.3 Semi Type I Ecolabel

¿WHAT IS SEMI TYPE I ECOLABEL?

Before the public institutions established the ISO 14020 family, labels were created to provide information on environmental characteristics of products.

Sectoral or manufacturer associations, social organisations, <u>defined and established</u>:

- Environmental criteria on certain priority aspects.

- Limits for compliance and to certify it with a label.

- A great number of those systems have reached equal and even higher recognition than type I ecolabels and enjoy prestige, tradition and recognition from the society.
- They have constructed themselves an independent group to bring together different groups such as:
  - Agriculture and food
  - Enegry consumption
  - Building materials and sustainable building
  - Textile products
  - Use of wood

Objective of semi type I ecolabel:

−To get as much products as posible certified by the system.
−To achieve the highest posible recognition by consumers.

10.3 Types of Ecolabel
10.3.3 Semi Type I Ecolabel

BEST KNOWN SEMI-TYPE I LABELS

Chain of custody Certification (Standards by country)

Chain of custody Certification (Standards by country)

Oeko-Tex (Switzerland)

U.S. Green Building Council (America)

Energy Efficiency (America).

100% Green Energy (Italy)

10.3 Types of Ecolabel
10.3.4 Type II Ecolabel – Self-declared Environmental Claims (ISO 14021)

¿WHAT IS TYPE II ECOLABELLING?

Environmental indication (logo, text) supported by the same manufacturer or packager, usually referred to one stage of the life cycle or a particular aspect of a product ("biodegradable", "recyclable", etc.).

Standard ISO 14021 specific requirements are met. This standard provides guidance on the use of certain environmental terms, symbols or charts that describe environmental product characteristics.

TYPE II ECOLABEL CHARACTERISTICS

- Self-declaration by the organisation voluntarily.
- Non-mandatory verification or certification by independent third party. The declarant has full responsibility for his declaration.
- Usually one criterion.
- 18 general guidelines for environmental messages.
- No testing methodology.
- They are statements, symbols or charts that describe specific environmental characteristics of the product.
- They must be accurate and neither misleading, nor cause of misunderstandings.

Precisely these labels are those that bring most confusion to consumers and organisations who wish to check the certainty of their claims.

TERMS OR STATEMENTS USED

- Compostable
- Biodegradable
- Designed for disassembly
- Extended life product
- Recovered energy
- Recyclable

- Recycled content
- Recycled material
- Waste reduction
- Reduced energy consumption
- Reduced water consumption
- Reusable and refillable

The consumer must avoid terms such as:

- Friendly
- Green
- Environmentally safe
- Earth friendly
- Non-polluting
- Etc.

Imprecise expressions where reality is not reflected

- Sustainable

is a complex term to be used

- "Without…", "…-free":

Only if demonstrable

Terms to be considered that:
- Use accurate and non-misleading statements.
- Relate to relevant environmental aspects related to the stages of a product's life cycle.
- Provide substantial verified and verifiable information.
- Make clear if the statement refers to the entire product or only to parts of it.
- Consider the transfer of environmental impacts between the different stages of the life cycle.

-La falta de certificación/validación reduce credibilidad.
-Los consumidores confunden su significado o es difícil su interpretación.
-Bajo contenido de información.

10.3 Types of Ecolabel
10.3.4 Type II Ecolabel – Self-declared Environmental Claims (ISO 14021)

ADVANTAGES

- Visibility.

- They are more economical because they require no third party certification or validation.

DISADVANTAGES

- A lack of certification/validation reduces credibility.

- Consumers confuse their meaning or their interpretation is difficult.

- Low information content.

10.3 Types of Ecolabel
10.3.4 Type II Ecolabel – Self-declared Environmental Claims (ISO 14021)

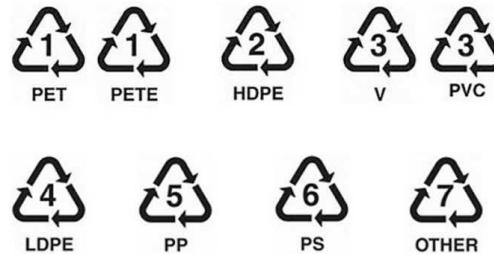## TYPE II ECOLABELS EXAMPLES

MÖBIUS STRIP

Recyclable   % of recycled material

It indicates that the product or the packaging is reciclable and is convenient to deposit the product in a collection point.

RECYCLABLE PLASTIC

| 1 PET | 1 PETE | 2 HDPE | 3 V | 3 PVC |
| 4 LDPE | 5 PP | 6 PS | 7 OTHER |

Symbols found in plastic containers of different types, numbered 1 to 7.

RECYCLABLE ALUMINIUM

41 ALU

The can or container made of reciclable aluminium. Soda cans, food cans, etc.

GREEN POINT

The package company pays a fee, both for its collection and for its waste, which is generated in a recycling circuit, avoiding the contamination of the environment. We find it in plastic containers, metal containers, tetrabrik, cardboard, paper and glass.

SIGRE

Equivalent Green dot on the packaging of pharmaceuticals. The laboratories, under this system, ensure that the packaging and products will be managed to prevent them damaging the environment.

10.3 Types of Ecolabel
10.3.4 Type II Ecolabel – Self-declared Environmental Claims (ISO 14021)

EXAMPLES OF TYPE II SELF-DECLARED ENVIRONMENTAL CLAIMS MADE BY SOME ASSOCIATIONS

	The Basque organisation EZARRI, manufacturer of glass mosaics, has tested and certified by the symbol Möbius its statement in reference to "100% of the glass used as raw material is recycled glass".
	The organisation uses this symbol to facilitate the recognition of RICOH products with environmental characteristics. Proving the use of more tan 40% by mass of reused parts of the product and the total recyclability of more tan 90%.
	Renault. CO_2 emissions below 140 gr/km or compatible with biofuels. Valuable (reciclable and/or reusable) by 95% at the end of its life.
	- Grupo Forlasa. CO_2 emissions offset through compensation system. - Reuse/recycle 100% of the industrial water.

10.3 Types of Ecolabel
10.3.5 Type III Ecolabel – Environmental Product Declarations (ISO 14025)

¿WHAT IS TYPE III ECOLABELLING?

Environmental product declarations (type III labels), as defined by ISO 14025, facilitate the objective, comparable and credible communication of the environmental performance of products.

Their aim is to:

- Offer comprehensible quantitative environmental information, based on different standards.

- Provide an inventory of quantified environmental data of a product, with predetermined categories of parameters based on the standard series ISO 14040, concerning Life Cycle Assessment (LCA).

TYPE III ECOLABELS CHARACTERISTICS

- Voluntary Environmental Declaration.
- Mandatory verification by third party.
- They provide quantified information of the life cycle (according to ISO 14040), and comparable with other products that perform the same function.
- Inform about the environmental impact of a product throughout its life cycle. There are some environmental indicators defined by product category. They are classified by impact category.
- Unlike type I labels, type III neither define the environmental preference of products nor establish minimum requirements to meet.

10.3 Types of Ecolabel
10.3.5 Type III Ecolabel – Environmental Product Declarations (ISO 14025)

CERTIFICATION PROGRAMMES OF EPD

- Optionally, there are certification programmes of EPD, which specify, for different groups of products, the most detailed way to carry out the LCA an EPD according to working rules or procedures contained in documents called: Product Category Rules (PCR). They allow the use of a symbol added to the report which works as an environmental certificate.

- The aim of these organisations is that market EPD follow common "rules" regarding its elaboration and drafting.

PRODUCT CATEGORY RULES (PCR)

- The PCR collect the minimum necessary data to be included in the LCA study, the methodology of impacts to use and the contents of EPD.
- If there is no PCR defined for a group of products, the programme may decide to develop them together with the collaboration of the manufacturer and interested third parties.
- By their very nature, this kind of systems are suitable for exchanges of information between organisations and their customers, and not to the standard final consumer as the information contained the EPD is very technical and detailed.
- There are several entities worldwide with the purpose of developing PCR certify the EPD. The aim of these organisations is that market EPD follow common "rules" regarding its elaboration and drafting.
- Unlike type I labels, type III neither define the environmental preference of products nor establish minimum requirements to meet.

ADVANTAGES

- For manufacturers, importers and suppliers: to provide quantitative information, objective and reliable (LCA methods are used), and open to all products/services.

- For buyers, retailers and customers: to be a source of comparable information, the calculation methods are common and credible thanks to inspection, review and monitoring by an independent verifier.

- They can also be integrated with other tools:

  - Green purchasing.

  - In EMS, the ecolabelling criteria can be used as improved significant environmental aspects.

  - Exploiting synergies among the three types of label, reducing costs and satisfying customers.

  - LCA results can be used as an opportunity for improvement in Ecodesign.

10.3 Types of Ecolabel
10.3.5 Type III Ecolabel – Environmental Product Declarations (ISO 14025)

TYPE III ECOLABEL EXAMPLES

The international EPD Consortium

EcoLeaf environmental label Japan

Korean Ecolabel

Norwegian EPD Foundation

Institute Construction and Environment (IBU) , Germany

Colegio de Aparejadores, Arquitectos Técnicos e Ingenieros de Edificación de Barcelona

ENVIRONMENTAL STATEMENTS OF CARBON FOOTPRINT

- The carbon footprint is used to describe the calculation of emissions of all greenhouse gases (GHG) emissions associated with organiSations, events or activities or the life cycle of a product in order to determine their contribution to climate change and it is expressed in equivalent tons of CO_2.

The well-known methods for calculating the Carbon Footprint of products (or services) are:

−ISO/TS 14067:2013 (Greenhouse gases. Carbon footprint of products. Requirements and guidelines for quantification and communication).

−PAS 2050:2011. Specification for the assessment of the life cycle greenhouse gas emissions of products and services.

−GHG Protocol. Product standard.

ADVANTAGES

- The communication of carbon footprint allows transparent information to consumers.

- It gives value to the product as a differentiator element against others that do not calculate their footprint.

10.4   Difference between Ecolabels and Product Ecodesign

DIFFERENCES BETWEEN ECOLABELS AND ECODESIGN

ECOLABEL	ECODESIGN
Certification associated with a product	Certification associated to the management system (design process)
Evidence that a product meets pre-established environmental criteria and ensures, with that label, that every product from different manufacturers have the same characteristics.	It allows the organisation to choose freely, among the properties of their product or service, where the environmental improvement is carried out through design.
Ensures compliance with certain requirements set in technical specifications (standards) that do not vary over time.	It is based on continuous improvement. That is, the systematic introduction of successive improvements or new product designs is ensured and, therefore, the evolution of the same terms of sustainability.
A product image improvement.	An improvement of the product image and the system management of the organisation.

Funded by the Erasmus+ Programme of the European Union

Thank you for your attention

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