



# ECOSIGN

## Basic Concepts on Ecodesign

### UNIT 3: European legal framework of Environment and Ecodesign



## Objectives of the unit

- To know the European Legal Framework of Environment and Ecodesign in general.
- To know the legislation and general standards for Ecodesign.
- To know the legislation and reference standards of materials and products.



# 1.1 Environment and Ecodesign European legal framework

## 1.1.1 Evolution of European Environment Policy

- At the end of the 50s, the UE countries shown the concern over issues of pollution and environmental degradation.
- It was not until the 70s that the need to adopt a common environmental policy in the EU was formally recognized.
- From the 70s to the present time, legislation and regulation have been developed to define the objectives and principles of environmental policy in order to protect the environment and to prevent environmental pollution.

In the 70s and 80s, the issues of traditional ecology were priority - *protection of species, improvement of air and water quality through the reduction of pollutant emissions.*-

Nowadays, it is prioritized that the approach be more systematic and take into account other links between different issues and their global dimension - *involve to move from rehabilitation to prevention of environmental degradation*

# 1.1 Environment and Ecodesign European legal framework

## 1.1.1 Evolution of European Environment Policy

### Chronology of the incorporation of the environment into the legal basis

- 1972 **Paris European Council**  
The UE recognizes the need to adopt a common environmental policy.
  - 1987 **Single European Act**  
First legal basis for a common environmental policy .
  - 1993 **Constitutional Treaty of the European Community, Maastricht**  
The environmental field was made official in the EU policy area. Co-decision and qualified majority voting
  - 1999 **Amsterdam Treaty**  
Promote “Sustainable development” Integration of environmental protection into all EU sectoral policies
  - 2009 **Lisbon Treaty**  
Objective “Fight against climate change”.
- Integration of the environmental policy into other EU policies in several fields such as: Industry, Energy, Transport, Agriculture and Construction.*
- Present**

# 1.1 Environment and Ecodesign European legal framework

## 1.1.1 Evolution of European Environment Policy

- European environmental policy is based on articles 11, 191, 192 and 193 of the Treaty of Functioning of the European Union

### Objectives of Community environmental policy

- Preserve the quality of environment.
- Protect human health.
- Ensure the rational use of resources.
- Promote measure at the international level to address regional or global environmental issues

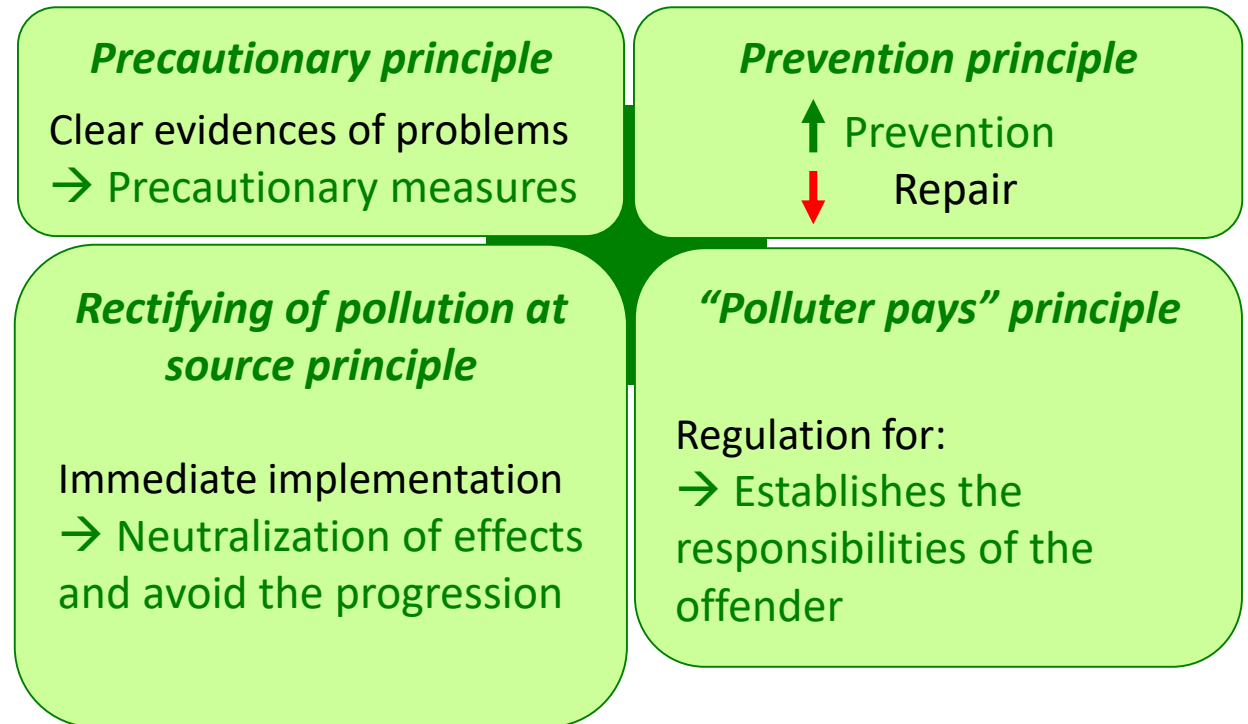
# 1.1 Environment and Ecodesign European legal framework.

## 1.1.2 General principles of European environmental policy.

### General principles of European environmental policy

- **PRECAUTIONARY PRINCIPLE.**
- **PREVENTION PRINCIPLE.**
- **RECTIFYING OF POLLUTION AT SOURCE PRINCIPLE.**
- **“POLLUTER PAYS” PRINCIPLE.**

**The principles are applied to any form of pollution or deterioration**



# 1.1 Environment and Ecodesign European legal framework.

## 1.1.3 Basic legal framework of European environmental policy.

### Summary of the Legal Framework of European Environmental Policy

- ACTION PROGRAMMES
- HORIZONTAL STRATEGIES
- ENVIRONMENTAL IMPACT ASSESMENT AND PUBLIC PARTICIPATION
- INTERNATIONAL COOPERATION
- IMPLEMENTATION, COMPLIANCE AND MONITORING OF THE LEGISLATION

#### *Examples of actions in the Basic Legal Framework*

*VII EAP – General Union Environment Action Programme until 2020*

*“Sustainable Development Strategy”, “Biodiversity Strategy”, “Horizon 2020 Strategy”,...*

*Assessment of projects and programmes*

*International agreements on a wide range of issues*

*Legislation and regulation of effective implementation*

*Organization for monitoring: EEA (European Environmental Agency) , COPERNICUS (European Earth Observation Programme), ...*

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.3 Basic legal framework of European environmental policy.

### **ACTION PROGRAMMES**

- They lay down future legislative proposals and objectives for the Union's environmental policy over a period of several years
- The specific measures are adopted after.
- The programmes are the background on the legislative measure which will be adopted and the first-rate interpretative frame.

The current program, the seventh of its type "VII EAP", was approved by the European Parliament and the Council of the European Union in November 2013 and covers the period up until 2020

VII EAP – General Union Environment Action Programme until 2020

### *Objectives of the VII EAP*

- Protect, conserve and improve the natural capital of the Union.
- Make the Union into a low-carbon, resource-efficient, ecological and competitive economy.
- Protect citizens of the Union from environmental pressures and risks to health and well-being.
- Maximize the benefits of the Union's environmental legislation by improving its application.
- Improve knowledge of the environment and expand the evidence base on which to base policies.
- Ensure investments for climate and environment policy and take into account the environmental costs of all the activities of the society.
- Better integration of environmental concerns into other policy areas and ensure the coherence of the new policies.
- Increase the sustainability of the Union cities.
- Strengthen the Union's effectiveness in the Union when it has to deal with environmental and climate challenges at international level.



## 1.1 Environment and Ecodesign European legal framework.

### 1.1.3 Basic legal framework of European environmental policy.

#### HORIZONTAL STRATEGIES

- They are joining forces to promote environmental improvements alongside other aspects such as: promoting growth and employment with an environmental dimension, quality of life promoting prosperity, environmental protection and social cohesion, etc.
- Some “Strategies” adopted are “Sustainable development”, “Biodiversity” and “Smart, Sustainable and inclusive growth”.

#### COMUNICATION FROM THE EUROPEAN COMMISSION 2020

*A strategy for smart, sustainable and inclusive growth.*

*The commission suggests five quantifiable 2020 targets for the European Union which will set the lines of the process and translate into national targets: employment, research and innovation, climate change and energy, education and the fight against poverty.*

*Points the way to sustainable growth and supports the progress towards a low-carbon, resource-efficient economy.*

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.3 Basic legal framework of European environmental policy.

### ENVIRONMENTAL IMPACT ASSESMENT AND PUBLIC PARTICIPATION

- Assessment of Project of activities with great impact on the Environment, according to the European directive:  
*Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment.*
- They are also subject to assess, called "Strategic Environmental Assessment", to other public programs or plans in relation to land, transport, energy, waste or agriculture uses, according to the European directive:  
*Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.*
- Aarhus Convention 2001 (*Multilateral Agreement on the Environment under the auspices of the United Nations Economic Commission for Europe–UN/CEPE*). High level of environmental protection. Integration of environmental considerations in the planning phase. Before the approval or authorization of a project, the possible consequences are taken into account. Citizens acquire environmental rights: participation in decision-making, access to information, and right of access to justice, if the two previous ones are not taken into account.



# 1.1 Environment and Ecodesign European legal framework.

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### ENVIRONMENTAL IMPACT ASSESMENT AND PUBLIC PARTICIPATION

#### ■ Aarhus Convention 2001

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- High level of environmental protection
- Integration of environmental considerations in the planning phase.
- Before the approval or authorization of a project, the possible consequences are taken into account
- Citizens acquire environmental rights

#### *Rights to citizens in the field of the environment:*

- Participation in decision-making.
- Access to information
- The right of access to justice in case of failure to take into account the other two rights

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.3 Basic legal framework of European environmental policy.

### INTERNATIONAL COOPERATION

- The European Union take part of global, regional, supra-regional, “Agreements” on a wide range of issues:
  - Protection of nature and biodiversity
  - Climate change,
  - Transboundary air and water pollution.
  - Etc.

### EU AGREEMENTS

- The Convention on Biological Diversity “Tenth Meeting of the Conference of the Parties”, 2010 Nagoya (Japan), reached an agreement on a global strategy to halt the loss of biodiversity by 2020.
- The decision to develop Sustainable Development Objectives which resulted in the Rio+20 Conference of 2012.
- The fight of all crime against endangered species of Fauna and Flora at international level through the accession to CITES Convention

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.3 Basic legal framework of European environmental policy.

### **IMPLEMENTATION, COMPLIANCE AND MONITORING OF THE LEGISLATION**

The EU took measurements to ensure compliance with legislation and its effective implementation at national, regional and local levels. Examples of measures taken:

- *In 2001, the European Parliament and the Council adopted minimum (non-binding) standards for environmental inspections.*
- *Effective, proportionate and dissuasive penal sanctions were predicted for the most serious environmental crimes*
- *A platform for the exchange of ideas and best practices for policymakers, environmental inspectors and law enforcement agents was launched through the European Network for the Implementation and Enforcement of Environmental Law (IMPEL).*
- *In 2016, The Commission revised environmental legislation and launched an instrument designed to achieve full implementation of environmental legislation, accompanied by a Program for the adequacy and effectiveness of the “REFIT” regulation (monitoring and reporting obligations arising from current legislation).*
- *In 1990, The European Environmental Agency (EEA) was established to support the development, implementation and assessment of environment policy and to inform the general public.*



# 1.1 Environment and Ecodesign European legal framework.

## 1.1.4 Legal framework of Ecodesign.

### Summary of the Basic Legal Framework for Ecodesign in Europe

- INTEGRATED PRODUCT POLICY
- ACTION PLANS: EFFECTIVE USE OF RESOURCES, ECO-INNOVATION, SUSTAINABLE CONSUMPTION AND PRODUCTION, AND CIRCULAR ECONOMY
- WASTE MANAGEMENT AND PREVENTION
- ECOLOGICAL AND ENERGY LABELLING
- ECO MANAGEMENT AND AUDIT SCHEME (EMAS)
- ECOLOGICAL DESIGN
- GREEN PUBLIC PROCUREMENT
- ENVIRONMENTAL PRODUCT DECLARATIONS, EPD
- OTHERS VOLUNTARY INSTRUMENTS (STANDARDS)

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.4 Legal framework of Ecodesign.

### Chronology of Basic Legal Framework of Ecodesign

- **1992 Ecological and energy labelling**
  - European eco-labelling, Regulation (EEC) No. 880/92.
  - Energy label system for household appliances (electrical appliances), Directive 92/75/ECC.
- **1993 The European Union Eco management and audit scheme (EMAS)**
  - Regulation (EEC) No. 1836/93.
- **1996 Specific legislation waste**
  - Radioactive Substances and waste. Directive 96/29/Euratom.
  - Packages and packaging waste. Directive 94/62/EC
- **2000 Specific legislation waste and Ecological and energy labelling**
  - End-of-life vehicles. Directive 2000/53/EC
  - European eco-labelling. Regulation (EC) No. 1980/2000.
- **2001 The European Union Ecomanagement and audit scheme (EMAS) and Integrated product policy**
  - Regulation (EC) No. 761/2001 (EMAS).
  - Integrated product policy, Green paper, COM/2001/0068 final



# 1.1 Environment and Ecodesign European legal framework.

## 1.1.4 Legal framework of Ecodesign.

### Chronology of Basic Legal Framework of Ecodesign

- **2002 Specific legislation waste**
  - Electrical and electronic equipment. The Directive 2002/96/EC (RoHS), modified by the Directive 2008/34/EC.
- **2004 Specific legislation waste. Environmental Technologies Action Plan and Green public procurement**
  - Package and packaging waste. The Directive 2004/12/EC (Modified by the Directive 94/62/EC).
  - Environmental Technologies Action Plan (ETAP), COM (2004), 38
  - Green public procurement. Directive 2004/17/EC and 2004/18/EC
- **2005 Waste Management and prevention and Ecodesign.**
  - COM (2005) 0666. Communication “Taking sustainable use of resources forward: A thematic strategy on the prevention and recycling of waste”.
  - Ecodesign. Ecodesign requirements for energy-using products, Directive 2005/32/EC.
- **2006 Waste prevention and management, specific waste legislation**
  - Regulation on the shipments of waste.
  - Batteries, accumulators and their waste. Directive 2006/66/EC.
  - Waste from extractive industries. Directive 2006/21/EC related to mining waste

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.4 Legal framework of Ecodesign.

### Chronology of Basic Legal Framework of Ecodesign

- **2008 Sustainable Consumption and Production Action Plan, Waste management and prevention, y Green Public Procurement**
  - Sustainable Consumption and Production Action Plan
  - Waste Framework Directive
  - Green Public Procurement, COM (2008) 400 final
- **2009 Ecodesign, Eco-Management and Audit Scheme (EMAS)**
  - Ecodesign requirements for energy-related products, Directive 2009/125/EC.
  - Regulation (EC) No. 1221/2009.
- **2010 Ecological and energy labelling**
  - European Ecolabelling, Regulation (EC) No. 66/2010.
  - System of energy labelling of the household appliances (electrical household appliances), Directive 2010/30/EU
- **2011 Resource efficiency use and Ecodesign**
  - "Roadmap towards an efficient Europe in the use of resources"
  - Eco-Innovation Action Plan

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.4 Legal framework of Ecodesign.

### Chronology of Basic Legal Framework of Ecodesign

- **2012** Recasting of the Directive 2012/19/EU (WEEE) and the Directive 2012/18/EU (RoHS), for an increased electronic waste collection.
- **2013** Specific legislation waste
  - Ship recycling (Regulation (EU) No. 1257/2013).
- **2014** \_Management and prevention waste y Green public procurement
  - Regulation (EU) No. 660/2014.
  - Green public procurement, Directives 2014/23/EU, 2014/24/EU and 2014/25/EU.
- **2015** Waste specific legislation and Circular Economy
  - Packaging and packaging waste. Directive (EU) 2015/720 of 29/04/2015.
  - The Circular Economy Package. COM (2015) 614 final. Brussels 2.12.2015. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the committee of the regions. Closing the loop: An EU action plan for the Circular Economy.
- **2016** Ecodesign
  - Ecodesign Work Plan, COM (2016) 773 final.

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.5 Voluntary instrument for the application of Ecodesign

- Standards are not mandatory, unlike the legislation
- They are a just volunteer instrument which the company could apply or implement
- Environmental standards can be grouped into the **”ISO 14000 family of standard”**, and can be basically divided into three groups
  - INTEGRATION OF ENVIRONMENTAL ASPECT IN DESIGN AND DEVELOPMENT.
  - LIFE-CYCLE ANALYSIS
  - ENVIRONMENTAL LABELLING (ECO-LABELS AND DECLARATIONS).
- Within these groups there are several application standards, voluntary instruments, and the summary of which will be discussed below

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.5 Voluntary instrument for the application of Ecodesign

### FAMILY OF ISO 14000 STANDARDS *Product Environmental Assessment*

#### INTEGRATION OF ENVIRONMENTAL ASPECTS IN DESIGN

**ISO 14006:2011.** Environmental management systems – Guidelines for incorporating ecodesign.

**ISO/TR 14062:2002.** Environmental management – Integrating environmental aspects into product design and development

#### LIFE CYCLE ANALYSIS

**ISO 14040.** Environmental management- Life cycle assessment- Principles and framework.

**ISO 14044.** Environmental management- Life Cycle Assessment- Requirements and guidelines.

**ISO 14047.** Environmental management- Life cycle assessment- Illustrative examples on how to apply ISO 14044 to impact assessment situations.

**ISO/TR 14048.** Environmental management- Life cycle assessment- Data documentation format.

**ISO/TR 14049.** Environmental management- Life cycle assessment- Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory

#### ENVIRONMENTAL LABELING

**ISO 14020.** Environmental labels and declarations- General principles.

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

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

**ISO 14025.** Environmental labels and declarations- Type III environmental declarations- principles and procedures.

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.5 Voluntary instrument for the application of Ecodesign

### Chronology of the main voluntary instrument apply to Ecodesign

#### INTEGRATION OF ENVIRONMENTAL ASPECTS IN DESIGN

*Implement an Ecodesign Management System for continuous improvement within the companies, provides the elements of an Environmental Management system for the Design and Development of products and/or services.*

- **2002 Voluntary instruments. Integration of environmental aspects in design**
  - ISO/TR 14062:2002. Environmental management – Integrating environmental aspects into product design and development.
- **2003 Voluntary instruments. Integration of environmental aspects in design**
  - UNE 150301:2003. Environmental management of design and development process. Design for environment. (Currently superseded. In force ISO 14006)
- **2009 Voluntary instruments. Integration of environmental aspects in design**
  - IEC 62430:2009. Environmentally conscious design for electrical and electronic products.
- **2011 Voluntary instruments. Integration of environmental aspects in design**
  - ISO 14006:2011. Environmental management systems – Guidelines for incorporating Ecodesign

# 1.1 Environment and Ecodesign European legal framework.

## 1.1.5 Voluntary instrument for the application of Ecodesign

### Chronology of the main voluntary instrument apply to Ecodesign

#### LIFE CYCLE ANALYSIS

*The Life Cycle Analysis of a product or service allows to identify and quantify the environmental aspects and to assessment the environmental impacts that the product / service produces throughout its life cycle.*

- **1997 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO 14040:1997. Environmental management- Life cycle assessment- Principles and framework. (Currently superseded. In force ISO 14040:2006).
- **1998 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO 14041:1998. Environmental management. Life cycle assessment. Goal and scope definition and inventory analysis.
  - ISO 14042:2000. Environmental management. Life cycle assessment. Life cycle impact assessment.
  - ISO 14043:2000. Environmental management. Life cycle assessment. Life cycle interpretation

Currently, the three standards are superseded. In force ISO 14040:2006
- **2000 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO/TR 14049:2000. Environmental management -- Life cycle assessment -- Examples of application of ISO 14041 to goal and scope definition and inventory analysis (Currently superseded. In force ISO 14049:2012).

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### Chronology of the main voluntary instrument apply to Ecodesign

#### LIFE CYCLE ANALYSIS

- **2002 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO/TS 14048:2002. Environmental management. Life cycle assessment. Data documentation format
- **2003 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO 14047:2003. Environmental management -- Life cycle assessment -- Illustrative examples on how to apply ISO 14044 to impact assessment situations. (Currently superseded. In force ISO 14047:2012).
- **2006 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO 14040:2006 Environmental management- Life cycle assessment- Principles and framework
  - ISO 14044:2006. Environmental management- Life Cycle Assessment- Requirements and guidelines.
- **2012 Voluntary instruments. Standards for Product Environmental Impact Assessment. Life Cycle Assessment**
  - ISO 14047:2012. Environmental management -- Life cycle assessment -- Illustrative examples on how to apply ISO 14044 to impact assessment situations.
  - ISO/TR 14049:2012. Environmental management -- Life cycle assessment -- Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis.



# 1.1 Environment and Ecodesign European legal framework.

## 1.1.5 Voluntary instrument for the application of Ecodesign

### Chronology of the main voluntary instrument apply to Ecodesign

#### ECOLABELS AND ENVIRONMENTAL DECLARATIONS

*Environmental labelling is, according to ISO 14020, a set of voluntary tools which try to stimulate the demand for product and services with lower environmental loads by offering relevant information about their life cycle to satisfy the demand of environmental information by the buyers.*

- **1998 Voluntary instruments. Environmental labels and declarations**
  - ISO 14020:1998. Environmental labels and declarations. General principles (Currently superseded. In force ISO 14040:2006).
- **1999 Voluntary instruments. Environmental labels and declarations**
  - ISO 14021:1999. Environmental labels and declarations -- Self-declared environmental claims (Type II environmental labelling). (Currently superseded. In force ISO 14021:2016).
  - ISO 14024:1999. Environmental labels and declarations- Type I environmental labelling- Principles and procedures

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#### ECOLABELS AND ENVIRONMENTAL DECLARATIONS

- **2006 Voluntary instruments. Environmental labels and declarations.**
  - ISO 14020:2006. Environmental labels and declarations. General principles.
  - ISO 14025:2006. Environmental labels and declarations- Type III environmental declarations. Principles and procedure.
- **2016 Voluntary instruments. Environmental labels and declarations.**
  - ISO 14021:2016. Environmental labels and declarations- Self-declared environmental claims (Type II environmental labelling).

Thanks

# Basic Concepts on Ecodesign

UNIT 3: European legal framework of Environment and Ecodesign.

