



ECOSIGN

Basic Concepts on Ecodesign

UNIT 8: Environmental Management



Objectives

- Know, in general terms, environmental management systems under the standard ISO 14001 and the EMAS Regulation.

9.1 Environmental Management Systems

9.1.1 Introduction

What is an Environmental Management System?

An Environmental Management System (EMS) is a system introduced to control all those processes of an organisation that are related to the environment and have an impact on it.

Environmental management in organisations is not a voluntary activity, but a mandatory one, due to the vast amount of environmental legislation.

The goal of an EMS is: “to define and document methodologies to carry out activities under control, always from a more environmentally friendly perspective.”

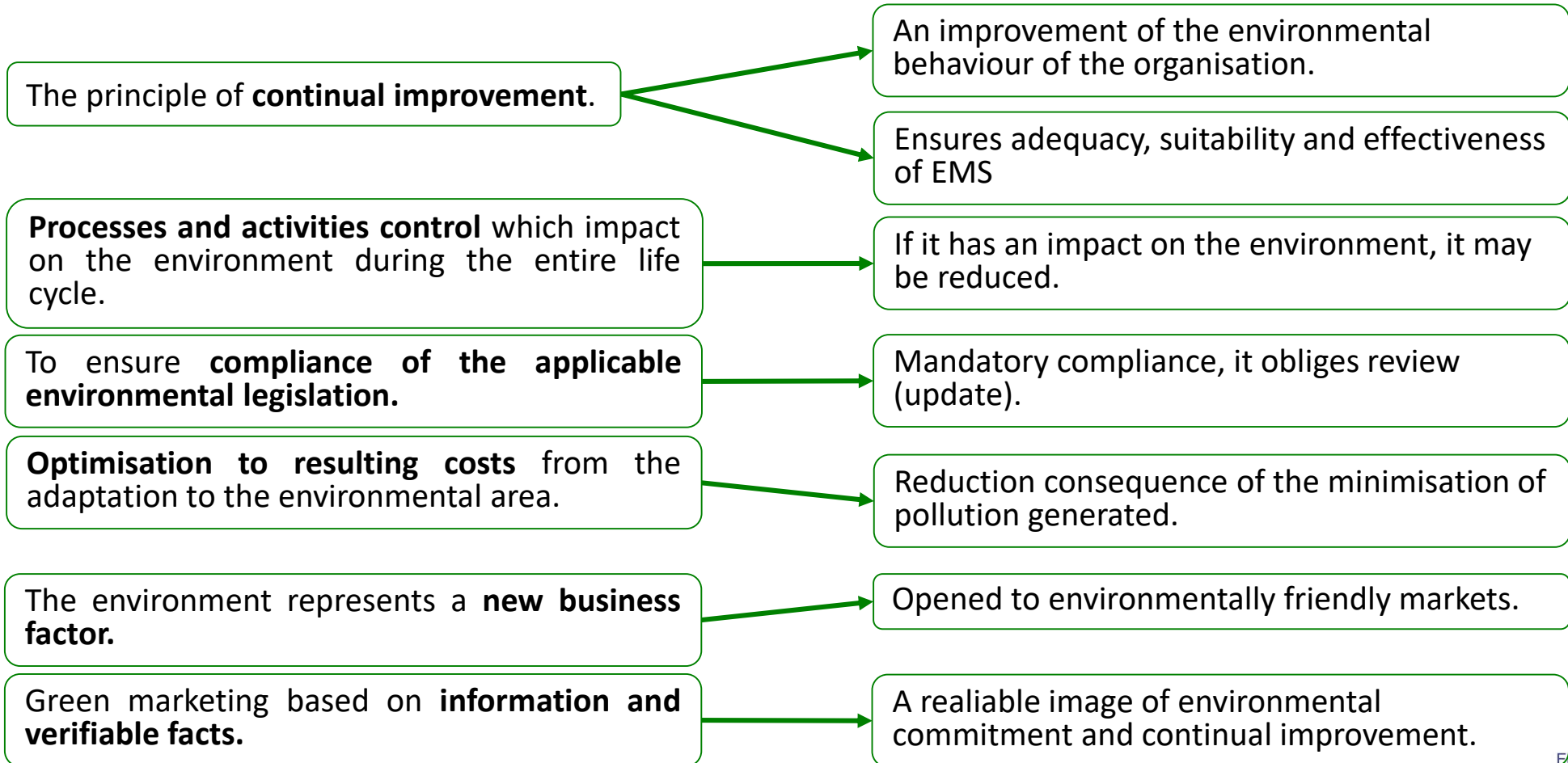
Environmental Management System Types (EMS):

- Formal EMS. Auditable by third parties and certifiable. Best known:
 - ISO 14001
 - Reglamento EMAS
- Informal or not referenced EMS. Neither auditable, nor certifiable.

9.1 Environmental Management Systems

9.1.2 Benefits of Introducing an EMS

BENEFITS



9.2 Standard ISO 14001

9.2.1 Structure of the Standard ISO 14001

WHAT IS THE HIGH LEVEL STRUCTURE OF A STANDARD?

- Standard ISO 14001 has a high level structure. Allows easy integration of other management systems: ISO 9001, ISO 27001, etc.
- A high level structure consists of 10 main headings.

*“Sections of the standard 0, 1, 2 and 3 are generic.
This unit focuses on:
4 to 10 requirements (subsection 9.2.2.)”*

Sections of a high level structure

Generic

0. INTRODUCTION

1. SCOPE

2. NORMATIVE REFERENCES

3. TERMS AND DEFINITIONS

Requirements

4. CONTEXT OF THE ORGANISATION

5. LEADERSHIP

6. PLANNING

7. SUPPORT

8. OPERATION

9. PERFORMANCE EVALUATION

10. IMPROVEMENT

9.2 Standard ISO 14001

9.2.2 Requirements of the Standard ISO 14001

4. Context of the Organisation

■ Context analysis and interested parties identification. Analyse environmental conditions that affect at internal level:

- Internal: cultural, economic, operative, technological, performance aspects, etc., and
- External: technological, economic, market, political, social, etc.

■ Determine who are the interested parties inside the given context, based on their membership, needs and expectations.

■ The Executive Board must establish a strategy on environmental management. The system must be in line with the strategy and the determined scope.

5. Leadership

■ Top management should demonstrate leadership and commitment to the system:

- Define an “environmental policy” (communicate).
- Define “objectives”, “environmental indicators” and “strategies” considering legal requirements and related information.
- Establish roles, responsibilities and authorities.
- Promote the use of “processes approach” and “risk based thinking”.

9.2 Standard ISO 14001

9.2.2 Requirements of the Standard ISO 14001

6. Planning

- EMS must be planned by the organisation.
- Requirements:
 - Determine the “risks and opportunities” related to environmental aspects of the organisation and take proper actions.
 - Identify and assess the organisation’s “environmental aspects” from the life cycle perspective. Identify the significant aspects with the established criteria.
 - Identify and assess the “legal environmental requirements”. Review and update.
 - Establish “improvement targets” to significant environmental aspects, legal requirements, as well as to risks and opportunities detected.

7. Support

- Top management of the organisation must support the needed resources for the EMS continual improvement:
 - Raise awareness and commitment to the system in the organisation. Communicate the importance of environmental management.
 - Provide the needed EMS training to the staff.
 - Establish the needed processes for internal and external communications relevant to the implemented EMS.
 - Determine the needed documented information and its control to meet the standard requirements and other requirements which may be of importance later.



9.2 Standard ISO 14001

9.2.2 Requirements of the Standard ISO 14001

8. Operation

■ “Operational planning and control”. Operating criteria for the processes and their control:

- In the design and development process for the product or service → controls must be established, considering each life cycle stage.
- Determine the environmental requirements for the procurement of products and communicate its environmental requirements to external providers.
- It must consider the need to provide information about potential significant environmental impacts associated with the transportation or delivery, use, end-of-life, treatment and final disposal of its products.

■ “Emergency preparedness and response”:

- Determine emergency situations, included those that may have an environmental impact.
- Establish, implement and maintain processes needed to prepare and respond to potential emergency situations, perform drills, evaluate and review the results obtained.

9.2 Standard ISO 14001

9.2.2 Requirements of the Standard ISO 14001

9. Performance evaluation

- The implemented EMS must be regularly reviewed: its effectiveness and compliance.
 - “Monitoring, measurement, analysis and evaluation” of processes performance.
 - Conduct “internal audits” at planned intervals.
 - Conduct an EMS “management review” to ensure its continuing suitability, adequacy and effectiveness.

10. Improvement

- Continual improvement on processes efficiency and efficacy must be ensured:
 - Actions against non-conformities detected to mitigate impacts. Take appropriate actions against system deviations.

“Preventive actions” are no longer on the standard (disappeared in the 2015 standard versión because risk and opportunities management is considered).
 - Apply the continual improvement principle, and continually improve the suitability, adequacy and effectiveness of the EMS.

9.2 Standard ISO 14001

9.2.3 Standard ISO 14001 Certification

- Once the EMS is implemented, the organisation is in position to certify the system.

→ Contact with an accredited certification body:

AENOR, BVQi, SGS, ...

To proceed with a certification audit and prove that the ISO 14001 requirements demanded are met.

- Third party auditory certification. Check that the ISO 14001 requirements of the implemented EMS met requirements.
- If the outcome is satisfactory, the certification body issues the ISO 14001 Certification.
- Disseminate the certification, communicate to the interested parties: clients, providers, association, etc.).



9.3 EMAS Regulation

9.3.1 The Objective of EMAS

THE OBJECTIVE OF EMAS:

Promote continual improvement of organisation's environmental behaviour

with:

- The establishment and implementation of EMS.
- The systematic, objective and periodic evaluation of the performance of such systems.
- The provision of information on environmental performance.
- An open dialogue with the public and other interested parties and the active involvement of employees in organisations and appropriate training.

Important instrument of the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan.

9.3 EMAS Regulation

9.3.2 Requirements of the EMAS Regulation

The general procedure for implementing EMAS in an organisation consists of the following 6 steps:

1. Initial environmental review
2. Implementing an EMS in line with ISO 14001
3. System checking: internal Audit and management review.
4. EMAS environmental statement
5. EMS validation by an EMAS verifier
6. Application for registration of EMAS

Organisations that register with EMAS have to:

- Prove compliance with environmental legislation.
- Make a commitment to continually improving their environmental performance.
- Show they have an open dialogue with all stakeholders.
- Involve employees in improving the organisation's environmental performance.
- Publish and update a validated EMAS environmental statement for external communication.

9.3 EMAS Regulation

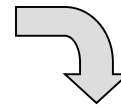
9.3.2 Requirements of the EMAS Regulation

1. Initial environmental review

- of all activities the organisation carries out.
- identify relevant “direct and indirect environmental aspects” and the “applicable environmental legislation”.

Initial environmental review contents

- a. Applicable of legal requirements to the organisation.
- b. Identification of direct and indirect environmental aspects.
- c. Assessment of the significance of the environmental aspects.
- d. Examination of existing processes, practices and procedures.
- e. Evaluation of feedback from the investigation of previous incidents.



After the “initial environmental review”

2. Implementing an EMS in line with ISO 14001

- An EMS is implemented in line with the requirements of ISO 14001

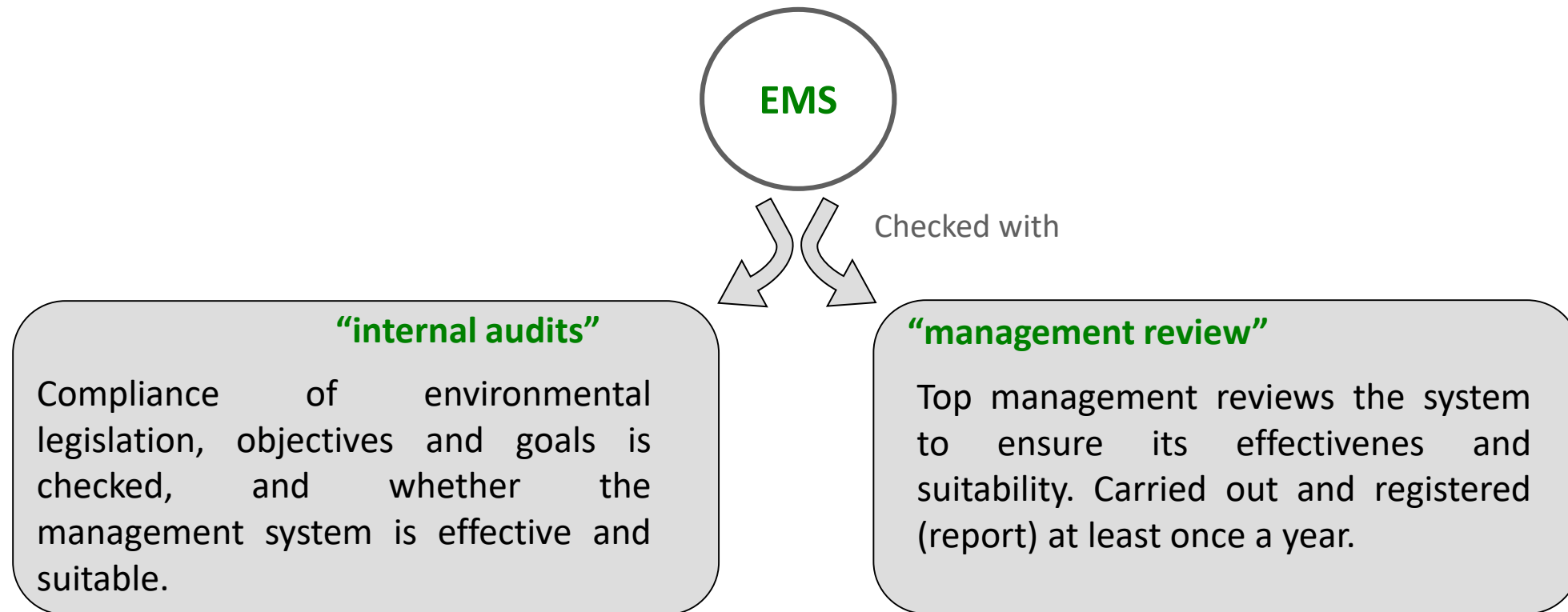
(Annex II to the EMAS Regulation).

- See: section 9.2, Unit 8.

9.3 EMAS Regulation

9.3.2 Requirements of the EMAS Regulation

3. System checking: internal Audit and management review



9.3 EMAS Regulation

9.3.2 Requirements of the EMAS Regulation

4. EMAS environmental statement

- The following step is to draft the “EMAS environmental statement”.



Content of an EMAS environmental statement

- 1) Description of the organisation. Summary of activities (NACE codes), products and services. Relationship to parent organisations.
- 2) Environmental policy. Brief description of the EMS and the work structure.
- 3) Description of all the significant direct and indirect environmental aspects (separated). Explanation of the nature of the related impacts (Annex I.2 of the EMAS Regulation).
- 4) Description of the environmental objectives and targets in relation to the significant environmental aspects and impacts. Environmental programme and taken/planned action to improve behaviour.
- 5) Summary of the data available on the performance of the organisation achieving its environmental objectives and targets with respect to its significant environmental impacts. Core and other indicators relevant according to section C, annex IV of the EMAS Regulation.

Including also:

Sectoral Reference Documents



The European Commission developed “Sectoral Reference Documents”.

Organisations should take them into account when implementing EMAS and specify in their environmental statement how these documents were used.

9.3 EMAS Regulation

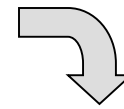
9.3.2 Requirements of the EMAS Regulation

5. EMS validation by an EMAS verifier

The organisation's EMS may be audited by an external recognised EMAS verifier to issue the validation and access to the EMAS Register. Identify: relevant direct and indirect environmental aspects" and "applicable environmental legislation".

EMAS validation audit:

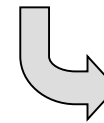
- An accredited or licensed environmental verifier will verify the environmental review and the environmental management system.
- If the outcome is satisfactory, the environmental management system will be verified.



After the "EMS validation"

6. Application for registration of EMAS

- Submission of an application for registration to the Competent Body of State:
 - Validated EMAS environmental statement.
 - Declaration signed by the environmental verifier.
 - Completed application form (annex VI to the Regulation)
 - Evidence of payment of fees, if applicable.



Gestión ambiental verificada
Reg. n° XXXX

*"Once registered,
organisations are entitled to
use the EMAS logo"
(verified environmental
management)*

Funded by the
Erasmus+ Programme
of the European Union



9.4 Differences between ISO 14001 and the EMAS Regulation

“ISO 14001 and EMAS suggest an effective systematic for the environmental management of organisations”

Differences between ISO 14001 and EMAS

- EMAS is more complete, since it not only demands compliance with Standard ISO 14001 requirements, but it also contains additional requirements:
 - An “environmental statement”:
 - public document.
 - obligation to regularly facilitate the environmental information contained in that statement → **Instrument for communication of the organisation’s environmental behaviour.**
 - A public register of participating organisations in each country, which boosts business opportunities.

Thank you for your attention

Basic Concepts on Ecodesign

UNIT 8: Environmental Management.

