

## ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2004

### INTRODUCTION

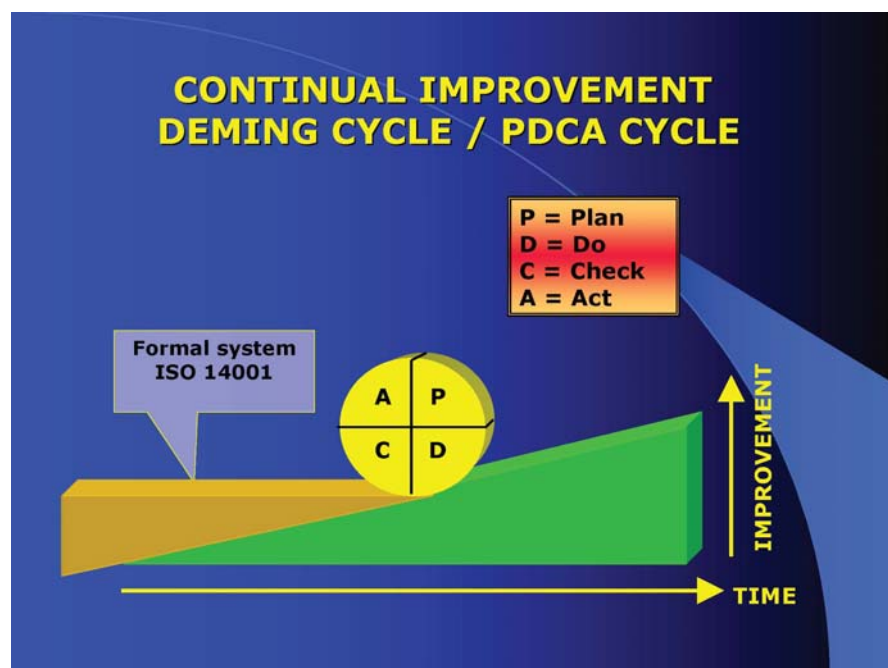
Management of environmental issues is a crucial factor in national and international business competitiveness. Environmental regulations are getting stricter, and so is enforcement. The customers are becoming more and more aware of environmental sustainability issues. Therefore the organizations world-wide make an additional, voluntary efforts to minimize their negative impact on the environment. They develop a systematic management approach to the environmental concerns of the organization, that results in continual improvement in environmental management.

Independent certification of the environmental management system according to requirements of internationally recognized standard ISO 14001 adds a value to organization's business and makes it more attractive to environmentally concerned business partners.

### WHAT IS ENVIRONMENTAL MANAGEMENT SYSTEM?

Environmental management system is a powerful, market driven tool that enables every organization continuously improve the overall environmental performance. According to the ISO 14001 standard, environmental management system is that part of the organization's management system, that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy. The various parts of an organization's management system might be integrated, together with the environmental management system into a single management system using common elements.

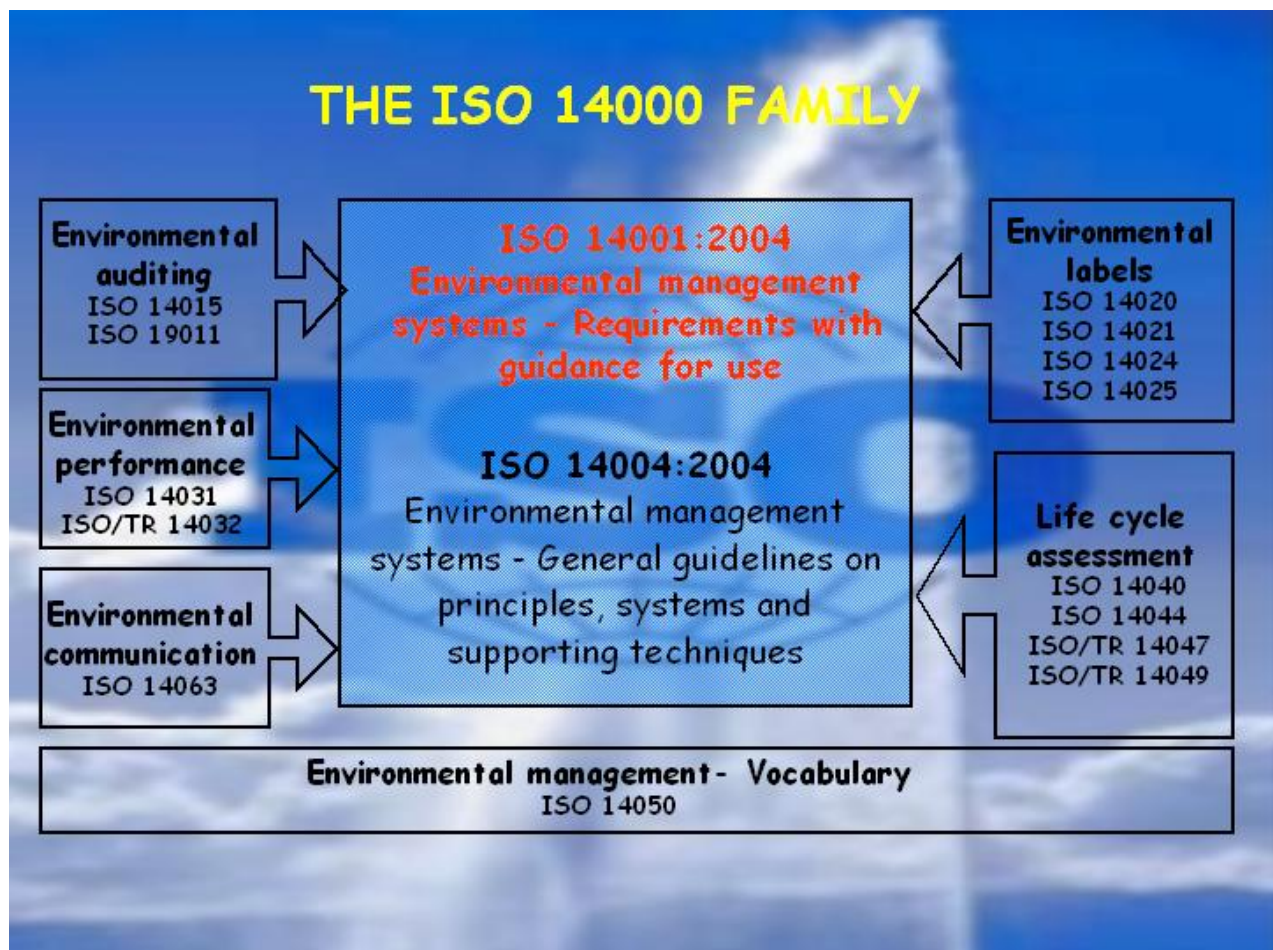
The fundamental principle of every environmental management system is concept of continual improvement. This concept is aimed at improving on a regular basis the overall environmental performance and is depicted by "Plan-Do-Check-Act" model introduced by Deming.



## THE ISO 14001 STANDARD

The ISO 14001 standard sets the requirements for environmental management system in an organization.

The ISO 14001 standard is first standard out of the ISO 14000 family. The whole ISO 14000 series provides management tools for organizations to control their environmental aspects and to improve their environmental performance related to their products and/or services. ISO 14001 is designed to be flexible enough to be applied to any sized organization in both the private and public sectors. An implemented EMS may only be certified according to the requirements of the ISO 14001 standard. The other standards constituting the ISO 14000 series can be used as a environmental management tools that provide additional guidance and useful explanations to ISO14001.



## **MAIN ELEMENTS OF EMS ACCORDING TO THE ISO 14001 STANDARD**

Implementation of the EMS is voluntary. Its adoption will only be successful, if it is a strategic decision of organization's top management.

In order to know, what steps should be taken to decrease the environmental impact, an organization should assess to what extent it influences every element of the environment. An organization may consider to carry out an initial environmental review (ISO 14001 doesn't require it), which would help to identify the environmental aspects of its activities, products and/or services. In other words the organization must understand how it interacts with the environment.

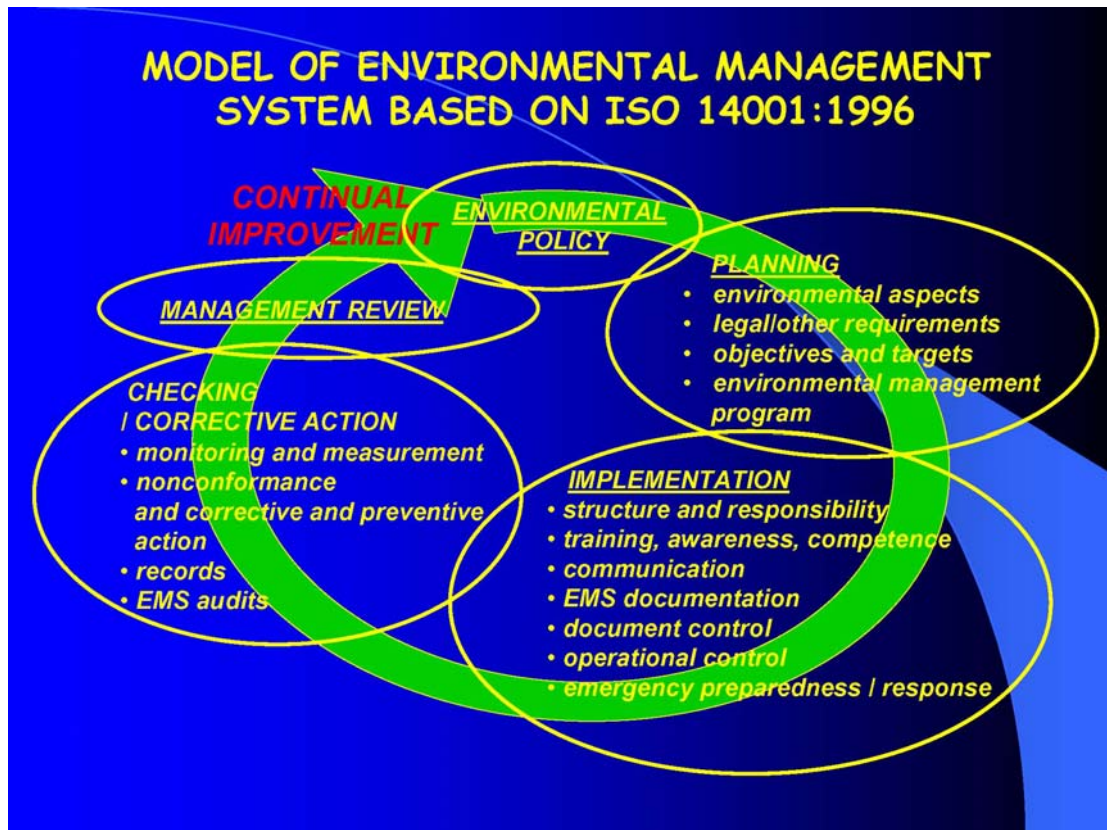
Among all environmental aspects, those should be chosen that can be controlled, and over which the organization can be expected to have influence. These are so called significant environmental aspects. The factors such as: ecological effects, human health impacts, resource depletion, scale, severity & duration of impacts, probability of occurrence, legal aspects, third party consultation might be considered when assessing the significance of the environmental aspects.

The significant environmental aspects provide the basis for the environmental policy statement, and the environmental objective(s) and targets. As a result of the initial review all legal and other requirements to which the organization subscribes, that are applicable to the environmental aspects of its activities, products or services shall be identified, updated and maintained. Once the organization establishes its environmental objectives and targets, then the environmental management program should be developed and integrated into the existing environmental management practices at the organization wherever possible, and should be tied into the strategic plan of the organization as well. Issues such as scheduling, resource allocation, and responsibilities should be included in the EM Program.

As a next step the organization shall identify those operations and activities, which are associated with the identified significant environmental aspects. These activities shall be planned and maintained, in order to ensure that they are carried out under specified conditions. It means that the organization should establish and maintain documented procedures to cover situations where their absence could lead to deviations from the environmental policy and the objectives and targets.

Measuring and monitoring of environmental impacts, along with practices for identifying nonconformance and for implementing corrective and preventive actions, conducting routine internal audits and record keeping constitute the organization's EMS checking and corrective action program.

Apart from internal audits, management review is an essential portion of the continual improvement of the organization's EMS. The review must assess the extent of compliance or nonconformance to the ISO 14001 standard, and then review the effectiveness of corrective actions. For better EMS performance internal and external communication practices shall be established, as well as organizational structure, personnel responsibilities, competency and training, especially for those employees with responsibilities directly connected with significant environmental aspects.



## **CERTIFICATION OF ENVIRONMENTAL MANAGEMENT SYSTEM**

Many organization seek independent verification of their management system. Certification attests that organization's EMS conforms the requirements of EM standard such as ISO 14001.

***Certified Environmental Management System confirms organization's effective and responsible environmental performance. It ensures organization's ability to continually deliver its products and/or services while controlling environmental aspects and realizing task targeting to reach environmental objectives, and improvement of environmental performance is a fundamental principle of the organization.***

NEPCon provides independent evaluation and certification of the environmental management system against ISO 14001:2004. During the certification audit auditor checks, whether all system elements fulfill relevant requirements. Certificate confirming that EMS conforms the requirements of the ISO 14001 standard is valid for 3 years. In this period NEPCon conducts annual surveillance audits.

NEPCon's services comply with international standards set in ISO/IEC Guide 66:1999 (General Requirements for Bodies Operating Assessment and Certification/Registration of Environmental Management Systems), which constitutes basis for European standard EN-45012:1998 under the same name.

NEPCon plans and conducts certification processes, and selects auditors using methods and techniques required by the international standard ISO 19011:2002 "Guidelines for quality and/or environmental management systems auditing".

NEPCon cooperates and employs high qualified auditors and experts that have experience and qualifications, which enable them to comprehend the technological context in which the audit is being conducted.

### **CERTIFICATION STEP BY STEP**

- 1. Initial contact** is made between the organization and NEPCon.
- The organization fills in the **application form** and sends it to NEPCon by e-mail, fax, or traditional mail.
- NEPCon estimates the cost for personnel, travel, administration and other costs, and prepares a **proposal for certification** covering cost of certification and surveillance audits.
- If the organization accepts the proposal, NEPCon prepares **certification agreement** for certification and surveillance of the management system, which both parties sign.
- 5. Certification audit in the organization.**

Certification audit consists of two stages.

The objectives of the audit's first stage are to provide a focus for planning the audit by gaining an understanding of the EMS in the context of the organization's environmental aspects and associated impacts, policy and objectives, and, in particular, of the organization's state of preparedness for audit, by reviewing the extent to which:

- the EMS includes an adequate process for identification of the organization's environmental aspects and subsequent determination of their significance;
- for the relevant activities of the organization, environmental licenses are in place;
- the EMS is designed to achieve the organization's environmental policy;
- the internal audit conforms to the requirements of the EMS standard;
- management reviews are being conducted and cover the continuing suitability, adequacy and effectiveness of the EMS;
- the EMS documents and responds to relevant communication from external interested parties;

The following information shall be obtained as a result of the audits' first stage:

- EMS documentation including procedures;
- a description of the organization and its on-site processes;
- an indication of environmental aspects and their associated impacts and the determination of significant environmental aspects;
- the means by which the concept of continual improvement is realized;
- an overview of the applicable regulations (including licenses/permits), and any agreements with authorities;
- internal audit programs and reports.

The stage 1 should be performed at the organization's site, unless it can justify an alternative approach, such as EMS documentation review. Such a justification might be conducting audit in a small organization with few number of processes and/or low environmental impact.

The objectives of the second stage are to confirm that the organization adheres to its own policies, objectives and procedures, and the EMS conforms with all the requirements of the EMS standard and is achieving the organization's policy objectives.

The stage 2 should address the implementation of all elements of the standard (except those fully and successfully audited in stage 1) and in particular focus on the organization's:

- identification of environmental aspects and subsequent determination of their significance;
- procedures to ensure compliance with legal and other requirements;
- operational control;
- performance monitoring, measuring, reporting and reviewing against the objectives and targets;
- identification and evaluation of nonconformities and completion of corrective /preventive actions;
- internal auditing and management review;
- management responsibility for the environmental policy;
- links between policy, environmental aspects and their associated environmental impacts, objectives and targets, responsibilities, programs, procedures, performance data, internal audit and review.

During the audit, information relevant to the audit objectives, scope and criteria are gathered. Methods of collecting information include interviews, observation of activities, and/or review of documents. All collected information is verified. Only verified information may be audit evidence. Audit evidence is recorded and evaluated against audit criteria to generate the audit findings. Audit findings can indicate either conformity or nonconformity with audit criteria. They can identify an opportunity for improvement as well. Nonconformities are summarized and agreed by auditor team, then recorded in the Nonconformities Report.

NEPCon distinguishes the following grades of nonconformity:

- a. Observation – Audit evidence exists but relevant requirements (criteria) can not be found. The observation might refer to potential problems that were noticed, or suggested improvements that could be made even though an actual non-compliance was not found.
- b. Minor nonconformity – failure in some part of the EMS documentation, which is not required by the standard. It is not likely to result in the failure of the EMS.
- c. Major nonconformity – any noncompliance with the standard requirement. A number of minor nonconformities against one requirements, that can represent a total breakdown of the system.

*!!! Caution: Audit is based on sampling techniques. Fact, that nonconformities haven't been identified in a certain area, does not mean that they do not exist there.*

*!!! Caution: NEPCon strictly obeys its confidentiality policy. All information and other property rights of our clients are kept confidential. Subcontracted personnel and all employees are required and obliged to keep all such information confidential.*

6. NEPCon prepares **audit report** and sends the final version to the organization within one month after certification audit.
7. NEPCon takes the **certification decision** and issues the certificate (if the decision is positive).
8. **Surveillance** over certified management system.

After certificate is issued the organization must follow the criteria of certification, which is confirmed during annual surveillance audits within 3 year period of validity of the certificate. The purpose of surveillance is to verify that the approved EMS continues to be implemented, to consider the implications of changes to that system initiated as a result of changes in the organization's operation and to confirm continued conformity with certification requirements.

*!!!Caution: The above-mentioned procedure might vary depending on size of organization and types of operation. For large and complicated operation we might suggest to conduct an initial audit to identify major weaknesses in their system before the certification audit.*

### **BENEFITS OF AN ISO 14001 BASED ENVIRONMENTAL MANAGEMENT SYSTEM IMPLEMENTATION AND CERTIFICATION**

Among the most important benefits of environmental management system implementation and certification the following are to be mentioned:

- Better position on the competitive national and global market, as well as access to new markets,
- Lower production costs because of cutting waste and using energy and natural resources more efficiently,
- Higher confidence and will of cooperation from clients, contractors, and other stakeholders,
- Better public image,
- Continuous and effective process of improvement that saves time and money and improves environmental performance,
- Higher engagement, self-control, and motivation of employees,
- Compliance with regulatory and legal requirements.