

CONTRIBUTIONS TO THE IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT SYSTEM WITHIN THE ECO TECHNOLOGIC ORGANIZATION

Prof. univ. dr. ing. Gheorghe **AMZA**, Polytechnic University of Bucharest, Romania,
amza@camis.pub.ro

Prof.univ. dr. ing. Dan **DOBROTA**, "Constantin Brâncuși" University of Târgu - Jiu,
Romania, ddan@utgjiu.ro

***Abstract:** This paper presents contributions to the implementation of environmental management system within the eco technologic organization. SME type organization's environmental policies highlights the accomplishment of requirements of ISO 19001 standard, regarding pollution prevention, commitment in accordance to the law and if it is documented and can provide a framework for setting environmental objectives and targets. The audit may reveal whether it corresponds to the nature, scale and impact that activities, products and services of the organization have on the environment, or if it is implemented, maintained and communicated to all staff. This paper presents mainly the following: elements of environmental planning process, environmental planning process, place of environmental conservation in the general strategy of the organization*

Keywords: implementation, environmental, eco technologic, management system.

1. INTRODUCTION

The task of achieving consistency between population growth trends, the desire for continuous development of the organization and the need to protect the environment can be met only through an approach that encourages and supports development and environment simultaneously.

The development of eco technologic organizations represents a new approach of industrial development that enables organizations to ensure economic and social benefits for the present generation without compromising the ability of future generations to meet their own needs without damaging the fundamental ecological processes.

From this definition follows that any significant degradation of ecological processes, due to industrial organizations should not be on long term. To achieve sustainable development of the organization three criteria have to be met:

- protection of eco-capacity, namely maintenance of the capacity of ecosystems to function in spite of pollution;
- efficient use of human, material and energy resources;
- ensuring a fair distribution among nations both of the goods supplied by the development of organizations as well of the hardships caused by environmental degradation.

The eco production concept evolves from earlier concepts of eco-technology and clean technology or low-waste production. The older concept of clean technology was regarded by the European Community Commission in 1979 as having three distinct but complementary goals:

- fewer pollutants discharged into the natural environment (air, water, soil);
- less waste (waste-free technology or low-waste production);
- lower demand for natural resources (water, energy and raw materials).

Although there is still no universally agreed definition of eco production, nor do any sustainable development, there is some consensus expressed at the seminar to promote clean production, organized by the United Nations Environment Program.

Eco production is a global approach of environmental protection, which includes all phases of production or product life cycle, mainly aimed to prevent and minimize short-and long-term risks for humans and the environment.

Eco production is beneficial to the environment by reducing pollution. Also, eco technologic organizations following this type of preventive pollution approach, have some direct benefits, such as:

- achieve cost savings by reducing waste of energy and raw materials;
- improving the efficiency of the organization;
- achieving a better quality of products, since the operation of the organization is easier to predict;
- recovery of wasted certain materials.

Eco production includes the following:

- application of expertise;
- improving technology;
- changing attitudes.

By the new approach born in environmental management, the priorities of pollution management are completely reversed. Thus, the first hierarchic priority is to prevent pollution, according to changes of the processes and products, recycling and recovery of production site, before taking measures to reduce pollution. This new hierarchy looks like this:

- prevention;
- reduction;
- reuse and recycling;
- treatment with energy and material recovery;
- treatment;
- final disposal.

This approach of environmental management is growing because of the fact that eco technologic organizations, especially companies applying technical progress:

- realize that new priorities are less expensive and therefore it is a more profitable environment management;
- are aware that sooner or later they will be forced by public pressure or Government to reduce pressure of environmental pollution.

Steps necessary to implement a program to achieve an eco production in an organization can be summarized as follows:

- develop and implement a comprehensive environmental policy at corporate level to focus on preventing pollution.
- setting some corporate objectives regarding the program of introduction of eco production by establishing a precise agenda.
- allocation of responsibilities, time and financial support for the entire program;
- employees' involvement at all levels;
- develop accounting procedures for the reduction of waste in the company and their regular use to identify, assess and eliminate waste at every stage of production;
- obtaining and using the best technical and other information from both inside and outside the company;
- monitoring and evaluating progress of the program;

- regular information of all company's employees on progress in connection with eco production from the last month, from the last six months, the last year or last five years;
- encouraging and rewarding fruitful individual and collective efforts in eco production's implementation;
- awareness that achieving eco production is a journey and not a destination;
- regular modernization of objectives and timetables to minimize the amount of waste.

2. REQUIREMENTS FOR ENVIRONMENTAL POLICY

Environmental policy is the only the framework for setting environmental objectives and specific environmental targets. There are however certification bodies requiring, that these objectives to be explicitly included in the policy.

SME type organization's environmental policies highlights the accomplishment of requirements of ISO 19001 standard, regarding pollution prevention, commitment in accordance to the law and if it is documented and can provide a framework for setting environmental objectives and targets. The audit may reveal whether it corresponds to the nature, scale and impact that activities, products and services of the organization have on the environment, or if it is implemented, maintained and communicated to all staff.

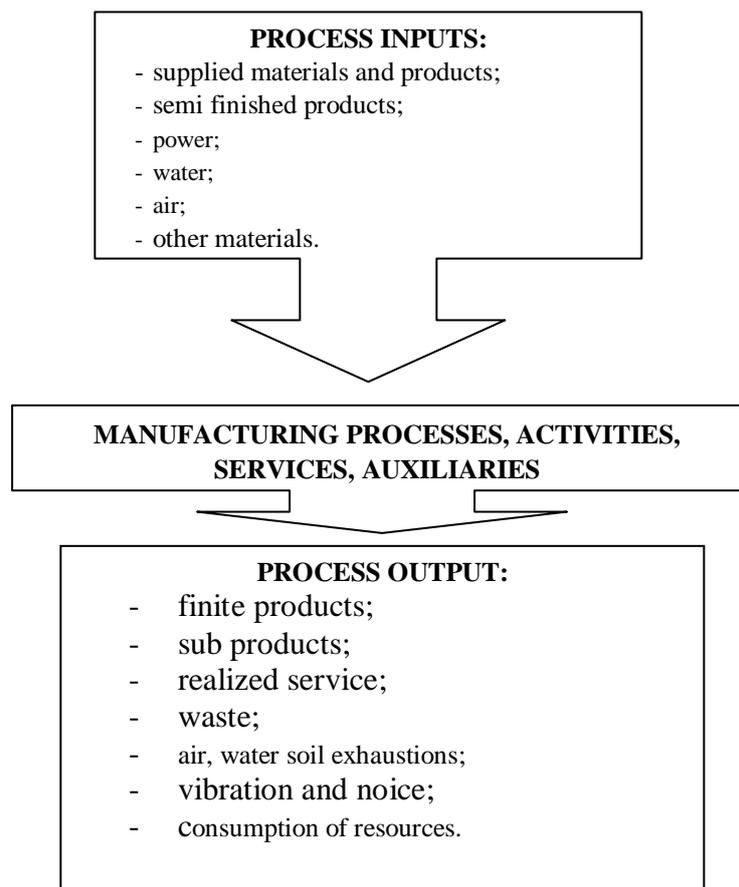


Figure 1. Elements of environmental planning process

It is indicated that environmental issues identified at the outset to completely reflect the real situation of an organization against the environment. Not to lose sight the essential aspects, it is appropriate to consider each process analyzed within scheme shown in figure 1, that should be customized for each examined process.

Also, setting environmental goals, targets and programs must necessarily consider significant environmental aspects. The sequence indicated in figure 2 must be followed.

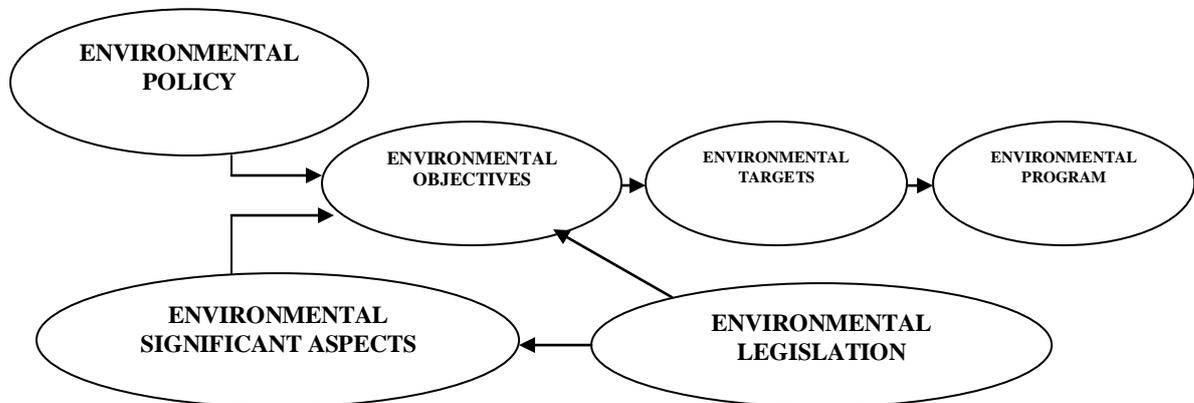


Figure 2. Environmental planning process

It is essential that management reviews to be strictly conducted within the terms specified and regularly. Such analysis must always rely on some clearly defined input data, showing how the system works, the degree to which the objectives and targets are accomplished, the problems, identified nonconformities, deviations from the planned approach and the proposed targets. Analysis of the above indicated aspects should always be done with functions involved and those which can offer solutions, but also to those having responsibilities in implementing the actions to be determined. Presence of the environmental management representative is always required. Analyses made by management may be more effective if based on the results obtained by one or more teams, who have previously applied techniques to identify the causes that have led to environmental problems, to non-conformances, to deviations or undesirable impacts from the established objectives.

Analysis made by management must always lead to certain decisions, namely the corrective and preventive actions, or to confirm, correct or generalize some certain previously taken actions. These results should always be documented on forms to allow their tracking. In the forthcoming review meeting application and effectiveness of established measures must necessarily be verified. Where failures or inefficiencies are found corrective action must necessarily be taken. Management analysis and in particular, decisions on these occasions in order to meet and positive spirit of our own of continuous improvement that the standard promotes must be used. According to the above mentioned, all the leverage that the standard offers and even those aimed at updating the policy, objectives and targets should be considered.

For a better approximation of reality and a higher accuracy the following content of analysis scales, divided into five levels of representation of environmental phenomena and processes in the overall effort, and the fields, at the level of eco technologic organization is proposed.

The place of environmental conservation in the general strategy of the organization is presented in table 1.

Table 1. Place of environmental conservation in the general strategy of the organization

Presentation level (elements)	1	2	3	4	5
1 Hierarchical level to assume the environmental responsibilities			*		
2 Share of medium expenses (less investment) in the organization's budget				*	
3 Investment for environmental conservation			*		
4 The importance attached to internal communication policy in environmental management					*
5 The importance of external communication policy in environmental management					*
6 The importance given to increasing number of supporters greening activity					*
7 Efficient distribution (effective and economical) of environmental responsibilities				*	
8 Perceiving need for greening of the activity for internal business environment organization				*	
9 Perceiving need for greening of the activity for external business environment organization				*	
10 The share of environmental problems in research and development.				*	
The level of presentation (items) (M_{sg})	$M_{sg} = (\sum E_i / 50) \cdot 100[\%]$ $E_i =$ the level of representation of i elements				

$$M_{sg} = (41/50) \cdot 100 = 82[\%]$$

Assessment of global importance given to environmental conservation in the overall strategy M_{sg} of the organization has as its starting point the hierarchic level to assume environmental responsibilities, this practice recording several situations, giving notes:

1. assuming responsibilities by the general manager;
2. assuming responsibilities of a department dealing with:
 - public relations;
 - supervision and control of quality production;
 - security in the conduct of technical and productive processes;
3. assuming responsibilities by several departments;
4. assuming responsibilities of a specialized department;
5. assuming responsibilities by the entire organization.

Coverage of environmental conservation in the organization's strategy is realized by calculating the presentation level M_{sg} presentation, with the relationship:

$$M_{sg} = \frac{\sum_{i=1}^{10} E_i}{50} \cdot 100[\%] \quad (1)$$

where: E_i is the representation level of "i" elements.

In the above mentioned case, the M_{sg} presentation level is:

$$M_{sg} = \frac{41}{50} \cdot 100 \approx 82[\%] \quad (2)$$

3. CONCLUSIONS.

In conclusion, it can be affirmed that according to scales resolved in the organization the production strategy obtained the highest score. This is very important because in any organization a higher production is required to be obtained as the company to achieve foreseen profits. Second place was taken by legal and financial strategy with the level of representation of 88%, this revealing that the company complies with state laws with great care in this respect.

General strategy to the environmental problems with a representation level of 82% occupies the third place, followed in fourth place by the communications strategy, revealing a growing interest in communication, with implications for both internal communication and external communication, as internal communication gives consistency to the mechanism of transmission of the image enhancing efficiency of external communication.

Imposing command and control regulations on eco technologic organization, is a contested process, often involving substantial legal costs and more delays. If eco technologic organization representatives are eager to cooperate, the Government may negotiate planned arrangements. A planned understanding represents a guarantee of eco technologic organization to meet environmental objectives that are acceptable for the government. This method works well in sectors that have relatively few organizations, but high capacity (United Nations Industrial Development Organization, 2002).

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