

EVALUATION OF THE TOOLS OF ENVIRONMENTAL PROTECTION AT THE ENTERPRISE LEVEL

Marcela Kožená

Ústav ekonomiky a managementu, FES, Univerzita Pardubice

Abstract:

Environmental protection is very important aim of human society in our age. Many environmental damages come up from enterprise level and that's why is necessary to begin with environmental protection at the enterprises where many pollutants have their background. There are many tools to prevent environmental pollution as the mandatory as the voluntary. The implementation of environmental protection tools on the enterprise level can have positive influence on enterprise competition ability.

Key words: Environmental protection, mandatory and voluntary tools of environmental protection, Environmental Audit, LCA.

1. Introduction

Environmental protection is one of most important aim of the society in this age. It includes activities which aim at prevention of pollution of - or damage to the environment or curbing or elimination of pollution. With regard to our present – day and future economic development and to our entrance in European Union we have more to respect environmental access to enterprise.

Unfortunately the Czech Republic is negative example of the endanger and the damage of the environment by wasteful economic activities. Therefore the change of this situation will be more difficult and expensive. However environmental industry and services in European Union states-founders pertain to very prosperous branch we can anticipate similar development in our country too. The cause of this positive development is not only more strict environmental standards but all the time increasing interest in the most quality environment of civilized world. [2]

2. Environmental protection in the Czech Republic and in the other European Union states

Environmental protection should be realized on the enterprise level where many of the harmful pollutants are produced. Some activities of environmental management are particular realized on the enterprises level. The main tools of direction environmental policy are [4]:

- Environmental Audit,
- Life-cycle assessment,
- Environmental Impact Assessment,
- Environmental Damage Evaluation,
- Some other tools, for example the clear production, the responsible enterprise in chemistry and other activities in connection with quality.

2.1 Environmental Audit

It informs the enterprise management about the quality of environment protection and suggests method that improves it. It is repeatedly made during enterprise life. The enterprise management obtains necessary information to be able right to protect environment and to take care of it. It legalizes environmental access of the enterprise. Its criteria are the standards and

the established legislature. Environmental audits are realized by the Instruction for environmental audits which are contained in the Standards CSN EN ISO 14 010,14 011 and 14 012. The environmental audits instruction are contained in European Standard Ordinance of Council EEC n. 1836/1993 EMAS. [1]

The EMAS Program was established in the Czech Republic on the basis of Resolution of the Government of Czech Republic No. 466/1998, on approval of the National Program of Implementation of the Eco-management and Audit Scheme.

Operation of the EMAS Program in the Czech Republic is ensured, in particular, by the following entities:

- the Council of the EMAS Program
- the EMAS Agency
- the Czech Accreditation Institute
- the Czech Environmental Inspection.

The position of the above authorities in the framework of the National EMAS Program is depicted in the following diagram (Figure 1). Validation of the environmental statement is ensured by the Environmental verifier. An organization can request financial assistance from the State Environmental Fund.

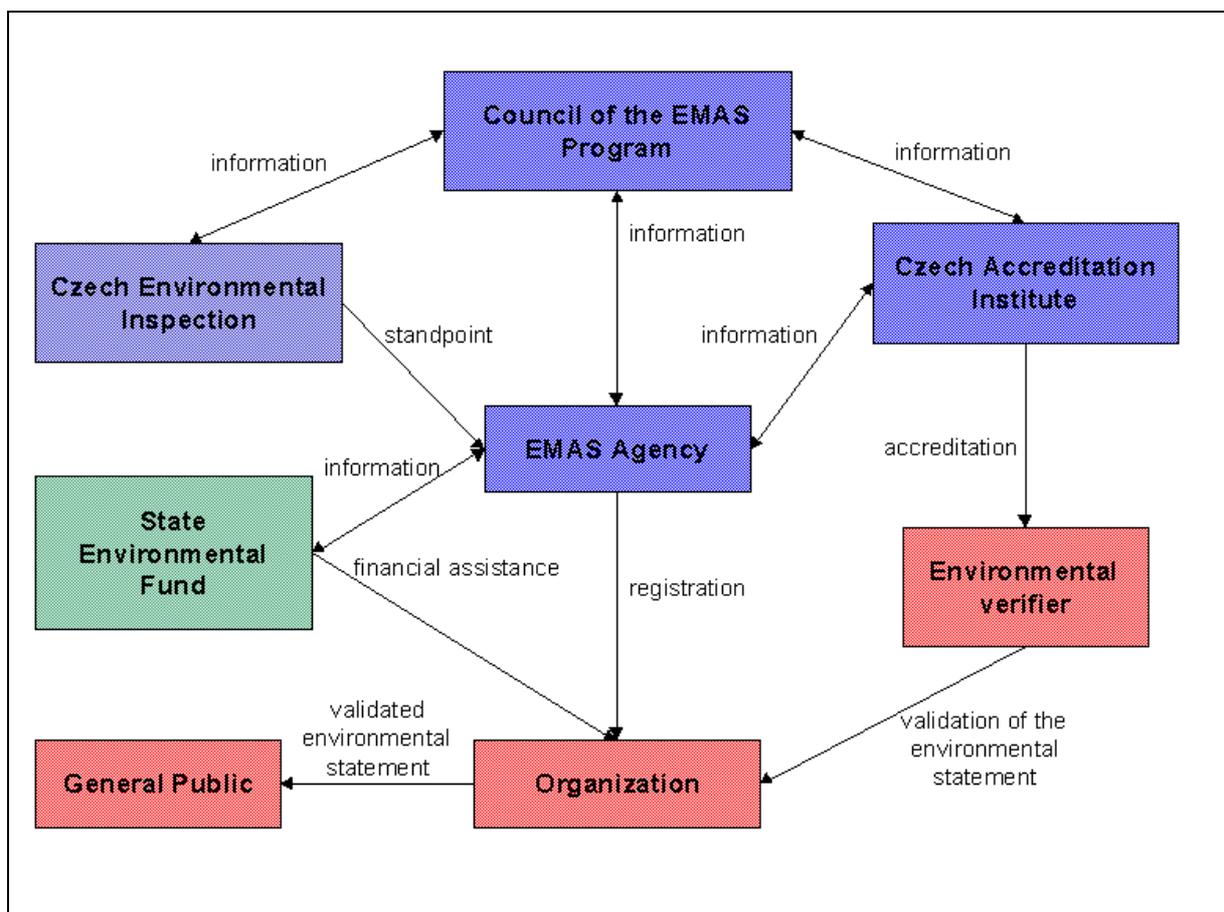


Figure 1: The position of the above authorities in the framework of the National EMAS Program (source: www.emas.cz)

The Council of the EMAS Program is a standing, conceptual, management, control and advisory body for the EMAS Program. It is composed of representatives of selected central

state administration bodies and representatives of various fields of economy and society who are active, in particular, in the sectors of environmental protection and industry.

The EMAS Agency is the executive body for the EMAS Program in the Czech Republic. The Agency is active within the Czech Environmental Institute and provides for all management and professional activities connected with the EMAS Program in the Czech Republic.

The Czech Accreditation Institute, p.s.c. carries out the functions of an accreditation authority for the EMAS Program, in the framework of which it is entrusted with

- performance of accreditation and supervision of environmental verifiers;
- issuing of the relevant methodical guidelines.¹

To improve the credibility of the system, **the Czech Environmental Inspection** was involved in the EMAS Program, within which it was entrusted with the position of an advisory and consultation body. The relevant entities must require its standpoint in cases where

- an organization requests the EMAS Agency to carry out registration in the national EMAS Register;
- an organization applies to the State Environmental Fund for financial support for introduction of EMS or EMAS.

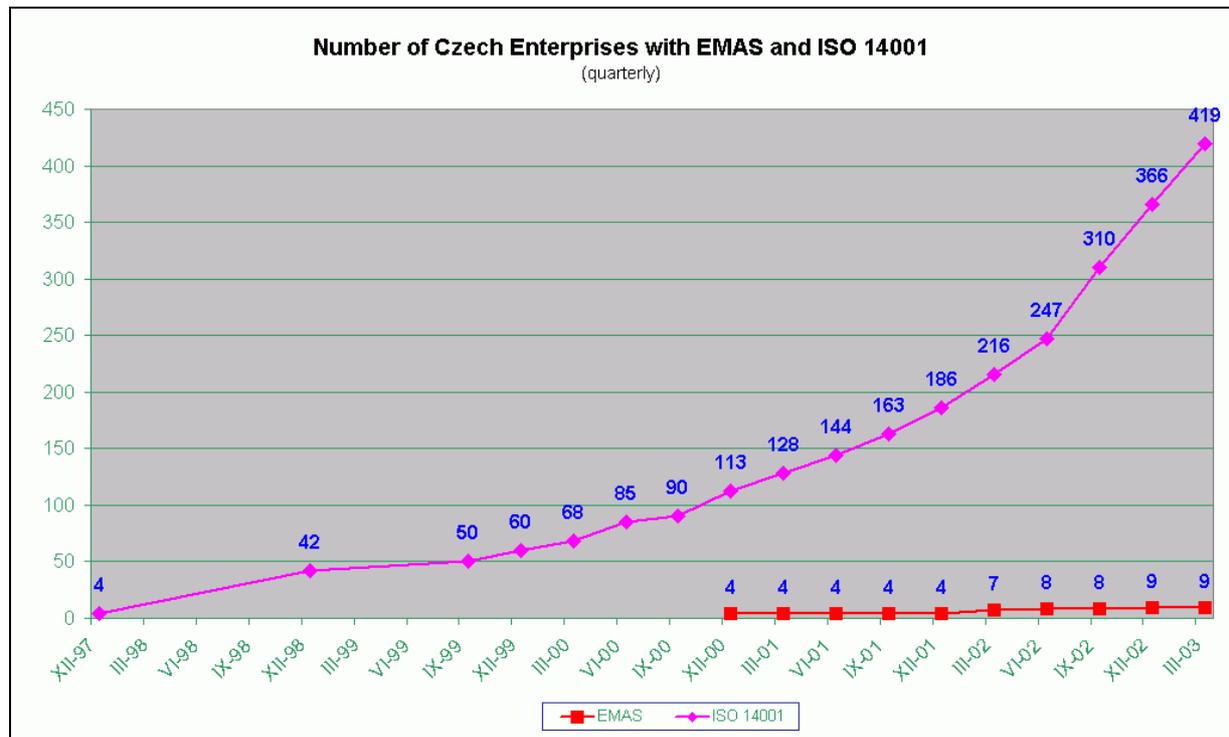


Figure 2: Number of Czech enterprises with EMAS and ISO 14001 (source: www.cenia.cz)

¹ Two methodical guidelines have been issued to date: MPA 90-01-98 “Accreditation of verifiers for the area of environment” and MPA 90-02-98 “Supervision of foreign accredited verifiers for the area of environment”. Updated versions of these methodical guidelines have been prepared in connection with transition of the Czech Republic to EMAS II.

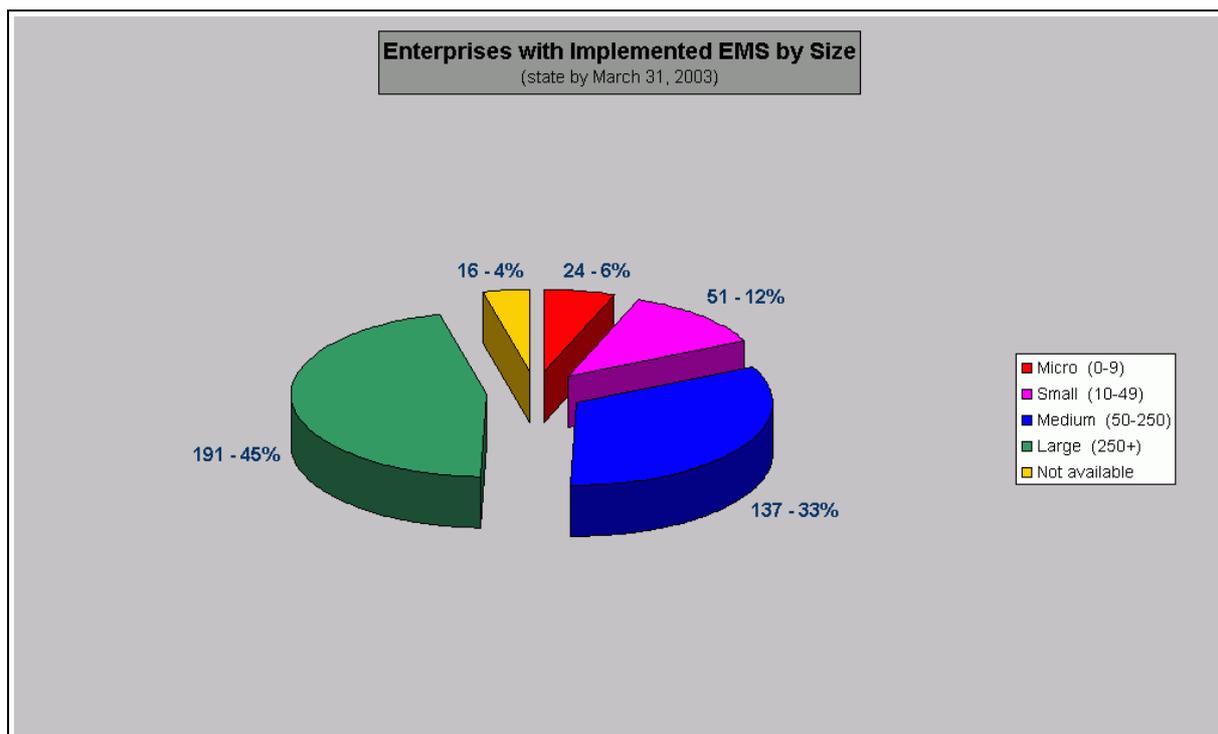


Figure 3: The Czech enterprises with implemented EMS by size (source: www.env.cz)

On March 19, 2001, the European Parliament and Council adopted Regulation (EC) No. 761/2001 allowing voluntary participation by organizations in a Community eco-management and audit scheme **EMAS II**, which replaced the currently valid Regulation No. 1836/93.

The Czech Republic reacted for the requirements of Regulation (EC) No. 761/2001. In the framework of the above mentioned CHEMAS project, the draft Updated EMAS Program was prepared, on the basis of which a new Resolution of the Government was prepared. This Regulation (No. 651/2002) was approved June 19, 2002.

The Czech Republic, as the first of the accession countries, implemented a fully operational system, which has been demonstrated, amongst other things, by the fact that of 16 EMAS registrations that were recorded in March 2003 within the accession countries, 9 registrations were carried out in the Czech Republic (Figure 2). The Czech EMAS Program becomes “model” system constituting a basis for other accession countries, in particular, the Baltic countries, Slovenia and Hungary. Together with Poland and the Czech Republic, Hungary is amongst the leading countries (in the framework of the accession countries) also in relation to the number of certified enterprises pursuant to ISO 14001 (Figure 5). The fact that the Czech Republic belongs amongst the three most developed accession countries in relation to environmental management and that it is the leading country in relation to EMAS was also acknowledged by the European Union itself, when it entrusted the Czech Republic with organization of the 5th Meeting of the Article 14 Committee. These regular meetings are attended by representatives of the EMAS competent bodies from individual EU Member States and selected accession countries to discuss current topics in the field of environmental management (in particular EMAS) and its relations to other areas of environmental protection. The above mentioned 5th meeting took place on October 22-25, 2002 in Prague and it was the first time when this event was held in a country other than an EU Member State. The Czech Republic highly values this acknowledgment and strongly believes that the Czech EMAS Program will belong amongst the best even after the Czech Republic accession in the framework of the European Union.

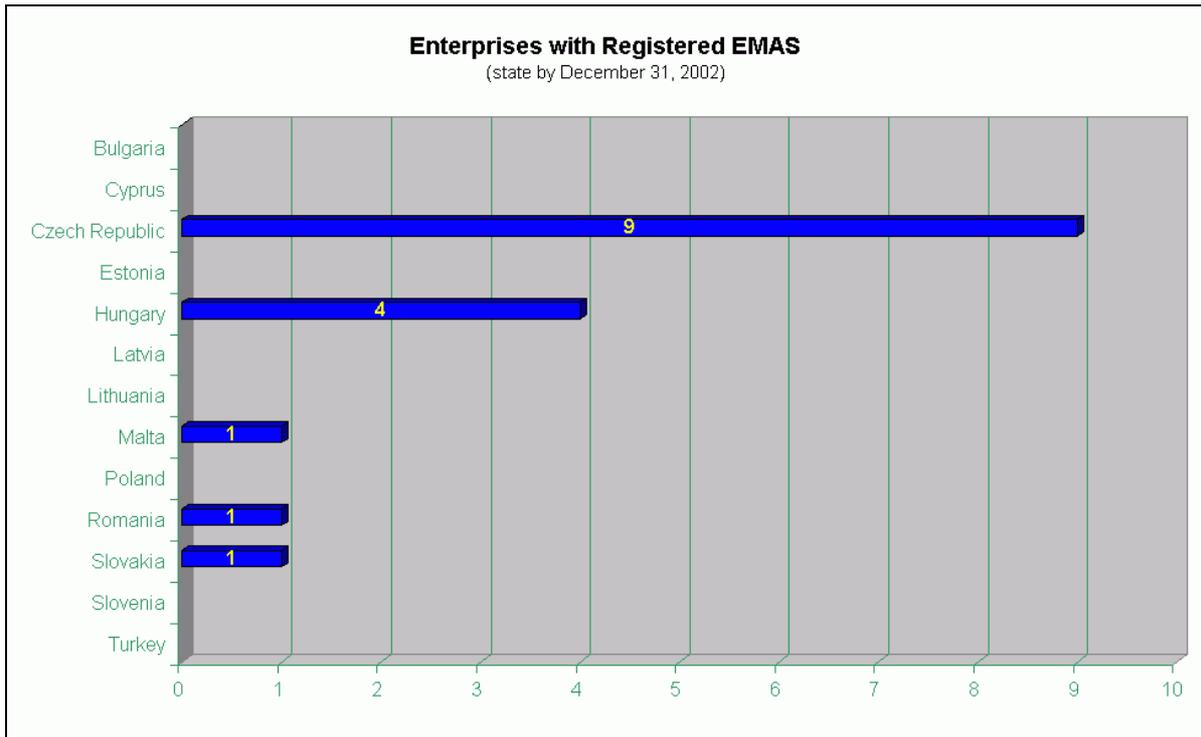


Figure 4: Enterprises with certified EMS pursuant to EMAS (source: www.ceu.cz)

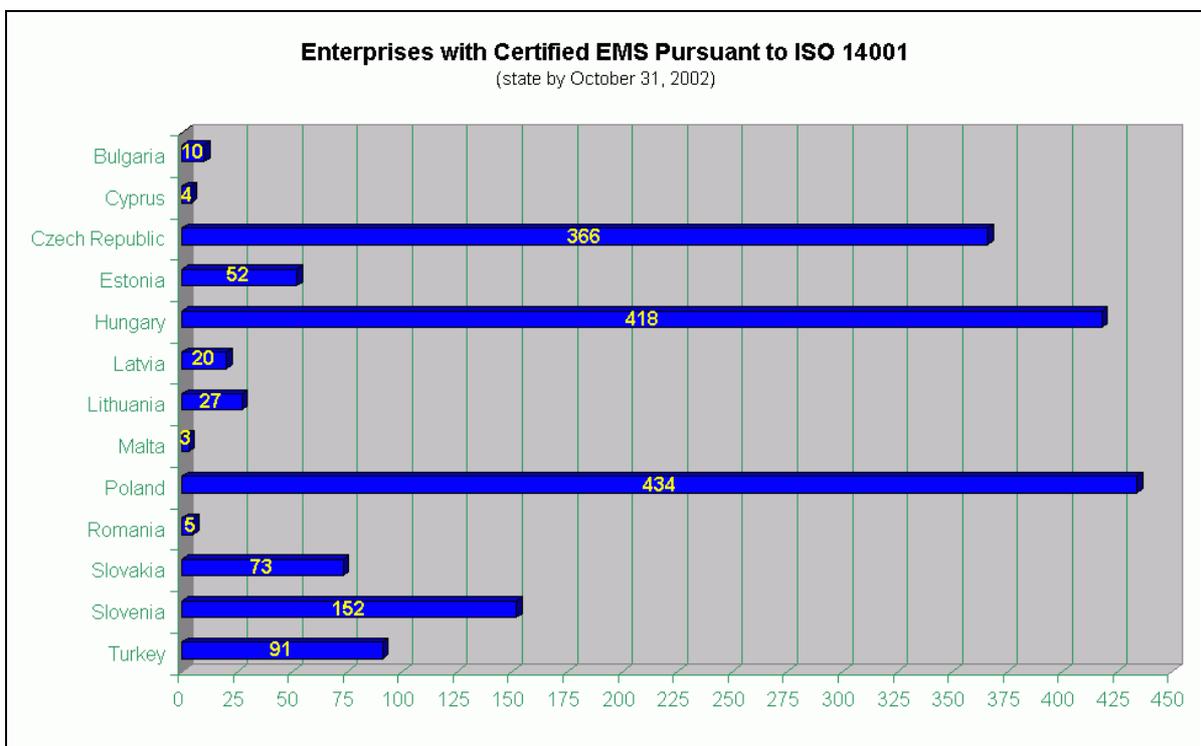


Figure 5: Enterprises with certified EMS pursuant to ISO 14001
(source: www.ceinet.org)

2.2 The method environmental balance (life-cycle assessment)

In continuity with evaluation of product life cycle is used the method environmental balance. It is as a matter of fact the suitable way of damage expressing caused of harmful economic activities in whole life-cycle of product. The method of environmental balance is used in the sphere of the negative influence assessment on the environment. It is essentially to express the number of the damages which were caused by the raw material exploitation to production, distribution, consumption and to its final harmless in the end of live. [3]

On the international level is used the title life-cycle assessment – instead of indication the environmental balance. According the Standard ISO 14 040 is defined LCA this way "LCA is collection and assessment input and output raw materials and energy in connection with environment influences within all life-cycle assessment according to the certain methods." On the fundamental of life-cycle assessment we can determine the objective criterion for the product assessment and its "eco –label" symbol. The basic requirement is simple life-cycle assessment by the application for the valuation and the label of environmental harmless product "eco – label" among states of European Union. The label can be obtained only for the definite period. This way the producers are forced to improve the facility of their products for benefit of the environment. [5]

The Standard CSN EN ISO 14 040 sets out Life cycle assessment framework:

- Goal and scope definition
- Inventory analysis
- Impact assessment
- Interpretation.

This standard sets out direct applications of the life – cycle assessment: [6]

- Product development and improvement
- Strategic planning
- Public policy making
- Marketing
- Other.

In the Czech Republic is used label **The environmentally friendly product** for environmental harmless products. The applicants have to fulfil more strict demands with environmental quality then set out laws and technical standards. There were 73 firms so far certificated with label The environmentally friendly product in the Czech Republic (to April 2004).

3. Conclusion

The implementation of environmental protection tools on the enterprise level can have positive influence on enterprise competition ability. The most important economic advantages of certificated enterprises are: [4]

- timely determination of environmental and guarantee venture,
- positive enterprise image in market competition,
- facility by credits affording,
- cost reducing,
- employees motivation,
- advantages which bring keeping of organizational and technical standards.

List of used literature

- [1] Conference of the Representatives of the Governments of the Member States. The Consolidated version of the EC Treaty incorporating the changes made by the Treaty of Amsterdam. European Commission, Brussels, European Commission, 1997.
- [2] Česká republika 2003. Deset let udržitelného rozvoje. Praha: Centrum pro otázky životního prostředí UK, 2003.
- [3] Kožená M. Marketing in environmental era. In European Integration: Selected Chapters. Lacina K. Pardubice: University of Pardubice, 2000. ISBN 80-7194-272-3.
- [4] Kožená M. Konkurenceschopnost podniku při respektování strategie udržitelného rozvoje. Brno: Edice PhD Thesis, sv. 154, 2002. ISSN 1213-4198.
- [5] Steven J. Bennett - Richard Freeman - Stephen George. Corporate Realities and Environmental Truths. New York: John Wiley, 1993. ISBN 0-471-53073-5.
- [6] Soubor norem ČSN ISO 14 000. Praha: Český normalizační institut: 1997.

www.emas.cz

www.env.cz

www.cenia.cz

www.ceu.cz

www.ceinet.org

Kontaktní adresa:

Ing. Marcela Kožená, Ph.D.

Univerzita Pardubice

Fakulta ekonomicko-správní

Ústav ekonomiky a managementu

Studentská 84, 532 10 Pardubice

e-mail Marcela.Kozena@upce.cz.

tel. 46 603 6179