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### **Udržitelná výroba**

CENIA, česká informační agentura životního prostředí  
2008

Dostupný z <http://www.nusl.cz/ntk/nusl-295562>

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Datum stažení: 19.04.2024

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## KEY MESSAGES

Sustainable development, which also includes sustainable consumption and production, makes use of natural resources to meet society's basic needs without compromising the ability of future generations to meet their own needs.

In the Czech Republic, the principles of sustainable consumption and production are anchored in a number of legal documents, whose adoption has been associated with the EU's legal regulations.

Sustainable production is based on 3 pillars: the economic, the environmental and the social ones. When designing new measures, all 3 areas are considered (i.e. the economic benefit, the environmental impact and the effect on society).

Sustainable consumption and production addresses one basic conflict: We want products and services, but we do not want their negative effects on the quality of life.

Sustainable production can be applied so that the competitiveness and value of a business can be increased.

## REFERENCES AND OTHER INFORMATION

- ☉ CENIA, the Czech Environmental Information Agency – <http://www.cenia.cz>
- ☉ Ministry of the Environment – <http://www.mzp.cz>
- ☉ The Partnership for Sustainable Consumption and Production Project – <http://www.cenia.cz/USV>
- ☉ National Cleaner Production Centre – <http://www.cenia.cz/CP>
- ☉ The platform for sustainable consumption and production – <http://www.usv-partner.cz>
- ☉ Czech Environment Management Centre – <http://www.cemc.cz>



### THE ENVIRONMENT OF THE CZECH REPUBLIC

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This publication was made with the financial assistance of the State Environmental Fund of the Czech Republic.

*Printed on chlorine-free paper.*



# Sustainable Production



## THE ENVIRONMENT OF THE CZECH REPUBLIC



Ministry of the Environment  
of the Czech Republic





## SUSTAINABLE PRODUCTION

Production activities can be referred to as sustainable production as long as they are economically effective for businesses yet, at the same time, affect the environment and human health as little as possible, use only a minimum amount of natural resources, energy, toxic substances and produce a minimum amount of waste. This is closely linked with sustainable consumption, especially since every producer is also a consumer and every consumer can, through selecting the products he or she buys, promote the above principles.

### Product life cycle



## HOW TO PRODUCE SUSTAINABLY

Businesses that want to produce sustainably can implement a number of voluntary instruments, of which here we present the most important and the most commonly used.

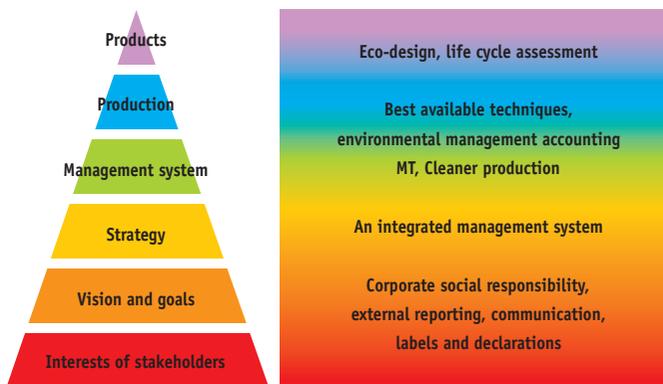
- Cleaner production** – This is a preventive strategy that promotes efficient production. As its principal component, material and energy flows are analysed in order to map undesirable non-product output (losses, waste and pollution). This makes it possible to identify the reasons behind the losses and to propose the optimum set of measures that are both economically beneficial and have a smaller environmental impact. It is advisable to continuously perform these analyses and process reviews, as a one-off implementation of a tool does not deliver the same benefits as its continuous application.
- Monitoring and Targeting (M&T)** – This means energy management and the management of material flows that reduces energy and raw material consumption. This involves the implementation of a system for measuring both the consumption of energy and raw materials and the factors that influence such consumption for individual cost centres. This makes it possible to monitor and gradually improve the real efficiency of energy and material input utilisation within production processes and/or buildings.
- Environmental management accounting** – The evaluation of data on costs and benefits that are associated with material and energy flows and environmental impacts, which leads to both reduced adverse effects on the environment and reduced costs.

- Best available techniques (BATs) and benchmarking** – These involve the use of technology including methods of operation that leads to the maximum possible reduction of the overall environmental impact, provided that the use of BAT is implemented under economically and technically acceptable conditions. Benchmarking is a method used to identify best solutions. It is based on measuring and analysing an organisation's processes and performance and on comparing and sharing experience with other organisations.
- An integrated management system** – A set of procedures to be followed by a business within the individual areas of interest under international standards: ISO 9001 – Quality Management System, ISO 14001 – Environmental Management System, EMAS – Eco-Management and Audit Scheme and BS OHSAS 18001 – Occupational Health and Safety Management System.
- Life cycle assessment (LCA) under the ISO 14040 and 14044 standards** – An evaluation of environmental aspects and potential environmental impacts, which is performed throughout the entire life cycle of a product or a service, from obtaining raw materials and production to its use and disposal. LCA is applied during the preparation of type III environmental declarations (Environmental Product Declaration – EPD).
- Corporate social responsibility (CSR)** – This is an approach to business activities, which, in addition to economic interests, takes into account the social and environmental interests of the groups that influence or are influenced by those business activities. CSR is an important umbrella approach for sustainable consumption and production measures.

## THE IMPLEMENTATION OF SUSTAINABLE PRODUCTION

The above instruments are implemented by businesses of their own free will, beyond the scope of the requirements imposed by legal regulations (this does not have to be true for BATs which can be utilised for setting up emission limit values within the Integrated Pollution Prevention and Control). Ideally, multiple instruments should be applied simultaneously since individual instruments have excellent potential for supplementing each other. Voluntary instruments can be applied at all levels of the management pyramid within a business. In the Czech Republic, the implementation of sustainable production has received systematic support since 1992. This positive trend has been particularly notable in recent years during which a number of projects have seen rising awareness of voluntary instruments.

### Management pyramid

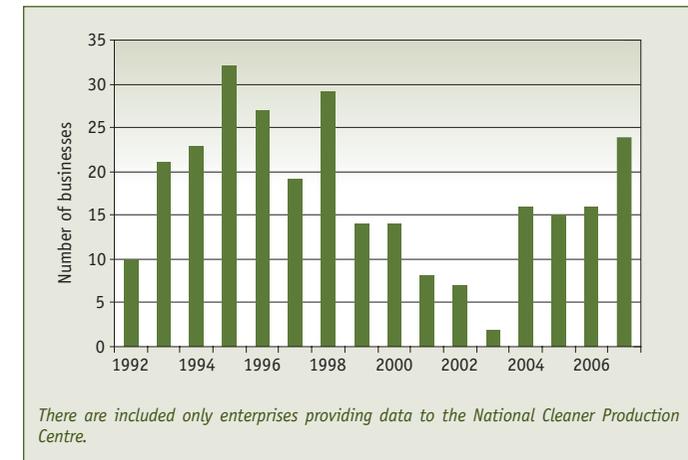


## CLEANER PRODUCTION

Cleaner production is a universal tool to be used in different businesses and organisations. It has been applied in the Czech Republic since 1992. The first pilot projects in the field of cleaner production were implemented and local experts were trained within the framework of the Czech-Norwegian Cleaner Production Program and also within the assistance of the World Environment Center (WEC). The International UNIDO/UNEP Programme supporting the National Cleaner Production Centres was significant for promoting cleaner production in the Czech Republic. The programme support lasted until 1999. Analyses conducted after 2003 showed that businesses still have a high potential for implementing both economically and environmentally effective cleaner production measures. The implementation of cleaner production received renewed vigour through verifying the feasibility of the Energy Management and Performance Related Energy Savings Scheme (EMPRESS) and through comprehensively evaluating potential sustainable consumption and production innovations in business (OP HRD and JPD3). These new cleaner production implementation methods are also popular abroad.

### The number of new businesses that implemented cleaner production projects in the Czech Republic, 1992–2007

Source: CENIA



In the Czech Republic, both sustainable production and the implementation of voluntary instruments have been supported for many years. Within this area, management systems are the most common type of instrument to be implemented by organisations in the Czech Republic. However, there still is potential for improvement.

With respect to sustainable consumption and production, the Czech Republic is among the most developed of the new EU Member States. In addition, it ranks high in "quality of life" evaluations. The Czech Republic plays an active role in resolving key global problems, both within the EU and in broader international relations.

The issue of sustainable consumption and production is one of the Czech Republic's main priorities for its presidency over the Council of the European Union, particularly the support for and the extension of the approved Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan within the "package of documents".