

**Framework of Programmes on Sustainable
Consumption and Production
in the Czech Republic**

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INTRODUCTION

Sustainable consumption is defined as “the use of goods and services that respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations”.

Changing existing consumption and production patterns has been in the centre of attention of the international community for a long time. The 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro proposed a plan of implementing sustainable development through changes to consumption and production patterns. In its Plan of Implementation, the World Summit on Sustainable Development, held in Johannesburg in September 2002, highlighted the change of production and consumption patterns as one of the principal preconditions to achieve globally sustainable development. One of the tasks following on from the Johannesburg Plan of Implementation is to create a ten-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production. The framework should strengthen international cooperation and exchange of information and examples of best practice to facilitate the implementation of national and regional programmes in support of sustainable consumption and production.

The first international expert meeting on the ten-year framework of programmes on sustainable consumption and production, attended by representatives of governmental organisations, intergovernmental organisations, NGOs, and trade and industry organisations, was organised by the United Nations Environment Programme (UNEP) in co-operation with the Division for Sustainable Development of the United Nations Department of Economic and Social Affairs (UN DESA), and took place in Marrakech, Morocco in June 2003. The meeting launched the “Marrakech Process”, including regular global and regional meetings supported by informal expert task forces and roundtables to exchange information, examples of good practice, etc. The lead role in this process, at global and regional level, is played by the UNEP and the Division for Sustainable Development of the UN DESA. The result achieved in the preparation and support of the framework will be reviewed at the meeting of the United Nations Commission on Sustainable Development (CSD) as part of the 2010/2011 cycle.

The Organisation for Economic Co-operation and Development (OECD), too, has been paying attention to issues of sustainable consumption and production for a long time. In March 1996, the OECD Council recommended the member countries to draw and implement strategies to continuously improve the environmental performance of governments by integrating environmental requirements in all activities of agencies, authorities and facilities and in all related decision-making processes. In recent years, the OECD has prepared numerous studies and analyses within the framework of its project concerning sustainable consumption and production, focusing its attention on, for example, consumption of water and paper, passenger transport, and consumption of the state administration, and on analysing the impacts of household consumption on the environment.

An expert group of the European Commission had its first meeting in December 2003 in Brussels. In the course of 2004, the expert group drafted the document “Sustainable Consumption and Production in the European Union”, containing an outline of current policies and instruments in the area of sustainable production and consumption in the EU, including examples of good practice provided by individual countries. This document was used as background document for European Stakeholder Meeting on Sustainable

Consumption and Production organised by the European Commission and the UNEP in consultation with the UN DESA, with the support of the governments of Belgium, Finland, Germany and Sweden, in November 2004 in Ostende, Belgium, with a view to elaborating on the conclusions of the World Summit on Sustainable Development, determining key roles of each stakeholder, sharing information on ongoing activities and examples of good practice, identifying priorities as well as weaknesses, if any, of policies and instruments, and looking for implementation policies and instruments in the area of sustainable consumption and production. The EU is currently working to ensure that more attention is paid to this issue in its strategy documents, such as the revised EU Sustainable Development Strategy, the Lisbon Strategy, the so-called Cardiff Process, or the thematic strategies now being finalised (e.g. the Thematic Strategy on the sustainable use of natural resources, on the prevention and recycling of waste, or on soil protection). The European Union also deals with issues of sustainable consumption and production within several processes – by defining Integrated Product Policy (IPP), supporting Environmental Management Systems (EMS), eco-labelling, etc.

On 30th of July 2003, the Government Council for Sustainable Development (“GCSD”) was established by Government Resolution No 778 as a standing advisory and coordinating body of the Czech Government in the field of sustainable development and strategic management. In view of the fact that sustainable consumption and production is one of the preconditions for sustainable development, the Working Group for Sustainable Consumption and Production was set up in October 2003 as one of the GCSD working groups, with the aim to prepare, with linkage to the Strategy for Sustainable Development, a framework of programmes in support of sustainable consumption and production in the Czech Republic.

This Framework of Programmes on Sustainable Consumption and Production (SCP) is based on the Strategy for Sustainable Development of the Czech Republic and other adopted strategies and policies in process (State Environmental Policy, Raw Materials Policy, State Energy Policy; Transport Policy etc.), and elaborates on the relevant sections of these strategies in the field of consumption and production.

Purpose of the Framework

The reason for drafting the Framework for Programmes of Sustainable Consumption and Production (the SCP Framework) has been the necessity to tackle the issue of sustainable consumption and production in a systematic and active way, in view of the increasing consumption of natural resources and growing environmental burden. SCP is a basic precondition of sustainable development. Consumption means both the use of products and services and the use of natural resources, energy, water, land, etc. SCP is not an obstacle to economic development; on the contrary, it is a challenge and an opportunity, for the private sector to optimise the production process in terms of energy and material intensity and to make products with a competitive advantage for the increasingly aware consumer market in the European Union – products with an emphasis on quality, health and protection of the environment. It also offers an opportunity to create new jobs and thus considerably contributes to finding a solution to the social problem of highest priority – unemployment.

Why consumption and production should be sustainable

A modern consumption-oriented society forms the consumer so that the consumer:

- wants to have all the things (goods and services¹) that a modern society offers, because he is being persuaded that they improve the quality of his life, and at the same time
- does not want negative effects affecting the quality of his life that are generated by modern society in providing these goods and services (pollution, lack of space, adverse health and social effects).

The main sources from which this conflict stems are as follows:

1) Quality of life criteria – values categorised according to individual elements describing the quality of life²:

- material resources – access to resources to provide food and earnings
- health – both physical (suitable nourishment, the chance not to be unnecessarily sick, sufficient supply of fresh water, clean air, energy to provide heating and cooling) and mental (sufficient time for regeneration etc.)
- safety – the chance to live and work in a clean and safe environment
- social needs – from the perspective of the society as a whole, the appropriate level of social cohesion; from the perspective of an individual, the feeling of solidarity and love, respect and self-respect, “self-fulfilment” (this basic general need for growth and fulfilment includes the possibility to develop individual cultural and spiritual values or aesthetic and recreational values linked to ecosystems).

These most relevant factors determining the quality of life are strongly tied to human activities, to the need for freedom and to the right of choice.

2) Ecosystem services – i.e. benefits derived by society from ecosystems

A society can exist only thanks to supportive functions of ecosystems, and the limits of these systems determine the space available for the development of society. The benefits derived by society from ecosystems are called “ecosystem services” that include the provision of goods and regulatory and cultural services, which directly affect people and the quality of their lives, and supportive services that are necessary to maintain other services. Supportive services include: soil formation, the food chain, primary production.

Direct services include: the provision of goods (food, water, fuel, fibre, biochemicals, genetic resources), regulatory services (the regulation of climate, regulation of diseases, regulation of water sources, water treatment) and cultural services (non-material benefits of ecosystems – recreational, cultural, aesthetic and the like).

The rooted mechanisms of behaviour influencing this conflict are referred to as consumption and production patterns.

Over the past 15 years, there has been an improvement in the quality of the environment and life due to positive trends, new legislation, substantial restructuring efforts and investment by the industrial sector, and preparations for the accession to the EU. Nevertheless, the current status of consumption and production in the Czech Republic presents serious risks to the future. To ensure that the system of production and consumption is sustainable, it will be necessary to implement further measures. Environmental problems tend to be more concealed, and have changed their shape. Today, uncontrolled emissions of pollutants from power plant and factory smokestacks and extreme pollution of rivers are no longer the major

¹ With increasing quality, diversity and availability.

² The outline is based on elements determining the quality of life, adopted from “Ekosystémy a kvalita lidského života: Rámec pro hodnocení” [Ecosystems and the Quality of Human Life: The Framework for Evaluation], ISBN 80-7212-266-5, MŽP 2003, and from the traditional hierarchy of human needs according to Maslow.

problem; however, concern is raised by the impacts of the consumption of various products, increasing traffic and expansion of build-up areas in rural land. Another serious problem is the use of immense amounts of various chemical substances without knowledge of their effects on human health and the environment.

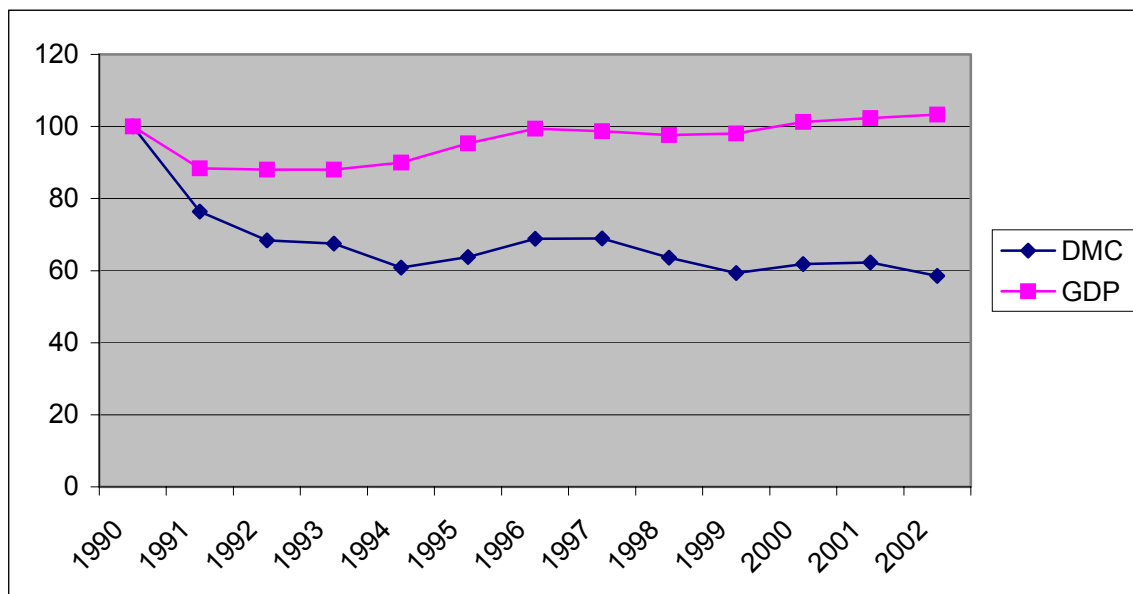
Hardly anybody realizes what huge quantities of resources are required to cover our everyday needs. For example, a toothbrush is made from 1.5 kg of raw materials, while a mobile phone (of which 10.7 million are in use at present in the Czech Republic) uses as much as 75 kg! The weight of the final products is negligible. A chip microprocessor, used for example in computers, weighs about 0.09 grams, while approximately 20 kg of raw materials are necessary for its production. With bigger products, exploitation of resources increases dramatically. One car weighing approximately 1 tonne generates 25 tonnes of waste before its first use, which is associated mainly with obtaining the necessary raw materials and manufacturing semi-finished products. The production of a single computer requires 240 kg of fossil fuel, 22 kg of various chemicals and about 1,500 litres of water.

The material and energy intensity of the production process are still unacceptably high, and so is the operation of the final products and the repercussions after the end of their life cycle. Consumption keeps growing in the Czech Republic, which may frequently eliminate potential positive effects achieved by reducing the material and energy intensity of products and services.

The number of cars in the Czech Republic has increased to 3.8 million. During the useful life of a car, we use 12,000 litres of fuel, 112.5 litres of motor oil, 10 litres of antifreeze, 16 tyres and 10 oil filters for driving and maintenance, large quantities of emissions and other forms of pollution are released into the air, and finally a significant amount of waste is generated by the car itself, or the car wreck.

Consumption of material is an important indicator of the pressure exerted on the environment. Domestic material consumption – DMC, i.e. consumption of material in a particular country, is calculated by deducting exports from direct material input, i.e. the input of material used by the economy (extracted raw materials and produced biomass – so-called domestic used extraction and imports). The following diagram shows the decoupling of the curve of domestic material consumption and the GDP.

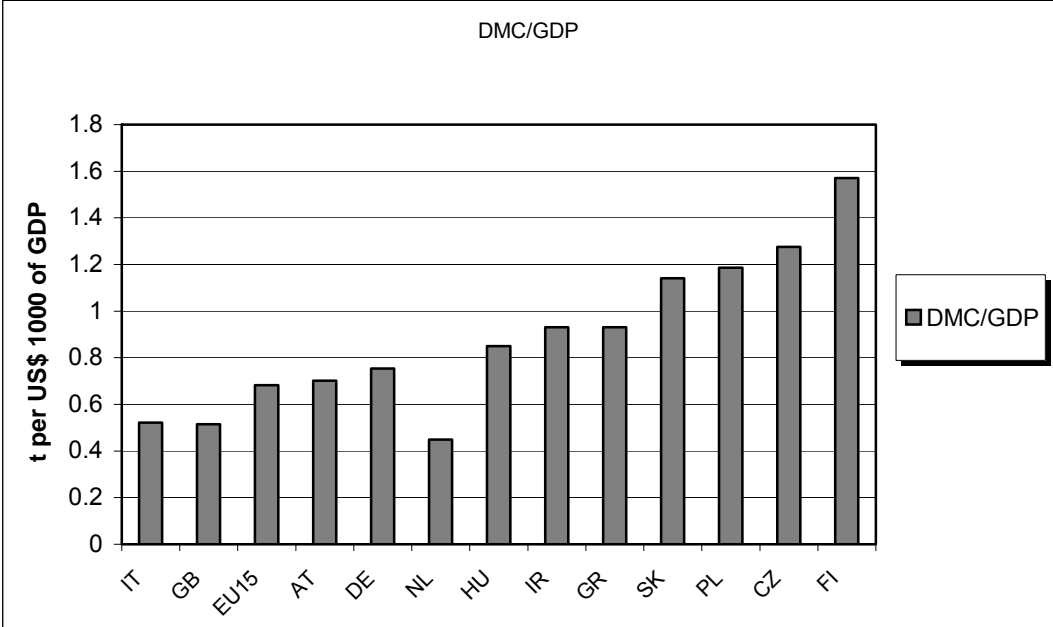
Growth of the GDP and the domestic material consumption in the Czech Republic



Source: Czech Statistical Office (CZSO), Charles University Environmental Center

In the course of the time period in question, the development of DMC tended to copy the development of the GDP (if the GDP increased over a longer period of time, the DMC began to grow as increase as well, and vice versa). It is necessary to break this interrelation, or else it will be impossible to achieve absolute decoupling of the DMC and GDP.

International comparison of material intensity DMC to GDP



Source: CZSO, Charles University Environmental Center;

It is clear from the diagram that the material intensity in the Czech Republic (1.28 t per US\$ 1000 of the GDP) are higher than in the other new EU Member States (1.19 t in Poland, 1.14 t in Slovakia and 0.85 t in Hungary), and more than double of those in some of the EU 15 countries (e.g. 0.45 t in the Netherlands or 0.51 t in the UK).

The annual consumption of resources in the Czech Republic exceeds the carrying capacity of the country’s territory. A large share of the raw material resources originates from “third world” countries, on which we are becoming dependent and in which the state of the environment deteriorates dramatically.

Excessive consumption is measured using an indicator called the “ecological footprint”, which compares consumption of natural resources with the amount of soil and water necessary to produce them and to assimilate waste. Based on the 2002 report of the World Wildlife Fund, the average ecological footprint in the Czech Republic is 4.8 ha/person, which is more than double the available biocapacity of the Czech Republic. Thus, the average inhabitant of the Czech Republic lives on ecological debt and generates an “ecological deficit”, which is compensated by imports of biocapacity (resources) from abroad.

The Czech Republic has, given the geological structure of its territory, limited access to fuel energy resources. The only relevant source of fuel energy resources is its reserves of black coal and lignite. Domestic extraction of crude oil and natural gas is quite negligible in terms of the national economy, and these two strategic resources have to be imported which, given the current prices, creates considerable pressure on the balance of the country’s foreign trade. However, the Czech Republic has a relatively solid resource base in terms of non-ore and building materials, and in respect of some of them even belongs to major producers in Europe

or globally (kaolin, feldspars, bentonites). The reserves of non-ore resources provide, unlike fuel energy resources, a guarantee of substantial life span for the whole of the 21st century.

Imports and exports of mineral raw materials in 1992 - 2003

Year	1992	1995	2000	2001	2002	2003
Imports (mil. CZK)	45,112	47,385	91,451	95,898	77,340	83243
Exports (mil. CZK)	9,523	16,728	14,735	16,029	13,288	13,351

Source: ČGS – Geofond [Czech Geological Service]

PRINCIPLES AND OBJECTIVES

The current situation calls for effective measures in the form of an initiative at the level of producers, of an increasing knowledge ability of consumers, and also requires measures to be taken at the level of public administration. However, these measures should not lead to economic decline; on the contrary, they should provide a competitive advantage and an economic stimulus.

It is necessary to strive towards a society that will:

- achieve highly effective production and competitiveness by optimally reducing the material and energy intensity of the process;
- develop an industrial economy based on renewable resources and on maximum use of secondary materials recovered from waste;
- provide products that have low requirements in terms of consumption during their life cycle and are easily used as waste, thus contributing to the closure of material flows;
- substantially reduce its dependence on primary and non-renewable raw materials, in particular on fossil fuels and their import;
- make massive investment in technological innovation and research & development;
- continue its efforts to decouple economic growth from the environmental degradation, mainly in areas where the two have not been absolutely decoupled;
- be able, in the interest of a better quality of life, to extend economic analysis related to its decision-making to cover the entire system of production and consumption, including any undesirable adverse impacts on the quality of life;
- satisfy its basic needs (energy, water, food) by effective products and foodstuffs made of safe substances and materials, with an emphasis on quality, health and environment.

Basic principles

The concept of sustainable development is based on a set of basic principles. Relevant strategic documents refer to these principles at three basic levels:

- at the basis level (values)
- at the level of system conditions (principles that need to be met at global level to ensure that development is sustainable)
- at the level of strategies (principles describing general strategies to meet the system conditions referred to above).

The following summary mentions only those principles that are relevant to the SCP Framework and its subsequent implementation:

1) Principles at the basis level

The principle of respect for human life, nature, and the values of civilisation and culture.

The principle of generational responsibility (every generation should be responsible to future generations for preserving and delivering fundamental natural, cultural and civilisation values).

The principle of partnership stipulates that relations between individual stakeholders, whether oriented environmentally, economically or socially, should be based on partnership, not rivalry.

2) Principles at the level of system conditions

The principle of not exceeding the environmental limits of economic growth. Degradation caused by society must not exceed environmental limits (this involves excessive exploitation of natural resources, negative changes of the components of the environment, and the loss of biological diversity).

On the basis of the **principle of equal opportunities for individuals and groups**, all entities should enjoy the same conditions wherever possible (for example in the area of availability and distribution of resources).

3) Principles at the level of strategies

The principle of progressive preference for the intensive development of society over extensive development. The focus on quantitative indicators of the standard of living should be replaced by orientation on the quality of life.

The principle of decoupling economic growth from environmental degradation.

The **principle of a comprehensive approach** stipulates that problems should be dealt with in the context of the whole system of consumption and production, with due regard to individual stages of the life cycle of products and services.

The principle of prevention is based on the experience that prevention is generally more viable and brings effects of synergy at the various levels of sustainable development.

Based on the **principle of substitution**, whenever technically possible and economically viable, any products and activities harmful to the environment and to the physical and mental health of humans should be substituted by products and activities that are less harmful or are not harmful at all. This principle also involves the principle of preferring renewable sources over non-renewable sources.

The principle of reducing the material and energy intensity of production and consumption systems. This principle also involves the principles of the minimisation of material and energy inputs, preventing the generation of waste, and closing the loop of material flows.

Strategic objective

The strategic objective of the SCP Framework is to achieve sustainable consumption and production in the specific conditions of the Czech Republic as a essential precondition for

achieving sustainable development. This means redirecting current development towards sustainable consumption and production to promote social and economic development of the present society within the limits of the acceptable pressure on ecosystems, by means of an absolute decoupling of the economic growth from the environmental degradation.

The fundamental precondition for accomplishing the strategic objective is to change the production and consumption patterns, which requires:

1. political will
2. a change of behaviour on the part of consumers (the state, enterprises, individual consumers, etc.)
3. a change of behaviour on the part of producers and service providers
4. a change of the regulatory system and conditions in the market to motivate the key players (producers, public administration, consumers) to strive to achieve sustainable consumption and production.

The SCP Framework is based on two basic approaches³:

- **Reducing the material and energy intensity within the systems of production and consumption** (by increasing their efficiency).

The main aim is to increase the efficiency of the processes of utilisation of raw materials and energy in the Czech Republic so as to increase the level of competitiveness in comparison with developed economies.

- **Optimising the systems of production and consumption** (substitution of inputs, processes, products, services and requirements) as follows:
 - changed consumption (changes leading to the modification of opportunities of choice and infrastructure)
 - responsible consumption (improving the quality of life by a more responsible choice and use of goods and services on the part of end consumers)
 - adequate consumption (the question of “sufficiency” and the effects of consumption on the quality of life).

The main goal of optimisation is a continuous improvement in the quality of life.

INSTRUMENTS OF THE IMPLEMENTATION OF THE FRAMEWORK

Programming instruments (strategies, policies, concepts, programmes, plans) are very important, and their mutual interaction is an indispensable precondition for their effective functioning. As a rule, these tools propose the creation or modification of tools in other categories and how to implement them. The assessment of environmental impacts is an integral part of programming documents. The SCP Framework is an example of a programming tool.

³ These basic strategies, and the key players’ responsibility for their implementation, are summarised in “Consumption Opportunities – Strategies for Change”, UNEP, 2001.

Normative instruments (obligations, limits, standards, prohibitions, directions) perform in many SCP programmes (such as requirements concerning appliances, reduction of consumption and production of hazardous products). The normative instruments of SCP programmes should be simple, specific, comprehensible, practicable, controllable and enforceable.

Economic instruments (taxes, fees, penalties, subsidies) have substantial relevance to changes in consumption and production patterns (they apply to the internalisation of externalities; determine the “full environmental price”, fair price, etc.). Ideally, economic instruments stimulate the innovation of production processes and sound consumption, and do not have high transactional costs. These instruments should not allow non-systemic exemptions.

Organisational instruments (arrangement of the relations between entities) should be applied in the market only to those entities that are unable, or reluctant, to be self-organised (for example, intervention in chains for the disposal of recycled products, the promotion of competition against monopolisation, restrictions imposed on undisciplined entities).

Informative instruments (gathering, processing and transferring information) are a prerequisite for the functioning of numerous other instruments, such as education and training. Information regarding the effects of products, safety and utility values that serves for freedom of choice and consumer protection must be obligatorily and publicly provided to the public authority (e.g. for registers of hazardous products or substances, or prices). Non-standard voluntary information systems may relate to certain SCP programmes (e.g. environmentally sound products or organic products).

Education and training is a long-term instrument for the shaping of attitudes and viewpoints and value preferences of the society. Both the consumer and the producer should be aware of the impacts of their behaviour that does not correspond with the principles of sustainable development and with sustainable consumption and production. It is necessary to ensure that all individuals, and children and young persons in particular, are provided with sufficient information regarding sustainable development. This is a continuous, life-long process covering the population from pre-school children to adults.

Institutional instruments (functions of public administration institutions in the areas of market supervision, safety, and elimination of risks) should be effective, coordinated, and controllable by the public to limit opportunities for negative practices such as bribery. The consumption of public institutions should serve as an example of sustainable consumption (programmes of “green government” – Government Resolution No 720 of July 2000 in support of the sale and use of environmentally sound products).

Voluntary instruments include activities that business entities and other parties implement on the base of their free, voluntary decision and that go beyond the framework of regulatory requirements. Voluntary instruments belong in the category of preventative instruments, and as such they focus on elimination of real causes of an environmental degradation. They encourage producers and consumers to behave in line with the principles of sustainable consumption and production and enable orientation of production and consumption to more environmentally friendly products and services. The following voluntary instruments are currently used in the Czech Republic: eco-labelling, implementation of environmental management systems (EMAS, ISO 14001), cleaner production, green purchasing, green public procurement and voluntary agreements. The Czech Republic also seeks to implement other types of voluntary instruments, such as life-cycle assessment or eco-design. Product-oriented voluntary instruments at EU level are summarised in the Integrated Product Policy, which is being drafted in the Czech Republic in accordance with EU procedures.

CURRENT SITUATION

Existing policies

The following characteristics and examples of existing policies and programmes affecting SCP are divided by the basic areas affected by these policies:

- the behaviour of producers;
- conditions in the market;
- the behaviour of consumers.

Production

Existing regulations applicable to producers in terms of SCP still focus primarily on manufacturing processes. The situation should be significantly improved by an integrated approach to the assessment of selected economic activities pursuant to Act No 76/2002 on integrated prevention, which provides an opportunity to seek for additional ways to reduce environmental pollution and risks to human health through better use of resources, increased energy efficiency, and use of the best available techniques.

Regulations also apply to the design of products and the use of certain materials, mainly with regard to the safety of consumers and the environment. The liability of producers within the life-cycle of products has recently been significantly extended to apply also at the end of the life-cycle, and producers are compelled to project the SCP objective related to the closing of the loop of material flows into the design of their products.

From the point of view of producers, the applicable laws are generally confusing and hard to predict. The implementation of SCP would be facilitated by simplifying and clarifying the system of local regulation and by integrating various administrative procedures that are mutually linked in the implementation of a project into a single consolidated procedure. The implementation of SCP is also facilitated by the consistent enforcement of applicable laws, because circumventing their provisions works to the disadvantage of entities that endeavour to be friendly to the environment.

Existing policies are typically aimed solely at selected stages of the life-cycle and are inadequately interrelated from the point of view of SCP. The support of eco-farming is a positive example of interrelation of individual stages of the life-cycle in a single programme, which is due to the substance of the programme and is oriented towards design, choice of material, production and sale. The success of this programme depends on the willingness of consumers to purchase eco-farming products.

In terms of allocated funds, important policies with effects on SCP include, for example, the support of innovation, including an increase in the share of renewable energy sources. Nonetheless, innovation in itself may not always meet the SCP criteria (in particular if assessed from the perspective of the entire life-cycle).

Support for a more efficient use of natural resources is declared in all relevant policies, but as a general rule, its practical implementation often lacks data regarding material flows and instruments to optimise them. Practical support for an increase in the energy efficiency of production, which carries high potential in the Czech Republic in respect of accomplishing the principal SCP strategies, remains relatively low.

A Programme for the Promotion of Environmental Technologies in the Czech Republic is being prepared to coordinate the promotion and support of environmental technologies, which should be manifested in the form of concrete measures in individual sectoral policies and

programmes. Thus, the aim is to make use of the potential that is offered by the implementation and use of environmental technologies to reduce environmental pressures, improve the quality of life and encourage economic growth.

An example of a major programme in support of environmental technologies is the support of the construction of wastewater treatment plants. These facilities deal with acute problems of environmental protection but, on the other hand, consume additional energy and material inputs and often tended to be unnecessarily oversized. For SCP purposes, these technologies need to be optimised for the whole life-cycle and prevention of pollution at the source should be applied as a priority. Prevention reduces the quantity of wastewater and brings savings in material and energy flows. Increasingly effective technologies are available for the treatment of wastewater.

Current policies have thus far encouraged voluntary SCP-oriented activities of producers only in the form of proclamations. New impulses at international level can be expected in the context of product-oriented policies, in particular in respect of product categories with a high potential for the application of basic SCP strategies (at present these include the Integrated Product Policy (IPP) and the European Commission's eco-design directive). The development of voluntary activities in this area will depend on whether consumers will become more involved in them and on whether producers will receive the necessary positive feedback for their initiatives.

Market

The shaping of conditions in the market in terms of sustainable development is monitored in the framework of the Strategy for Sustainable Development of the Czech Republic.

One of the most significant policies promoting SCP in respect of market conditions involves the implementation of a revenue-neutral green tax reform (GTR). Such a reform may serve as an example of how an economic instrument can facilitate a reduction of pollution caused by production, at the same time improving conditions for business and motivating the modernisation of the economy. Many experts believe that excessive taxation of labour is a serious problem for the Czech Republic's economy and an obstacle to more significant economic growth. Numerous studies, including the most recent OECD paper, indicate that taxation of labour in the Czech Republic is above the European average. Individuals and enterprises thus return too much money in the form of social security and income tax, and expensive human labour thus contributes to the high unemployment in the Czech Republic.

GTR offers a solution that has been practised in a number of EU 15 countries for several years. GTR consists in progressively reducing the high tax burden on human labour and business, and introducing and increasing so-called environmental taxes on pollution and the exhaustion of non-renewable resources. This scheme thus involves a shift of tax burden from income taxes and social security to a tax on energy generated from non-renewable sources and tax on non-renewable natural resources.

Taxes as an important economic instrument of environmental protection are compatible with market economy principles, and result in the balancing of market conditions by internalisation of negative externalities⁴. If industrial companies and households begin to pay, as a result of the GTR, for the consumption of non-renewable natural resources and for the environmental consequences of the generation of energy, this could work as an incentive to make

⁴ These include external costs where the producer's operations are harmful to other entities, cause material society-wide damage (e.g. impacts on average life expectancy, human health, the environment, damage caused to housing and landmarks), and the producer does not pay to remedy such damage. Significant externalities are caused in particular by the generation of energy at coal-fired power plants, intensive farming and transport. Conditions in the market are thus distorted and ecologically clean forms of production and their products are disadvantaged in the market.

investments in modern technology and to exploit the potential for savings. The GTR may motivate entities to cease wasting energy and raw materials and to launch innovation with positive economic and environmental effects. At the same time, labour will become cheaper and payroll expenses will decline, which may motivate undertakings to create new jobs.

The EFR has been recently applied in a number of EU-15 Member States, namely Germany, Sweden, Denmark, Finland, the United Kingdom and the Netherlands. For example, the German Institute for Economic Research notes that the reform, carried out in the federal states between 1999 and 2003, will reduce consumption of fossil fuels and the subsequent carbon dioxide emissions by approximately 3%, and due to the decline of the social security rate to 19.5%, the number of new job opportunities will be higher by 250,000 than without the EFR.

In October 2003, the Council of the European Union adopted Directive No 2003/96/EC on the taxation of energy products, providing minimum levels of taxation for coal, natural gas, electricity and mineral oils. The Czech Republic applied for a four-year transition period before it introduces environmental taxes (on coal and electricity), to expire in early 2008.

In 2003, the European Commission published “External Costs – Research results on socio-environmental damages due to electricity and transport”, a paper on external costs in the energy and transport sectors based on the ExternE methodology. The assessment of externalities in neighbouring countries, and also initial researches carried out in the Czech Republic, indicates that externalities represent immense amounts. Recent research and expert papers of the University of Economics and the Charles University Centre for Environmental Issues have quantified external costs and economic impacts of electricity and heat generation in coal-fired power plants in the Czech Republic on human health and the environment. The results indicate that coal-fired power plants in 2002 generated external costs in the amount of approximately CZK 64 billion, which represents about 2.5% of the Czech Republic’s GDP in that year. Thus, costs of CZK 5,700 are theoretically allocated to every citizen. In 2002, coal-fired power plants generated electricity at a cost of approximately CZK 50 billion and thus the actual cost of electricity generated by these facilities was more than double this amount.

Equal opportunities in the market and correct pricing cannot be achieved without reforming the policies of subsidies and State aid. Conditions in the market are significantly distorted by “harmful” subsidies and tax allowances that give an advantage to a specific industry or allow the prolongation of an activity, but have a significant impact on the environment. In such case, these industries or activities again do not bear the full costs associated with their operations. Environmentally sound and responsible processes and products are thus put at another disadvantage, which affects their position in the market and financial attractiveness.

These harmful subsidies have different forms and again represent substantial amounts. They are applied both directly and indirectly, and their major beneficiaries include the energy sector, agriculture and transport. The energy sector has been supported by public funds for quite a long time. These funds have mostly been used to support energy resources on the basis of non-renewable raw materials (coal and nucleus), to alleviate the consequences of coal and uranium ore mining, or to preserve mining activities.

The amount of subsidies provided in the recent years is indicated in the “Analysis of Subsidies in the Energy Sector”, a paper mapping and comparing the support provided from public funds to non-renewable and renewable sources of energy and to energy savings between 1994 and 1998. Based on the findings of the paper, state subsidies in support of non-renewable resources on the basis of fossil fuels amounted to CZK 113 billion and to CZK 20 billion in support of nuclear resources, while financial aid in support of savings and renewable resources amounted to a mere CZK 3.7 billion. Direct subsidies consisted primarily of the costs of mining reduction and removal of consequences, subsidised prices of heat, subsidies for a shift from coal to other fossil fuels (financial aid to municipalities for installation of gas supply) and institutional costs. Although some of these subsidies were

eliminated, this form of support continues, in some cases even to preserve ineffective mining operations to which the state is willing to allocate hundreds of millions of Czech crowns.

Indirect subsidies include, for example, free protection of nuclear plants by the army or the police, or assumption of a part of responsibility for damages in the event of a nuclear emergency where the operator of the facility is only liable for damage to a limited extent. Additional amounts are currently being made available to remedy environmental damage caused by coal mining in the Ústecký and Karlovarský regions, a project for which the government has allocated CZK 15 billion from the National Property Fund. Substantial amounts will also be required to eliminate the consequences of uranium ore mining at Stráž pod Ralskem, where uranium extraction was discontinued in 1996. Alleviation of the impacts on the environment and on human health has already cost the state approximately CZK 18 billion in this location. Total estimated costs amount to CZK 45 billion and the remediation of the chemical extraction of uranium will last until 2030, while the subsequent liquidation of boreholes, facilities, equipment and recuperation will take ten more years.

A more detailed description of the impacts of harmful subsidies requires diligent mapping of this area. Conditions in the market can be remedied, and fair market prices can be set, subject to gradual elimination of harmful subsidies and financial aid. Aid from public budgets should become oriented on SCP, e.g. for modernisation and innovation with a view to reducing material and energy intensity, for science and research, etc.

It should be noted in this context that general market conditions tend to be formed at global or European regional level, and the Czech Republic is able to influence these policies to an extent corresponding with its weight in international or European institutions. Serious social impacts of externalities and harmful subsidies call for discussion and measures to be taken in the framework of these institutions.

An example of a successful shift towards creating more balanced market conditions is the new Common Agricultural Policy, adopted by the European Union in the middle of 2003. While subsidies from public budgets in agriculture under the current system have been oriented on the support of agricultural production and its higher yields, the newly adopted rules will direct subsidies to the genuine development of rural areas, with an emphasis on the care of the landscape, eco-farming and non-productive functions of agriculture. In this manner it will be possible to avoid current problems facing agriculture in the Czech Republic and in the whole of the European Union, such as substantial over-production, the problem of placing products in the saturated market, consequent further waste of state funds to subsidise exports and sale of these surpluses, and it also will be possible to prevent continued serious damage to ecosystems and biodiversity by intensive large-scale production.

<p>The creation of rules and systems that affect motivation to increase the efficiency of use of natural resources is rarely based on the need to link quality to efficiency, but rather quality is associated with quantity which results in wastefulness. For example, compensation for engineering work is not derived from how effectively the purpose of the investment project in question was achieved, but from the total costs of the measures proposed to be taken in accomplishing the project. The tender procedure for a contractor, which should ensure an effective solution, is thus carried out in respect of a design that is not optimal.</p>
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Consumption

The efforts to influence unsustainable consumption patterns are monitored in the framework of the Czech Republic Strategy for Sustainable Development, and positive developments are also evidenced by embodiment of change of consumption patterns in the activities of certain ministries. There has been an increase in the number of consumers who sort waste, want to know the country of origin of the product, its environmental aspects, etc.

The Ministry of the Environment and the Ministry of Education, Youth and Sports seek, in the framework of their respective remits, to include environmental education in the syllabuses of schools at all levels, and encourage environmental education for all strata of the population. Ecological organisations and consumer protection organisations play an irreplaceable role in shaping more sustainable consumption patterns. A positive aspect is that they use advertising methods and practices.

A relatively large number of laws regulate consumer protection, including the Commercial Code and the Consumer Protection Act. Consumer protection is a responsibility of public administration bodies, such as the Ministry of Industry and Trade (responsible for the meetings of the Consumer Advisory Board), the Czech Trade Inspection or the National Agriculture and Food Inspection, and also a number of NGOs, for example the Consumers Defence Association of the Czech Republic, the Consumer Consultation and Information Service, the Eco-Counselling Network, etc. These and other institutions may play a positive role in the future in promoting sustainable development.

The role of key stakeholders

Producers

General trends

To the industrial sector, SCP is a challenge and an opportunity for new business activities. It is a challenge to undertake innovation and highly effective and safe production, and an opportunity for the development of new business activities based on environmental protection (green economy). This economical approach in combination with the green economy is on the rise in the EU and indicates that ecology and economy can go hand in hand and create a social background. Economical approach and innovation leading to a more effective use of materials and energy in the production and consumption system will continue to play a key role in achieving the objectives of SCP.

Management of the environmental and social aspects by producers has typically been oriented on the production itself. Nonetheless, the highest potential for the improvement of SCP in industry is in those stages of the life-cycle that have thus far been neglected in this respect:

- design of products or services;
- materials;
- use of products or services;
- end of life-cycle.

Protection of the environment and safe, quality products are becoming a great business opportunity in the EU and lead to the formation of a new industrial sector, green economy, which satisfies the still increasing demand of consumers and has a considerable share in the generation of the GDP. Production based on respect for the environment turns out to be a competitive advantage.

A concrete example of this is organic farming – an alternative method of soil and land management, contrasting with the broadly used intensive farming and guaranteeing the production of high quality food products. Products of organic farming (organic food) are becoming the fastest-growing market in the EU-15 food industry, with EUR 15 billion in 2002 (CZK 450 billion). The largest organic food market is Germany with sales of EUR 3 billion, followed by the United Kingdom with EUR 1.7 billion, Italy with EUR 1.4 billion, and France with EUR 1.3 billion. The organic food market in the EU-15 is expected to increase to EUR 40 billion (CZK 1,200 billion) by 2007; an increase by 75% is expected in the UK alone.

Energy savings are a very promising branch of green economy in the EU 15. Cogeneration of electricity and heat and the use of heat pumps is developing too. Sorting and reuse of waste represents a stand-alone progressive and highly developed industry.

Another concrete example of the green economy is the generation of energy from renewable sources, in particular biomass, wind energy and solar energy. Renewable sources are a promising source of electricity and the energy of the future, and apart from energy savings are the sole currently available inexhaustible sources of energy, do not produce greenhouse gases, typically produce significantly lower quantities of other emissions, and produce practically no waste. Energy from renewable sources in the EU-15 is one of the fastest developing industries, and the European renewable source energy industry is the leader of global technological development in this sector. Biomass heating plants, biogas cogeneration units, large wind power plants, photovoltaic farms, and solar collector installations in the civil sector are being developed in Germany, Austria, Denmark, the United Kingdom, and Spain. They form a large commercial and financial market and have become very important from the point of view of employment. In Germany alone they provide jobs for 130,000 persons (60,000 people work in the wind energy sector alone) and employ more people than the atomic and coal industries together.

A practical example in the EU is the substantial investment in science and research regarding renewable sources of energy, the massive development of the business sector in the area of renewable sources of energy, and the undertaking of the EU to cover 12% of primary energy needs (i.e. all energy used in industry, transport, households, etc.) from renewable sources by 2010, and to achieve a 22% share of renewable sources in total generated electricity.

Pro-active enterprises have been contributing to the accomplishment of basic SCP strategies for years, and have used these strategies to improve their position in the market. These initiatives, initially launched by the World Business Council for Sustainable Development (WBCSD), are developing worldwide, and have been showing the following trends of shift:

- from a segmented approach to an integral approach to environmental protection
- from ex-post installation of environmental technologies to preventative solutions integrated in production processes
- from a focus on the production process to influencing impacts throughout the life cycle
- from solely technical solutions to new control and management systems and to new strategies and visions
- from isolation and confrontation to openness and cooperation with stakeholders
- from a separated approach to economic, environmental and social objectives to their integration.

Situation in the Czech Republic

The use of the aforesaid positive trends in the Czech business sector has thus far been limited by the general conditions (due in particular to the insufficient legislation and lack of information, inappropriate setting of conditions in the market, and harmful subsidies). Insufficient regard to external costs and the principles of SCP therefore represents the principal limits for industrial activities in this area.

In general, however, industry and production in the Czech Republic has recently made remarkable improvements and progress. These positive trends have also been noticeable in the area of reducing impacts on the environment and in the implementation of certain principles of sustainability. Nevertheless, production is still burdened by the imbalanced and energy-demanding structure of the economy, the negative legacy of the past, and by insufficient effectiveness and modernisation. Despite the growing significance of the service

sector, the share of industry in the generation of the GDP is still high, and the energy requirements of GDP generation are still considerably higher than in EU-15 countries and OECD member countries. The high share of solid fuels in the consumption of primary energy sources and high level of dependence on fossil fuels, mainly coal in the production of electricity, are also raising concerns.

Energy intensity (toe.1000 USD of GDP)⁵

Czech Republic				EU-15	OECD	Germany	Austria	France	Poland	Slovakia
1994	1998	2000	2003	2003	2003	2003	2003	2003	2003	2003
0.33	0.30	0.29	0.29	0.17	0.19	0.18	0.14	0.17	0.24	0.28

Source: OECD, 2005

Reducing the energy intensity of industry and the construction sector through the efficient use of energy is necessary not only to increase their competitiveness but also for SCP, and is associated with the introduction of new production technologies with minimum energy and raw material requirements, and with high efficiency throughout the whole process of generation and production of energy.

Unfortunately, the entities involved have not yet been actively involved in the implementation of measures designed to improve the situation, although the potential for energy savings and for highly efficient cogeneration of energy is considerable in the Czech Republic. The use of this potential may have significant economic, environmental and social effects.

One of the effective ways to substantially reduce the consumption and cost of energy is the method of energy performance contracting (EPC). This method represents new business opportunities oriented on identifying the potential for energy savings in manufacturing and industrial zones and in public facilities, such as hospitals and schools. A company providing EPC services will draft a project for the client for the exploitation of savings potential, and if the potential is sufficient, the provider will guarantee the declared energy savings, will arrange financing of the investment, and will provide a regular service. The economic savings are then the EPC company's income for an agreed period of time and are used towards repayment of the investment and payment for the services rendered. The project is thus beneficial to both parties. If this method gains ground in the Czech Republic, the economic and environmental benefits would be considerable. The potential of eco-effective savings achievable through the EPC method in the public sector alone is estimated in the Czech Republic at more than CZK 100 billion.

The Jilemnice hospital EPC project

The EPC project at the Masaryk Municipal Hospital at Jilemnice involved the installation of new sources of heating water and technological steam, increasing the efficiency of heat generation, reducing losses in the steam and heating water distribution system, and introducing a new measurement and regulation system. In technical units, the achieved savings represent approximately 56% of the cost of heating, while in financial quantification, reflecting also the change of the price of inputs, the savings amount to up to 77% of the bill for energy. The hospital repays the investment from the savings, and the term of the contract with EPS ČR, s.r.o. (now MVV Energie) is 8 years. The project was financed by a bank loan provided to the hospital, with the contractors as guarantors. The project received a subsidy of CZK 5,000,000 from the Czech Energy Agency (CEA). The Jilemnice hospital project was one of two pilot EPC projects in the Czech Republic. The contractor worked on the project together with Landis & Gyr (now Siemens s.r.o.) as the supplier of complete control and management systems and guarantor for the loan necessary to finance the implementation of the project. *Source: EPC projects database, CEA.*

Another example of significant, and hitherto unused, potential in the Czech Republic is the area of decentralised combined sources of generation of energy and heat. Cogeneration can be successfully used at existing sources too. Practically any larger municipality or city has boiler houses which generate heat by combusting coal or natural gas. However, the boiler

⁵ 1 toe = 41.868 GJ = 11.630 MWh

houses use only a minor part of the energy potential of fuel, while installation of cogeneration units at these sources would also allow for the generation of electricity. Combined sources of energy are able to very effectively use the energy contained in fuel, and their efficiency rate exceeds 80%. For comparison, standard coal-fired condensation power plants work with an efficiency of only 30%, while the remaining approximately 70% of energy escapes through the smokestack and the cooling tower and is lost. The potential of combined sources in the Czech Republic is estimated at 2,700 MW with regard to natural gas alone.

The green economy, too, offers considerable potential for SCP in the Czech Republic, but has not as yet been treated with adequate interest or seriousness. Following the Czech Republic's accession to the European Union, this form of economy, too, is becoming a focus of attention, and binding objectives are being set. For example, the Czech Republic has agreed to ensure that by 2010 the share of renewable sources of energy in the overall energy balance will amount to 6% and their share in the generation of electricity will be 8%. At present, the share of these sources in the generation of electricity is only in the region of 3.6%. An important strategy to accomplish these objectives will be to use the potential of energy savings, which will reduce the absolute value of the overall consumption of energy.

Renewable sources of energy offer great economic, environmental and job opportunities, but their significance and benefit remains undervalued in the Czech Republic. In the local context, energy from biomass (wood, agricultural and other decomposable waste, biogas, energy crops in agriculture) represents the most important source of renewable energy, closely followed by wind power plants and small hydroelectric power plants. The verified available potential of biomass amounts to nearly 200 PJ/year, which represents approximately 11.5% of the current consumption of primary energy sources and would thus make it possible to accomplish the targets set for 2010. A substantial share in this potential is attributable to growing biomass (plants used for energy purposes, fast-growing trees etc.), but significant is also the potential of use of biogas, which is generated by the processing of organic waste. For example, biogas could provide for 1,200 GWh of electricity per year, which exceeds current total production of electricity from all renewable sources of energy (except large hydroelectric power plants).

Ecological farming has been developing in the Czech Republic since 1990. Since then, when only three farms based on ecological principles existed in the Czech Republic, the number of these farms had increased to 836 in 2004. The total area of land used for ecological farming is 263,299 ha, which represents 6.16% of total farmland. The greatest increase of area occurred after 1998, when the state support of ecological farming was resumed. In 2004, the Ministry of Agriculture adopted the Czech Republic Plan of Action for the Development of Ecological Farming by 2010 with a view to strengthening the position of ecological farming in the Czech Republic, increasing the competitiveness of Czech agriculture in the EU, and achieving a share of 10% of total agricultural land by 2010.

The green economy also provides an opportunity to deal with unemployment. An expert assessment of the potential of biogas in Czech agriculture, prepared by the Research Institute of Agricultural Engineering, indicates that the use of the available potential of biogas would create 20,600 jobs in the Czech Republic.

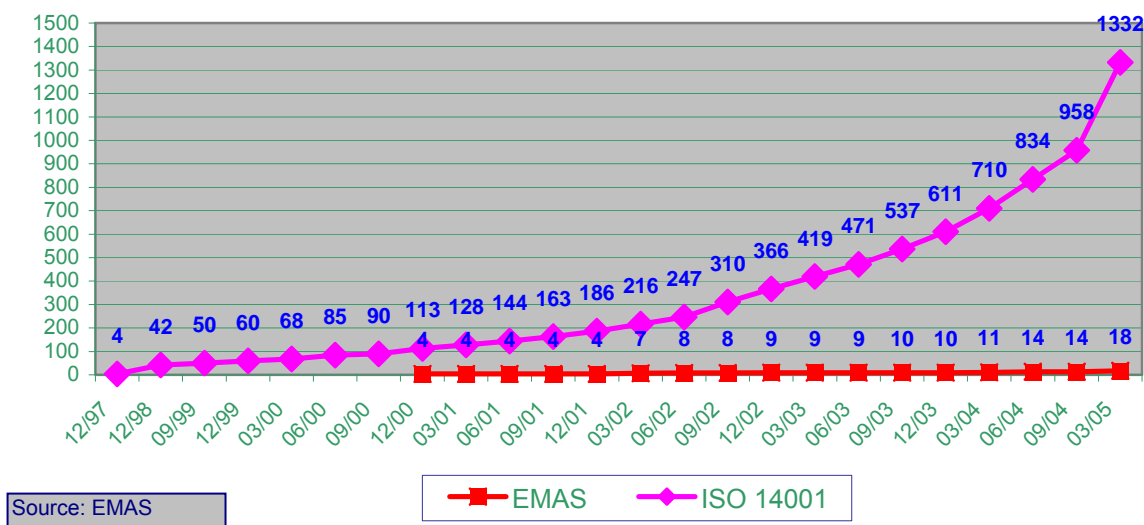
The development of solar and wind energy sector is a source of substantial investment and new job opportunities. The Japanese company Kyocera intends to build a factory producing solar collectors and cells at the Kadaň industrial zone; this investment would be worth CZK 200 million and would provide jobs to 150 people. Similarly, RWE Schott Solar, a German manufacturer of solar systems, will build a new plant for the production of solar modules at

Valašské Meziříčí, with an investment of CZK 600 million. The investment will be increased over the next two years and about 300 new jobs will be created.

The sorting and reuse of waste provides jobs to thousands of people. If the Czech Republic continues to actively develop the systems of sorting and recycling in accordance with the trends in the EU and achieves the goals set in the waste management policy, this sector of the green economy will provide thousands of new job opportunities by 2010. For example, Petrec intends to build a PET bottles processing plant in the Czech Republic and create 120 job opportunities by 2008. Similar potential also exists in organic farming, which is currently stagnating and awaiting genuine development.

Positive aspects include the growing willingness of certain enterprises to apply voluntary approaches in support of SCP. The most common practice is introducing the eco-management scheme under the ISO 14001 standard; in late April 2005, there were 1,400 undertakings with ISO 14001 registered in the Czech Republic, and 18 with EMAS. Other voluntary instruments that are not required by the market suffer from insufficient positive feedback (motivation), which is an indispensable prerequisite for the success of voluntary instruments. Enterprises would carry out voluntary SCP activities to a greater extent if they were not burdened so much by legislative requirements and if their efforts in this respect produced adequate benefit.

Development of the number of enterprises with EMAS and ISO 14001 (annually)



Cleaner production experience in the Czech Republic
 An overall assessment of cleaner production projects implemented in 46 companies in the Czech Republic in the 1990s showed how preventative measures integrated in the production process can combine environmental and economic effects. Using these measures, the companies significantly reduced the amounts of produced waste and pollution, at the same time reducing their production costs (by approximately 1% of turnover on average). Non-investment organisational measures provided average savings of approximately CZK 1 million per business. The tracing of the origin of economic savings reveals that these savings originate mainly from savings in the production process, with savings on the prices of input materials being the principal component. Savings on the treatment of pollution (the cost of which has traditionally been considered the total cost of pollution) amounted on average to less than a tenth of the savings. Similar projects demonstrated the importance of the more effective use of materials and energy for continuous improvement in the environmental profile of companies in the eco-effective way. *Source: Czech Cleaner Production Centre*

The key players that could facilitate desirable change in this respect include, for example, the Czech Confederation of Industry, the Czech Chamber of Commerce, or the Czech Business Council for Sustainable Development attached to the CEMC.

Consumers

General trends

Globally, two types of sustainable development can be distinguished – excessive consumption in the countries of the “North” and consumption that fails to satisfy the basic living needs of most inhabitants of the “South”. The economic and social development of the North and the efforts of the developing countries to achieve a similar rate of development place inadequate demands on the environment, with impacts on the whole planet. Excessive consumption and inefficient models of production and consumption with uneven distribution widen the gap between the rich North and the poor South, where a substantial portion of the population does not have access to drinking water, basic foodstuffs, sanitary services or health care.

International and national consumer initiatives are focused especially on consumer protection, and recently also on changing the patterns of behaviour on the part of consumers. An emphasis is placed on the availability of information, education and voluntary instruments. Many international organisations target mainly young people.

In recent years, there has been an increase in the number of consumers who, while purchasing goods or services, keep in mind environmental and health aspects, prefer local products or fair trade⁶, minimise and sort waste, etc.

Situation in the Czech Republic

The purpose of SCP at the consumer level is not to restrict or prohibit the purchase of goods, but rather to provide the consumer with information on relevant facts, to change the patterns of consumption and the preferences and criteria of the consumer. It is necessary, through intensive educational and informative activities, to increase the consumers’ awareness of the fact that our everyday consumer habits (buying goods, generating and disposing of waste, the method of heating our flats, road traffic, etc.) contribute to the serious problems of society. It is also necessary to inform consumers to the effect that a positive change in consumer habits leads to a significant reduction of these problems, and also has health and economic benefits. The aim is to concentrate attention of consumers on products with a higher value added in terms of quality, health and ecology. This also requires adequate conditions for the better availability of products with a higher added value in the general retail network. Availability is currently rather problematic, and the consumer’s right to choose between conventional products and organic food, environment friendly products and drinks in redeemable packaging is strongly limited. In many cases, the consumer does not have access to sufficient information to make the right decisions, or is unable to correctly use it. It is therefore necessary to implement a broad campaign to increase SCP awareness and to provide information on how the consumer can contribute to SCP. Compact power saving light tubes or organic foodstuffs are a typical example of products with a high value added.

⁶ Fair trade is a partnership between retail chains and consumer organisations in developed countries and producers in developing countries, who are given fair trade conditions while respecting the objectives and limits of sustainable development.

Compact lighting, in comparison with a standard light bulb, consumes less power, and thus is more economical, and at the same time has a longer useful life. Based on calculations, a power saving light bulb with a capacity of 23 W and useful life of 6,000 hours can adequately replace a 100 W light bulb and will save 462 kWh during its life, with a saving of CZK 1,600 to the consumer. In addition, this bulb saves 480 kg of carbon dioxide equivalent, which will not be discharged into the atmosphere. The extent and significance of potential savings is even more striking if we realise that one kWh is enough to watch TV for 6 hours or to cook a meal for three persons. If all Czech households replaced a standard 100 W bulb with the power-saving 23 W compact bulb, the economic savings would amount to CZK 1 billion per year.

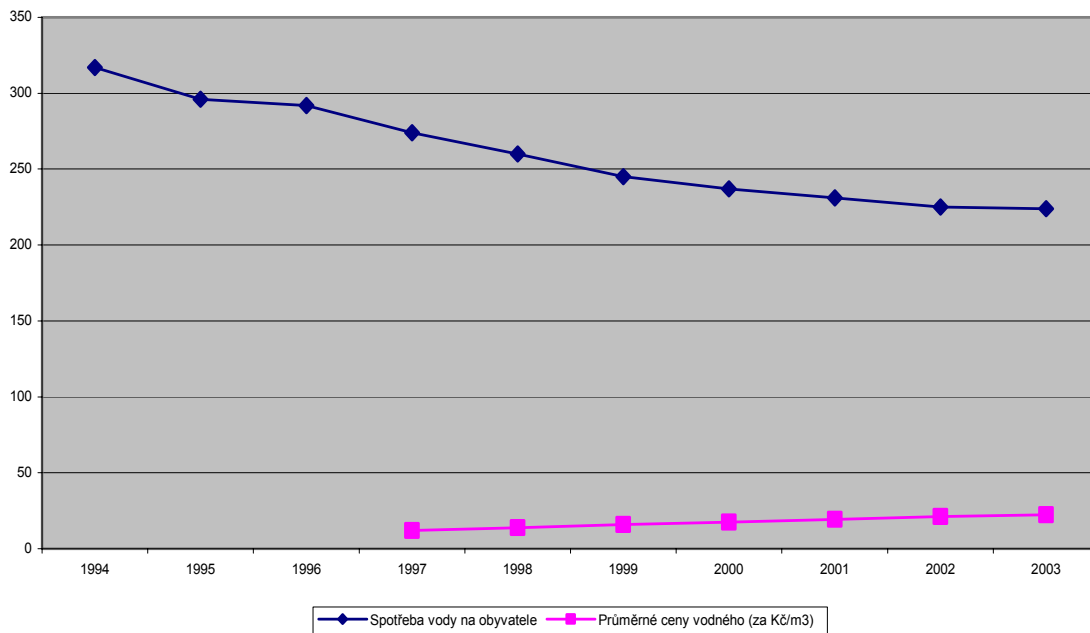
Organic food. While organic food (products of ecological farming) is still very rare in Czech shops and is seldom found by the Czech consumer, in the EU-15 organic food is the fastest-growing market in the food sector. The interest of consumers in these products is rapidly growing and retail chains compete to provide the most attractive offer. Consumers in the EU-15 prefer these high-quality and safe products that do not contain any chemical residues (pesticides and chemical fertilisers), problematic synthetic additives (popularly known as “E-numbers”) or GMOs – see page 11.

Certain information activities with positive effects for the consumer have been implemented over the recent years. These activities include, for example, consultation and advertising campaigns by some environmental organisations focused on sustainable consumption, the publication of guides on environment-friendly detergents etc., and the labelling of electrical appliances providing the consumer with information about the requirements of the appliance in terms of the consumption of energy and water and noise levels.

The labelling of appliances in the EU countries has a 25-year history, and it has been proven that the energy label serves as a primary information aid to the consumer when choosing and purchasing appliances. The Czech Republic promulgated the relevant legislation in 2001. In the Czech Republic, too, energy labels have become an important source of information in the shops, and are becoming increasingly popular as they allow the customer to compare the price and other parameters of the appliance and to estimate its operating costs and environmental impacts during the useful life of the product. The main aim of the legislative regulation is to protect the environment through informed decision-making by consumers and through exerting pressure on the producers to design and develop more economical models. It is therefore necessary to foster consumer awareness of the benefits of this piece of legislation more actively.

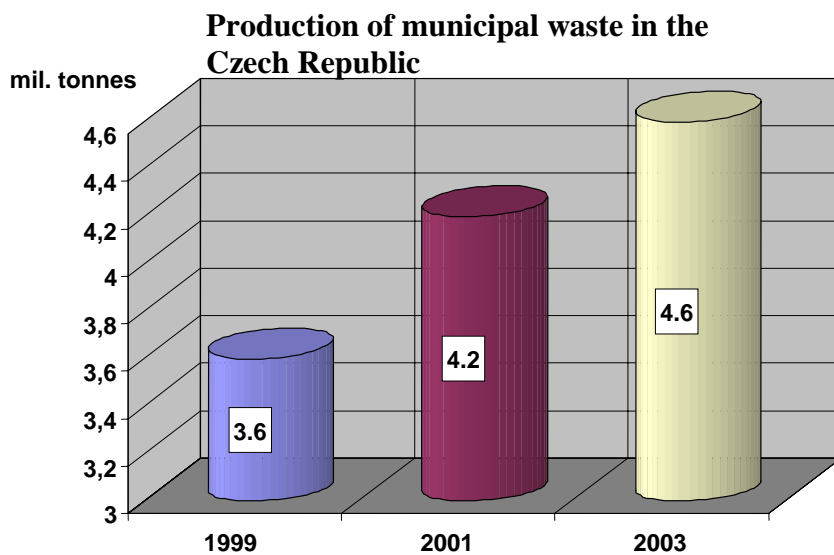
In the course of the 1990s, there have also been certain positive changes in the level of household consumption – for example, the consumption patterns in respect of food shifted towards health food (less meat products, more vegetables and fruit). Cars with catalysers have clearly prevailed. Consumption of water dropped significantly as a result of pricing deregulation, which indicates that correctly set prices lead to an active implementation of measures designed to provide savings.

Chart of drinking water consumption and water distribution rates in 1997 – 2003



Source: CZSO

Although the overall production of waste has been declining since 2000, production of municipal waste continues to follow a moderate growth trajectory. Waste production amounted to 3.6 million tonnes in 1999 and to 4.6 million tonnes in 2003. The positive aspect is that the percentage of sorted municipal waste is growing.



Comparison of recycling and reuse of packaging waste in the Czech Republic and in selected EU countries⁷

	Use and incineration in incinerators as source of energy (%)	Total recycling (%)	Recycling – glass container waste (%)	Recycling – paper packaging waste (%)	Recycling – metal container waste (%)	Recycling – plastic container and packaging waste (%)
Austria	75	66	86	80	67	30
Belgium	91	68	93	78	86	29
Denmark	94	57	90	61	44	16
France	62	45	52	64	53	15
Germany	78	74	86	88	80	49
Greece	33	33	24	68	10	3
Ireland	35	35	48	35	35	17
Italy	56	51	53	59	54	23
Netherlands	61	57	79	69	80	16
Spain	50	44	36	60	39	20
Sweden	67	65	88	70	68	20
UK	50	44	34	59	39	19
Czech Rep.	50	49	56	66	37	37

Source: Ministry of the Environment

State administration and local authorities

State administration and local authorities play a crucial role in the implementation of SCP, in particular with respect to the legislative process, strategies, policies, and the setting of suitable conditions in the market. In the framework of the legislative process, it is necessary to ensure that the state administration actively enforces measures designed to rectify market conditions in terms of SCP. This includes the elimination of harmful subsidies and tax exemptions, and the inclusion of externalities in the prices of products. Green Tax Reform (GTR), for example, will make it possible to improve the conditions for business entities by reducing the tax burden on human labour and business activities. In the context of various strategies and policies, it is desirable that state administration ensures linkage and harmonisation of individual major documents with a view to achieving SCP. All these measures need to be taken in a transparent way and through open communication and discussion with the entities involved, in particular with representatives of industry and NGOs.

As a consumer, state administration and local authorities have a key position in the area of sustainable consumption, which it exercises to a minimum extent at present. Public

⁷ Czech Republic data for 2003, other countries data for 2002.

administration annually expends large amounts on the consumption of various products, produces quantities of waste, and makes public orders. At a time when the state and various organisations are intensifying their efforts to persuade consumers to behave in a conscious and responsible way, to prefer ecological products and actively sort the waste they generate, most state administration and local authorities bodies paradoxically have problems in taking this approach and do not act as a good example to the general public or the business sector.

The importance of sustainable consumption at the level of public administration is confirmed by numerous examples in the EU-15 and also by an appeal of the European Commission of 26 August 2004. The European Commission appealed to the public authorities of the EU Member States to take into account the environment when buying goods or services and thus to help save the environment. In addition, the European Commission has produced a new handbook “Buying Green” to help public purchasers such as schools, hospitals and state authorities in this respect.

Public administration in the Czech Republic should take an approach that could serve as an example for citizens, and should actively apply green public procurement. To this end, it is recommended to draft, adopt and implement a governmental programme on “Sustainable Public Administration”, whereby public administration would support environmental practices, not by mere declarations but by a practical approach, and serve as an example to other consumers. The programme would trigger a change in consumption patterns at public administration level – recycled, recovered and environmentally sound products would be preferred in buying goods and public procurement, and the sorting of waste would be a matter of course.

Creating general conditions for SCP in EU countries

The best example of creating favourable general conditions for SCP is the United Kingdom, which is one of the economically most successful EU countries and yet emphasises sustainable development. Between 1990 and 2002, the UK reduced emissions of carbon dioxide by 15%, at the same time increasing economic growth by 30%. In addition, the British economy has succeeded in reducing its dependence on crude oil thanks to reducing the share of manufacturing, increasing the share of tourism, ensuring the effective use of energy, and increasing the share of renewable sources. Although the British economy is growing and so is the country’s population, total demand for petroleum decreased in 2002 to an average of 1.6 million barrels per day from 1.77 million in 1992. The successful governmental policy in this area is based on the laboriously negotiated tripartite consensus.

Non-governmental non-profit organisations

These organisations (NGOs) play a key role in the field of educational and informative activities oriented mainly on consumers and their behaviour. A positive effect is that they work directly in specific locations, know local conditions and have a close relationship with the local population. Thus, NGOs are often the operators of pilot or ancillary SCP projects at local level, or carry out environmental education projects with a particular focus on children and students. They work in close cooperation with local authorities and schools and contribute to the development of civil society and the enrichment of local life.

Some organisations or coalitions of non-profit organisations have national reach and seek to improve the access of citizens to information and also to improve cooperation between individual stakeholders. Important initiatives in this area include, for example, the Eco-Counselling Network, associating individual eco-counselling offices with a view to taking care of the environment and promoting cooperation and communication between local authorities, the state administration, science and research, the general public and the private sector. The objective of eco-counselling is to provide citizens with access to impartial and comprehensive information about the environment, environmental problems and their

solutions, and about products and their impact on the environment. The counselling activities of NGOs (environmental, agricultural, etc.) thus contribute to the population's awareness and to the building-up of civic structures to counterbalance unilateral political or economic decisions.

Centre of Model Environmental Projects for Rural Areas

An example of a socially beneficial project at local level is the "Centre of Model Environmental Projects for Rural Areas" at Hostětín near Uherský Brod. The project has been implemented for several years by Veronica foundation, based in Brno, in cooperation with several other non-profit organisations and entities, including the local authority of Hostětín.

The project demonstrates, by way of practical examples, that the approach to nature, local resources and tradition, together with thoughtful management can economically stabilise a rural area and also deal with unemployment. The number and success rate of projects implemented at Hostětín is indeed remarkable as well as inspiring. The village has an aquatic root zone wastewater treatment system, in full operation since 1997; the well-known Hostětín sweet-cider house annually processes about 200 tonnes of ecologically grown apples of local species (the cider house is operated by the civic association White Carpathians Tradition); the village also has a fruit drying shop; solar collectors were installed on the cider house and 10 other buildings as part of the "Sun for the White Carpathians" programme (based on measurements monitoring the effectiveness of the collectors, annual energy savings amount to approximately 2,000 kWh per collector); and, last but not least, Hostětín is the proud operator of a municipal centralised wood chips heating plant as part of the international programme for the reduction of greenhouse gas emissions. Plans are in place to build a model low-energy building to be used as the Workshop Centre for a new training programme oriented on environmentally conscious construction. The Centre should be used all year as a training centre for the staff of NGOs, state authorities, local authorities, students, small entrepreneurs and craftsmen, farmers and other groups of people interested in sustainable development of rural areas.

Similar activities have thus far been scarce in the Czech Republic. However, their success indicates that they are an appropriate example of the sustainable development of Czech rural areas, and that this example deserves much more attention and support, in particular of the state administration and local authorities.

Investors and financial organisations

Investors and financial organisations play a very important role in forming and maintaining production and consumption patterns. Departure from long-term investments and endeavours to achieve swift returns on capital is a current trend that goes against SCP principles.

Despite this main trend, there is a marginal positive trend of increasing interest among certain financial organisations in assessments of clients and investment strategies other than from the financial aspect. This interest stems from the experience that an undertaking realising short-term profits to the detriment of the community will probably have problems with the consequences of its behaviour in the long run (in the Czech Republic, this involves experience of the elimination of past ecological burdens and its impact on the value of the undertaking).

The most extensive international initiative in this area thus far has been socially responsible investment (SRI), an attempt to integrate broader social and environmental considerations into decision-making regarding the orientation of investments. The UNEP, in cooperation with the UN Global Impact initiative, manages the process of preparing principles for responsible investing that will take account of SCP principles.

Trends promoting SRI include the growing influence of pension funds, which by definition are interested in long-term improvements in capital and in the integration of social and environmental considerations into the decision-making regarding the placement of capital. Sufficient potential for the support of SCP also exists in the insurance industry where the interests of insurance companies overlap with SCP objectives (e.g. health, or negative impacts of unsustainable production and consumption patterns on the economy).

Commercial organisations

Commercial organisations, namely in the form of retail chains, play a key role in changing the current negative patterns of consumption at the level of consumers. In recent years, retail chains have established themselves in the Czech market and have significantly influenced the whole community. At present, they have a sizeable share in sales of consumer goods in the Czech Republic, spend substantial amounts on advertising, and dramatically influence the behaviour of not only consumers but also suppliers and producers who are often dependent on supplies to retail chains.

The current attitude and policy of these retail chains in the Czech Republic has significantly contributed to the orientation of consumers on massive consumption with an emphasis on the lowest possible price of goods, and to preference being given to disposable products. Together with their pricing requirements and conditions in general, they have caused problems to producers, which in many cases is reflected in the lower quality of products. Recent events in connection with the sale of goods, where the massive influence of retail chains on consumers has once again been clearly revealed, this time together with the deception of consumers, and also criticism voiced by producers, mainly in agriculture, pointing out the discriminatory practices of retail chains, have highlighted certain negative trends on the part of consumption and production in the Czech Republic.

Retail chains in EU-15 countries play a principal role in extending the consumer's awareness of ecological products and ensure they are widely available. An overview of the practices of retail chains in the EU-15 reveals a major difference in approach. In Austria, Germany, Belgium and the United Kingdom, retail chains offer a wide range of eco-foodstuffs, environment-friendly products and a wide assortment of beverages in redeemable containers. There are even supermarkets specialising in organic food. Retail chains provide consumers with easy access to a wide assortment of products, thus acting as the driving force of sustainable consumption. The main criterion is not the lowest possible price at the cost of the quality of the product, but quality of the product in view of health and the environment. In the United Kingdom, for example, 81% of organic food is sold through retail chains, which compete to have the most attractive and broadest supply of organic foodstuffs. For example, Waitrose offers more than 1,300 "bio" quality items in its branches, and the Sainsbury chain has received the prestigious Organic Supermarket of the Year award three times in a row.

In the Czech Republic, the situation in this respect needs to be improved and retail chains should become more involved in SCP considerations. Ways to achieve this are manifold: stronger interventions of the state with a view to setting better rules; more active communication of the state and consumer, environmental and producers' organisations with retail chains; voluntary agreements between these entities aimed at improving existing conditions; better availability of environmentally sound products and better promotion; and intensifying pressure from and demand of consumers.

Educational organisations

The need for life-long learning is being discussed on an increasingly frequently basis in connection with the need to continuously improve the quality of life – i.e. with the goals of SCP. SCP should become an important part of life-long learning. Educational organisations are responsible for the delivery and cultivation of cultural and social values. SCP is becoming an inseparable part of these values and its importance will keep growing, which should be reflected by the adequate professional training of teachers at schools of all levels.

The most relevant factor for the shaping and functioning of production and consumption systems involves the controlling ideas and attitudes of the persons participating in their creation and implementation. To harmonise these ideas and attitudes with the objective of

providing an integral quality of life to present and future generations is the principal task of educational organisations in the field of SCP. Technical expertise and skills to accomplish the principles of SCP, e.g. in the area of care for the environment, good operating practices in the production process or good stewardship in households, are another necessary precondition for the implementation of SCP. In a fragmented and specialised society it is necessary that people should, from a very young age, comprehensively see the functioning of the community and the dynamic dependence on the environment. Increasing the level of education in the field of SCP has been identified as a basic priority of SCP in the Czech Republic. Educational facilities also play an irreplaceable role in the transfer of SCP-relevant information and may become a basis for innovation in the field of SCP. The importance of educational organisations for innovation in the field of SCP is augmented when they become interconnected with the local community or with representatives of individual stakeholders.

Research and development organisations; consultancy sector

The principal task for the implementation of the SCP Framework is to create and transfer relevant information about the systems of production and consumption, their impacts on the objectives of the society, and ways to improve them. Research and development is a platform for the accomplishment of this goal, while educational organisations and consultancy firms subsequently play an important role in the transfer of this information. The irreplaceable role of science and research also rests in the timely identification of new problems and opportunities related to SCP and in proposing suitable solutions.

The sector of science and research and consultation will provide and extend the expert capacity necessary for innovation in the area of SCP, if the community so desires. The state sector should look for ways to encourage and support the building and use of professional SCP capacities, inter alia by projecting the objectives of the SCP Framework into programmes supporting research and development, through public and private partnership (PPP), and through sharing innovation risks by supporting pilot projects.

In improving the existing systems of production and consumption it is impossible to rely solely on technical solutions. A relevant factor for the functioning of production and consumption systems is the human factor, the strategies and control systems used, etc. From this point of view, a challenge to innovation in the field of SCP in the Czech Republic is the greater involvement of social sciences in the solution of the issues and problems outlined in the SCP Framework. It appears that the Czech Republic as yet lacks basic capacities in this area. The institutions that could tackle these new tasks have different priorities.

Effective innovation in SCP depends on cooperation between individual stakeholders so that scientific findings make contact with the possessors of practical knowledge and vice versa. The first step towards creating the necessary professional and organisational background for SCP in the Czech Republic could be the establishment of a platform for the exchange of information and initiation of concrete innovation projects. Numerous partial initiatives in this area already exist.

Media organisations

The media are a means for the transfer of information to consumers – television, radio and the press are nowadays widely available and are the principal instrument for the dissemination of advertising and promotion of goods or services. Information and advertisements surround the consumer and tempt his attention literally at every step. They invade the human subconscious and significantly influence decision-making and choice related to the purchase goods.

Advertising influences human behaviour to such an extent that consumers buy things they otherwise would not buy. A significant target group of advertisement in the media is children and young people, who are particularly easy to manipulate and are strongly influenced by the media.

Expenditure on advertising continues to grow, and retail chains alone spent more than CZK 1 billion on advertising in 2004, about CZK 300 million more than in 2003. Their expenditure on advertising in the press, television and radio and on outdoor advertisements increased by more than 40% compared to 2003. Manufacturers and dealers of cars paid nearly CZK 1.5 billion for advertisements in the Czech media in 2003. Thus, advertisement expenditures are equal to 7% of the total investment in the road infrastructure in 2003. Advertisements have different forms which in some cases go beyond rational and responsible limits. Intensive car advertising campaigns in the media often attempt to persuade the consumer that a car is a symbol of the freedom of movement, comfort, social prestige, and also a happy family, and that all this can be bought with a car. Similarly, TV advertisements for food products adversely affect the diet of children, thus contributing to a number of health problems, such as obesity. Intensive and ubiquitous advertising, mainly that of supermarket chains' sales or discounts, significantly influences consumer behaviour.

The extent, form and influence of advertisement and the media bring negative aspects and contribute to the deepening of SCP problems. The media and information play a key role in the area of educational and information activities in general, and in changing consumption patterns in particular. The problem is that the potential of this instrument is not being fully and actively exploited, while problematic advertising, on the other hand, is massive.

It is necessary to create conditions that would make it possible to substantially extend the space made available for SCP themes in the media, whether in the form of articles, discussion, or TV informative releases. Public-service media in particular could provide better conditions for topics of public benefit, the solution or improvement of which is in the public interest. Short informative messages at prime time by the public-service Czech Television appear to be an effective tool. Short shots would fill in the space between programming and would appeal to the general public with their positive and practical contents concerning selected SCP themes. Given the public interest in sustainable development, this space would be made available on advantageous terms, at least in the public-service media. These messages would be the responsibility of selected state administration authorities (for example the Ministry of Environment and the Ministry of Culture). The state, the attitude of the media and the approach of the industrial sector play an important role in creating better conditions for the promotion of SCP.

Cooperation of stakeholders

Progress in introducing SCP is conditional on the cooperation of individual stakeholders. The dialogue launched within the working group for the SCP Framework has indicated that:

- it is necessary to first clarify the terms, notions and concepts associated with SCP (this process is also going on at the international level, and SCP is a very dynamic theme)
- different points of view exist in respect of the policies and instruments supporting SCP; the principal objective of the discussion is to understand the approach of partners and the values which they use as the point of departure – then it will be possible to agree on several priorities in which joint efforts will bring the greatest added value
- there are many examples of support for SCP, but the transfer of relevant information in this respect is inadequate (a similar situation exists on the international stage).

One of the principal barriers to cooperation in the field of SCP is the distrust between, but also within, individual stakeholders.

One of the examples of insufficient cooperation between stakeholders in support of SCP is the support given to energy performance contracting (EPC). Despite the considerable eco-effective benefits of this tool, which mobilises private capital to increase energy efficiency, it is difficult to find broader support for EPC. The potential of eco-effective savings attainable through EPC in the Czech public sector alone is estimated at CZK 100 billion or more. Energy and material savings are an SCP category offering opportunities for consensus across stakeholders.

STRATEGIC PRIORITIES

The following strategic priorities stem from the focus of the SCP Framework on several priorities that may bring the best possible effects. The strategic priorities of the SCP Framework were selected based on the following principal criteria:

- encouraging linkage between existing policies and programmes;
- avoiding duplicities with existing programmes;
- targeting several key themes that will allow concentration of efforts;
- accomplishing objectives of the EU, OECD and UN;
- using the potential for significant progress in SCP.

Priority 1: Education and transfer of information

The basic precondition for achieving sustainable consumption is education and transfer of information. Education helps raise awareness of citizens, increase the quality of decision-making of individuals and, by extension, improve the quality of life. It is necessary to ensure that all individuals, in particular children and young people, have access to sufficient information on sustainable development and sustainable consumption and production, and that all individuals realise the consequences of any behaviour that does not support sustainable development. This is a continuous, life-long process – from pre-school to adult age. It is therefore necessary to adopt a communication strategy that will contain various means of communication to affect all groups of population. Information should be conveyed to consumers in a positive way rather than in the form of moralising messages – in a personal, comprehensible, simple and practical way. Information must contain a message about the benefits of a change in consumer patterns. Consumer information should be disseminated through prominent and popular cultural, music and sports personalities who have authority and influence over target groups of population.

Education is closely linked to communication and the transfer of information about impacts on the interests of individual stakeholders, or about possible alternatives. A combination of practical experience with scientific findings leads to innovation. Thus, all these areas:

- communication
- education
- innovation

are closely linked.

In the Czech Republic, education on sustainable development is supported under the State Programme of Environmental Education in the Czech Republic and the related Plan of Action, which is updated every three years.

A high-level meeting of representatives of environment and education ministries was held in Vilnius, Lithuania, in March 2005, which adopted the Strategy for Education for Sustainable Development of the UN Economic Commission for Europe. The Strategy contains a requirement to adopt national strategies for education on sustainable development, to which the Czech Republic should react by drafting a National Strategy for Education on Sustainable Development with the involvement of all stakeholders and subject to broad communication and cooperation with both the professional and the general public. To this end, it will be necessary to appoint an agency responsible for drafting, and subsequently for updating and monitoring the implementation of this National Strategy. It is currently recommended to appoint the Government Council for Sustainable Development to be responsible for the drafting of the National Strategy. For this purpose, the Council would establish a relevant working body (a committee or working group) headed by a representative of the Ministry of Education, Youth and Sport.

Priority 2: Integration of objectives of policies, strategies and programmes

The objectives of current policies and programmes are often of a high quality adequate to the principles of SCP, but their weaknesses in general include:

- linkage between objectives and practice (integration of these objectives into the decision-making of stakeholders),

Policies are often drafted top-down, sometimes without a connection with reality, which could not be omitted if they were drafted bottom-up⁸. The advantage here is the possibility of international comparison, but the decision on the manner of solution is made before inputs are perfectly processed, including data concerning local areas or population groups. Policies do not deal with specific problems in a “tailored” way.

- feedback from implementation (lack of effective indicators and their monitoring)⁹,
- interdepartmental integration of the objectives of policies (practical implementation of objectives by a department may go against the objectives of other departments).

Improvements in these three respects will significantly facilitate accomplishment of the objectives, which will subsequently lead to a desirable practical change in the consumption and production patterns.

Priority 3: Eco-efficiency throughout the life-cycle

Great opportunities for practical application of SCP principles are offered by systemic use of the potential for eco-effective solutions, i.e. solutions bringing both economic and environmental effects. The potential for eco-effective solutions exists in respect of production processes and services in the private and public sectors and can be exploited by the more effective use, or substitution, of material and energy inputs.

⁸ Some national policies and programmes, although elaborated at the local level, are incompatible (e.g. regional energy concepts and the National Energy Policy). Regions provide much better potential of renewable sources.

⁹ Both at the macro- and micro-level, and at national and international level. It is necessary to make methodological modifications to the key indicators allowing international comparison. The indicators should be adequate to the level of decision-making.

The instruments for the identification and implementation of eco-effective solutions used in the Czech Republic include environmental management accounting (EMA), cleaner production assessment (CPA) / waste minimisation or monitoring and targeting (M&T). The extent to which these pro-active instruments are used is inadequate to their potential. Existing policies and programmes and the instruments being used mostly focus on selected segments of the life-cycle (mainly the production stage), which may lead to suboptimisation of the solutions to be implemented. The instruments allowing the use of the potential of eco-effective measures throughout the life-cycle include assessment of the entire life-cycle, supplier chain management, or eco-design.

The priority of monitoring eco-efficiency during the life-cycle covers a wide spectrum of innovation in the field of technologies, schemes and objectives, and aims at linking these aspects. The point of departure for implementing this priority at the macro- and micro-level should be a high quality information system regarding material, energy and associated financial flows. For example, the potential for increasing the energy and material efficiency cannot be fully exploited due to a lack of information regarding:

- material and energy flows and associated financial flows at the micro-level (many enterprises still monitor information about the effectiveness of the use of energy and materials only at the input into and output from the production process, and thus do not have any basic tool for continuous improvements in effectiveness). Lack of information at this level leads to passivity, or to suboptimisation of the selected solutions;
- opportunities to influence the energy and material efficiency through measures at other stages of the life cycle;
- material flows at the macro-level (lack of information underlying the drafting of policies);
- interest of individual stakeholders, and the effects of increased energy and material efficiency on these interests.

A lack of information amplifies the risks existing in connection with the use of the potential for savings.

Priority 4: Local SCP initiatives

This priority is based on the potential of the local community for implementing more sustainable consumption and production patterns on the basis of local objectives and social capital. Local innovation offers solid potential for SCP innovation.

Individual national policies and programmes are progressively elaborated at local (regional) level. A plan exists for the horizontal development of rural areas, a decentralised approach to diversification and the development of agriculture and rural areas on the basis of local programmes¹⁰.

Priority 5: Sustainable public administration

In the field of sustainable consumption, state administration and local authorities have a key position, which has thus far been minimally exercised in the Czech Republic. Public administration annually spends large amounts on the consumption of various products, produces quantities of waste, and makes public orders. It is alarming that, at a time when

¹⁰ This priority allows the use of experience gained in agriculture where numerous SCP practices are already being implemented.

efforts are intensifying to persuade consumers to behave in a conscious and responsible way when buying goods or disposing of waste, most state administration and local authorities have serious problems in taking this approach and do not act as a good example to the general public and the business sector.

Public authorities have immense purchasing power, which, if correctly channelled, will help to positively change the existing consumption and production patterns. For this purpose, the Czech Republic Government's programme "Sustainable Public Administration" will be drafted and implemented, creating conditions for the active development of sustainable consumption in the public sector. The programme will inform public servants about environmentally sound measures and products, support the availability of products with a high added value, will serve as inspiration and an appropriate example to others, and will contribute to an expansion in the opportunity of choice and access to information for all consumers.

Priority 6: Market conditions

An analysis of the current situation in the market and of the conditions for business has highlighted several serious deformations, inequality in the setting of prices for products, and a relatively high tax burden on human labour. It has also become clear that improving these conditions is necessary to achieve SCP. Serious threats associated with the consequences of the excessive consumption and production to the detriment of regenerative capabilities of ecosystems and the increasing pressures on the environment require an active approach. For a successful solution of this priority, it is necessary to adopt a government programme, find political consensus and focus on the following two basic aspects:

a) Rectification of pricing and market conditions

The purpose is to explore and assess harmful subsidies and externalities in individual industrial sectors, and subsequently to eliminate the harmful subsidies and internalise externalities. The first step towards implementation of this priority is an environmental fiscal reform, which will be designed in several stages and actively implemented in compliance with the relevant EU policy.

b) Providing availability for sustainable consumer choice

It is necessary to concentrate on eliminating discrimination caused by insufficient availability of goods, services or infrastructure necessary for alternative patterns of consumption and production. Availability is currently very problematic, and the consumer's possibility of choice between standard products and organic food, environmentally sound products and beverages in redeemable containers is limited. The limited ability to market a product with a higher added value puts the producers at a disadvantage.

PROPOSAL OF SPECIFIC ACTIVITIES

	<u>Short-term horizon 2007</u>	<u>Medium-term horizon 2010</u>
Priority 1: Education and transfer of information	<ul style="list-style-type: none"> - Create a database of SCP initiatives in the Czech Republic. - Create a platform for transfer of information and experience between these initiatives, educational institutions and the public; use members of SCP initiatives for education. - Use the capacity of these initiatives to prepare educational programmes for different target groups that would integrate environmental aspects with social and economic aspects of development. - Significantly extend the space for SCP themes in the media, whether in the form of articles, talks, discussions or visual information. - Provide better conditions for publicly beneficial SCP themes, mainly in the public media, the solution and improvement of which is in the best public interests. A specific and effective way would be to introduce informative messages at prime time on the public-service Czech TV. 	<ul style="list-style-type: none"> - Implement a programme for the integration of education on sustainable development with other themes of life-long learning. - Implement systemic linkage between education and programmes of local support of SCP.
Priority 2: Integration of policies, strategies and programmes	<ul style="list-style-type: none"> - Make use of the economic policy to promote long-term eco-effective objectives in the field of energy and material efficiency, including mechanisms for their implementation and assessment across sectoral policies. - Introduce the monitoring of SCP indicators at the level of strategic objectives. - Introduce accounts of material flows in the Czech Republic and use them to set specific objectives and indicators for increasing material efficiency. - Introduce the monitoring of qualitative indicators of the quality of life and use them to set specific objectives in this area. 	
Priority 3: Eco-efficiency throughout the life-cycle	<ul style="list-style-type: none"> - Draft a programme that will provide support in identifying and using the potential of eco-effective measures in the framework of production processes and throughout the life cycle; the programme will focus on organisations using substantial energy and material flows and lacking capacity to optimise them (e.g. SMEs or health facilities). 	<ul style="list-style-type: none"> - Explore the possibility of encouraging the establishment of revolving funds in support of eco-effective innovation at local level (contributions to these funds)

	<ul style="list-style-type: none"> - Support environmentally sound technologies. - Indicators: <ul style="list-style-type: none"> a) decline in the consumption of material and energy and generation of waste and pollution per unit of production or service; b) tax revenues in the private sector or savings of public expenditure in the public sector achieved through reduction of production costs (lower material and energy requirements). - Create better conditions for the sharing of risks by producers while preparing and implementing innovations for SCP – support for creation of capacity for the provision of eco-effective services with a guarantee (e.g. for EPC, which optimises the design as the provider of the service is interested in the most economical and effective solution in terms of investment and operation; this eventually leads to savings of inputs and reduction of emissions). 	<p>could be made by the public as well as the private sector at regional level; the funds would support the introduction of systemic innovation, technological innovation and innovation to the product/service systems). With a view to optimising investments, funds should be established on the principles of EPC.</p> <p>Implementation of objectives stemming from the Programme for the Promotion of Environmental Technologies.</p>
Priority 4: Local SCP initiatives	<ul style="list-style-type: none"> - Encourage transfer of information about SCP initiatives in the Czech Republic at local level using the existing information systems; unify the approach to the various SCP initiatives through the quality of life criteria. - Support pilot projects of local innovation for SCP (the projects could be based on cooperation between local SCP initiatives with scientific establishments). - Support projects of cooperation between local educational institutions and SCP initiatives. 	<ul style="list-style-type: none"> - Support the establishment of local SCP initiatives (e.g. housing in line with SCO principles). - Support expansion of the activities of existing initiatives (e.g. direct exchange of experience).
Priority 5: Sustainable public administration – green public procurement	<ul style="list-style-type: none"> - Draft, adopt and implement the government programme “Sustainable Public Administration”, making use of the experience gained in implementing pilot projects, the experience of public administration in the EU-15, the handbook “Buying Green” (published for this purpose by the European Commission), and propose criteria for the identification of environmentally sound alternatives. - In the framework of the preparation of this programme, the potential and the economic and social benefit of available measures for sustainable consumption of the public administration will be assessed, and priorities will be set. 	<p>Evaluate adopted measures and their benefits, and evaluate the activities and the level of involvement of local authorities. On the basis of this evaluation, adopt additional measures necessary for optimisation of the programme, transfer of experience, and consulting.</p>
Priority 6: Market conditions	<ul style="list-style-type: none"> - Accelerate implementation of the revenue-neutral environmental fiscal reform. By means of taxation, achieve a partial reduction of pollution caused by industrial 	<p>consider (after the introduction of new taxes on solid fuels and electricity in</p>

<p>Rectification of pricing and market conditions</p> <p>Providing availability for sustainable consumer choice</p>	<p>activities and improve conditions for business, reduce taxation of human labour (social security and income tax) and motivate the modernisation of the economy.</p> <ul style="list-style-type: none"> - Complete an analysis of externalities and include these external costs in the prices of products through taxes. - Quantify externalities in transport and include them in the prices of vehicles and fuel. - Analyse harmful subsidies and public assistance, and actively carry out a reform of these subsidies and public assistance. - Assistance from public budgets should be more intensively oriented on SCP, namely modernisation and innovation designed to reduce energy and material intensity, on science and research, the development of alternative and renewable sources of energy, etc., analyse opportunities to increase the availability of sustainable goods in the market. - Actively involve retail chains through more intensive intervention of the state with a view to setting better rules, more active communication of the state and consumer, environmental and producers' organisations with retail chains, voluntary agreements between these entities with a view to improving present conditions, increasing the availability of environmentally sound goods and improving their promotion, and increasing demand on the part of consumers. 	<p>2008) a more integral assessment of the importance of excise taxes, which may be perceived as environmental taxes.</p>
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