

## PART I: NATIONAL REPORTING FOR CSD-18/19 THEMATIC AREAS - HUNGARY

### COMMON ISSUES

#### Means of Implementation

- *Education, training, awareness-raising and capacity-building*

From kindergarten to secondary school level there are many initiatives on education for sustainable development (ESD) such as the Green Kindergarten system, the Eco-schools, the Forest Schools and Forest Kindertartens. The integration of ESD themes across all relevant subjects, programs and courses is usual in public primary and secondary education, however the provision of specific ESD programs and courses is more frequent and accepted in higher education.

There are several university courses addressing SD (environmental science, environmental studies, environmental-economic studies, environment and society studies, etc.). It appears in teacher education and in-service teacher training as well. Competences in ESD are addressed in the list of minimum professional competences for teachers in formal education.

In Hungary the revised National Environmental Education Strategy – which had been developed by 200 civil organizations and after the revision its scope was broadened with themes of ESD - is used as a policy document for ESD.

There are several awareness raising campaigns and capacity-building activities, financed from various sources (EU funds, Hungarian governmental funds, Norwegian Fund, business and NGO initiatives) on energy saving, waste minimizing & recycling, sustainable consumption, healthy lifestyle, etc.

The project, „Realizing the potential for small scale renewable energy sources in the home (*Kyoto in home*)” is based on the European initiative on energy saving education and promotion of renewable energy resources.

#### Summary:

The EU Kyoto target for greenhouse gas reductions can be met if families realize that they each can do something to reduce the environmental pollution associated with energy use. The project's global aim is to inform and educate teachers, students and their families so that they can realize the need and can assess the potential for energy efficiency (EE) measures and renewable energy sources (RES) in their homes.

The project supplemented two existing European educational initiatives namely

- The „Green Pack” education toolkit, developed by the Regional Environmental Centre for CEE covering energy use and environmental pollution and
- the TREAM resource „energy savings in the home resource” which focuses on the use of energy labelling to identify energy efficient appliances.

Based on these resources and supplemented by the benefits of insulating the family home and incorporating small scale RES, the project includes:

- Development a web-based methodology which will enable families to assess how RES can be incorporated into homes once they have identified ways of saving energy;
- Trial the new resource in schools to check their suitability and possible integration in various subjects;
- Work with stakeholders to encourage families to evaluate the potential of EE and RES in their homes;
- Prepare a dissemination plan which will link to the campaign for Sustainable Energy Europe (SEE) and the EU Green Week.

The master resources were developed in English, then translated into national languages and adapted for local use and trial. The partners worked together to develop methodologies for training

teachers and students and to identify ways of informing and engaging the parents of the students receiving the training.

The benefits of such a project:

- integrated and holistic approach to energy efficiency and small scale RES providing either electricity and/or heat in family homes;
- suitable resource materials which can be translated and adapted for use in all other European countries;
- methodologies for training teachers, interested students and involving and motivating their families;
- resources to assist the EU's Energy Efficiency and Green weeks in 10 member states.

The partners worked with local stakeholders such as schools, retailers, utilities, installers and energy advisers who helped with the methodology, publicized and supported the trials. A dialogue was also established with those responsible for social housing in order to help the families living in such homes. Stakeholder workshops were linked with project meetings to develop the dialogue on both local and European scale.

In Hungary 35 schools participated in the „Kyoto in home” with great success. Several energy agencies and organizations participated in the stakeholder dialogue and events and motivated the interested families for energy efficiency activities.

More information: [www.kyotoinhome.info](http://www.kyotoinhome.info)

o *National legal frameworks and administrative or other measures of relevance*

The aim of Act No. 53 of 1995 about the *general rules of the environmental protection* is “to form the harmonic connection of the population and the environment, the consistent and high level protection of the environment as a whole and its elements and its processes furthermore the ensuring of sustainable development.” According to this aim the competence of the Act covers “the living organs ... and the lifeless elements of the environment” furthermore “ ... the activities that utilize, burden, endanger and pollute the environment respectively.”

The framework legislation on waste management has been established by the Act No. 53 of 2000 on *Waste Management*. The mid-term waste management strategy of Hungary is defined in National Waste Management Plans (NWMP), of which the first planning period 2003-2008 has been just expired. The new NWMP 2009-2014 is under elaboration parallel to the upgrading of the Waste Management Act in order to harmonize national legislation, targets and implementation tools to the new Waste Framework Directive 2008/98/EC.

The *National Strategy on Sustainable Development* has been approved in June 2007 by the Government Resolution No. 1054 of 2007. Sustainable consumption and production is one of its horizontal priorities. ([http://www.ff3.hu/upload/NFFS\\_20070629\\_en1.doc](http://www.ff3.hu/upload/NFFS_20070629_en1.doc)).

The *National Framework Program on SCP* was elaborated in 2006 through a stakeholder dialogue by Hungarian Network on SCP, coordinated by the Regional Environmental Center for Central and Eastern Europe, Country Office Hungary, based on the concept proposal of the Hungarian Cleaner Production Center.

The general targets of the ten-year framework program are the following:

- definition of requirements for sustainable development, welfare in a broader economic, social and environmental sense; decoupling economic development from environmental deterioration;
- increase in production efficiency and by this means reduction of environmental load caused by companies, reduction of natural resources use;
- making consumers' behavior and habits sustainable, avoiding traps of consumer society;
- enforcement of rights of future generations during decision making on sustainability.

Our *National Environmental Programs* (NEPs) are based on the principles of sustainable development. The 3<sup>rd</sup> NEP for the period of 2009-2014 encompasses specific thematic action plans on environmental awareness, climate change, environment & health, human settlements, biodiversity, land use, water and waste management and environmental safety.

The *National Council for Sustainable Development* was established by the Hungarian Parliament through the Parliamentary Resolution No. 100 of 2007 as a conciliatory, consultative and advisory organ for issues in the field of sustainable development. ([http://www.nfft.hu/main\\_page/](http://www.nfft.hu/main_page/)) The members are representatives of the Parliamentary parties, science and education, chambers of commerce, trade unions, employers' organisations, churches, municipal associations and NGOs.

- *Participation of Major Groups, in particular women and local communities, in decision-making and implementation*

Participation of stakeholders in decision making is ensured by law in Hungary. The decision-making process has changed by the political and economic transition, international developments and the accession to the European Union. A more democratic public involvement practice has been developed in decision-making such as legislative drafting, elaboration of development plans and programs, environmental impact assessment procedures, distribution of funds etc.

Hungary has ratified<sup>1</sup> and promulgated<sup>2</sup> the UN ECE Aarhus Convention on access to information, public participation and access to justice in environmental matters in 2001, so it became part of the Hungarian legislation. Information provision obligation of public authorities and public participation were provided in Hungarian legislation even before the Aarhus Convention: the Constitution<sup>3</sup>, the Act on legislation<sup>4</sup>, the Act on the Protection of Personal Data and Publicity of Data of Public Interest,<sup>5</sup> the Act on chambers<sup>6</sup> as well as the Act on the general rules of environmental protection<sup>7</sup> contain regulations recommending that the opinion of the affected citizens' organizations should be known and taken into account in the decision-making processes.

- *Technology development, transfer and dissemination*

The **National Technology Program** supports mid-term R&D activities which have a potential for bringing about scientific and technology break-through in the given field. One of the sub-programs is the 'Liveable and Sustainable Environment' program with aims at preserving natural and built environment, applying environment-friendly technologies, preventing pollution, improving the efficiency of technologies applying renewable energy sources. Promoting environmental industry and technology R&D, environment protection, prevention and decreasing pollution.

Efficient transfer of environment-friendly technologies to the developing countries is crucial. To facilitate this goal the Hungarian Ministry of Environment and Water (MoEW) launched a comprehensive environmental foreign trade program at the beginning of 2007. The **KEXPORT** program encourages professional associations and companies in the field of environmental technologies and services to strengthen their economic cooperation through external trade activities and investments with focus on innovation, R&D and technology transfer projects. The established common platform serves the interested partners by providing services, relevant information and promoting international trade relations in the environment sector. The program has achieved a significant success: for the time being 24 companies have joined the program signing contracts for export of technology and investment.

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<sup>1</sup> by Parliamentary Resolution No. 35 of 2001

<sup>2</sup> by the Act No. 81 of 2001

<sup>3</sup> Act No. 20 of 1949

<sup>4</sup> Act No. 11 of 1987

<sup>5</sup> Act No. 63 of 1992

<sup>6</sup> Act No. 121 of 1999

<sup>7</sup> Act No. 53 of 1995

## **THEME-SPECIFIC ISSUES**

### **CHEMICALS**

- **Assessment of chemical risks, including:**

- *Mechanisms for systematic evaluation, classification, and labeling of chemicals, including initiatives towards a harmonized system of classification and labeling of chemicals*

In Hungary the EU regulation known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances, 1907/2006/EK) is applied on this specific field. According to its rules the producers and importers of chemicals are responsible for evaluation of the intrinsic properties and the associated hazards of the chemicals they place on the market.

The EU adopted the harmonized system of classification and labeling of chemicals (GHS) in its regulation 1272/2008/EK (CLP regulation). This legislation is also effective in Hungary.

- *Initiatives for assessment of toxic chemicals, hazard and risk assessment, and participation in various international and regional initiatives*

Hungary participates in the Chemicals Program of the OECD and its initiative for assessment of high production volume (HPV) chemicals.

- *Strategies for exposure assessment and environmental monitoring and improvement in procedures for using toxicological and epidemiological data to predict and estimate the effects of chemicals on human health and the environment*

Exposure assessment is used as one of the key elements of risk assessment. Such assessments are however limited to chemicals of EU-wide concern, like heavy metals, POPs or substances of very high concern (SVHC).

Environmental monitoring is carried out for key pollutants to comply with the national legal rules. There are also inter-sectoral initiatives for environmental monitoring. For example the presence of pesticides in agricultural fields are regularly monitored.

- *Information exchange and cooperation, data-quality assurance, application of assessment criteria, and linkages to risk management activities*

Information exchange and cooperation is well established in Hungary. An inter-sectoral Chemical Safety Committee is in operation, which is composed of experts from relevant Ministries, industry, Academia and NGOs. The EU rules on information exchange and data-quality assurance are implemented in Hungary, as stipulated in the REACH regulation. There are many laboratories which apply the GLP (Good Laboratory Practice) principles and Hungary also participates in the relevant activities of the OECD.

- **Sound management of toxic chemicals**

- *Progress within the larger framework of Strategic Approach to International Chemicals Management (SAICM)*

A working group for SAICM was established under the Inter-ministerial Committee on Chemical Safety in May 2007. Hungary granted a financial support of EUR 10000 to the Quick Start Program Executive Board in 2008. Legislation on chemicals was significantly improved as an effect of the European Regulations REACH and CLP (see above). Hungary ratified the relevant international agreements, including Basel, Rotterdam and Stockholm Conventions.

SAICM implementation priorities are to be selected from priorities listed in the National Profile of the Hungarian Chemical Safety ([http://web.kvvm.hu/vegvi/documents/2/Profil\\_2006\\_sszegez\\_s.pdf](http://web.kvvm.hu/vegvi/documents/2/Profil_2006_sszegez_s.pdf) - in Hungarian only).

- ***Initiatives and innovations for risk reduction, particularly taking in to account the life cycle of the chemicals***

The Hungarian initiatives for risk reduction are considered together with those of other Member states of the European Union. Initiatives may be transformed into legislation of the Community, typically into REACH regulation.

- ***Precautionary measures derived from broad-based life cycle analysis***

Precautionary measures elaborated in the European Community is applicable in Hungary. This refers to legislation and policies for example on mercury and endocrine disruptors.

- ***Policy measures to phase out chemicals that pose unreasonable and unmanageable risk to human health and human environment, such as, for example, ozone-depleting substances***

The relevant instrument in Hungary to phase out chemicals that pose unreasonable and unmanageable risk to human health and the environment is the set of legal rules of the EU. REACH regulation is designed specifically for these tasks. By implementing EU rules, the policy measures prescribed in the international conventions are also met and even overtaken. The European Community issued legislation aiming at implementation of the conventions on the fields of LRTAP, POPs, HMs, ozone-depleting substances, etc. Hungary elaborated the implementation plans accordingly. Policy measures to this end are also elaborated in the National Environmental Program ([http://www.ff3.hu/upload/NEP2\\_Hungary.pdf](http://www.ff3.hu/upload/NEP2_Hungary.pdf)).

- ***Policies and frameworks for prevention of accidents, preparedness and response***

Hungary maintains a framework for prevention of accidents, preparedness and response according to the law transposing Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (Seveso II). This involves identification of establishment carrying dangerous activity, and the corresponding internal and external emergency planning; informing the public and ensuring publicity; evaluation of the harmful consequences of major-accidents; and control of the safety management system in view of prevention of damage and protection of citizens. Exercises of external emergency plans are carried out regularly by the head of the regional disaster management body and is led by the competent mayor, according to the annual plan approved by the general director of the National Chief Inspectorate of Disasters ([http://www.katasztrofavedelem.hu/letoltes/civil\\_pr\\_in\\_hun.doc](http://www.katasztrofavedelem.hu/letoltes/civil_pr_in_hun.doc)).

Hungary is also a Party to the UNECE Convention on the Transboundary Effects of Industrial Accidents (<http://www.unece.org/env/teia/>).

- ***Policies aimed at reducing the risks posed by lead, mercury and cadmium and other harmful heavy metals, including through a review of relevant studies, such as, for example, the United Nations Environment Program global assessment of mercury and its compounds***

The frameworks to reduce the risks posed by lead, mercury and cadmium and other harmful heavy metals are provided by the Community's legislation, which roots both in international conventions and European policies. Policy measures to this end are also elaborated in the National Environmental Program.

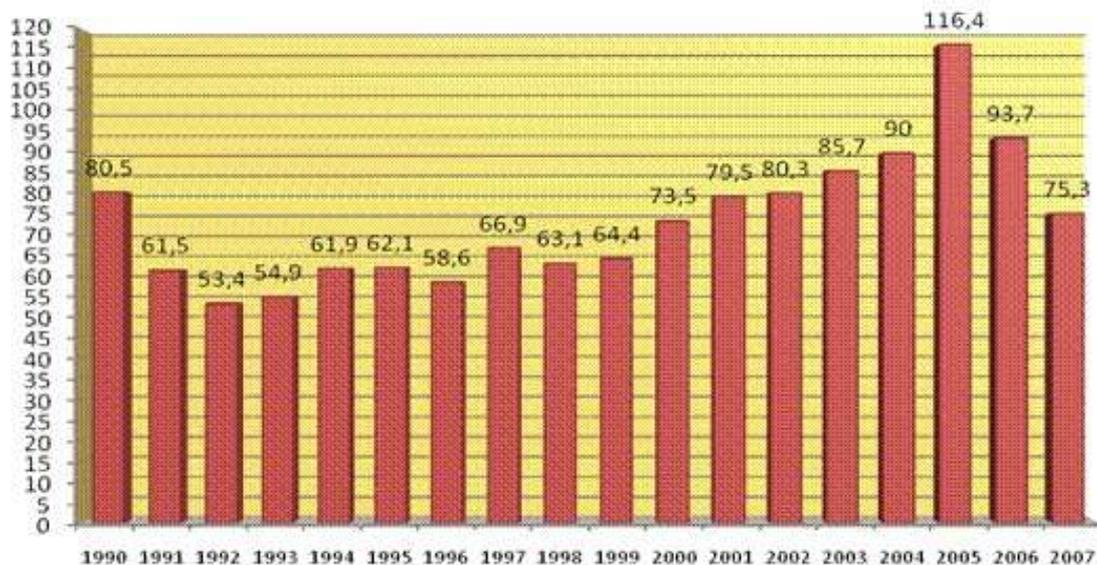
- ***Initiatives to reduce overdependence on the use of agricultural chemicals***

There are mid-term frameworks in Hungary aiming at reducing the overdependence on the use of agricultural chemicals. One of them is the National Agro-Environmental Program, which is of a multi-sector character and targeted to the protection of the rural areas, the environment and natural habitats. Another one is the National Environmental Program, which relates to several fields relevant to the decreased use of pesticides. Those fields are food safety; protection of soils; environmentally sound farming practices; chemical safety.

## MINING

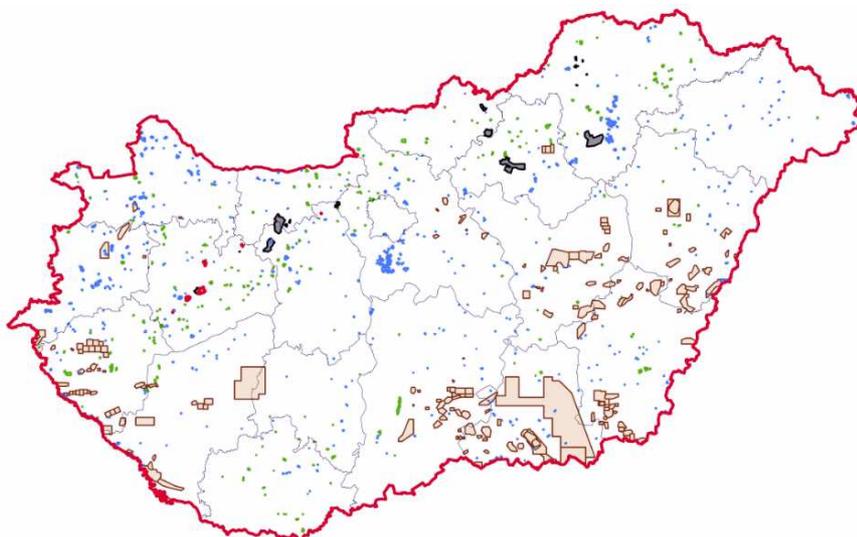
In the last twenty years the mining industry experienced dramatic changes. In the fossil fuel and metallic ores sector the big state-owned mining companies collapsed and/or transformed into private companies, many mines were closed, especially the sub-economic underground coal mines, tens of thousands of mine workers lost their job, left to early retirement or got training into other professions. The state spent tens of billions of HUF for mine closure, remediation and decontamination activities at mining sites.

The aggregates segment of the mining industry (construction sand, gravel, crushed rocks, and decoration stones) and the industrial minerals companies being typically SMEs adapted more easily to the changes. This is reflected in the record of the bulk mineral production of Hungary. The annual production volumes are influenced a lot by the aggregates production which is a direct function of the infrastructure development supported by national state budget or EU funding and associated incentives.



*Minerals production in Hungary 1990-2006 (Mtons) - source: Hungarian Office for Mining and Geology*

In 2008, according to the register of the Hungarian Office for Mining and Geology (HOMG) 879 mining companies carried out active minerals and geothermal energy production on 1858 mining sites. The mining royalty provided by the extractive industry (ca. EUR 400 million equivalent) is a significant contribution to the central state budget income.



*Mining plots (licensed exploitation areas) in Hungary, June 2009*

Legend:

*brown: oil and gas,  
black: coal,  
red: ore,  
blue: aggregates,  
green: other)*

## **Policy and regulations**

### **○ *Features of national mining codes or mineral industry code***

The Act No. 48 of 1993 on Mining came into force in 1993, later it was amended several times. Among the numerous implementing pieces of legislation (mainly decrees of the Ministry of Economy and Transport), the most important one is the Government Decree No. 203 of 1998 which gives detailed implementing provisions to the articles of the Mining Act.

The scope of the Mining Act covers the complete mining-related activity chain, as: geological survey, mining exploration, exploitation, break in operation, mineral processing, closure, remediation. It extends to all mineral commodities (including oil and gas); establishment, utilization and termination of waste rock heaps; maintenance, utilization and closure of open spaces of closed underground mines; underground activities of non mineral exploitation purposes using mining methods (as shafts, deep drillings, tunnels and galleries); establishment and operation of pipelines conveying hydrocarbons; the utilization of geothermal energy with the exception of ground waters; all facilities and equipments necessary for the above activities (as mining railways, cableways, string ways, electric cables, explosives). Water, even groundwater holding geothermal energy, works of water management in general, and manual gold-washing are out of the scope.

In practice, the major legal tool of minerals management is the concession procedure. The state – the original owner of mineral resources – can plan and control minerals exploitation on a longer-term by deciding whether to open certain areas for the exploitation of certain minerals in the form of announcing these for open concession tenders.

Another tool for controlling minerals management is the obligation of paying extra mining royalty in case when the mining operator produces more cut-off than licenced in the technical operation plan or makes unreasonable damage to the mineral reserve itself.

The National Mineral and Geothermal Energy Resource Inventory (and Balance) of Hungary is managed by HOMG and its predecessors since the 1950's. It is updated each year. The Inventory includes more than 2700 deposits and mines. The Inventory contains quantitative data (resource, reserve, production, status of mine, etc.) and some qualitative data (type of mineral, main constituents, etc.). HOMG operates the National Archive for all geological data. Data are to be submitted on a yearly basis, including primary (field) data, and processed and interpreted data as well as reports, maps etc.

Data provided by the concession holder/licensee are confidential - business secret - for the whole duration of the concession contract/mining licence. After the termination of the concession contract/mining licence all data become public.

According to the Government Decree No. 203 of 1998 an environmental impact assessment based environmental licence is required before the technical operation plan is submitted to the mining authority.

Mining companies have to pay mining royalty after exploited minerals and geothermal energy. The basis of the calculation of the mining royalty is the market value of the unprocessed minerals leaving the mining works.

### **○ *Fiscal policies for investments and counteracting market fluctuations***

No specific financial incentives were established in order to support investments nor to counteracting market fluctuations in the mining sector. However, the mining legislation and the practice of the mining supervision authority provide a relatively high degree of freedom for investors in planning and accomplishing mining projects. For example, the time span available for mining companies carrying out exploration activities is remarkably long (10 years maximum), and the exclusive access to their acreage is ensured. The licensee is entitled to sell its mining right, as well as to trade with its geological data during the duration of the whole licenced mining period.

- ***Regulations and mechanisms for compliance and monitoring***

HOMG is the prime authority to supervise the mining industry. It is:

- the prime supervisor and licensing body of all geological and mining activities, and
- the monopolistic host and supplier of geo-information, including mineral resources,
- its regulatory competence extends beyond the classic spheres of authority, such as mineral exploration and exploitation, mining waste management, technical safety of mines and workers health, geotechnics and specific constructions, national inventory of mineral resources - over to fields such as gas pipelines and pressure equipments, explosives management, occupational issues, market surveillance, professional experts titles, geothermal energy, etc.

Moreover, the agency is involved in numerous other licensing action as a co-authority, e.g. environmental protection, water management, land use planning, nuclear affairs, constructions.

- ***Guidelines for artisanal, small and medium scale mining***

There are no specific guidelines for artisanal, small and medium scale mining in Hungary. There are a very few manual gold washer persons along the Danube river, and some illegal gravel pit diggers in the vicinity of certain villages, but the magnitude of this problem is negligible. Therefore the mining authority does not apply specific surveillance actions against these activities beyond the routine monitoring and sanctioning practices.

- ***Public/Stakeholder consultation and participation in decision-making related to mining and public governance and transparency in the mining sector***

According the law on the public administration procedures and to the Mining Act, the interested public and the stakeholders can have access to licensing activities, geological data, and information on mining areas and activities. The ways they may perform these rights are diverse:

- direct notification by the authorities,
- announcements on web homepages,
- analogue announcements on local municipalities news,
- free of charge data service by the authorities on request,
- public hearings,
- court jurisdiction intervention, etc.

- **Mining best practices**

- ***Environmental Impact Assessment (EIA) and monitoring of all phases of mining operation (exploration, project development, mine operation, and mine closure)***

The mining legislation contains general provisions concerning the accomplishment of environmental protection criteria. Necessary measures of environmental protection are required by the relevant authorities during the licensing procedures. The legal basis of the detailed requirements is set in environmental, water and other specific legislation. In the Mining Act, besides the participation of relevant co-authorities, there is a special legal institution of "exempted location" where prospecting shall be licenced with the preliminary approval of the relevant authorities or interested parties. Exempted location includes the built environment, bed of water course, water works, potable water, mineral water, medicinal water, any spring and the designated protective area thereof, protective forest, protective zone around resorts, protected natural area, real estate under the protection of monument of art or archaeological protection, and soil in relation to open-pits.

During licensing phases as approving concession contract and granting exploration, environmental liability guarantees as bank deposits, liability insurance, indemnity are required.

The mining authority may impose a fine on, and may prohibit the mining activity performed without a licence. If the company deviates from the rules prescribed in the regulations or in the licence, the authority may impose a fine, may suspend the activities, withdraw the licence, or may initiate termination of the concession contract and may order remediation of the site.

- ***Private Public Partnership PPP for sustainable mining***

PPP is not in practice in the mining sector in Hungary. The mining industry is completely private-owned. However, the 100 % state-owned Mining Property Utilization Company in the Public Interest is managing mine remediation activities in the sphere of state liability mining sites.

- ***Emergency Response Plans and Preparedness at the local level***

Emergency response plans and public preparedness of the locals are out focus, since mining facilities with high risk of accidents do not exist in Hungary, i.e. no installations known belonging to the scope of the Seveso II Directive. Directive 2006/21/EC on mining waste management also prescribes external and internal emergency planning for category “A” waste management facilities, but there are no such facilities known in the country.

- ***Risk assessment of mines and mining activities***

Risk assessment in the mining sector is a common practice with respect to environmental impact assessment and mining waste management affairs. However, it is usually performed for the purposes of supporting an environmental licence application. Voluntary environmental risk assessments are rare. When business management feasibility risk assessments are concerned, leading companies apply those on routine basis.

- ***Rehabilitation of affected communities and life-supporting ecosystems, including mine site decommissioning***

The Hungarian State spent significant amount of financial funds in the last twenty years on former state-owned mining sites decontamination and remediation, including the rehabilitation of affected built environment, the education of affected local public and manpower, and the revitalization of the local biodiversity.

The stringent new requirements of the Mining Act on the financial guarantee ensure that the mining companies are duly liable for any environmental impacts their activity may pose.

- ***Technological, institutional and social initiatives for protecting the health of mining workers***

The regulations and institutions of work safety are fundamentally defined in the Constitution along with the Act on work safety and health<sup>8</sup>. Also of special importance are the Act on healthcare<sup>9</sup>, the Act on the National Public Health and Medical Officer Service<sup>10</sup>, and Act on the mining industry<sup>11</sup>. The mining entrepreneurs are required to ensure the proper conditions of the work, to eliminate and to minimize the harmful environmental effects furthermore to grant financial base to cover the costs of rehabilitation.

The Act on Mining and the concrete rules of its Methodological Norm<sup>12</sup> contain requirements concerning the protection of human life, human health, the environment, agricultural lands and properties.

These requirements are ensured through the supervision of work safety and health carried out by the National Labor Inspectorate, the National Public Health and Medical Officer Service and the Mine Supervision or their district organs.

The Hungarian Mining Authority is intent on keeping its traditional positions – by exercising its jurisdiction – despite the significant changes taking place in the country. It has encouraged introducing and operating management control systems in the field under its supervision.

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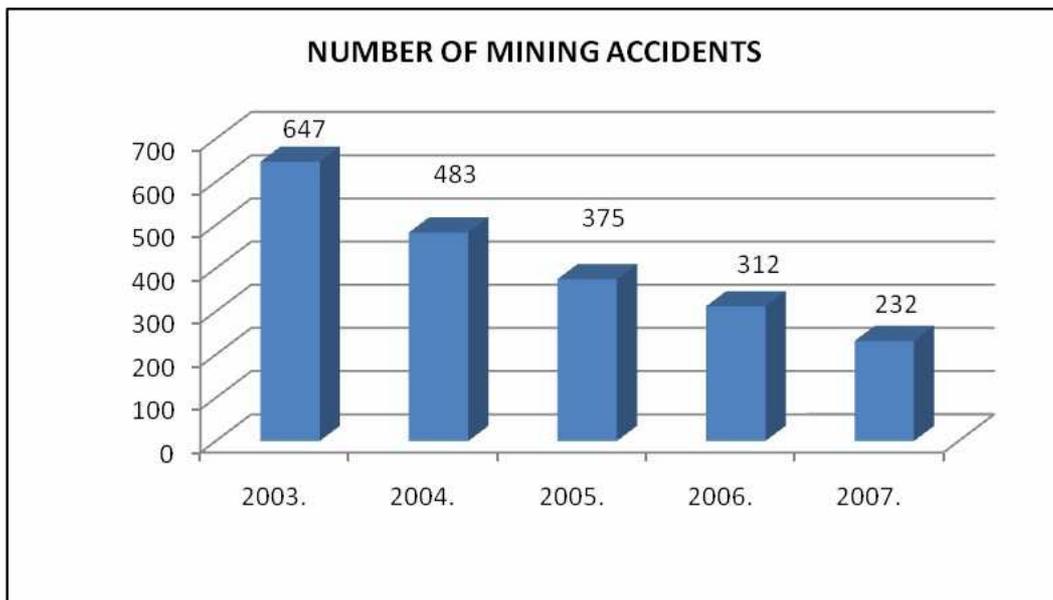
<sup>8</sup> Act No. 93 of 1993

<sup>9</sup> Act No. 154 of 1997

<sup>10</sup> Act No. 11 of 1991

<sup>11</sup> Act No. 48 of 1993

<sup>12</sup> Government Decree No. 203 of 1998



*Number of mining accidents in Hungary (2003-2007) - Source: Hungarian Office for Mining and Geology*

- ***Mine Closure Planning (Land use plans & site rehabilitation, site safety, decommissioning, waste dumps & tailings, site water management, off-site infrastructure, community socio-economic programs and employees)***

The closure of the mine is regulated by the Mining Act. The mining entrepreneur shall submit a technical operation plan for the closure. The mining authority and the involved co-authorities shall judge the possibility of the further use of mined spaces and facilities. The underground workings shall be abandoned in such a condition that it should not be a hazard to the environment or the surface.

According to the implementing Government Decree No. 203 of 1998 the technical operation plan of the closure shall contain:

- an environmental impact assessment,
- the technical measures for the protection of the surface, groundwater and natural values,
- the remediation measures and their timing,
- the presentation of facilities for further use or demolition,
- plans for the utilization or clean-up of waste rock heaps, etc.

The further utilization of underground mining spaces is acceptable in case when remediation is completed, the environmental damages are restored or compensated and the new financial proof for environmental liability was paid.

The mine closure regulatory process includes the granting of the remediation, as prescribed by the Mining Act and by the implementing Government Decree that give detailed provisions on remediation. The mining company shall continuously remediate the surface area, which can be no longer used, to achieve a state harmonizing with the natural environment or condition for further utilization in accordance with the technical operation plan. A separate remediation plan shall be submitted to the interested authorities after three years of the establishment of the mining plot at the latest. The accomplishment of the remediation shall be reported to the authorities for final acceptance. However, these sections do not give provisions on the post-closure monitoring but the obligatory participation of the environmental, water and geological authorities in the licensing process make it sure that this is considered and required if needed.

## **TRANSPORT**

### **• Policies and progress on transport access**

Accession to the European Union and further enlargement of the EU had a significant effect on the Hungarian transport development. Investment resources from the EU Cohesion Fund and the Structural Funds, supplemented with national resources were used for this purpose.

The main transport policy documents are the Hungarian Transport Policy, HTP (2003-2015), and the Unified Transport Development Strategy, UTDS (2007-2020)

[http://www.khem.gov.hu/data/cms1919520/EKFS\\_feh\\_r\\_k\\_nyv\\_EN\\_0902.pdf](http://www.khem.gov.hu/data/cms1919520/EKFS_feh_r_k_nyv_EN_0902.pdf).

The general objectives of Hungarian transport policy determined in HTP (2003-2015) and approved by the Parliament are as follows:

- improvement of the quality of life, preservation of health, reduction of regional disparities, increasing the safety of transportation, protection of built-in and natural environment;
- improvement and extension of connection to the neighboring countries,
- promotion of the implementation of regional development objectives,
- creation the conditions for efficient operation and maintenance by regulated competition.

The UTDS elaborated in 2007 specified a more efficient cooperation of sub-sectors and a uniform set of objectives of services. Priority objectives in UTDS are as follows:

#### Development of passenger transport

- Optimization of task sharing of passenger transport by keeping the share of community transport above the EU-27 average;
- Improvement of the efficiency of task sharing in community transport by ensuring co-modality;
- Increased mobility by ensuring equal opportunities in mobility;
- Ensuring economic sustainability of passenger transport by rational organization.

#### Development of transport of goods

- Ensuring the share of environmentally friendly factors above the EU-27 average in the task sharing of transport of goods;
- Profitability of environmentally friendly transport modes, improvement of their infrastructure maintenance capacity;
- Increasing the share of combined transport of goods;
- Increasing the efficiency of intermodal logistic service centers.

#### Development of transport infrastructure

- Elaboration of a main network structure, improving economic competitiveness;
- Improvement of regional accessibility at various levels;
- Development of the infrastructure of urban and suburban community transport;
- Prevention of increased road wear originating from public road vehicles of increasing axis pressure.

#### Horizontal topics

- Reduction of the number of death under 500 per year, caused by accidents on public roads;
- Implementation of more environmentally friendly and energy efficient transport systems;
- Long term provision of sustainability by conscious infrastructural development;
- Acceleration of the pace of introduction of ITS (intelligent transportation systems) applications.

The development of logistic is a very important part of the transport policy. The target of the Hungarian Intermodal Logistic Development Conception is the development of an efficient transport logistic system in Hungary, which is capable of building an environmental friendly and efficient distribution functions toward Eastern and South Europe.

- **Fuel prices and tax reform**

- *Removing subsidies on fuel*

The price structure of fuels contains 5 main elements: production price (net price), excise tax, stockpiling fee, commercial (wholesale and retail) margins, and value-added tax. The legislation could support certain transport goals connected to sustainable development and the social cohesion with one single mean: the full or partial refund of the excise tax. According to the main principle of the Act the excise tax is non-refundable (every user has to pay the prescribed amount of the tax) but there are a few exceptions:

- Rail freight transport sector, air and water (passenger and freight) transport sectors and agricultural undertakings (about 6% of the total budgetary fuel-related excise revenue).
- The second exception were earlier the full refund of the excise tax after distribution of the bio-fuels. Promoting more stable domestic energy balance the Act admit to mix 5 % bio-diesel and 5 % bio-ethanol (EBTE) into the regular gasoline and petroleum with refund excise duty. This legal action was fully in accordance with the 2001/77/EC (definition), 2003/30/EC (national target rate of bio-fuels) and 2003/96/EC (exemption of the excise tax) Directives. In 2005 the reported national target rate of the bio-fuels was 0.5 % of the total fuel consumption, and for 2010 5.75 % was planned. Unfortunately the effects of these economic incentives did not prevail on the supply side of the bio-fuel industry – especially in the case of the bio-diesel manufacturers.

In the past years the transport related excise tax refund mechanism went through many – usually restricting – changes. Degrees of the excise refund of the agricultural undertaking were limited in 2008. The excise refund mechanism of the bio-fuels went through a tax differentiation reshaping process. Due to a change in 2009, the bio-fuel components do not receive excise tax relief any more. Today 4.8 V/V % bio-fuel blending into the traditional petrol and diesel is mandatory otherwise penalty imposes. The new sustainability criteria for the bio-fuels will partly be fulfilled by second generation bio-fuel production technologies.

- *Encouraging energy efficiency*

Due to the lack of budgetary financial resources there had not been any state program specified to energy efficiency of road transport since 1990. The trend of factors determining energy consumption of the road transport at a ten-year interval is as follows:

- The performance of the passenger transport and the road freight transport has been permanently increasing, similarly to the growth of the GDP.
- From environmental point of view, the Hungarian transport sector still has a more favorable modal split than most of the other EU countries. In 2007, the passenger cars accounted for 60%, rail passenger transport accounted for 13% and the bus and coach passenger transport accounted for 24 % of the passenger transport, the figures of the EU average were 83-6.5-9%, respectively. The rail freight transport accounted for 15% of the goods in tons kilometers, which is quite high compared to the EU average.
- The domestic passenger car fleet shows some transformation (average life span in 2002 was 11,7 years, in 2008: 10,4 years). Between 2001 and 2006 the renewal rate of the passenger cars exceeded the 9% (EU-15: 8%). The key element of the modernization was to maintain the domestic purchase power for the sake of the discount credit-constructions of the commercial banks (partly based on foreign currency).
- Similar renewal process of the bus and coach fleet can not be observed as the transport companies has no resource to finance it.
- The quality of fuel in Hungary is fully in accordance with the EU standards, or even higher than the international standards, e.g. nearly all fuel types distributed are sulphur free.

- Last 10 years, the Hungarian ODEX (energy efficiency index) of the road transport decreased by 3% (it increased by 7% for trucks and light lorries, and fell by 8% for passenger cars).

The main tax-related energy efficiency incentive of the government was the introduction of the registration tax. The sum that has to be paid is between HUF 250,000 and 9,622,000 per motor vehicle, depending on its environmental grading and the type and the volume of the motor engine.

- *Providing reliable alternatives for the poor*

During the last two decades the relatively high level of state subsidies on public transport systems declined. In existing tariff systems special preference is given to children, students, civil servants, pensioners, old people, however social conditions are not taken into account.

Though the price of the tickets has grown dramatically – exceeding the inflation rate – the income of the companies can not cover even the operational costs of the public transport services.

- **Regional and global transport system integration encouraging efficient modes**

The principle of co-modality should prevail the area of passenger transport, goods transport and logistics, while each mode of transport have to be improved.

Freight transport, by improving its energy efficiency, and by its decisive ratio impacting volume, considerably influences the total consumption of the Hungarian transport sector, so the improvement of its environmental performance has a special importance.

Development of the railway sector is a prominent societal and national economic interest emphasized due to sustainability advantages. Hungary's long-term objective is to have a railway by 2020, which offers a significantly higher level of service than today as well as a better operating reliability for passengers (primarily in suburban and long-distance intercity transport) and freight companies using the services.

Navigation does not play a very significant role in domestic transport, however, its contribution to the foreign trade performance of Hungary has been growing steadily. There are some factors limiting the utilization of our inland waterways, e.g. frequent draft restrictions, low ration of loaded passage time/annual operation time, density of ports operating permanently with facilities and infrastructure of adequate standards, high water level.

**Modal split of passenger transport, by mode of transport**

(%)

Year	Passenger cars		Bus		Rail	
	EU-15 <sup>+</sup>	Hungary	EU-15 <sup>+</sup>	Hungary	EU-15 <sup>+</sup>	Hungary
1995	84,6	64,6	9,0	23,4	6,5	11,9
1996	84,4	63,2 <sup>a)</sup>	9,0	25,0 <sup>a)</sup>	6,6	11,8 <sup>a)</sup>
1997	84,5	64,1	8,9	24,0	6,6	11,9
1998	84,5	64,1	8,9	23,7	6,5	12,2
1999	84,6	63,0	8,8	24,1	6,6	12,9
2000	84,6	62,1	8,7	25,0	6,7	12,9
2001	84,7	61,9	8,6	24,8	6,7	13,3
2002	84,9	61,5	8,5	24,6	6,6	13,9
2003	85,0	61,6	8,5	24,9	6,5	13,5
2004	84,7	61,9	8,6	24,7	6,6	13,4
2005	84,4	63,0	8,7	23,7	6,9	13,3
2006	84,3	63,2	8,6	23,8	7,1	13,0

a) Break in series.

Source: Eurostat

**Modal split of freight transport, by mode of transport**

(%)

Year	Rail		Road		Domestic inland	
	EU-15 <sup>+</sup>	Hungary	EU-15 <sup>+</sup>	Hungary	EU-15 <sup>+</sup>	Hungary
1996	15,3	32,7 <sup>b)</sup>	77,1	61,3 <sup>b)</sup>	7,6	6,0 <sup>b)</sup>
1997	15,8	33,3 <sup>b)</sup>	76,4	60,8 <sup>b)</sup>	7,8	5,9 <sup>b)</sup>
1998	15,2	28,7	77,1	65,8	7,7	5,5
1999	14,6	28,3	77,9	68,2	7,5	3,5
2000	14,9	28,8 <sup>c)</sup>	77,6	68,1 <sup>c)</sup>	7,6	3,1 <sup>c)</sup>
2001	14,3	28,1	78,3	67,3	7,4	4,6
2002	13,9	28,4	78,9	65,5	7,2	6,1
2003	14,1	28,9	79,2	65,6	6,8	5,5
2004	14,0	28,0	79,1	65,9	6,8	6,1
2005	14,0	25,0	79,3	69,2	6,7	5,8
2006	14,6	23,9	78,8	71,6	6,8	4,5

a) Value estimated by Eurostat

b) Value estimated by member state

c) Methodological break

Source: Eurostat

**Volume of long distance passenger transport, by mode of transport**

(million passenger kilometre)

Year	Road	Rail	Inland water	Air	Total
1995	9 556	8 441	49	2 383	20 429
1996	9 764	8 582	41	2 775	21 161
1997	10 168	8 669	38	3 049	21 924
1998	10 143	8 454	41	3 038	21 676
1999	11 265	9 514	40	3 513	24 332
2000	12 150	9 789	45	3 539	25 523
2001	12 021	10 005	43	3 447	25 516
2002	12 097	10 531	30	3 445	26 103
2003	12 322	10 286	34	3 776	26 418
2004	12 096	10 544	38	6 865	29 543
2005	11 530	9 880	25	6 865	28 300
2006	11 784	9 584	35	9 131	30 534

Source: Hungarian Central Statistical Office

**Freight transport volumes, by mode of transport**

(thousand tkm)

Year	Road	Rail	Inland water	Total
1995	9 955	8 422	1 338	19 714
1996	10 182	7 634	2 482	20 298
1997	10 430	8 149	1 644	20 223
1998	18 674	8 150	1 561	28 385
1999	18 599	7 734	958	27 291
2000	19 123	8 095	891	28 109
2001	18 503	7 731	1 259	27 493
2002	17 143	7 752	1 668	26 563
2003	18 199	8 109	1 517	27 825
2004	20 598	8 749	1 904	31 251
2005	25 138	9 090	2 110	36 338
2006	30 495	10 167	1 912	42 574

- **Urban transport planning and policies**

In Hungary, the national government and the local governments share the responsibility regarding the development and operation of the transport infrastructure in accordance with the legal obligations and depending on the ownership, however it is vital to provide all the conditions necessary for the good cooperation. In this regard the connecting points of the transport systems are the most important factors, including construction of junctions, harmonization of timetables of the interurban and urban public transport, utilization of rail in suburban transport, the construction of bypass roads etc.

The urban transport policy recommended in Hungary relies on EU-conform, consistent guidelines as follows:

- Satisfy sustainable transport demand;
- Support well-balanced regional development;
- Ensure fair market regulation;
- Support transport integration;
- Improve quality and service centers;
- Protect human life and the environment;
- Apply prices commensurable with actual performance and costs.

- **Vehicle efficiency and emissions policies**

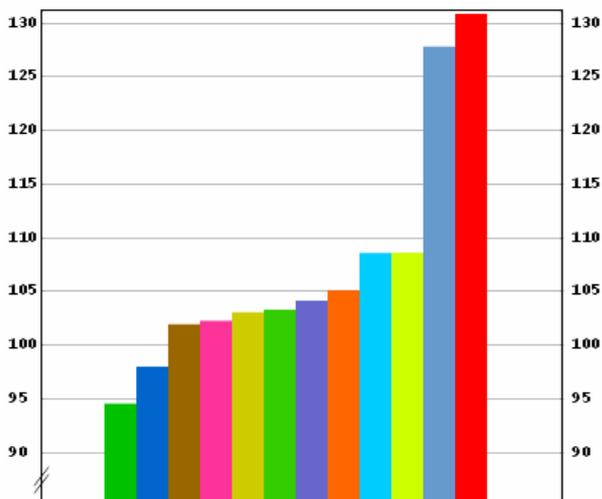
The EU common transport policy (2001, reviewed in 2006) can be considered as the guiding document for Hungary in terms of priorities and environmental aspects, and there are several environmental directives dealing with reduction and monitoring of transport-related emissions.

The Hungarian emission policy related to transport is harmonized with the EU legislation. In compliance with the Union's type approval regulations (Euro 4 for passenger cars and Euro 5 for trucks and buses) the same exhaust emission norms are valid as in all other EU countries. For off road vehicles the regulation is the same. The legislation will follow the new EU directives when they come into force.

In order to control the emission related condition of the car fleet, a regular control was introduced which is compulsory for all road vehicles.

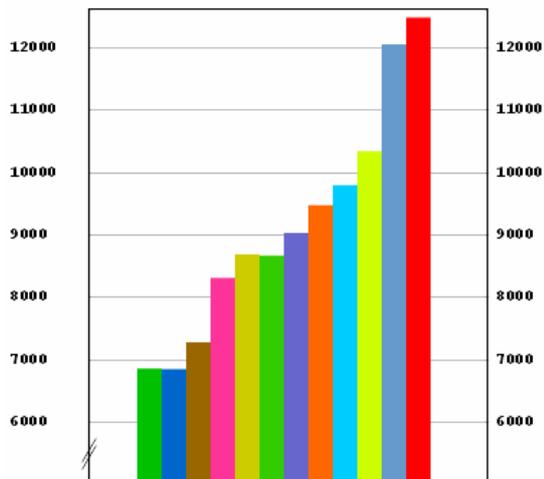
**Emissions of particulate matter from transport**

1 000 tonnes



**Greenhouse gas emissions from transport**

1 000 tonnes of CO<sub>2</sub> equivalent

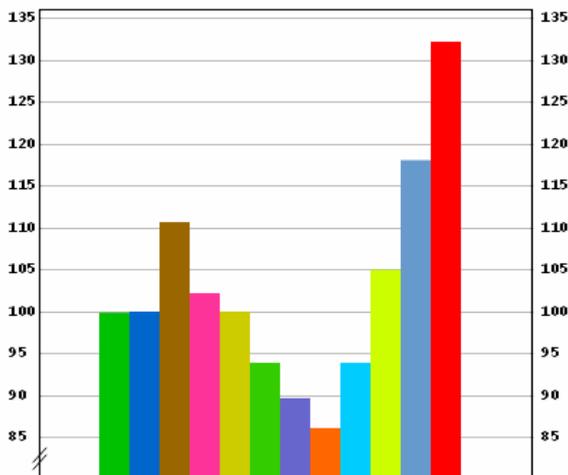


*Legend:*



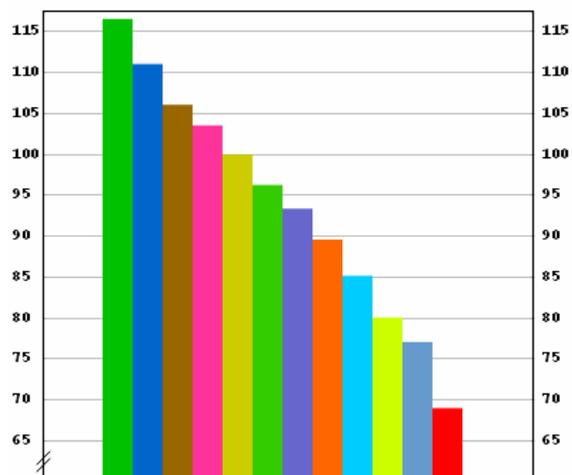
### Volume of freight transport

Index 2000 = 100



### Volume of passenger transport

Index 2000 = 100



Source of charts: Institute for Transport Sciences, 2009

- **Development of any transport technology research and development (public sector or private)**

In order to develop the highway asset management in Hungary, a complex system was compiled consisting of the following main elements: users' expectations and clients' needs; administrative issues; organizational matters; decision-supporting technical tools (Pavement Management Program, Bridge Management System etc.).

Some concrete results achieved on R+D field during the past years:

- identification of the possibilities of private funds involvement into road construction and rehabilitation;
- performance of the road users' satisfaction surveys;
- establishment of a quality management system for highway constructions;
- development of highway and bridge assets valuation system;
- adaptation of different management systems to Hungarian conditions (PONTIS, HDM-4).

As a consequence of the harmonization with European standards, the application of performance-based contracts is extending. A pilot project on the field of road maintenance and operation is being prepared and will be carried out in the near future.

- **Road, rail and marine systems construction standards and changes in the, in anticipation of climate change impacts (sea level rise, and increased frequency and severity of weather events)**

Preliminary studies were performed to support the adaptation to climate change on the field of road construction and maintenance as well. In these studies the following issues were analyzed:

- New pavement materials with temperature-independent behavior;
- Impacts of extreme high wind speed and other extraordinary loads on road users and structural elements of roads;
- Impacts of high precipitation on materials, structural elements and safety of roads, and performance of the drainage systems;
- Prevention of damages and dangerous conditions caused by extreme much snow and ice.

Modification of the current road standards and specifications that are necessary due to climate change is being investigated.

**Miskolc** a town in the north-eastern part of Hungary with more than 180,000 inhabitants has a large project titled “Development of city tramways in Miskolc”. The aim of the project is to realize a long-term sustainable, competitive, environment-friendly, fast and safe public transport system, thus making public transport more attractive.

The main elements of the project

- complete reconstruction of the existing tracks (9,6 km);
- construction of wide platforms, roofed stops, introduction of an advanced passenger information system;
- purchasing 19 new vehicles and renovation of the old ones;
- line extension (1,5 km).

In order to improve the conditions for passenger and freight transport in the Hungarian capital city **Budapest** and its suburbs, several important programs were prepared, e.g.:

- Budapest Mid-term Urban Development Program (Podmaniczky Program) – including the development of the public transport systems;
- Reform of the Car-parking System;
- Extension of the Budapest Underground System – M4 metro line project;
- Establishment of the Budapest Transport Association – the cooperation of the three transport companies operating on the metropolitan area (Budapest Public Transport Company, the MÁV Hungarian State Railways Private Company by Shares and the VOLÁNBUSZ Transport Company) can provide a cheaper transportation and more comfortable service for 3.3 million inhabitants in the Budapest agglomeration;
- Smog alarm regulation – in 2008 the Budapest Municipality adopted a decree containing regulations to protect human health and the environment in case of dangerous air quality situation, and measures that have to be taken when the air quality requires emission reduction, with special attention to car traffic limitations;
- Access fee conception – limitation of the traffic in the city center introducing an access fee for motor vehicles;
- Construction of bikeway system to promote the environmental friendly means of transport.

## **WASTE MANAGEMENT**

The Hungarian waste management regime is being developed continuously, especially from the beginning of the EU accession procedure in the late 90s. The framework legislation has been established by the Act No. 53 of 2000 on Waste Management in conformity with the EU Directive 2006/12/EC on waste. The mid-term waste management strategy of Hungary is defined in National Waste Management Plans (NWMP) prepared for six-year periods, of which the first planning period 2003-2008 has been just expired. The new NWMP for 2009-2014 is under elaboration parallel to the upgrading of the Waste Management Act in order to harmonize national legislation, targets and implementation tools to the new EU Waste Framework Directive 2008/98/EC.

Sustainable development is one of the basic elements of Hungarian waste management policy and of the NWMP. The main principle is to follow and enforce the classic waste management hierarchy: prevention – recovery - disposal. In order to ensure the sustainable use of natural resources it supports the use of technologies generating minimum amount of waste with economical material and energy consumption, thereby preventing the pile-up of waste; utilization of materials producing less hazardous waste, representing lower risk; as well as recovery the generated waste materials and energy to the fullest extent by substitution of non-renewable natural resources with secondary raw materials; and finally disposal of non-recoverable waste in an environmentally friendly manner, that does not cause hazards to human health and to the environment and - as part of this - reduction to the minimum of waste landfill.

### **• Concrete actions taken and specific progress made in implementation**

The main measures to be taken have been defined in the NWMP. Major tasks to be solved or managed by the implementation of NWMP are as follows:

- reduce both the high absolute value of waste generation and the high proportion of waste generated, as compared to the production value;
- increase the ratio of recovery which is low for most waste types, encourage economical material and energy recovery;
- minimize the currently high proportion of waste disposal by landfill;
- gradually eliminate the sources of hazard and the contaminated sites which resulted from the unsuitable waste disposal of the past decades;
- promote - through market-conform economic instruments - the solutions that are beneficial in the long term, in accordance with the principles of sustainable development, and the construction of modern, complex waste management systems, having special regard to recovery;
- promote research and technical development in line with achieving the goals of waste management;
- strengthen the co-operation between the state and the private sector, to support the local or local community initiatives, having special regard to selective waste collection and recovery;
- increase the efficiency of education, training and awareness raising activities.

### Annual waste production and the GDP

	2000	2004	2005	2006	2007	2008*
<b>Total waste production, 1000 tons/year</b>	40 700	30 045	28 558	26 607	25 858	25 000
<b>Total waste production, % of the previous year</b>	90.4	93.9	95.1	93.2	97.2	96.7
<b>GDP, % of the previous year</b>	105.2	104.8	104.1	103.9	101.3	100.08

Source: Ministry of Environment and Water

\* Estimated value

Through legislative, economic and public relation measures, progress made in a number of areas:

- The annual amount of waste decreased by 38% (from some 41 million tons to 26 million tons) from 2000 to 2007, but municipal solid waste generation changed from 4.55 million tons to 4.59 million tons. In the same time period the GDP increased by about 35%.

### Generation of municipal solid waste (MSW) and the GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008*
<b>Generation of MSW, 1000 tons/year</b>	4 552	4 603	4 646	4 693	4 591	4 646	4 711	4 594	4 400
<b>Generation of MSW, % of the previous year</b>	101.1	101.1	100.9	101.0	97.8	101.2	101.4	97.5	95.8
<b>GDP, % of the previous year</b>	105.2	104.1	104.4	104.2	104.8	104.1	103.9	101.3	100.08
<b>Real income, % of the previous year</b>	101.5	106.4	113.6	109.2	98.9	106.3	103.5	96.0	n.a.

Source: Hungarian Central Statistical Office, Ministry of Environment and Water

\* Estimated value

- The recovery rate of total generated waste decreased from 27% to 25% but on municipal waste this rate increased from 3% to 20% between 2000 and 2007.
- The rate of disposal by landfills decreased from 52% to 45% between 2000 and 2007 but municipal waste landfill rate changed from 85% to 75%.

### Waste treatment in Hungary (without waste water sludge)

	2004		2005		2006		2007	
	tons	%	tons	%	tons	%	tons	%
<b>Recycling</b>	8 892 837	<b>29.8</b>	7 630 197	<b>26.9</b>	6 697 451	<b>25.2</b>	4 629 467	18.4
<b>Energy recovery</b>	911 322	<b>3.1</b>	1 271 472	<b>4.5</b>	1 627 237	<b>6.1</b>	1 354 938	5.4
<b>Incineration</b>	169 852	<b>0.6</b>	52 756	<b>0.2</b>	101 434	<b>0.4</b>	77 935	0.3
<b>Landfill</b>	17 415 456	<b>58.3</b>	13 602 494	<b>48.0</b>	14 288 930	<b>53.7</b>	11 325 094	45.0
<b>Other</b>	2 461 033	<b>8.2</b>	5 799 114	<b>20.4</b>	3 892 287	<b>14.6</b>	7 758 880	30.9

Source: database of the Waste Information System (HIR)

## Treatment of municipal solid waste (1000 tons)

	2000	2001	2002	2003	2004	2005	2006	2007
<b>Recycling</b>	350	360	400	490	540	444	490	554
<b>Energy recovery</b>	340	350	280	240	155	303	389	383
<b>Landfill</b>	3 760	3 800	3 890	3 900	3 857	3 859	3 792	3 428
<b>Other</b>	n.a	n.a	n.a	n.a	40	40	40	229

Source: Hungarian Central Statistical Office, Ministry of Environment and Water

\* The fluctuation of the values of 'energy recovery' is caused by the stopping the operation of the Waste Recovery Plant of Budapest and restarting it due to reconstruction.

- In accordance with the EU regulations Hungary introduced the extended producer responsibility for certain products (waste electrical and electronic equipment -WEEE, packaging, end of life vehicles - ELV, batteries), and fulfilled the EU obligations on the reduction of heavy metal contents of the goods available on the market, and waste collection and recovery targets.
- To promote the collection and recycling of certain products' waste a special product fee is used (on packaging, electronics, accumulators, tyres, oil-products, advertising papers, cooling agents); producers pay reduced product fee if they collect and recover the waste of their products. Steps were also taken to promote the use of reusable packaging and regulations encouraged the bottle deposit scheme.
- Special subsidizing systems were elaborated
  - = for companies to introduce and develop low-waste and recovery technologies, and for marketing environmental-friendly, and/or recycled products,
  - = to help R+D+I of such kind of technologies and products,
  - = to develop complex regional municipal solid waste management systems, including the investments in reuse centers, home-composting, selective collection systems, composting and up-to-date landfill sites.

The base of these supporting programs is the National Development Plan; the sources are covered by different EU funds and the self-contribution of the investor.

### • Lessons learned

#### Prevention:

Since 2000 the volume of total waste generated has decreased significantly because of the decrease of the waste-producing economic activities ("production waste"). The decrease of production waste was due to the decline of the main waste generating sectors (for example mining, metallurgy), the application of modern production methods and new technologies and the development of industries of low material input and high skill requirements (electronics and car manufacturing).

The amount of collected municipal waste increased slightly between 2000 and 2007. The reason was the unfavorable change in consumer preferences and the development of public services in the field of municipal solid waste collection and management. No real link between GDP and municipal waste generation observed but there is a strong link between real wages and the level of consumption.

#### Recovery:

Recovery industry is very sensitive to the actual raw-material market circumstances; when demand and prices of secondary raw materials were higher, the recovery rate reached 35%. Parallel to the economic situation, especially during the crisis, recovery rates fall dramatically.

On the other side legislation on producers' responsibility can considerably raise demand for the development of selective collection and recovery industry, especially when it is combined with economic incentives.

- **Recent trends and emerging issues**

In the recent global economic market and fiscal system the natural trends show that increasing consumption generates more household waste, but economic trends and efficiency motivations push the production sector generating less waste.

Increasing of recovery depends mainly on demand of raw materials and on consumption patterns.

In Hungary the main tasks in the next couple of years would be:

- elaboration of an effective national waste prevention program,
- raising demand on secondary raw materials and recycled products,
- increasing the recovery of construction/demolition waste,
- increasing the use of waste as fuel, replacing non-renewable energy sources,
- minimization of landfill in general and those of biodegradable waste in particular.

- **Major constraints and challenges**

Waste management policy has to concentrate on changing economic and fiscal interests, and at the same time on changing consumption patterns. For this sake strengthened legislation is needed with quantitative targets, enforcement and wider use of producers' responsibility and more effective economic incentives.

Trends can be changed or turned only if external environmental costs are built into prices of primary goods, making more expensive the use of them, and raising demand on secondary goods. At the same time subsidies are continuously needed for the development and marketing of durable and reusable, easily recyclable products, and for low-waste or non-waste technologies and for recycling industry.

Changing public and private procurement patterns is also needed to encourage the use of secondary raw materials and recycled products.

## **THE TEN YEAR FRAMEWORK OF PROGRAMS ON SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS**

The structure of production and consumption in Hungary has changed immensely during recent decades and while some favorable trends have also appeared in the environmental load of production, inequalities between social groups in terms of the qualitative and quantitative parameters of consumption have increased rapidly and, on the whole, some detrimental environmental and lifestyle impacts have amplified. Increasing consumption is regarded by most people to be something good and desirable and this set of 'values' is mostly communicated by the media as well.

Hungary's structure of consumption is growing increasingly similar to that of Western European countries. Households' per capita average consumption is on the rise. A large part of the structure of consumption is made up of expenditures on foodstuffs. Although in recent years the proportion of healthy foodstuffs and organic foodstuffs has increased - though it is very low and lags far behind the EU-15 average - a rather high proportion of household consumption is made up of consumer goods, tobacco, and alcoholic beverages. The share of foodstuffs in total household consumption is followed by the most dynamically growing share of services - which advanced from the third to the second position in the early 90's - while the proportion of both foodstuffs and clothing have declined. The trend of gradually growing household consumption also hides some contradictions. On the one hand, households have contributed to reducing the consumption of energy and water, they contribute to the growth in motor vehicle traffic and also to the increase of the household waste output.

In terms of the internal proportions of the consumption structure, there are material differences between different income groups of society. In the case of some particular durable household goods, the number of units per 100 households increases in proportion to households' income.

The production and consumption of goods and services meeting the requirements of sustainability was started in the mid-90's, though not much progress has been observed in this field to date. Another sustainability issue may result from the fact that the steady expansion of the per capita household consumption is financed by people increasingly from loans and this entails a risk of growing indebtedness of a very substantial proportion of the Hungarian population.

- **Generic issues relating to the inclusion of SCP in national policies:**

- *Inclusion of SCP in development planning*

The SCP is one of the horizontal objectives of the National Sustainable Development Strategy, approved by the Government in 2007 ([http://www.ff3.hu/upload/NFFS\\_20070629\\_en1.doc](http://www.ff3.hu/upload/NFFS_20070629_en1.doc)).

The *EU Cohesion and Structural Funds tender procedure* incorporates the sustainability aspects during project selection and realization.

- **Green public procurement policies, laws and regulations**

Public procurement in Hungary is regulated currently by the Act No. 129 of 2003, which was modified by the Act No. 172. of 2005, and is fully complied with new procurement directives of the EU (18/2004/EC and 17/2004/EC). The new directives give a wide range of tools to implement environmental criteria in the public procurement process but they are not obligatory.

The first version of a Governmental Action Plan on Green Public Procurement has been drafted in 2007. It defined green public procurement target ratios and deadlines for the following groups of goods and services: computer and office machines, office paper, cleaning services, construction works and motor vehicles. The implementation would be carried out step-by-step, first focusing on computers and office machines, office paper and motor vehicles. The government's Centralized Purchasing Agency should be obliged to use the green public procurement to give a model for other institutions and local governments.

### Recognized barriers

The main problem in Hungary now is that there is no appropriate coordination which could promote green public procurement. There are more governmental institutions who are responsible for the legislation, execution and controlling of public procurement but none of them performs coordination. The Ministry of Environment and Water is the initiator of the process but a whole-governmental will and political support is needed to succeed.

According to the experience the public procurers:

- do not know exactly what green procurement is => lack of basic information
- do not have the proper knowledge to do green procurement in practice => lack of trainings
- do not have the appropriate tools for doing green public procurement => lack of standardized criteria and methods

A proper coordination and cooperation between the concerned governmental bodies would help a lot to make progress in this issue. After a common declaration stating that this tool is a very important one, the first information databases could be build and appropriate trainings could be started. At first step it would also be very important to use existing possibilities like the systems of Energy labels and labelled environmentally friendly products.

In July 2006, the Council of Budapest approved a green public procurement regulation, the first local authority green procurement regulation in Hungary. It is based on the *Green Procurement Manual for Local Authorities* prepared and published by the Center for Environmental Studies. The head of the Procurement Department hoped that the share of environmentally conscious purchasing of Budapest was going to increase significantly and before long, at least 40% of the calls for tenders would include environmental criteria (this share has been recommended by the EU). In order to achieve this, environmental aspects, as a rule, must be incorporated in all procurement deals, except for cases when urgency of the deal or excessive (by more than 20% higher) prices of environmentally friendly alternatives make it impossible. In all other cases, a waiver should be obtained from the Environmental Department.

- **Instruments for sustainable consumption**

- *Awareness-rising programs/campaigns on SCP, including water conservation, energy efficiency, waste minimization and recycling*

There are several awareness raising campaigns and capacity-building activities, financed by various sources (EU funds, Hungarian governmental funds, Norwegian Fund, business and NGO initiatives) on energy saving, waste minimizing & recycling, sustainable consumption, healthy lifestyle, etc.

The MoEW has been running an awareness raising campaign on selective waste collection in order to encourage citizens to use the so called “waste collection islands” (groups of containers for selective collection of paper, metal, glass and plastic) throughout the country and to promote the selective collection of hazardous waste (medicine, batteries, used electric and electronic devices). The campaign “Drop your own!” won the EU environmental communication Best Practice Award in 2006. <http://www.kvvm.hu/szelektiv/>  
([http://ec.europa.eu/environment/networks/greenspider/bp\\_campaigns.html](http://ec.europa.eu/environment/networks/greenspider/bp_campaigns.html))

The new program of MoEW “Just one movement” was launched in July 2009. It gives practical tips for citizens on energy and water saving, waste reduction and sustainable lifestyles on the website of the program (<http://www.egymozdulat.hu/> - in Hungarian only) An energy saving calculator is available there after registration to assist monitoring of energy savings and CO2 emission reduction resulting thereof. Videos, games, school education programs are also available from the website. A promoting road show helps awareness raising in the country, visiting popular events, festivals.

### **SCP Network in Hungary. Deliberation of sustainable consumption and production- Making an Impact – Collective Actions (2007-2008)**

The project, titled *Deliberation of sustainable consumption and production*, gives the chance to mobilize the civil society organizations (CSOs) in the Hungarian network and develop cooperative actions with other stakeholders. The REC Country Office Hungary cooperates with UNEP Wuppertal Institute SCP Center in the project and brings the voice of Hungarian CSOs in the European process.

The ‘Civil Society Platform on Sustainable Consumption and Production’ (DelibProcessSCP, 2008-2009) is a dialogue platform, which provides space and partnerships for civil society organizations to influence political decisions, information about funding opportunities, explores creative tools and identifies research needs. The project invites European civil society organizations to discuss three main impact areas (housing, food & drink, mobility) as the main domains for SCP and recommends options for policies and actions, which respond to the needs of civil society in cooperation with other stakeholders (researchers, governments and businesses).

For promoting sustainable consumption and sustainable lifestyle, such as sustainable food, housing and mobility, CSOs have an important role to play. They are needed for urging governments and business to take action and encourage individual consumers in order to achieve more sustainable consumption and production patterns. However, they need support to become more active in different policy levels.

The work of the platform can serve for further improvement of the national SCP Action Plan and influence the further development of the EU SCP Action Plan as well.

*(Reported by the REC, Country Office Hungary, [www.rec.hu](http://www.rec.hu).)*

- *Policies and/or infrastructure to support citizens’ choices for responsible consumption of products and services, including consumer information tools*

There are several means to support citizens’ choices for responsible consumption. Besides the traditional information tools (eco-labels, energy efficiency labels, product labels) there are less formal but effective tools, like the “dirty twelve” – a governmental action to publish the most pollutant companies on an official website.

NGOs are also very active in this field. One of them is the Association of Conscious Consumers ([http://www.tve.hu/about\\_us](http://www.tve.hu/about_us)) that organizes events, campaigns, provides information on sustainable consumption and lifestyles and publishes a magazine, The Conscious Consumer. It is available at news stands and also on-line (<http://www.tudatosvasarlo.hu/magazin/archivum>).

“Green” NGOs – in cooperation with the Information offices of national parks and regional environmental inspectorates of MoEW – run the Network of Eco-counselling Offices since 1997; assisting citizens with advice on environment, nature conservation, sustainable consumption and lifestyle. ([http://www.kothalo.hu/index.php?option=com\\_content&view=article&id=64&Itemid=78](http://www.kothalo.hu/index.php?option=com_content&view=article&id=64&Itemid=78))

### **Eco-label in Hungary**

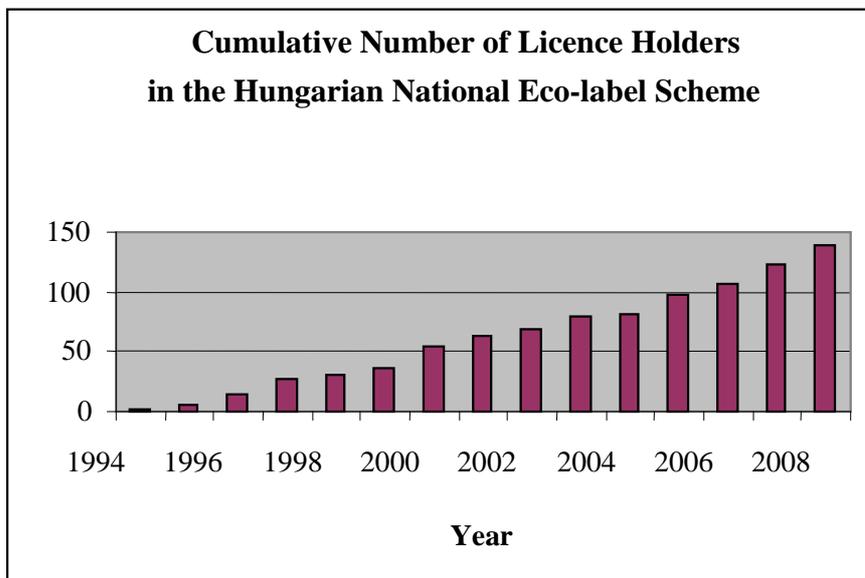
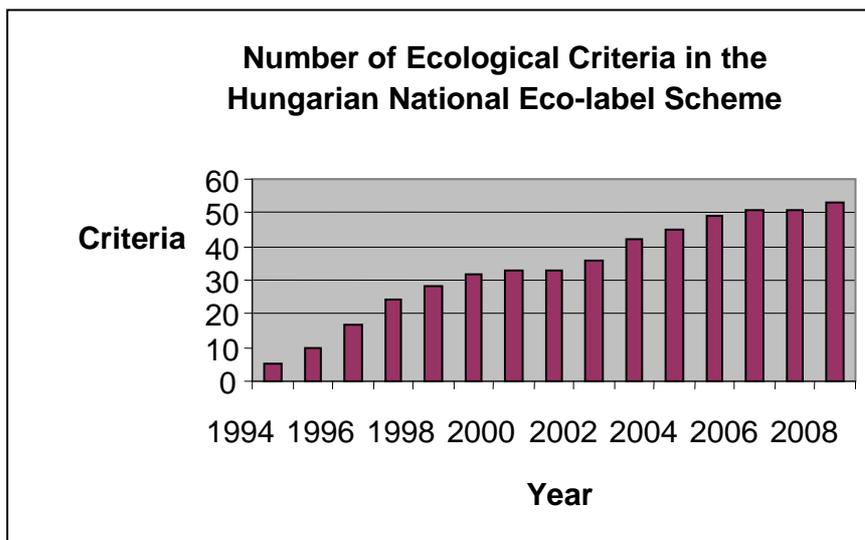
#### *Institutional and legal background*

In Hungary a national eco-label scheme has been operated since 1994 and the EU Eco-label scheme has been adopted from the date of the country’s accession to the European Community (2004). The institutional capacity for implementing eco-labels is available since 1994, as the Ministry of Environment – first among the countries with similar economic and political circumstances – founded a special non-profit organization, the Hungarian Eco-labelling Organization to manage the task (<http://www.kornyezetbarat-termek.hu/angism.htm>). National legal frameworks regulating the process of eco-labelling, the participation of interested parties and the tasks of the Hungarian eco-labelling Organization exist since 1997.

The related legislation is:

- Act No. 53 of 1995 on the general rules of the environmental protection;
- Decree of the Minister of Environment and Regional Development No. 29 of 1997 modified by the Decree of the Minister of Environment and Water No. 9 of 2004 on terms of use of the eco-label;
- Government Decree No. 83 of 2003 on the nomination of awarding authority for the eco-label of the European Communities.

The number of ecological criteria and the number of licence holder companies in the national scheme has increased permanently during the past 15 years. Currently there are 58 licence holders in the national eco-label scheme.



*Source: Hungarian Eco-labeling Organization*

The number of eco-labelled products rose by nearly 40% in Hungary from 2000 to 2008. The most important product groups were construction products, packaging materials and electrical appliances in the period examined. The share of eco-labelled construction products among all environment-friendly products was some 50% in 2008.

**Eco-labelled products, by character**

Product group	( number)											
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 <sup>a)</sup>
Construction products	4	4	5	57	55	55	116	131	150	150	167	167
Packaging materials	..	..	..	104	144	144	112	40	59	151	130	130
Electrical appliances	-	-	2	36	36	25	35	47	43	43	20	20
Chemicals	..	..	..	17	17	16	20	20	11	8	7	15
Services	..	1	1	3	2	2	2	1	1	2	2	2
Transport equipment products	9	9	11	21	21	20	12	12	6	5	0	0
Other	..	5	5	5	5	5	5	0	0	5	5	5
<b>Total</b>	<b>13</b>	<b>19</b>	<b>24</b>	<b>243</b>	<b>280</b>	<b>267</b>	<b>302</b>	<b>251</b>	<b>270</b>	<b>364</b>	<b>331</b>	<b>339</b>

a) As of 30th April 2008.

Source: Hungarian Eco-labelling Organisation, Ministry of Environment and Water

The efforts to get the EU eco-label certification has increased also, the “EU Flower” was awarded to 6 companies so far, and more applications are under process.

Eco-labelled products and services are beneficiaries in the Hungarian product fee system and their role is increasing in the green public procurement.

*Obstacles:* Economic difficulties, low public awareness, competing and misleading labels are hindering the faster development of environmental labels.

Education, training and public awareness raising

Public awareness rising for eco-labels has been a priority in the implementation process but its degree depends on the financial possibilities. Several actions were taken, like publications, brochures, lectures at university courses, presentations at seminars, cooperation with educational institutions at consultancy, assessment of thesis, etc. A one-day seminar was successfully organized to celebrate the 10 years anniversary of the Hungarian eco-labeling scheme.

In order to increase public awareness of eco-labels, a major media campaign was performed in 2003. In 2009 a multi-component media campaign will be performed with the support of the EU and Hungarian National Development Plan. Television, radio and press advertisements will be involved in the campaign focusing on the “Green Month” period of the EU to ensure synergy with the efforts of other countries throughout the European Community. A publication is going to be published to assist public procurers in defining “green” criteria of tenders.

Participation of interested parties

Interested parties (environmental civil organizations, consumers’ organizations, industry, trade, science organizations, the Hungarian Accreditation Body and relevant ministries) are represented in the Assessment Committee of the national scheme regulated by the relevant legislation. This committee is responsible for developing new award criteria based on life cycle assessment.

Proposals for new product groups are welcome from any stakeholder.

Financial resources

The implementation of both eco-label schemes in Hungary is subsidized by the MoEW, application fees and annual fees paid by the licence holders. Additional funds were grants obtained by tenders. Application and annual fees however do not cover the costs; additional funds are necessary, and further financial resources are needed to raise public awareness.

### Future challenges

- Continuous implementation of National Eco-label, and EU eco-label as well;
- Raising public awareness, increasing the number of labelled goods and services on the market;
- Improving the participation of the interested parties in the Assessment Committee of the national scheme;
- Improving the communication with the public by an interactive homepage;
- Improving the financial incentives for applicants to take part in the eco-labeling system. Working out subsidy system for eco-labelled products and services (e.g. decreased product fee, advantage at public procurement, tax reduction);
- More extensive application of eco-label criteria in green public procurement tenders;
- Public awareness campaign, subsidies, increased presence of green public procurement will result in more eco-labelled products on the market; the increased consumption of labelled products and services will result in remarkable environmental benefits.

#### ○ *Curriculum development/formal education programs*

There are 250 primary and secondary *Eco-schools* involved in the integration of SCP in the schools' curriculum all over the country. Furthermore, 600 primary and secondary schools are teaching the Green Pack (developed by the REC) including sustainable patterns of consumption.

In vocational education and training SCP is a key topic for integration, introduction of new teaching methods and innovative tools.

Several kinds of programs, teaching and educational materials, education toolkits on sustainable consumption have been elaborated and are under development to assist education on SCP. They are financed by different sources (EU funds, Hungarian governmental funds, Norwegian Fund, business initiatives). For instance, a digital education toolkit on energy („Energy Experience”) was elaborated by E-ON Hungaria, an electricity and gas provider company. Another education toolkit entitled „Global climate change” was elaborated by the Budapest Polytechnic for Economics. The “Kyoto in the home” project ([www.kyotoinhome.info](http://www.kyotoinhome.info)) focusing on energy use and climate change supported by Intelligent Energy Europe (see in more detail in chapter “Means of Implementation”).

NGOs are also very active in developing educational programs, teaching manuals, toolkits.

#### ● **SCP in national priority areas**

##### ○ *Inclusion of SCP in policies, laws, regulations, and guidelines*

SCP forms a horizontal priority area of strategic policy documents, such as the National Sustainable Development Strategy (NSDS) and the National Environmental Program (NEP). Both NEP-2 (2003-2008) and the current NEP-3 (2009-2014) deals with awareness raising, environmental education including awareness raising on sustainable consumption and specific provisions on SCP. Furthermore, the second National Development Plan (the New Hungary Development Plan) contains a horizontal angle of sustainability; there is a special call for projects on Sustainable Consumption and Lifestyle.

#### Barriers to implementation:

- there are no tailor-made bank loans for environmental changes and investments,
- harmful subsidies (ex for highways instead of railway),
- the long lifespan of products is not matching with the goals of the consumer society,
- lack of extended cooperation among companies and there is no greater industrial ecology.

- ***Inclusion of measures and policies to improve the environmental and social impacts of products (e.g. life-cycle analysis, energy-efficiency standards, internalization of environmental and social costs)***

Application of ***life-cycle thinking*** is slowly growing in Hungary, it needs to be promoted. The Hungarian LCA Center (<http://www.lcacenter.hu>) has been established in 2008 in cooperation of Bay Zoltán Foundation of Applied Research, the Miskolc University, the FEBE ECOLOGIC and the KM-Project Ltd.. The aim of the association is to raise awareness on and to popularize the use of life cycle analysis, to further develop their methodology and to build network among research centers, universities and companies.

In accordance with EU Directive 2006/32/EC, Hungary submitted its ***National Energy Efficiency Action Plan*** in July 2007. It was approved by the Government on 14 February 2008. The objectives of the plan are:

- alignment of Hungary's energy policy initiatives with those of the European Union;
- finding the most cost-effective solutions for utilizing energy-saving potential;
- shaping consumer awareness and influencing the market in order to achieve long-term energy efficiency;
- informing market players of the structure and time frame of the plans;
- realization of the EU's energy efficiency expectations of member states; and
- consideration of climate protection aspects.

The time frame of the Action Plan is 2007 to 2013, which is consistent with the period covered by the New Hungary Development Plan (NHDP).

The plan focuses primarily on consolidating and expanding existing programs. The plan anticipates that Hungary will attain the annual 1% of savings in the use of energy, as provided for in the EU directive.

The plan also notes that additional savings could be achieved if other actions can be implemented, which is dependant on resources. Such other measures could include:

- extension of state aid in respect of replacing household installations with efficient ones, compact fluorescent tubes, etc.;
- state aid for the development of energy saving awareness activities;
- making obligatory the use of energy efficient office installations;
- extension of the system of specialists for energy management;
- promotion of the dissemination of building technologies resulting in the lowest use of energy;
- enforcement of air pollution and energy consumption requirements when new motor vehicles are entered into circulation (enforcement of the EU's gCO<sub>2</sub>/km Directive, initiation of a system of checking tyre pressures, energy efficient air-conditioners);
- strengthening of the energy aspect of environmental and traffic safety considerations in connection with the import of used vehicles; and
- in connection with the registration tax of vehicles and with the vehicle tax allowing the operation of vehicles, the favoring of motor vehicles with lower fuel consumption and better performance.

In 2006, Hungary passed Decree No. 7 of 2006 TNM on the establishment of ***energy characteristics of buildings***, thereby transposing portions of the EU Directive on the Energy Performance of Buildings. In particular, this decree covers the first three of the five main areas contained in the directive. The decree:

- elaborated a national methodology for calculating the integrated energy efficiency of buildings;
- established minimum requirements for the energy efficiency of new buildings with a surface area of over 1000m<sup>2</sup>;

- established minimum requirements for large existing buildings (with a surface area of more than 1000 m<sup>2</sup>) regarding their energy performance in case they are subject to major renovation.

Requirements cover both specific U-values for different building elements, whole building heating load requirements, and gross energy requirements for heating, cooling, ventilation, domestic hot water and - except for residential buildings - artificial lighting. The rationality of using co-generation must also be verified.

The same requirements apply to new buildings and buildings undergoing major renovation, which is defined based on the building value: the cost of the renovation of the building envelope and/or mechanical systems must exceed 25% of the building's value.

Proof of compliance with the requirement is made in two stages, first when requesting a building permit, and second after building/renovation completion.

The methodology included in the annex to the decree is to be applied, as of 1 September 2006, among the supporting technical calculations included in the licensing design documentation of the building (earlier the calculation had to be made in accordance with Hungarian standard No. MSZ-04-140/2:1992). The calculation is checked during the licensing procedure.

### **Implementation and operation of EMAS in Hungary**

#### *Institution and legal background*

The European Community eco-management and audit scheme (EMAS) was introduced by the time of Hungary's accession to the EU. MoEW has the task to ensure the national legal framework and the promotion for the system.

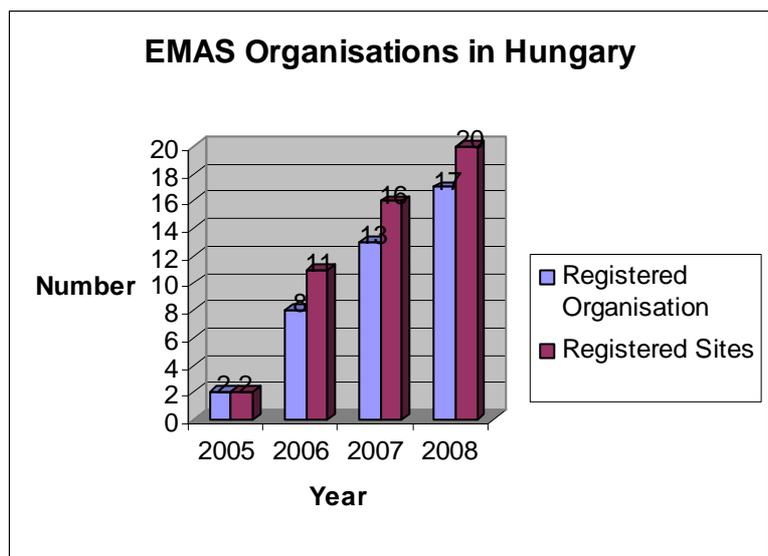
The independent and neutral institutions for the registration and for the verification procedures for EMAS were set up. The National Inspectorate for Environment, Nature Conservation and Water is designated as the Competent Body (CB), who organizes the registration process involving the environmental and accreditation authorities and makes the decisions on registrations.

The National Accreditation Board is designated as the National Accreditation Body. Its task is to accredit EMAS verifiers, making sure that verifiers are in compliance with the requirements of the EMAS Regulation.

#### *The national legal framework:*

The rules and procedures concerning EMAS organizations in Hungary were established by the Government Decree No. 74 of 2003. Based on the three-year experiences in the EMAS implementation process, a new Government Decree (No. 214 of 2006.) was adopted.

The number of the EMAS registrations in Hungary has been increasing continually.



There are eighteen registered organizations with twenty-one registered sites in Hungary at the moment. There is no application and maintenance fee, in order to make EMAS more popular among interested and registered organizations, especially the SMEs.

### EMAS projects

Several successful projects have been organized in Hungary to prepare the implementation of EMAS registration:

- ***Hungarian-Danish Phare Twinning Light project (2005):***

Several trainings were held for the enforcement authorities/ inspectorates and for the potential EMAS verifiers. In order to disseminate information among interested organisations in the rural areas as well, roadshows were organised in four larger cities of Hungary.

Based on the Danish example a general leaflet about EMAS was published and distributed by the relevant local authorities and chambers.

- ***EU EMAS Easy Project (2006):*** EMAS Easy is a new methodology for SMEs that reduces the burdens of paperwork and external costs. A program with the slogan “10 days, 10 people, 10 pages”, a program that can easily be implemented by all companies no matter what size. Ten SMEs were prepared for EMAS in Hungary through the project.

- ***EMAS Easy Project II. (2007):*** A second round of EMAS Easy was launched under the coordination of KÖVET (Hungarian Association for Environmentally Aware Management), resulting in two new EMAS registrations. The project was partly financed by MoEW.

- ***EMAS Project of Municipalities supported by the EU LIFE financed NEST project (2004-2007):*** The aim of the project was to implement Environmental Management Systems in public administration, namely in municipalities. According to the EMAS regulation, four new registrations were achieved (cities of Dunaújváros, Győr, Miskolc, Sopron).

- ***EU TAIEX workshop on EMAS (2007):*** It was organized for Hungarian ISO 14001 companies, to draw their attention to EMAS by means of good practice in other member states and in the EMAS companies in Hungary, and to provide them with the necessary information on evaluation of the scheme.

An ***EMAS Round Table***, a voluntary EMAS forum has already been operating in Hungary for 3 years. The initiative came from companies' level: Audi Hungaria Motor Ltd. was the founder that intended to bring all EMAS players around a table to talk about current issues, obstacles and possible solutions. The Round Table seems to be an appropriate base for the successful communication among the main participants of the EMAS scheme in Hungary.

There has been a good inflow of ***EMAS supporting funds*** in Hungary. These funds have directly or indirectly been promoting SMEs' and local authorities' participation in the development of EMAS.

### Future plans:

For a wider adoption of the EMAS scheme among Hungarian organizations EMAS has to be promoted in the future through a wide range of incentives, such as public procurement, funding support, technical and information support, regulatory benefits for EMAS registered organizations applying for an environmental permit. The frequency of inspections for organizations implementing EMAS can also be reduced.

The number of enterprises with ISO 14001 increases permanently, the total number in 2007 was 1254, nearly six times as much as in 2000.

### ***Economic instruments to promote SCP:***

There are series of economic instruments in use in Hungary to support SCP: energy tax (since 2004), environmental load charges (since 2004, for air, soil and water at the same time), product charges (since 2006, to pay for specific environmentally harmful product groups like tyres, refrigerators, batteries etc.), deposit refund system (non-binding regulation since 2005), giving bond, charge on use of natural resources or utilization contribution, different types of fines, incentives and subsidies.

The National Development Fund based on EU Cohesion and Structural Funds: there is a special call for projects on Sustainable Consumption and Lifestyle, another call for projects on Environmental technology change for SMEs. The MoEW's "Green Source" program provides grants for NGOs to implement programs on environmental protection, sustainable development, education and awareness raising. The Norwegian and Swiss governments also provide grants for Hungarian civil organizations to promote such projects.

#### *Environmental taxes*

<i>Denomination</i>	1995	2000	2001	2002	2003	2004	2005	2006
<i>Environmental taxes total, HUF million</i>	133 481	363 349	379 030	417 398	451 190	492 313	548 737	567 093
<i>Out of which</i>								
<i>product charges, HUF million</i>	4 655	24 407	26 404	20 054	25 459	20 009	19 616	20 131
<i>taxes levied on energy, HUF million</i>	124 139	324 598	335 871	368 656	390 849	415 712	469 673	483 843

Source: HCSO. Ministry of Finance

#### ○ *Public, parastatal and private institutions involved*

The ***Hungarian Network on Sustainable Consumption and Production*** (HNSCP) has been established in November 2002 on the initiative of UNEP Regional Office for Europe and under the coordination of the Regional Environmental Center for Central and Eastern Europe (REC). The members of the Network are representatives from government offices (ministries responsible for environment and water, economy, transport, finance, education), business (National Federation of Employers, chambers, companies), civil organizations (consumers' organizations, associations for environment-friendly production, other "green" organizations), academic sector (universities and the Hungarian Academy of Science) and the media (broadcast stations and papers). The network contributed to the elaboration of the National Framework Program on SCP and gives a platform of information exchange as well, in an advisory role (<http://www.rec.hu/hftf/>).

The ***"Energy Centre"*** Energy Efficiency, Environment and Energy Information Agency Non-Profit Company (owned by the Ministry of Transport, Telecommunication and Energy) is the national energy agency responsible for the improvement of the energy efficiency and renewable energy utilization. The Energy Centre manages most of the statistical issues related to energy, managing subsidies and loans for energy efficiency and renewables, and prepares the strategy of the government concerning energy efficiency and renewable energy sources, and carries out the energy agency activities. (<http://www.energiakozpont.hu/index.php?p=181>)

#### ○ *Enabling infrastructure and institutions for sustainable lifestyles*

NGO actions for consumers:

- Association of Conscious Consumers (<http://tve.hu/contacts>),
- Network of Eco-Counselling Offices (<http://www.kothalo.hu//content/view/25/50/>),

For companies:

- Hungarian Cleaner Production Center ([http://hcpc.uni-corvinus.hu/exp\\_eng/index\\_exp.htm](http://hcpc.uni-corvinus.hu/exp_eng/index_exp.htm))
- KÖVET Association for Sustainable Economies (<http://www.kovet.hu/view/main/108.html>),
- Hungarian Business Leaders Forum (<http://www.hblf.org/index.php?lang=english>)
- Business Council for Sustainable Development (<http://www.bcsdh.hu/index.php?page=2&l=1>)

o *Eco-efficiency/eco-design programs*

The **National Energy Conservation Program** has been offering energy efficiency grants to households each year for the last 6 years. In 2008, five different types of energy efficiency improvements were subsidized as part of the program, each with a different subsidy intensity (SI), that is the percentage of the overall investment that is subsidized by the state.

- Change or insulation of windows and doors, SI of 15% up to a maximum per dwelling of HUF 265,000
- Improvement of heating and hot water supply (eg. change of boiler), SI of 20%, up to a maximum per dwelling of HUF 400,000
- Thermal insulation of existing buildings, SI of 20% up to a maximum per dwelling of HUF 400,000
- Complex energy efficiency improvement of buildings, SI of 18% up to a maximum per dwelling of HUF 720,000
- Use of renewable energy (biomass, geothermal energy, wind, waste, solar collectors and Photovoltaic) for generating heat and/or electricity, SI of 25% up to a maximum per dwelling of HUF 1,000,000

The **Environment and Energy Operative Program** commenced in October 2007, with assistance from the EU Cohesion and Structural Funds. It is one of the programs put in place to implement the New Hungary Development Plan 2007-2013, which was agreed to by the Hungarian government on 25 October 2006.

The operative program has six priorities, two of them are energy-related ones. No. 4 concerns increasing the use of renewable energy, while No. 5 concerns increasing energy efficiency. Financial allocation for these two priorities amounts to EUR 440 million, which is 8% of the total operative program.

**Apple of our eyes:** The Hungarian government announced a partnership with Energy Service Companies (ESCOs) to improve the energy efficiency of buildings used for public education.

As announced, the ESCOs will upgrade the buildings' heating and lighting and insulation. Cash conserved from spending on energy bills will fund the installation and upkeep of further efficiency measures in public schools and profit the ESCOs.

The **"Panel Program"** grant funds the renovation of residential buildings built with prefabricated panels; these are large, 10 storey buildings with low thermal U value. The grant includes some funds for renovation of roads, parking areas, playgrounds and parks in the buildings' vicinity.

Eligible energy conservation actions include change of doors and windows, thermal insulation of walls and ceilings, modernization of HVAC systems.

The Hungarian state will refund renovation expenses to a maximum of one third of the total investment, an amount not to exceed HUF 500,000 per residence. The remaining two-thirds of the investment can come from the local municipality and from the dweller (own contribution).

Emissions avoided by this efficiency upgrade may qualify for trade.

o *Promotion of Corporate Social Responsibility in the sector*

CSR is a relatively new phenomenon in Hungary. Hungary is leader in CSR in Central and Eastern Europe but there is still room for accelerating CSR practices among Hungarian companies.

The first movement of CSR in Hungary was mainly connected to donations and philanthropy. Today it's no question anymore that CSR is much more than promoting social issues.

The key issue for Hungarian companies is to understand that CSR is not equivalent to merely establishing environmental and social programs and management systems. CSR is a strategic approach on how companies can do their business responsibly. It should appear in every decision,

action, program. KÖVET Association for Sustainable Economies tries to promote it by presenting good practices (<http://www.kovet.hu/view/main/108.html>).

KÖVET, in partnership with several national partners, including CSR Europe, has been granted EU funding for a project titled **TRAIN4CSR**. The project is financed by the EU Leonardo da Vinci program and its main objective is to develop CSR training material with a new approach in terms of training methodology. As a result of the two year project, an adaptable, state of the art CSR training will be created in four languages (English, Hungarian, Italian and Spanish). Training modules will be available on 8-10 topics, based on an extensive analysis of needs.

The **BeSmarter program** aims to help SMEs to implement an environmental management system called EMAS Easy, which is based on EMAS with a simplified method (cost and human resources effective).

Another SME project is called **Alternative Entrepreneurs** which objective is to accelerate CSR best practices among SMEs. KÖVET collects case studies from small businesses where profit is an important instrument, but not the final objective; whom they think are the closest to economic actors working in harmony with the ideal of sustainable development.

For multinationals and big businesses they provide different services such as sustainability report verifications, trainings, workshops for experience sharing and R&D projects - as an example life cycle assessment, environmental communication, and sustainability performance evaluation.

Every year, KÖVET organizes an Annual Conference with Environmental Saving Awards. Companies, that submit the best proposals for the '**Money Back through the Window**' program (which is one of KÖVET's most popular and successful projects) are being awarded. Case studies are collected to prove that money spent on environmental protection is not "money thrown out the window", but rather a good investment that pays back in a short period, and gives economic advantages to environmentally aware companies.

Case studies have been gathered annually since 2002. Over the last six years, they have collected 262 case studies from 56 different businesses with a total saving of 58.8 million euro. Every year, they have published a case study book, and in 2007 created an online database available in Hungarian and English (<http://www.environmental-savings.com/>).

*(Based on the interview given by Mr. Csaba Bodroghgyi, managing director of KÖVET Hungaria)*

#### o **R&D incentive or support provided**

The European Technologies Action Plan (ETAP) of the EU was adopted in 2004. For the implementation the Member states have prepared their own national action programs.

One of the main objectives of the Hungarian action program is to help the research results getting to the market. One of the initiatives in this field is the **National Technology Program**. It supports mid-term R&D activities which have a potential for bringing about scientific and technology breakthrough in the given field. The National Office for Research and Technology allocated an annual budget of HUF 18 billion for the purposes of the Program for 2008-2009. One of the sub-programs is the 'Liveable and Sustainable Environment' program. The aims of the sub-program include preserving natural and built environment, applying environment-friendly technologies, preventing pollution, improving the economic efficiency of technologies applying renewable energy sources. Promoting environmental industry and technology R&D, environment protection, prevention of and decreasing pollution of the environment. In the second turn of 2008 16 applications were supported by HUF 7,8 billion in the sub-program on sustainability.

In the framework of the **Economic Development Operational** program the ‘Changing Technology for the Environment’ program had been started aiming at the promotion of eco-friendly technologies. It encouraged the advanced environmental technologies in order to reduce the environmental burden and/or decrease the use of natural resources. The program was a new construction, so in the first year (2008) the number of applicants was rather low, but the program is becoming more and more popular.

In the subsidizing scheme of the Economic Development Operational Program, **EMAS** and other environmental management systems are considered as advantage. The aim is to enhance the application of such systems. Special grant was offered for introduction environmental management systems.

The above mentioned programs gave financial promotion for research, investments in environmental technologies and for improving market positions of environmental technologies and services. The introduction and certification of environmental management systems were also enhanced while contributing to the better environment as well.

o ***Programs to integrate sustainability in distribution/retailing***

There are some voluntary initiatives to integrate sustainability aspects in the retail sector. Selective collection of certain types of waste (packaging materials, batteries) is offered by some retail chains in Hungary. Growing trade of organic products (especially organic food but also clothing made of organic cotton), growing range of Fair Trade products available in shops are signs of this positive trend. Awareness raising could increase the demand for these products and therefore could help the expansion of supply too.

***In your basket – Environment and Health*** (campaign of REC Country Office Hungary)

Campaign for environment- and health-aware changes in Hungarian consumer patterns; greening retail chains

Overarching objective of the project: promoting the spread of sustainable consumption and the linked purchasing habits and behavior, focusing on food and daily consumer products.

The aim of the project is to make consumers aware of importance of resource and energy saving, waste minimization and to contribute to the establishment of a more environment- and health-aware consumer culture on the long-term. It aims at increasing the demand on environment sound products and raising consumers’ knowledge on environmental management systems (ISO, EMAS) and eco-labels. The activities of the project include research on purchasing habits of consumers in supermarkets, opinion polls, creation of communication channels among consumers, retail management and consumer protection organizations, on-line education materials, elaboration of program proposal on popularization of more sustainable consumer behavior and awareness raising.