

**ROMANIA'S NATIONAL REPORT
for the 18th Session of
The United Nations Commission on Sustainable
Development (CSD-18)**

Foreword

Some sustainable development principles were incorporated in public policies as result of the concrete obligations under the declarations and conventions that were developed following debates within the UN and its specialized agencies (for example, Romania was the first European country to ratify the Kyoto Protocol to the United Nations Framework Convention on Climate Change). The prospect of EU accession caused these endeavours to become more specific by emphasizing the priority of adopting a new philosophy of development that could ensure an organic correlation of economic, social and environmental dimensions along with the assimilation of the Community *acquis* in its entirety.

A first National Strategy for Sustainable Development was prepared between 1997 and 1999 with the assistance of the United Nations Development Programme (UNDP). The Strategy integrated a large number of contributions assembled through a broad participative process and was adopted as an official policy document of the Romanian Government. Although the impact of that document on public policies at national level was relatively limited, it supplied the conceptual and methodological framework for stakeholder consultation and facilitated the successful implementation of Local Agenda 21 in approximately 40 counties and municipalities. Following EU accession, an interim report was presented to the European Commission, in July 2007, on the implementation of the 1999 Strategy and the application of sustainable development principles in Romania.

In 2007-2008 was revised the National Sustainable Development Strategy, based on the objectives of the European Union Sustainable Development Strategy, reviewed in 2006. The review process was conducted under a joint project by the Romanian Government and the UN Development Program in Romania. The "National Sustainable Development Strategy of Romania 2013-2020-2030" (NSDS) was approved by the Government Decision no. 1460 in November 2008, becoming the main strategic document on sustainable development at national level. This National Strategy aims to connect Romania to a new philosophy of development, adopted by the European Union and widely shared globally—that of sustainable development.

Implementing the National Sustainable Development Strategy has become a priority for policy action in the current Government Programme 2009-2012, the Ministry of Environment and Forests having the responsibility for following up implementation of this strategy.

Currently, the National Institute of Statistics conducted a project in collaboration with the Ministry of Environment and Forests within a Eurostat grant (Agreement No. 50202.2008.002-2008.417). The aim of this project is to develop a set of national sustainable development indicators to monitor the objectives of the NSDS. This will also build a system for creating an institutional mechanism for monitoring, reporting and updating the NSDS, whose structures are in building up phase.

The report was draw up based on the contributions to the five themes of the current CSD cycle: Chemicals, Mining, Transport, Waste Management, Sustainable Consumption and Production within the departments of the Ministry of Environment and Forests, the National Environmental Protection Agency, the National Agency for Mineral Resources, the Ministry of Economy, Trade and Business Environment, the Ministry of Transports and Infrastructure, the Ministry of Agriculture and Rural Development.

1. CHEMICALS

Assessment of chemical risks

Chemicals are a factual presence in modern economies and societies but can pose risks for the environment and human health if not carefully managed, and all stakeholders are involved in the sound management of them. Romania is committed to the goal set by the World Summit of Sustainable Development in Johannesburg in 2002 that, chemicals should be used and produced in a way that minimize significant adverse effects on the environment and human health. The diversity and potential consequences of using chemicals make sound chemicals management a key cross-cutting issue for sustainable development. Romania, as EU member had set as priority the implementation of UE legislation in the field of chemicals.

Mechanisms for systematic evaluation, classification, and labelling of chemicals

Before joining the UE the institution responsible for chemicals was the National Agency for Dangerous Substances and Preparations and some activities have been developed regarding restricting the use, manufacture and placing on the market of dangerous chemicals, such as POPs, chemicals in paints, chemicals in electronic and electrical equipments based on national legislative frame which had mirrored the UE legislation. (Government Decision No. 347/2003, Government Decision No .992/2005, Government Decision No. 735/2006).

Romania became the member of the European Union on 1 January 2007 and aiming to have an efficient structure for chemicals management and reduced number of agencies, the National Agency for Dangerous Substances and Preparations was undertaken by National Environmental Protection Agency and National Environmental Guard.

The following EU legislation was implemented for the environment and health protection with regard to the evaluation, classification and labelling of chemicals:

- The Council of the European Union Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances
- European Union Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

The requirements have been implemented in the national legislation.

The “*REACH* Age” defined by Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC) provides several measures regarding evaluation of chemicals, substances and mixtures.

Our REACH and CLP Competent Authorities have been appointed from environmental protection authorities, human health authority, and consumer protection authority. Application of this regulation required the competent authorities to perform tasks specified in the regulation, enforcement provisions and penalties applicable for infringement in order to assure a high level of protection to human and environment. Our REACH and CLP experts are participating into the works of special committees of European Agency in the procedures of classification, evaluation, authorization, restriction of chemicals.

During the period 2010 - 2015, in Romania, as UE Member State, provisions of Directives and Regulation mentioned above will apply.

In 2015 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 will be the only reglementation regarding classification, labelling and packaging of substances and mixtures in UE.

Taking into consideration the fact that CLP Regulation is linked to REACH regulation the helpdesk activities are performed through a national Helpdesk and a dedicated web site in the structure of NEPA.

At national level there are procedures referring to authorization of biocides, fertilizers and pesticides for placing on the internal market. The Commissions are based on collaboration of agriculture, environment and health authorities.

The National Commission for homologation of plant protection products is functioning at agriculture authority, and in 2008 issued 104 certifications for products into national procedure implementing Directive 91/414 regarding placing on the market of plant protection products. The Inter-ministerial Commission for authorization of fertilizers is functioning at agriculture authority.

The National Commission for biocide products is functioning at health authority, and issued 244 certificates for year 2008, in conformity with Directive 98/8 regarding placing on the market of biocides

Participation in international and regional initiatives

The cooperation with OECD has a special place in Romanian activities, our experts participated as observers in the work of working groups for evaluation of substances and good laboratory practices.

Romania ratified the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade in 2003, approved by Law no.91 2003, and was deeply involved in the activities as Vice-President at The fourth meeting of the Conference of the Parties to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

In 2008, in the area of import export of restricted chemicals new provisions are applying through Regulation EC no.689 of European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals.

In 2008 Romanian DNA issued 2 export authorizations and 2 import authorizations under the PIC Procedure. Also the PIC inventory of importers and exporters was updated.

Exported substances were 361.47 kg and imported preparations 33,108 tone, with 20.098 active substance (diazinon) under *Regulation EC no, 689/2008, general trend for restricted substances being to diminish the circulation on the market.*

Romania ratified the Stockholm Convention on Persistent Organic Pollutants by Law no 261/2004, and made sustained efforts for the implementation of the obligations assumed through ratification. In this sense the first step was the development of the National Implementation Plan for Stockholm Convention with GEF and UNIDO support. Romania submitted the National Implementation Plan to the Secretariat in April 2006. The National Implementation Plan was adopted by the Governmental Decision no 1497/2008.

At national level, with UNIDO support, some activities were organized such as Workshop on “POPs destruction technologies and decision support tools for their assessment and selection”, held in Mahmudia, Tulcea County, in 2006 and the ongoing project “Disposal of PCBs wastes in Romania”, which started in 2007, taking into consideration the fact that The National Implementation Plan (NIP) for the Stockholm Convention for Romania identified the polychlorinated biphenyl (PCB) issues as one of the top priorities requiring immediate attention and action. Through TAIEX and Twinning Project systems some activities were developed with the aim to share information related to the various implementation issues such as: reporting requirements, national implementation plans, methodologies of the inventories elaboration, modalities of disposal and recovery of the waste consisting of, containing or contaminated by POPs, measures to reduce, minimise or eliminate the production, use and release of persistent organic pollutants, effect of POPs over the human health and environment.

At regional level, in 2009, Romania, with UNIDO support, officially launched the “Regional BAT and BEP Forum for Central and Eastern Europe, Caucasus, and Central Asia (CEECCA) to Promote Strategies to Reduce or Eliminate Unintentionally Produced POPs from Industry”. For 2 years period Romania has the Chairmanship of the Forum being assisted by two Co-chairs, Armenia and Sweden.

The Forum is focused on providing technical assistance to developing countries and countries with economies in transition in order to fully enable implementing the BAT/BEP related provisions, mentioned in the Article 5 of the Stockholm Convention on persistent organic pollutants.

The scope of the activities foreseen within the Plan of Action of the Forum is to strengthen the capacities of the CEECCA countries to enable facilitation of transfer of environmentally sound technologies including or taking into account the increased use of local and traditional knowledge and techniques in the industrial sector in the region.

Since 2007, when Romania became a Member State to the European Union also the provisions of Regulation (EC) no 850/2004 on persistent organic pollutants were applied at national level. In order to create the infrastructure for the implementation of Regulation provisions was adopted the Governmental Decision no 561/2008 on establishment of

measures for the implementation of Regulation (EC) no 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/CEE.

Romania also ratified the Convention on Long-range Transboundary Air Pollution (CLRTAP) by Law no 8/1991 and the Protocol on persistent organic pollutants by Law no 271/2003. As Party of CLRTAP, Romania reports every two years to the Secretariat on the strategies and policies for the abatement of air pollution. Romania ratified Vienna Convention for the Protection of the Ozone Layer, adopted in 1985 in Vienna, The Montreal Protocol that Deplete the Ozone Layer adopted in Montreal in 1987 and its Amendments adopted in London (1993), Copenhagen (in 2001), Montreal (in 2001) and Beijing (in 2004). This emphasizes the Romanian Government's strong commitment to take the necessary measures to protect the ozone layer.

Romania is also applying the provisions of Convention ILO 170 on Safety at work place through the competent authority for labour.

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 are shortly presented below.

The Annual report on Environment on Romania with specific data on dangerous substances which uses implies a risk to environment is located on NEPA web site.

NEPA is responsible for Detergents monitoring at national level and has made an inventory regarding placing on the market of detergents under Regulation EC no.648 2004 on detergents. An inventory realized in 2007, showed a number of 80 importers, manufacturer or users and 8.5 tonnes of detergents.

Improvement in procedures for using toxicological and epidemiological data to predict and estimate the effects of chemicals on human health and the environment is based on implementing the Directives and Regulation and cooperation between health and environment authorities.

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

Information on health and safety of chemicals in support of risk reduction and decision making are available on the ministries web sites (PRTR, legislation, reports, studies, guidance and codes), cleaner production information (facilities to be close). A new instrument for information on chemicals provided for industry is National HELPDESK on REACH and CLP Regulations as previous mentioned.

During 2008 a lot of meetings with industry were taken place, such as workshops and conferences having as subject the preregistration procedures under REACH.

The Aarhus Convention (Directive 2003/4/EC of the European Parliament and the Council of 28 January 2003 on public access to environmental information) states in Article 7 (1) that each Contracting Party shall develop an integrated register of pollutants emitted and transferred to Community (European PRTR) as a publicly accessible electronic database.

At European Community level was launched the European E-PRTR register website that contains also the data reported by Romania in 2007. Link can be accessed at <http://prtr.ec.europa.eu> .

Romania is applying the provisions of Regulation (EC) no. 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC adopted at 18 January 2006, called EPRTR Regulation and established the national Register which is located on NEPA website: www.anpm.ro.

Sound management of toxic chemicals

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

During ICCM 1 in Dubai, in 2006 and all period nowadays, Romania acted and is continuing its activities for implementing Strategic Approach objectives, acting as vice president of ICCM1 and as Regional focal point for CEE region in the intersessional period to ICCM2.

We are committed to implement those activities as specified on Global plan of action and the Overarching Policy Strategy, and pledged to work in partnership with all stakeholders to achieve chemical safety, to achieve the Johannesburg Plan of Implementation 2020 goal and the objectives set forth in the Strategic Approach, and in so doing to assist in fighting poverty, protecting vulnerable groups, and advancing public health and human security.

Romania is reviewing the National Chemicals Management Profiles, as first step towards developing and implementing SAICM National Implementation Plan.

All activities are developed through an inter-ministerial coordination and cooperation mechanism with an effective national stakeholder's participation.

Besides having financial contribution to ICCM 2 organization, Romania is trying to support activities to enable initial capacity building and implementation in developing countries, least developed countries, Small Island Developing States and countries with economies in transition being contributor to Quick Start Programme (QSP) in response to the ICCM invitation to Governments to contribute to the QSP.

Reporting Questionnaire for Romania at ICCM 2 is available on web site www.saicm.org

We are interested to contribute to the development of the emerging policy issues stated by ICCM2 especially on Chemicals in products, nonmaterial, and lead in paints.

Risk reduction, particularly taking in to account the life cycle of the chemicals in EU is governed by the REACH regulation.

Romania follows the EU procedures. During the restriction (Annex XV restriction) and authorization procedure the assessment of the identified restriction and other risk management options and the assessment of effects on human health and the environment are developed.

Substance evaluation aims to clarify any grounds for considering that a substance constitutes a risk to human health or the environment. The general substance evaluation process, the

compilation of the Community rolling action plan (Article 44) and the allocation of substances between the Member States (Article 45 procedure) are the steps to risk reduction.

For the performance of a substance evaluation the Agency relies on MS-CAs. Substance evaluation is not a standalone process. Information obtained from the evaluation process should be considered for identification of substances of very high concern (Article 59(3)), restriction (Article 69(4)) and harmonised classification and labelling (Article 115(1)) procedures. In certain cases it may however be more appropriate to use the information for risk management procedures under other Community legislation

Additionally, regarding asbestos uses since 2007 it was banned the trade and use of it.

Policy measures to phase out chemicals that pose unreasonable and unmanageable risk to human health and human environment.

Until 1st of January 2008, Romania was classified as Art. 5 Party, developing country, in accordance with the Montreal Protocol, after this date Romania changed her status. Due to the accession to the European Union Romania was reclassified as Art. 2 party, developed country. As a developing country Romania had the possibility to access money for the implementation of ODS (ozone depleting substances) phase-out project from the Multilateral Fund for the Implementation of Montreal Protocol.

In order to align to the requirements of the Montreal Protocol and its amendments and the EU legislation Romania up-dated the Country Programme in 2003, this was needed to:

- Assess feed-back gained to date on the implementation of the National Action Plan for the phase out of Ozone Depleting Substances (ODS), elaborated in 1995
- Identify what additional measures might be needed to ensure the phase out of the remaining ODS consumption in Romania, and with priority for the period 2003 - 2006
- Up-date the National Action Plan to reflect the latest Amendments to the Montreal Protocol;
- Update information pertaining to ODS importers, exporters, producers and users in Romania
- To obtain financial assistance from Multilateral Fund for the implementation of Montreal Protocol

Based on the information obtained the following projects have been identified by the Country Programme Update, approved by a Governmental Decision no. 58/2004 as the National ODS Phase-out Management Plan, as being necessary element in achieving phase out of the remaining use of ODS in Romania, projects which were approved in the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol.

These projects had as a final target the total phase-out of ozone depleting substances.

The list of projects approved in the period 2004 – 2007 (having as implementing Agency UNIDO) is the following:

1. National CFCs Phase-out Plan (implemented by UNIDO and SEI Sweden)
 - Technical Assistance Halon Management Plan;
 - ODS s Phase-out in the Production Sector;

- Conversion of the CTC production capacity to other chlorinated solvents at Oltchim Ramnicu Valcea;
 - Conversion of the production capacity to phase out CTC as a by-product at Chimcomplex Onesti;
 - Closing-up of CFC production capacity from BICAPA Tarnaveni;
 - Closing-up of the MeBr production capacity from Sinteza - Oradea Company;
2. Regional demonstration project chiller conversion from CFC to ecological refrigerant (Radio House - beneficiary).

At 1st January 2010, Romania fulfilled all the Montreal Protocol requirements related to the Phase-out of ODSs and now is applying the EU Regulation 1005/2009.

Every year Romania sends reports to the Ozone Secretariat based on the Art. 7 of the Montreal protocol and also to the European Commission based on the Regulation 1005/2009. Our experts are participating to the EC coordination meetings and also to the Open-Ended Working Group and Meeting of the Parties/Conference of Parties.

In 2008 and 2009 Romania was member of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, representing the Art. 2 countries, donor's countries, from the Eastern Europe and Central Asia Region.

Romania join at **framework for prevention of accidents, preparedness and response** according to the Government Decision no. 804/2007 transposing **Council Directive 96/82/EC on the control of major accident hazards involving dangerous substances (Seveso II)**.

This involves identification and notification of establishments with dangerous activity, internal and external emergency plans, informing the public and dissemination of information related to safety including public consultations, evaluation of the consequences of major-accidents; and control of the safety management system in view of prevention of hazards and protection of people, land-use planning, inspections etc.

Romania has ratified **the Convention on the Transboundary Effects of Industrial Accidents** in 2003 and is **Party of the UNECE Convention** and actively participates in its implementation.

Starting with 2005, before accession period, Romania became active in the negotiation process regarding the European strategy for the **metallic mercury management**.

As a starting point Romania began collecting information in order to have a database on import, export, storage and metallic mercury production or devices that contain metallic mercury. After that, as an obligation from the strategy, Romania reported annually this national data.

Romania was active at the negotiations for the EU Regulation 1102/2008. This Regulation has to establish a legally binding instrument and ban the exports for metallic mercury from EU and, also, safe storage of this for the environment and human health.

At the national level were organized workshops and bilateral meetings (Romanian – German) having as principal task to fulfil the EU obligation at the national level. Also, in collaboration with the EC was organized a TAIEX regarding the management of metallic mercury.

At the national level we are studying the opportunity to store the metallic mercury in our own salt mines or, store it in other UE state.

We are studying also, from the financial point of view, the retrofitting process for the installation that still use metallic mercury in their processes. Having that in mind, we will start a program for collecting and recycling the devices that contain metallic mercury.

The inventories for mercury and nickel (quantities and articles that contain these metals or some compounds), quantities of nickel and his compounds, used/imported between 2005 and 2007 can be found in the Annual Report for environment that is on the National Agency for Environment website www.anpm.ro.

The overdependence on the use of agricultural chemicals is reduce by

- Applying the concept of Ecological agriculture through National Strategy for Ecological Agriculture under agriculture authority;
- Romania is implementing the Regulation EC no.1107/2009 on placing on the market of plant protection products and repelling Directives 79/117/EEC and 91/414/EEC, and principle stated by Thematic Strategy on sustainable use of pesticides.

As financial mechanism, the Environment Fund (EF) is established under the European principles 'polluter pays' and 'producer responsibility' for implementing environmental legislation, harmonized with the *acquis communautaire*.

This Fund is managed by the Environmental Fund Administration (AFM), a public institution, which is coordinated by the Ministry of Environment and Forests. The Environment Fund Administration give financial support for priority environmental projects, helping on the one hand local authorities to implement the National Development Plan priorities and directives of the European Union, for increasing the investment potential, environmental rehabilitation and quality of life in communities and health protection, and on the other hand helping the economic operators to fulfil the obligations contained in compliance programs.

The Environment Fund's incomes are public incomes and consist of taxes and contributions, based on the polluter pays principle for the production, import and use of hazardous substances collecting fees amounting to 2% of the value of hazardous substances produced and used.

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National Authorities should imply a lot of resources, financial and human, in order to fulfil comply with the Regulations. Lots of our human resources have left the institutions. In order to comply with the provisions set in the procedures for evaluation there is a special need for environmental and human health research institutes to be involved.

Chapter 2 – MINING

The challenges posed by the extractive industry bring to the forefront the need to have an efficient management in place as regards the current operations by deploying investment in new technologies in order to minimize the impacts that directly or indirectly affect the environment and human health. The use of non – polluting technologies should be regarded as an investment in the future meant to allow development for the future generations without paying the costs associated with a polluted environment. Romania is marked by the historical pollution generated by the industrialization process when emphasis was placed on growth by developing polluting industries.

The funds for new technological processes in order to find viable solutions to the problems of the extractive industry, as well as those for other mining activities such as care and maintenance, restoration and environmental rehabilitation are generally ensured by the State budget.

As regards mines closure, it is required to set up a specific financial instrument to cover the costs associated with not only closure, but also with safeguarding the former mining sites.

The mineral resources continue to play an important role in the country's economy and, therefore, the attention given to continually improve the legal and institutional framework and introduce the use of the best industry practices in line with the principles of sustainable development is justified.

The reforming and restructuring process initiated with the World Bank's support has brought about important changes in the Romanian mining sector, consisting in introducing a modern and transparent mineral resources concession framework by adopting the Mining Law and creating an appropriate institutional framework, on the one hand and, putting the sector on an economic basis by closing the non-viable mines and restructuring the profitable sub-sectors.

Romania's accession to the European Union in 2007 brought new requirements, but also new challenges for mining, such as clean energy production based on fossil fuel resources (particularly coal) in the context posed by the climate change and the stimulation of sustained production of the non-energy mineral resources. It also contributed to the improvement of the regulatory framework by transposing into the national legislation a number of acts in the field of environment.

At present, there are several on-going programs supported by the World Bank aimed at continuing the introduction of the best practices for mines closure and the environmental rehabilitation and the socio-economic regeneration of the former mining areas, as well as for emergency preparedness in respect of the risk posed by mining activities on the environment and human health.

The economic policies and regulations for the mining sector have in view the Implementation Plan adopted at the World Summit on Sustainable Development in September 2002, pursuing the Agenda 21 implementation in the context of replacing the old production and consumption patterns, natural resources protection and management and fostering sustainable development initiatives.

The adopted legislation recognizes that mining, minerals and metals are essential for modern life and the objective to achieve sustainable development in such a way that benefits generated today by mining should be distributed between the present and future generations, trying to maximize the social and economic benefits while minimizing the environmental and social impacts. The Government plays an important role in creating economic policies and a regulatory framework aimed at fostering mining contribution to the sustainable development.

The law governing mining activities in Romania is the Mining Law no. 85/2003, as subsequently supplemented and amended. This law in force replaces the law adopted in 1998. The sectoral legal framework has been subsequently supplemented by the adoption of application Norms by the Government, as well as by a series of regulations and instructions issued by the Competent Authority, the National Agency for Mineral Resources and the line ministry.

Of a particular importance for the mining sector is the environmental legislation represented by the Emergency Ordinance no. 195/2005 approved by the Law no. 265/2006, as subsequently supplemented and amended, as well as by a number of subsequent regulations particularly related to environmental assessment.

The Mining Law no. 85/2003, as subsequently supplemented and amended regulates carrying out mining activities in Romania, stimulating sustainable use of the mineral resources, public property of the State. The law provides for maximizing transparency for the mining activities and fair competition, without discriminating between the ownership types, origin of capital and the nationality of the operators.

The mineral resources under the Mining Law no. 85/2003, as subsequently supplemented and amended are: coal, ferrous, non-ferrous, aluminium ores, radioactive metals, rare and disperse earth, salts, non-metallic substances, aggregates, industrial minerals, precious stones and gems, peat, mud, therapeutical muds, bituminous rocks, non - combustion gas, geothermal waters, natural mineral waters (gaseous and non-gaseous), therapeutical mineral waters, as well as mining residues from waste dumps and tailings.

The mineral resources are turned into value by means of mining activities carried out by Romanian or foreign legal persons which poses the required technical and financial capacity to whom the competent authority, the National Agency for Mineral Resources grants mining concessions, in accordance with the provisions of the law.

The mining legislation covers the whole life – cycle: prospection, exploration, exploitation, processing, closure, environmental rehabilitation and post – closure.

Prospection is carried out based on a non-exclusive permit issued by the competent authority in accordance with the law upon receiving a written request for an area defined by topogeodesical coordinates. The prospecting permit is issued for a period of maximum three years, without the right to be renewed and with the obligation to the payment of an activity tax prior to the beginning of each calendar year. Exploration is carried out based on an exclusive licence granted in respect of any mineral resource discovered within the area, upon the request of interested Romanian or foreign legal persons. The exploration licence is granted for a period of maximum 5 years with a renewal right of maximum 3 years. The mining

exploitation is carried out based on an exclusive licence. The exploitation licence is granted for maximum 20 years with renewal rights for successive periods of 5 years.

The exploration/exploitation licences are granted to the winner of a public licensing round based on documentation submission. The documentation required for the exploitation licence, consists of submission of an environmental and social impact assessment in line with the principles of sustainable development, a feasibility study, a development plan, an initial mining activity cessation plan including an environmental rehabilitation program which is regularly updated.

The legal framework underwent improvements in the past ten years by integrating into the national legislation provisions of the European legislation in the fields of mining, environment, mining industry health and safety. For example the Council Directive of 27 June 1985 concerning the environmental assessment of the impact of certain public and private projects (Directive 85/337/EEC) and the Directive concerning the management of the extractive industries waste (Directive 2006/21/EEC).

Fiscal issues in the mining sector, as well as those relating to geology sector are important both for the Government of Romania and the investors. They are regulated by the Fiscal Code which provides for a profits tax of 16%, as well as by the Mining Law no. 85/2003, as subsequently supplemented and amended which foresees certain taxes specific to the mining sector. In accordance with the latter law, title holders of licences/permits are subject to the payment of a mineral resources prospecting, exploration and exploitation tax, as well as of a mining royalty.

The annual prospecting activity tax is 250 lei/kmp.

The annual exploration activity tax is 1,000 lei/kmp; the amount shall increase twice after 2 years and 5 times after 4 years.

The annual exploitation activity tax is 25,000 lei/kmp.

The amount is annually updated as a function of the inflation rate, at the proposal of the competent authority, by means of a Governmental Decision.

The obligation to pay a mining royalty to the State budget is established upon conclusion of a licence or when a permit is issued. It takes into account the mineral resource extracted, its quality and economic value.

At present, the mining royalties and the exploration/ exploitation taxes are set up at optimal values, making the mining activities attractive to the investors while rendering a fair income to the State, as owner of the mineral resources.

Regulations and mechanisms for compliance and monitoring

Mining activities relating to prospecting, exploration and exploitation are carried out based on a prospecting permit or an exploration/exploitation licence in accordance with the technical documentation prepared and submitted by the future title holder.

Such documentation includes the volume of the required mining works, including the associated costs. It also covers the physical volume and the associated costs for the environmental rehabilitation and the monitoring costs for the closure and post-closure phases.

The implementation of the measures contemplated under the technical documentation is endorsed by the competent authorities in the fields of mining, environment, water, historical and archaeological heritage, as well as other authorities, as the case may be (i.e. navigation or roads).

Controlling is carried out by the specialising compartments of the aforementioned authorities that take measures in accordance with the specific legislation.

Guidelines for artisanal, small and medium scale mining

All mining activities in Romania are governed by the provisions of the Mining Law no. 85/2003, which has non – discriminatory provisions. Consequently, mining, irrespective of the size of the operations is subject to this law.

Artisanal mining is not regulated by any other special legislation. In accordance with the Mining Law no. 85/2003, as subsequently supplemented and amended, alluvial gold recovery, outside mining concessions may be carried out by natural or legal persons based on a permit issued by the competent authority.

Public consultation is made during the whole life cycle of the mining project. According to the legislation in force, public consultation is mandatory as part of the environmental assessment carried out in order to grant a mining licence. Similarly, public consultations play an important role in procedures relating to mine closure and environmental rehabilitation taking into account the needs of the local communities.

The many activities associated with mine closure and environmental rehabilitation of a mining site is part of series of complex procedures and processes. The most important procedure is connected with the permanent review of the field conditions and the way to adapt the solutions set out in the technical documentation to such conditions, but also to the requests and needs of the local communities. The permanent contact with the local communities and the local administration is made through the designer of the mine closure works and the staff hired by the line ministry.

In order to improve such contact and solve the problems that occur as quickly as possible, the staff of the engineering firm together with the designer and the entrepreneur show to the beneficiary all the modifications that occur during the execution of the works. They are also analysed in correlation with the economic impact on the project and the appropriateness to technical and social criteria and cost limitations and if the results of such analysis is positive, the modifications are approved by the line ministry and put into practice.

From the same reasons, starting with 2007, but in force since 2008, a new technical body has been set up within the ministry: *public facilitators for the relationships with local institutions, administration and communities.*

Public information, consultation and facilitation play a different role during the specific phases of mine closure and rehabilitation.

Public governance and transparency in the mining sector

Granting mining licences is a transparent process. The list of areas proposed for mining activities under concessions is published in the Official Monitor of Romania and on the site of

the competent authority, the National Agency for Mineral Resources. There are several on – going projects and new draft regulations which are in connection with the granted concessions.

One of the main preoccupations of the line ministry, the Ministry of Economy, Trade and Business Environment relates to maximize transparency in all processes and activities connected to the implementation of mine closure works. Apart from observing all the requirements dealing with public announcements, the line ministry has adopted a policy of full transparency towards all stakeholders involved in the good conduct of the projects (The World Bank, contractors, authorities, local communities, general public, etc.).

In this regard, the main tool is the ministry’s site which is continually updated with new information and documents concerning new policy proposals, draft regulations, progress in the implementation of the mine closure and socio – economic regeneration project.

The best practices resulted from the environmental impact assessment and monitoring of all mining activities (exploitation, project development, mining operations and mine closure)

The monitoring of works execution

During the execution of mine closure and environmental rehabilitation works, the monitoring in respect of putting into practice of the solutions set out in the technical design and required by the legal approval and endorsements is achieved by the engineering firms. The coordinating engineers, the residents and the rest of the staff monitor, in accordance with the provisions of the FIDIC, on behalf of the beneficiary all aspects related to the work execution performance. The designer of the mine closure and environmental rehabilitation works is obliged to monitor from the technical point of view how the approved solutions are put into practice.

Technical independent audit

For the on-going works in order to monitor the behaviour of the receptioned works a technical independent audit is foreseen. Such audit is performed by firms specialising in technical and environmental audit. Their activities consist of:

- the review of the technical and economic documentation ever since the pre-bidding phase;
- the review of the technical and economic documentation that support the request for modifications in the works execution during mine closure and environmental rehabilitation;
- the review, at least quarterly, all work sites;
- interventions/recommendations, notifications with regard to the execution manner provided in the technical documentation (technical designs);
- the review of the contract execution in accordance with the FIDIC procedures; preparation of the audit results report, specifying the necessary measures to be taken and the responsibilities in order to solve the problems.

Post- closure monitoring in the warranty period

As a function of the mine closure and environmental rehabilitation works termination, as well as of the works of restoration, supplementation and remediation during the warranty period, the line ministry allocates funds for each mining site for post-closure monitoring of environmental factors and the behaviour of the works.

The main operations under monitoring and post /closure activities are:

- database development and integrated information system for monitoring the environmental impact of mining during post-closure;
- observing and monitoring the terrain deformations and landslides that affect or may affect the economic potential of the surfaces;
- monitoring the influence of the closed mines on the active mines located in the vicinity by regularly collecting underground water samples and gas samples from behind the dams that separate the mining fields;
- monitoring the rehabilitation of the soil quality by periodically carrying out agro – chemical studies to restore the land fertilisation status;
- monitoring of the waste dumps located in the vicinity of mining areas where activity has ceased;
- studying the impact of underground mining on the stability of the waste dumps located above the mining areas where activity has ceased;
- assessing the gas concentration in the soil of the drilling holes, in the areas at risk due to surface landslides due to underground mining;
- information systematization and development of framework applicable to all the activities following mine closure;

After a monitoring phase, a report containing the field observations and the allocation of responsibilities for the remediation of the deteriorations that have occurs is prepared.

The responsible institutions are informed in writing on the monitoring results, including the obligations they have for the remediation and removal of the aspects that do not conform.

Private Public Partnership (PPP) for sustainable mining

The way in which such a partnership is constructed consists in the fact that the public authority makes available to mining companies land, infrastructure, issues endorsements and approvals required for the conduct of mining activities. In turn, the mining companies provide jobs to the local people, pays direct and indirect taxes and fees to the local budget.

The PPP issue can also be regarded in the sense that local public authority can be a partner and a mediator in stimulating the development of the activities by private companies by facilitating access to information, existing infrastructure and offering incentives to the private companies that hire mining laid-off labour force and offer them an alternative. In this way, such social phenomena can be held under control.

Emergency preparedness and response plans at local level. The obligation to prepare internal and external emergency preparedness and response plans at local level is stipulated in the legislation in force.

As regards mining, model emergency preparedness and response plans have been prepared, as part of the project implemented with the support of the World Bank and GEF. Also, a number of training sessions for the staff of the mining companies and authorities having responsibilities at the local level have been organized.

Considering the institutions created, the allocation of the necessary funds, the economic and social programs and a proper monitoring of the mining activity since the beginning of the activity to final rehabilitation and rendering the rehabilitated surfaces to a land use, the local and national strategies, the State is able to immediately and efficiently intervene, in case of emergencies of economic, natural or social nature.

Risk assessment of mines and mining activities:

Any mining activity assumes certain risks:

- the risk to damage or even destroy the environment;
- the risk for the mining sites to become real ecological bombs after mining activity cessation;
- the risk for the laid – off personnel not to be re-included in the labour force because of their limited professional capacities;
- the risk that, in case of extraction activities downsizing or cessation, the economy in the monoindustrial areas be compressed resulting in decreasing the living standard.

The Government has assessed these risks and issued packages of legal acts and created institutions with clear responsibilities for the elimination of the aforementioned risks and allocated the resources in order to put into practice the risk reduction strategies. As an example, there are projects for mine closure and environmental rehabilitation of the former mining and quarrying areas.

Similarly, there are programs aimed at professional reorientation and reconversion for the jobless mining people. There are also programs of assistance dedicated to the local communities, the local public authorities and economic companies in the former monoindustrial mining areas, specially designed to lead in conjunction to offering an alternative for living in such areas.

Rehabilitation of the affected communities and life support ecosystems, including mine site decommissioning:

The programs under the Socio- Economic Regeneration (SER) Component of the Mine Closure, Environmental Rehabilitation and Socio- Economic Regeneration Project implemented by the Romanian Agency for the Sustainable Development of Industrial Areas

Support for job creation activities in mining regions and community capacity building in regard of local development activities

- Employment and Training Incentives Scheme (ETIS). Provision through the Agency of training and employment incentive payments to eligible employers in the mining regions to hire new workers for a period of up to a year. The beneficiaries are the employers from the mining areas; the incentive amounts to USD 1,200 year/job;
- Micro-Credit Scheme. Establishment and operation by the Agency of a Micro - Credit Scheme consisting of provision by Microfinance Institutions of Micro - Credit to eligible Beneficiaries in the mining regions, legal or natural persons from the mining areas. The maximum Micro – Credit amount is EURO 25,000;
- Support for entrepreneurs/ Workspace Centres. Provide enterprise support services to mining communities and entrepreneurs in business planning and start-up. The beneficiaries are legal or natural persons from the mining areas.

Objective:

Strengthening local community capacity in local development activities:

- Municipal Infrastructure. Provision of support to communes and municipalities in the mining regions, on a grant basis, to upgrade municipal infrastructure identified through a process of community consultation and local development planning in mining localities. The maximum grant amount is USD 600,000;
- Community Capacity Building. Provision of technical assistance to facilitate a process of community mobilization and dialogue among local stakeholders, to strategically plan, identify and select priority infrastructure and social service Sub-projects and micro-projects to be financed under components above. The beneficiaries are the local public authorities from the mining regions.

Technological, institutional and social initiatives for the miners’ health protection

The miners’ work health and safety is a constant preoccupation in Romania where there is a general legal framework harmonized with the European framework. These legal provisions also include a list of activities and services of technical and scientific nature that are provided by specialized institutions, followed by inspections in order to certify that the minimum health and safety requirements are met.

Also, there is a set of institutional and social measures to complement the measures taken to protect the miners’ lives and, in critical situations, even the lives of the members of their families. Here we can mention granting free of charge treatments in case of professional illnesses, emergency medical assistance for the miners that suffered from injuries, including aerial transportation if necessary, material help and financial compensation for the families of the miners should labour accidents occur.

Mine closure planning (land use plans and site rehabilitation plans, site safety, decommissioning, waste dumps and tailings, site water management, off – site infrastructure, community socio – economic programs and employees):

The exploitation of deposit ceases if the mineral resources have been exhausted or their extraction has become technically impossible or uneconomic. Under such circumstances the mining operators are obliged to prepare *the ‘Mining activity cessation plan’*. The

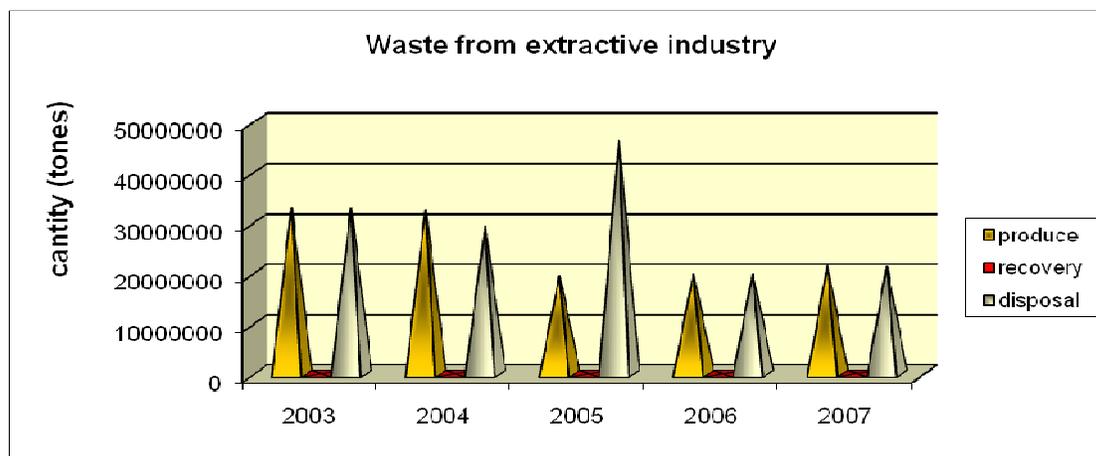
documentation consist of: The technical program for the mine decommissioning/ care and maintenance, the Environmental rehabilitation program and post-closure monitoring, the Social protection program in regard of the laid-off staff, the Procedure for decommissioning and rehabilitated land takeover.

In the case of mineral activities, in order to authorize a new extractive waste installation, the legislation provides for the development of a waste management plan, which covers mechanisms for compliance and monitoring of the mining waste installations. These include general information, but also legal compliance details for monitoring the tailings management facilities, the closure of waste disposal systems and records keeping. Also, it aims to fulfil the objectives of the technical Norms for the design, construction, operation and maintenance, closure and post-closure of the waste installation, to prevent accidents and limit their harmful effects on human health and/or environment.

When an operator starts any operation involving the accumulation or disposal of mining waste in a waste facility, the operator must prove financial provision guarantee that can be used any time for the rehabilitation of the site affected by the disposal operations.

Table 1. Quantity of waste from extractive industry, 2003-2007

Year	Total of produced waste in extractive industry	Total of recovery waste in extractive industry	Total of disposal waste in extractive industry
2003	331333961	726618	330610552
2004	326600800	668100	294551500
2005	195430438	535439	465291690
2006	199249301	105439	199156373
2007	215065670	1435088	213558683



Note: there are taken in consideration **the stocks** also, but they aren't separately mentioned.

The social initiatives consisted in providing support to increase local community capacity in local development activities:

Social Development Schemes for Mining Communities (SDSMC).

Provision of Grants to eligible community groups in the mining regions through the RSDF for eligible community-based infrastructure, income generation, and social services small projects, as well as provision of technical assistance and training to build capacity at the community level. The beneficiaries are disadvantaged groups of households or producing units (established in accordance with the Law no. 129/1998). The maximum grant amount is USD 100,000.

Small Grants Scheme (SGS). Provision of small grants to eligible Recipients by the Agency for eligible micro-projects to improve the welfare of women, youth and children in the mining regions, and induce the growth of social capital among mining communities (established in accordance with the Emergency Ordinance no. 94/2005). The maximum grant amount is USD 6,000.

Chapter 3 – TRANSPORT

Answering to the general objective of the European strategy for sustainable development: *ensuring that the transport systems will satisfy the economic, social and environmental needs of the society while reducing to minimum their undesirable impact on the economy, society and environment*, the strategy for sustainable development of the transport sector in Romania has a national objective: to promote a transport system in Romania in order to facilitate the safe, fast and efficient movement of the persons and goods nationally and internationally, according to the European standards. In terms of its geographical position at the eastern limit of the EU, Romania is interested in creating a more efficient and sustainable transport system at European level.

Policies and progresses regarding the access to transportation, including the rural population and the low income (poor) population

By the „settlement” in the market of the different transport modes produced in the reporting period 2008-2009 was registered an aggressive growth trend of road transport (freight and passengers) and air transport (passengers) and therefore an uneven evolution of the other transport modes, the objective of passing in a balanced manner to environmentally friendly transport modes being still far to reach.

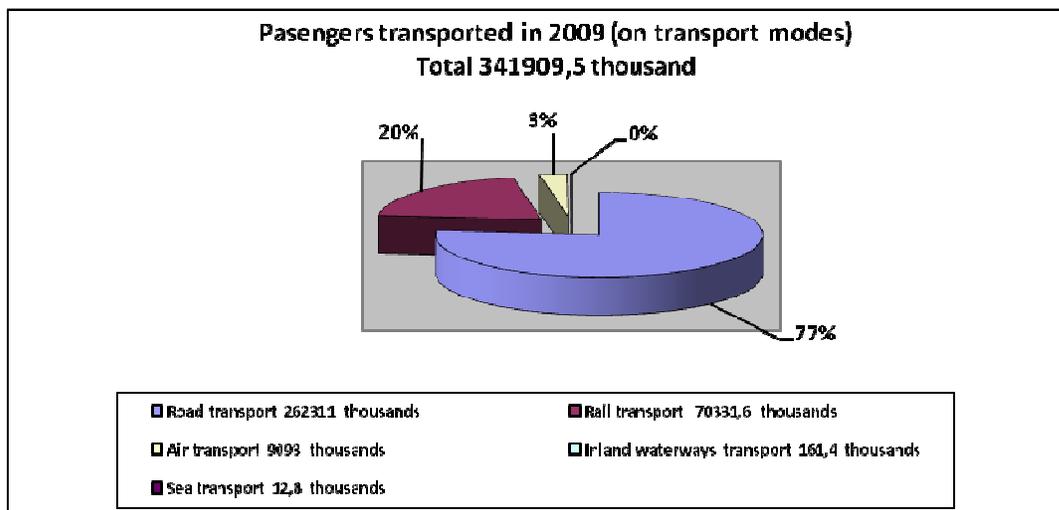
The share of road transport in the freight market structure is 80.1% at goods transported, 73.2% at freight transport performance in interurban and international traffic, 83.95% at goods transported and respectively 60.91% at freight transport performance in domestic traffic, comparable with the share registered in the EU 27 (76.5 %), but superior to that provided by the White Paper regarding the development of trans-European transport network compared with that of the EU 27.

The continuous and strong growth in the road sector can be considered alarming, especially because is expected a trend to aggravate the situation by increasing the share of road transport until 2013 with over 10%, in the absence of any re-orientation of goods flow towards other transport modes.

The market demand for freight transport has increased, generally 2-3% above the rate of growth of GDP, mainly due to mutations in the European economy and global production systems and due to the high share over the national economy of the low value density goods, which show no dissociation and orientation towards a sustainable transport.

As a result of the evolution of Romanian economy in the past two years, the evolution of passengers and freight transport volume initially registered a steady growth in the reporting period (2008), followed by a slight decrease. Thus, in 2009, compared with the previous year, except air passenger's transport, all other modes registered a negative trend in both the number of passengers as well as in passengers transport performance.

In 2009 were transported a total of 341.9 million passengers in the intercity and international transport, from which 3.3% were recorded in the international passengers transport; the road transport has the largest share, followed by the rail transport (20.6%)



Rail passenger transport recorded a negative evolution, both at the number of passengers and at the passengers transport performance comparing with the year 2008 (reduction by 10.1%, respectively by 11.9%).

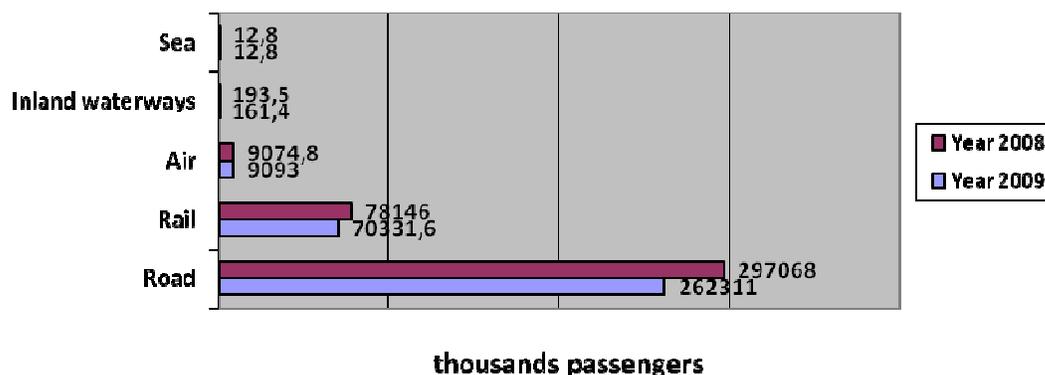
Road transport decreased at the indicators number of passengers and their transport performance from the previous year, so the number of passengers reduced by 11.7%, and the passengers transport performance by 15.3%.

In sea transport were recorded 12.8 thousands passengers in international flow.

In inland waterways transport negative evolutions were recorded at the number of passengers and their transport performance, from the year 2008 (reduction with 16.6%, respectively with 4.3%).

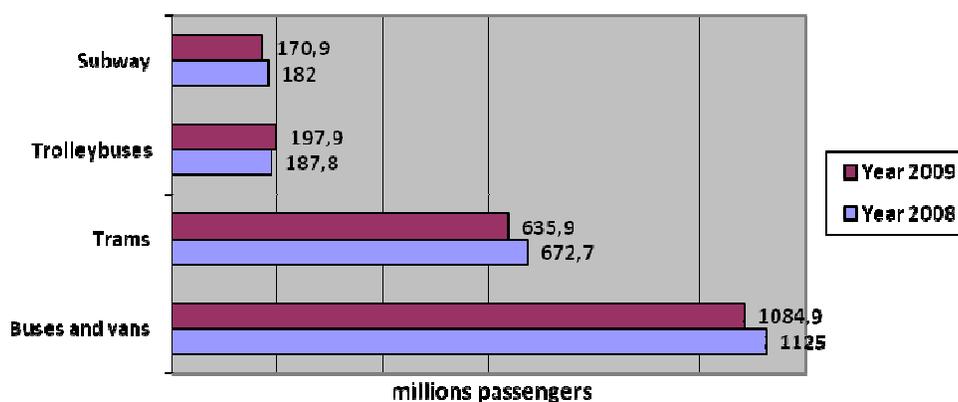
Air transport recorded a number of 9.1 million passengers, from which 7.85 million passengers were transported on international flights. The average transport distance for one passenger was higher compared with 2008 in inland waterways, up with 14.8%, but declined by 4.1% in road transport and by 2% in rail transport.

Number of passengers transported (on transport modes) in 2008-2009



Local public passengers transport recorded for the indicators number of passengers and their transport performance decreases comparing with the year 2008, so the number of passengers reduced by 3.6%, and the passengers transport performance by 6.6%.

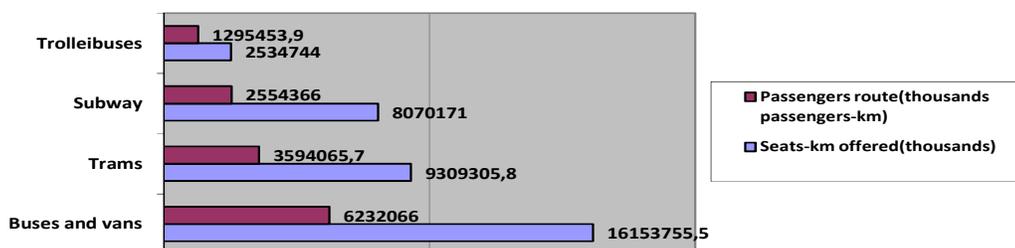
Passengers transported in public local transport in 2008-2009



From a total of 2089.6 million passengers recorded in local public transport, 1084.9 million passengers (51.9%) travelled by buses and vans. Passengers transport performance was 13676 million passengers-km, from which 6232.1 million passengers-km (45.6%) recorded in buses and vans transport.

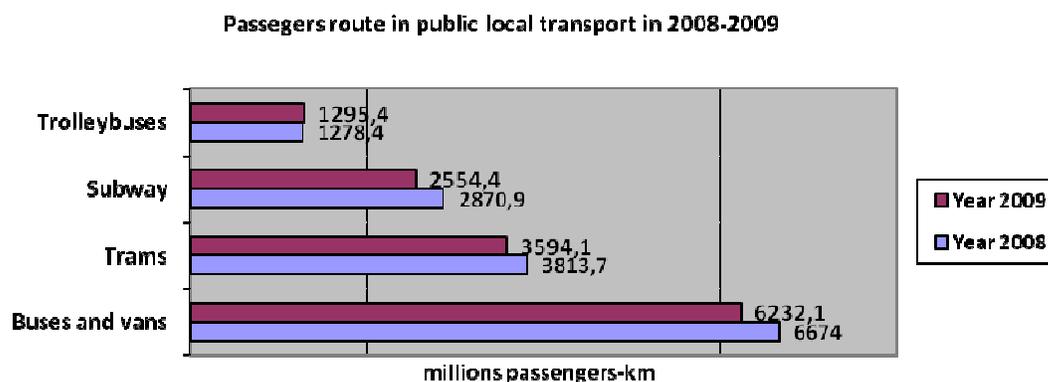
Significant increases in year 2009 comparing with 2008 were recorded at the number of passengers and at the passengers transport performance in trolleybuses transport (by 5.3% and respectively 1.3%), but were recorded also reductions of these indicators in the subway transport (by 6.1% and respectively by 11%).

Seats offered/ passengers route in public local passengers transport in 2009



Carrying capacity of vehicles for the local public transport of passengers was 36068 million seats-km offered, recording an increase by 4.4% over previous year, due to significant growth of the transport capacity for passengers by trams (by 13%).

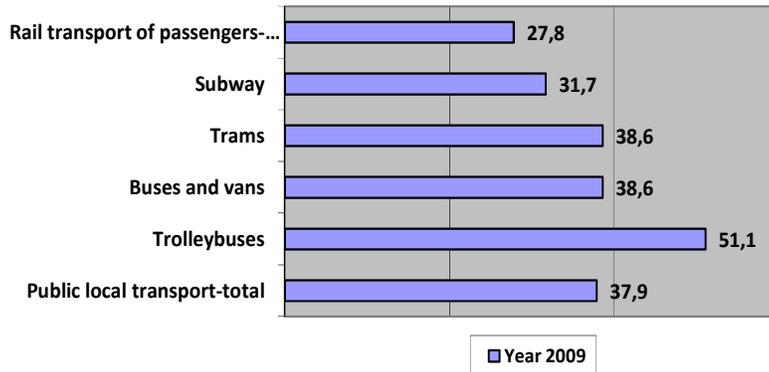
The index of using the seats-km offered was 37.9% for the local public transport of passengers (lower by 4.5% comparing with levels recorded in 2008).



Seats-km/Passengers route in public local transport of passengers - total 2009



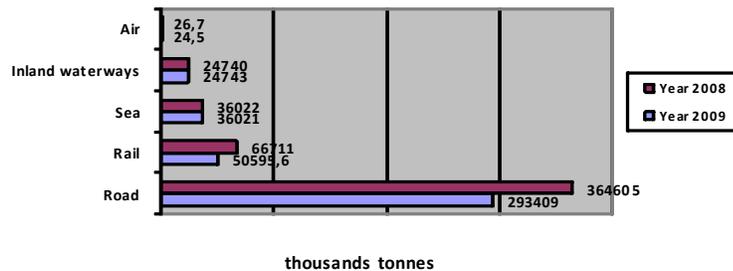
Index of using the seats-km offered(%)

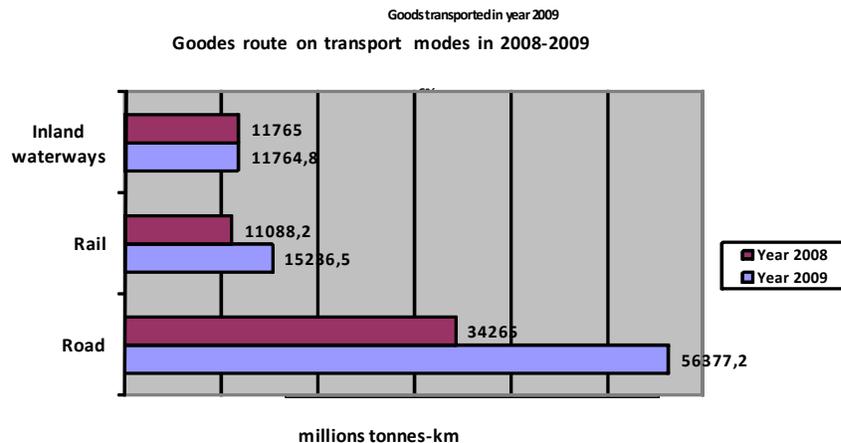


Regarding the transport of goods, in year 2009 was registered a decrease in the total volume of goods transported by transport operators comparing to the previous year, for all the transport modes, but predominantly for road and rail transport.

Thus, the road transport of goods carried by the licensed transport operators dropped by 19.5% in terms of volume of goods transported. From a total of 293409 thousand tonnes goods transported, 283272 thousand tonnes were operated in national transport. The volume of goods transported in national transport decreased by 18.4% comparing to the year 2008. Overall road transport, the goods transport performance decreased by 39.2% comparing to the year 2008.

Goods transported on transport modes in 2008-2009





In national transport, the goods transport performance decreased by 9.9% comparing with previous year.

In rail transport, transported goods volume recorded a decrease by 24.2% comparing with the year 2008. A total of 50595.6 thousands freight tonnes were transported, from which 45465 thousand tonnes in national flow. The goods transport performance registered a decrease by 27.2%.

In inland waterways transport, the freight volume totalized 24743 thousand tonnes, from which 9843 thousand tonnes were transported in national flow. For this transport mode, the goods transport performance represented 11764.8 million tonnes-km.

In sea transport have taken place transport operations of 36021 thousand tonnes regarding the volume of goods transported, and in air transport the freight volume transported recorded a total of 24.5 thousand tonnes.

In year 2009, in road transport in national flow, 42.2% of freight volume was transported on short distances, between 1 - 49 km, while 33.4% were transported on distances between 50 - 149 km. On distances over 150 km were transported 24.4% of the total goods volume operated by transporters.

In national transport on inland waterways, 52.2% from the goods volume were transported on distances between 150 - 229 km.

Regarding the values recorded on economic and technical indicators for using the railway vehicles for 2009, a negative evolution can be noted for most of these indicators, as a result of declines recorded in rail transport of goods and passengers.

Thus, the main technical economic indicators for using the fleet in rail transport, indicators which recorded a positive dynamic comparing with 2008 are:

- average commercial speed of passenger trains (km/h) increasing by 1.8%;

- average statistical load of freight wagons – (tones/axle) increasing by 1.3%.

Negative evolutions comparing 2008 were recorded for the indicators:

- number of wagons loaded foreign entry (thousands wagons) decreasing by 71.1%;
- average daily goods transport performance of the freight wagons (km/day) decreasing by 27.6%
- number of wagons loaded on CFR network (thousands wagons) decreasing by 22.1%;
- average daily transport performance of the passengers wagons (km/day) decreasing by 13.8%;
- transport performance of the locomotives used for freight and passengers transport (thousands km) decreasing by 6.1%;
- average gross weight of freight wagons (tonnes/train) decreasing by 4.7%;
- average commercial speed of freight trains (km/h) decreased by 4.6%;
- transport performance of the trains used for freight and passengers transport (thousands train/km) decreased by 4.2%;
- average daily transport performance of the locomotives used for freight transport (km/day) decreased by 1.9%;
- transport performance of the railcars (thousands km) decreased by 1.1%.

Regarding the combined transport, RO-LA type, in July 2009 CFR Marfă started the first shipment of this type of transport via Bucharest – Roşiori – Craiova – Filiaşi - Târgu Jiu – Simeria -Glogovăţ (Arad), this service being one experimental for the moment. This type of combined transport represents a transport alternative proposed to operate under condition of obtaining a governmental subvention up to 45% from the functioning costs.

Fuel prices and tax reform

Regarding the taxation of the transport (the euro vignette project), both in terms of its geographical position, but especially from the point of view of significant share of the road transport in its commercial exchanges with the other Member States, Romania reasserts its concern considering the opportunity and justification for introducing a „congestion charge” for trucks. Far away from contest the negative effect in terms of air and noise pollution produced by road transport, our country reiterates its belief that further initiate and sustain such measures can affect the cost and competitiveness of the road transport, considering that at this moment there are currently no viable alternatives.

Integration of the transport system at regional and global level by encouraging the effective transport modes

A report of the European Environment Agency shows that the main challenge in this direction for the new Member States and acceding countries is to maintain the advantage they have on

some aspects of transport and environment in comparison with the EU and also to satisfy the needs of growing the living standards and mobility.

With a higher rate of railways use, lower energy consumption in transportation and lower level of emissions *per capita* and also less fragmentation of the territory, the new Member States and acceding countries still face lower transport pressures on the environment than in EU.

But current trends are worrisome in these countries, the emphasis is on road transport sector, energy consumption is increasing, as the emissions of greenhouse gases and transportation safety requires improvements.

These trends indicate that new member states and acceding countries are at risk to reach the same unsustainable patterns of transport development like the EU.

The policies of these countries are presently focused on alignment of standards for infrastructure, vehicles and fuels to EU standards.

Therefore, the infrastructure development and especially the connection to the (TEN) Trans-European Network represents a priority and a pillar of the transport policies, that must be realized considering the relationship between the economic, social and environment aspects of the development of the transport infrastructures.

Planning and urban transport policy

The concept of sustainable transport rests on three pillars - economic, social and environmental goals. A sustainable development strategy must necessarily consider decoupling transport growth from economic growth and focusing on development of the rail, water and public transport with less emphasis on road transport.

Our national priority is focused on the development of the rail, water and public transport, and less on the development of road transport.

Therefore, policies planning on urban transport is attempted to be made in accordance with the objectives and principles of sustainable development. Also, transportation is a major factor in the social and economic development, but if is not developed in a sustainable manner requires significant costs to society in terms of environmental impact and health impact.

Sustainable transport systems have obviously the following advantages: they increase the social cohesion, reducing environmental problems and also they help in create a better economy and a better quality of life.

An important part in achieving a sustainable development in transport is the Romania's contribution to developing an *EU Strategy for the Danube Region*, initiated by Romania and Austria in the context of the under-use of the waterways at this time. Thus, through a closer cooperation between the Danube riparian states, the Danube can play a major role in achieving goals of sustainable and 'green' transport at the Community level, acquiring an increasing importance in terms of connection with the maritime highways from the Black Sea. Concomitantly, of great importance in providing a real value added for the Member States' approaches to achieving the objectives set by the European Strategy for Sustainable Development may be the future Polish EU presidency, which is sees as working more actively

for developing the cooperation relationships in all areas with the countries from eastern neighbourhood, and in particular with Member States, including Romania.

Objectives of urban mobility in terms of environmental protection

1. Reducing air pollution
 2. Reducing noise pollution
 3. Climate protection
 4. Increasing the quality of public space
- Developing local public transport systems through investments from tax collection;
 - Creating a more efficient traffic management (including traffic decongestion).

At present, Romania does not have the necessary infrastructure to set up a mechanism for charging in urban areas, as proposed by the European Commission.

Romania will send an application for the European Commission asking for support envisaging to realize an impact assessment at national level, aiming the social and financial implications of implementing the road charging systems in cities and elaborating a public policy on urban mobility, for the purpose of implementing such systems.

Actions planned for the future:

1. Directive for Intelligent Transport Systems (ITS)

Ministry of Environment and Forests (MEF) was involved in preparing the Memorandum on "Romania's position on the proposal for a Directive of the European Parliament and Council establishing a framework for implementation of Intelligent Transport Systems for road transport and interfaces with other modes of transport"

MEF is involved in all stages in preparing the final version of the Proposal of directive, which will be adopted in 2010 and subsequently to adoption, will participate in the transposition into national legislation and its implementation.

2. The next White Paper for Transport

Participation at the Joint Expert Group Transport and Environment meeting in Brussels on 23.04.2010, in the context of preparation of the next White Paper for Transport, action in coordination with the Ministry of Transports and Infrastructure.

Vehicle Efficiency and emissions policy

Currently, the traffic congestion which causes environmental problems and increases the road accidents in urban areas is a challenge for Romania. In recent years, these negative trends have increased, "Romania is the only EU state which does not progress at all from 2001 in road safety sector (evolution of road accidents statistics show an increase - from 13% (2006-2007) to 18% in 2008).

A first reason in this regard is the increasing number of vehicles registered. Thus, in late 2008, in Romania were registered in circulation a number of 5.1 million road vehicles, which is an increase with approximately 11.5% over the previous year. The largest share was represented

by vehicles which were represented by 87.4% from total cars number, their number increasing by about 21% compared to year 2005 (Statistics of the Directorate for Driving and motor vehicle registration on the car park in Romania (www.drpciv.ro)). Romania's current infrastructure architecture was not designed to handle a demand for traffic of such a magnitude, parking area is insufficient on land and ground, as the bunk parking is almost nonexistent. In addition, the discipline of road users, drivers, motorcyclists/bicyclists and pedestrians is poor.

In addition to the need for adoption of measures for road traffic, we particularly consider important and necessary the adoption of measures in order to reduce greenhouse gases emissions, in terms in which approximately 40% of CO₂ and other emissions and 70% of other pollutants emissions are generated by the road transport sector.

The pollutant emissions from the transport sector (circa 70% of carbon monoxide and carbon dioxide emissions - CO + CO₂ - 65% and nitrogen oxides emissions - NO_x) increased largely due to the road transport, which contributes with about 80% to emissions from this sector.

The urban clusters produced at the entrances to major cities and in some towns located along the national road network generated, in certain periods, emissions that exceeded air quality limits set by European standards in terms of PM₁₀ (particulate matter), NO₂ or ozone.

Traffic noise increased in recent years, estimating that 10 - 15% of the population is exposed to high noise levels (between 65 - 75 dB (A)).

The renewal policy and the changing of the structure of vehicle fleet (developed by private operators) are creating the premises for a significant reduction of pollutant emissions (especially NO_x), comparable with the limits established by the Directive 2001/81/EC on the national emission ceilings.

Introduction of the EURO 2 (1998), EURO 3 (2002) and EURO 4 (2008) standards and of the unleaded gasoline has led to a decrease of emissions from vehicles (especially SO₂ - sulphur dioxide, VOCs - volatile organic compounds, benzene, lead, CO - carbon monoxide), but continuous increase of the vehicle fleet has reduced the expected effect of introducing these rules. It is estimated that introducing soon the EURO 5 and EURO 6 standards will take effect more visible, at least on medium and long term.

The use of **bio-fuels** at larger scale for transport is only a part from the package of measures needed to achieve the commitments set out within the Kyoto Protocol of the United Nations Framework Convention on Climate Change, and also from legislative package on energy and climate change. Promotion of the production and use of bio-fuels contributes to the reduction of greenhouse gases emissions. It is envisaging replacing, in a certain measure, the use of petrol fuel and diesel fuel, by bio-fuels aiming to achieve the following objectives: fulfilling the commitments regarding the reduction of greenhouse gas emissions, ensuring security of energy supply while paying attention to environment issues, increasing energy independence and promoting the use of renewable energy sources.

Promotion of bio-fuels could also create new opportunities for a sustainable development of the rural areas with the possibility of opening new markets for agricultural products.

It has been adopted the necessary legislative framework:

- The Governmental Decision no. 1844/2005 on promoting the use of bio-fuels and other renewable fuels for transport, transposing the provisions of Directive 2003/30/EC.
- The Governmental Decision no.456/2007 amending the Governmental Decision no.1844/2005, setting the provisions regarding the gradual stages of a minimum bio-fuels percentage introduction in the content of conventional fuels (from 1 July 2008 every litter of diesel has to contain 4% bio-fuels; from 1 July 2009 every litter of petrol has to contain 4% bio-fuels.)
- introduction of the excise duty exemption for bio-fuels and other renewable fuels in the provisions of article 201, let. 1) Law no. 571/2003 regarding the Fiscal Code, amended by Law no.343/2006.

The research and technology development in terms of transportation (public or private sector)

Achieving a national and European sustainable transport requires a series of steps in order to reduce disparities and support the infrastructure deficit in the new Member States, further liberalization of the market (which will stimulate the competition in transport); better integration of transport modes simultaneously with implementing new technologies and intelligent transport systems, in terms of enhancing the safety in transportation - in parallel with increases in their efficiency.

The actions specified are intended to implement in practice the fundamental principles of the sustainable transport, against which there is general consensus at the national and at the EU level, namely: the principle of internalization of externalities, the 'user pays' principle of fair competition between different modes of transport.

Building standards for the roads, railways and maritime systems and the changes in foreseeing the impact of climate change (increase of sea levels and the frequency and severity of weather events)

The greenhouse gas emissions from transport have registered a severe increase over the years about 23% of carbon dioxide (CO₂) emissions resulted from burning fossil fuels worldwide. In this context, it is observed the increasing need to shift to sustainable transport patterns for taking into consideration a wide-scale use of alternative energy sources (e.g. bio-fuels, biogas) and also, the investments in environmental technologies research and development etc.

Romania has a national transport system situated on average level in terms of conventional standards of Europe's transport system. It was noted that the infrastructure of roads, railways, maritime and air transport is vulnerable in terms of extreme weather conditions.

Regarding the water transport, the direct impact on climate change is felt through the fluctuations in rates and flows of rivers, streams, etc. Considering the indirect effects of climate change, they are manifested by deteriorating road and rail infrastructure.

The adaptation of the Romanian transport sector to climate change impacts should take into account the use of technologies by focusing on increased safety standards, and ensuring

continuity of services. In order to implement these measures it is increased the need to invest into designing vehicles that can withstand the adverse effects of climate change. The new transport infrastructure and means of transport should be designed, beginning with the design phase, in order to be resilient to the effects of the climate change.

- During the reporting period (2008-2009) within the transportation area in Romania were taken several actions in order to fulfil the objectives of the chapter Sustainable Transport from the National Strategy for Sustainable Development, as follows:

- *A long-term plan for the railway sector* was developed and launched in order to establish the financial balance of the infrastructure manager and the modernization and renewal of infrastructure. Through Government Decision have been set clear provisions regarding the working contract of the National Railway Company “CFR” SA and the public service contracts for the passenger transport of the National Rail Society "CFR" SA during the period 2008 – 2011. The implementation of the *Programme of rehabilitation of railway infrastructure* was intensified (with direct impact on the disposal of dangerous points and speed restrictions on the public railway infrastructure, technical and market growth rate and operating at optimum level from the point of view of the traffic safety) and *Programmes for modernizing railway stations and rail facilities* (impact on passengers service quality).

- Within the framework of *the Programme of railway infrastructure modernization* were launched and are in progress working on 273 km, respectively on the sections Campina-Predeal and Bucharest-Constanta (ended 92 km railway line) and were completed the technical documentation for assuring the financing and the projects documentation in order to finalizing other sections (contained mainly on Corridor IV) in length of 600 km (Curtici Brasov, Craiova-Calafat Valcele-Ramnicu Vâlcea). Modernization of five railway stations were performed (Cluj and Iasi completed) and the rehabilitation of 16 railway stations (Tulcea, Focsani Alba Iulia Burdujeni Suceava, Galati, Arad, Sighisoara, Brasov, Oradea, Bacau, South Ploiesti, Sibiu- completed). 76 automate frames, 263 passenger wagons and 50 freight wagons were purchased. 595 locomotives, 135 passenger wagons and 266 freight wagons were modernized. 167 locomotives and 6544 freight wagons were repaired.

- In the subway urban transport area the *Strategy of development and modernization of Bucharest metro* was elaborated and were enhanced the equipment and safety works on sections Nicolae Grigorescu- belt line, 1 Mai, Laromet. The modernization works for fixed installations on Lines 1, 2 and 3 and for matching these installations on Lines 1, 2, 3 and TL were continued. 26 new subway trains were purchased and another 26 trains will be purchased to replace the trains type IVA.

- Works continued within the framework of the *Programme of national roads modernization* (with direct impact on increasing the capacity of movement, the safety and comfort of the user), was accelerated the implementation of the *Highways construction Programme* (with direct impact on increasing the degree of interconnection with the European network of roads) and has started the *bypasses construction programme* at highway and national road profile (with impact on cities decongestion).

- Within the framework of the *Programme of national roads modernization*, in 2005-2006 over 1438.8 km of national roads were under modernization, from which 172.2 km of roads modernized were finalized, in 2007 were completed 188.93 kilometres of roads upgraded (DN3 Fetesti - Constanta - Cernavoda DN22C Basarabi Bistrita Tureac DN17, DN59 Voiteg - Moravia, DN3 Calarasi – Silistra - Calarasi Drajna DN21, DN5 Adunații Copăceni - Giurgiu); in 2008 technical and tendering documentation were elaborate for the rehabilitation of approx. 1950 km, were carried out works of rehabilitation/ upgrading on approx. 1133 km, in various physical stages and were in developing feasibility studies for upgrading of approx. 1.500 km.
- In the framework of the *Highway Construction Programme*, in 2005-2006 were finalized the activities already contracted in 2006, the modernization activities on Fetesti - Cernavoda section on a length of 17.6 km on the highway A2 and A1 Bucharest-Pitesti with 36 km length. In 2007, starts the work on Drajna - Fetesti highway, on a length of 36.6 km on the A2 highway. Currently, there are ongoing execution works on approx. 180 km (on Bucharest-Ploiesti and Brasov - Bors highways). Preparatory actions were finalized to completion of documentation in order to ensure financing and start execution on approx. 1412.82 km (Nadlac – Deva – Sibiu – Pitesti – Bucharest - Constanta, Bucharest – Brasov -Targu Mures – Cluj – Oradea - Bors, Bucharest - Sculeni).
- Within the framework of the *bypasses construction programme*, several feasibility studies have been completed for a total number of 25 bypasses and currently are in preparation or in approval process all the necessary documentation for another three roads. The construction work began in 2006. In 2007, the bypasses Craiova (14.1 km) and Pitesti (15.15 km) were finalized at highway profile (including the underpass opened to traffic in Bascov-22/10/2008). Currently, there are in execution seven bypasses (Cluj Est, Ploiești Vest, Timișoara, Adunații Copăceni, Lugoj, Caracal, Alexandria).
- In the water transport sector, a new strategy was developed and works related to the modernization programme of the Constanta and Danube ports were executed, and also to the banks defence programmes of the Danube - Black Sea and Poarta Albă – Navodari waterways. The infrastructure works for barge terminals, container and grain in Constanta Harbor and container terminal in Galati Harbor were finalized.
- As an active member of the European Union from 2007, Romania intensified the actions in order to harmonize the transport sector policy with European policies as is defined by the transport White Paper, with related updates. It was elaborate the *Sustainable Transport Strategy for the period 2013, 2020 and 2030*, as a policy document and as an instrument for ensuring the implementation of the resources, the *Strategic Plan for Transport - part of the budgetary programming*. It was also finalized the *General Master Plan for Transport in Romania*, developed with external technical assistance. On 11.02.2008 were open calls for projects launched for the Transport Sector Operational Programme (POS-T) 2007-2013, on nine major areas of intervention from priority axes 1, 2, 3 and 4. Indicative financial allocation for (POS-T) is EUR 5.7 billion, of which EUR 4.57 billion EU contribution (FERD and CF) and EUR 1.13 billion national contribution (state budget). Were submitted to the Transport Managing Authority (POS-T) seven applications for funding, of which three were approved and submitted to the EC, totalling some EUR 775 million.

Building capacities for the transport activities and analysis assessment for integrated planning (urban transit, decongestion, non-motorized transit, vehicle efficiency development programs, evaluation of tax incentives, and management of inter-modal freight transport systems).

Achieving sustainable transport requires an integrated approach to policies and measures in this area, but also takes into account the particular socio-economic and environmental aspects of various sub-regions. The transport sector analysis of the various sub-regions should take into account several factors such as human migration pattern and consumption level, organizing the production activities and available capacity of infrastructure.

Romania is facing challenges regarding the achievement of sustainable transport. In this context, we mention the need to modernize urban transport infrastructure by developing a national impact study that takes into account social and financial implications of implementing such a system.

From the specific measures designed to ensure a sustainable transport we mention: suitable management of urban mobility, a multimodal approach to transport operations, improving traffic management and public awareness, etc.

For Romania, the development of efficient transport systems in urban areas has become a complex task, due to specific problems such as cities traffic congestion and accelerated urban expansion. Public authorities have a key role in planning, providing funding and creating a coherent regulatory framework for achieving key aspects of an efficient transport: the effective integration, interoperability and interconnection between different transport networks.

Romania, by its specific administrative-territorial system organization, envisages active cooperation between different levels of decision-making in order to facilitate that the local decisions are not taken on sectors, but within the framework of the national, regional policy and European legislation.

In Romania, local authorities will take into consideration the institutional capacity building and new ways of financial resources funding necessary to carry out different impact studies regarding the opportunity of large investments in the development of transport infrastructure and sustainable urban mobility plan with creation of vehicle fees for transiting certain urban areas aimed to reduce pollution and congestion traffic.

Started after 1989, the process of modernization and reconfiguration of the national transport infrastructure network and in particular the fundamental scheme of the national road network with traffic to access the link with the Black Sea (north/west-south/east and north/south east/east), on the eastern side (west-east direction to Moldova and Ukraine) and South-west side (north/west-south/west to the Balkans) starting from TEN-T and in the context of White Paper (with subsequent revisions), is a long term process. This process requires both an active involvement from Romania's part, as well as a greater flexibility from the part of the EU Member States in identifying and allocating the necessary resources. As an EU country, Romania will continue to harmonize its overall strategic framework with the main components of the strategically framework of sustainable transportation policies.

Chapter 4: WASTE MANAGEMENT

In Romania, the Ministry of Environment and Forests promoted public interest documents, such as eco-guide public official Eco-tourist guide and guide eco-citizen, containing recommendations on:

- Energy consumption reduction and energy waste and waste material avoidance, applied to both institutions and citizens;
- Separate collection of all types of waste, especially Waste Electrical and Electronic;
- Limiting environmental pollution through voluntary actions for waste management, reducing resource consumption, using biodegradable materials, the practice of responsible eco-tourism activities as against nature;

National policy documents governing waste management comprise two main components: *National Waste Management Strategy and National Waste Management Plan*, which are basic tools for EU waste policy implementation in Romania. Both documents are currently under revision process to establish updated targets and actions, for reducing the amount of waste disposed by landfilling through effective selective collection, recycling and restoring to economic systems of materials and energy from waste. Based on these documents, regional plans and county waste management were prepared, these being useful in development projects funded by European funds and optimization of investment and operating costs in waste management at district and regional level.

Basic principles of environmental policy in Romania are set in accordance with European and international provisions, ensuring protection and nature conservation, biological diversity and sustainable use of its components.

Currently, the waste hierarchy shall apply as a priority order, in four steps to according Directive 2006/12/CEE, but by the end of 2010, following the transposition of the new waste directive 2008/98/CEE there will be applied the five-step waste hierarchy: prevention, preparation for reuse, recycling, other recovery and disposal operations.

Prevention, reduction and a good environmental management of hazardous waste

To prevent, minimize and environmental sound management of hazardous waste, the Ministry of Environment and Forests established appropriate measures to prevent waste generation and its harmfulness and recovery of waste by recycling, reuse or any other process related to obtaining secondary raw materials or use of certain categories of waste as energy source.

Preventing waste generation and harmfulness is done by:

- clean and economic development technologies in natural resources utilization;
- technical development and marketing of products hence: by their characteristic of manufacturing, using and disposal after use, they do not contribute at all or in a low degree to increasing of the risk of pollution and the harmful content of waste;
- appropriate development techniques in order to dispose or neutralize dangerous substances which can be founded in waste for recovery.

Waste producers or holders of legal persons, must ensure, under its own power, recovery or waste disposal or to assure own waste teaching unit authorized for recovery or disposal, these obligations are determined by environment authorization. They also need to prevent waste production as much as possible due to the operation of industrial plants installations.

Batteries and accumulators. The legal act for waste batteries and accumulators management, a high level of collection and recycling of their governing banning the marketing of batteries and accumulators containing hazardous substances is promoted. At the moment of the first placing on the market of any type batteries and accumulators, manufacturers are required to register in the Register of manufacturers of batteries and accumulators made by the Ministry of Environment and Forests.

Registration number received from Register of Manufacturers of batteries and accumulators is communicated to the distribution manufacturer network. The used car batteries are collected through the „deposit” system, where distributors are required to take used car batteries to customer and apply the „deposit” system to selling price of car batteries.

Removal of PCB/PCT. National provisions on the disposal of PCBs (polychlorinated biphenyls)/PCT (polychlorinated biphenyls) applies to all equipment and waste or other materials containing designated compounds in concentrations of less than 50 parts per million (ppm) for a volume exceeding 5 sqdm (dm³).

In order to avoid adverse effects on human health, on assets and on the environment, compounds like polychlorinated biphenyls are subject to a special management and control on the Elimination of disposal plans approved with phased completion dates until December 2010.

Waste Oils. National legislation for the management of waste oils applies the ‘polluter pays’ principle according to which the producer is responsible to provide collection and recovery systems for waste oils, for the types of oils sold, within the quantities placed on the market.

Currently a high importance is given to waste oils recovery by regeneration, if the impurification degree and the nature of the impurities found in the waste oils allow the specific operations to be applied. Co-incineration of waste oils is an alternative recovery method, where technical and economic conditions lead to unsustainable regeneration, which is used as fuel to heat recovery. Disposal of waste oils by incineration should be done only when the regeneration and/or co-incineration are not applicable, complying with the limit values for the emissions as foreseen in the specific legislation.

Romania seeks to implement the concept of ‘industrial symbiosis’ which is a new way of looking at economic activity in which environmental concerns (so expensive) are transformed into opportunities for profit and benefit by coordinated action of several operators and communities.

Industrial symbiosis therefore includes separate traditional industries, but also other organizations from other sectors, in a collective approach involving physical exchange of material, energy, water and/or secondary products, and sharing of goods, logistics and expertise and encourages technology transfer.

Waste disposal. In Romania the quantity of hazardous waste generated continuously decreased in past few years. Waste disposal was done mainly by landfilling and incineration. The national legislation on waste disposal, including obtaining environmental permitting for development of these activities, transposes the EU legislation.

These activities are performed in a way that possible negative effects on environmental, in particular the pollution of surface water, groundwater, soil, and air, and the global environment, including the greenhouse effect, as well as any resulting risk to human health are reduce as far as possible.

According to the legislation in force, the waste producers have the responsibility management of waste including waste prevention, recycling, and disposal.

In 2007, over 419,000 tonnes of hazardous waste were generated; representing a 0.15 % of total of generated waste. Most of this hazardous waste was co-incineration or incineration in the producer own facilities or private operators' facilities, or landfilled.

Table 2. Management of hazardous industrial waste, 2003-2007

Year	Total of produced hazardous industrial waste	Total of recovered hazardous industrial waste	Total of disposed hazardous industrial waste
2003	730226	461628	514004
2004	1048400	2218000	7244000
2005	736787	458508	461668
2006	555227	337149	410787
2007	407837	406450	149824

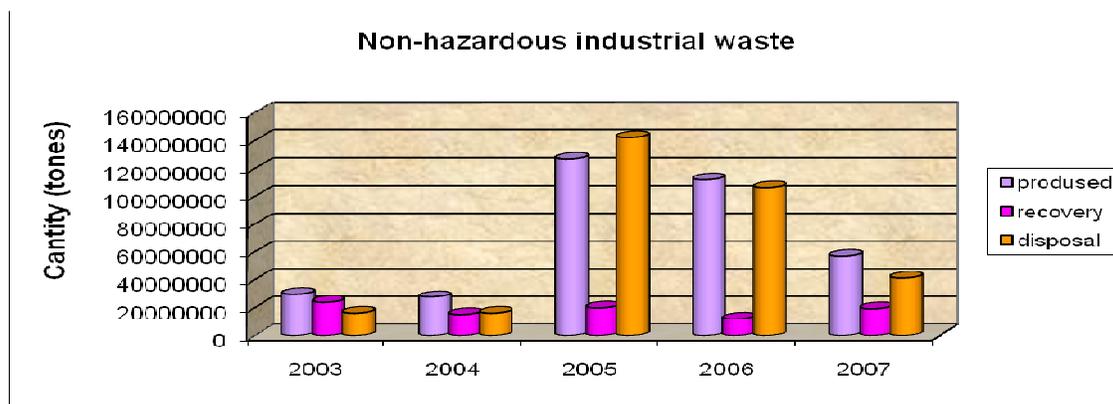


Note:

1. contains no data of waste from extractive industry
2. there are taken in consideration **the stocks** also, but they aren't separately mentioned.

Table 3. Management of non-hazardous industrial waste, 2003-2007

Year	Total of produced non-hazardous industrial waste	Total of recovered non-hazardous industrial waste	Total of disposed non-hazardous industrial waste
2003	29808434	23605705	16178892
2004	27467200	15180500	16172900
2005	126884825	19731371	142149227
2006	111938335	12067947	106397558
2007	56831280	19154798	41080788



Note:

1. contains no data of waste from extractive industry.
2. there are taken in consideration **the stocks** also, but they aren't separately mentioned

Illegal transboundary movement of hazardous wastes

Since 15 July 2007, Romania applies the Regulation (EC) no. 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste. The national legislation sets certain measures for enforcement of Regulation (EC) no.1013/2006 and establishes the responsible public authorities for supervision and control of import, export and transit of waste.

The Regulation transposes the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal adopted on 22 March 1989, to which Romania adhered by the Law no. 6/1991. The Amendment, as well as the Annexes VIII and IX of the Basel Convention, was ratified by Romania through the Law no. 265/2002.

Romania declares that the import and the disposal on its national territory of hazardous wastes and other wastes, can take place only with the prior approval of the competent Romanian authorities.

The import of any kind of wastes for final disposal is prohibited until the end of the transition period obtained by Romania through Accession Treaty to the EU.

Environmentally sound management of solid (non-hazardous) wastes and waste water, in the context of integrated planning and management of land resources

In order to comply with legislative requirements in waste management in Romania, there are developed integrated waste management projects under the National Waste Management Plan and Regional Waste Management Plans. Thus, funds have been allocated for the **development of integrated waste management systems and rehabilitation of historically contaminated sites (EUR 1.168 billion, of which the EU grants EUR 0.934 billion)** and to invest in the purchase of containers for selective collection, garbage trucks, sorting facilities, composting and recycling, construction of warehouses at European standards, closing old and non-complying landfills.

These projects are developed and implemented in urban and rural areas, at county/regional level and seek to extend/complete waste management systems so as to cover the whole country and population. Given the exclusive attributions of local authorities to implement and ensure the operation of integrated waste management in each locality, they are required to impose fees/charges for waste collection and landfill, which vary according to each types of waste.

Regarding the prevention of packaging waste, producers/importers of packaged products must take all measures to ensure compliance with relevant harmonized European standards or do not exceed specific consumption package/type of material/product.

At the same time, the actions in the National Waste Management Plan focus on encouragement of prevention of packaging waste through source reduction in the amount of packaging products.

In accordance with the ‘polluter pays’ principle, costs of waste disposal operations shall be supported by owner of waste or by the previous owner of waste or manufacturer of the resulting waste product. When the producer / holder of waste are unknown, costs of cleaning and environmental cleanup are supported by local government authority. After identifying the holder, he has to support both the costs incurred by the local government and those relating to actions taken for identification.

Table 4. Indicators for municipal waste generation

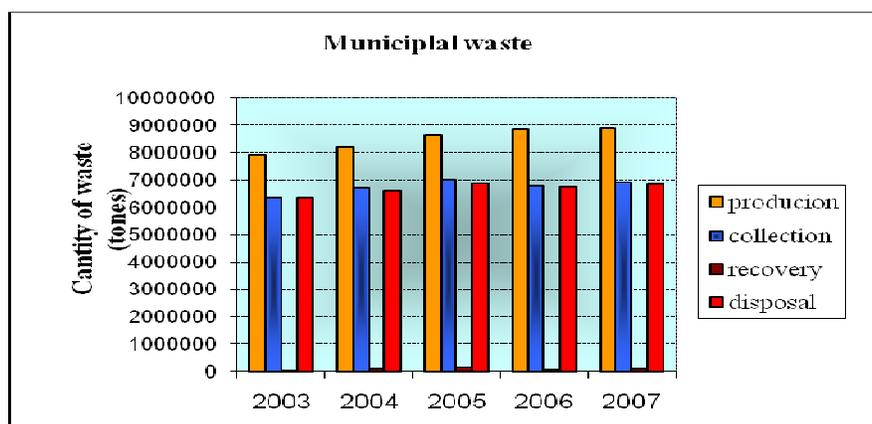
Municipal waste (kg/inh.year)	Year
364	2003
378	2004
398	2005
410	2006
412	2007

Romania has fulfilled the obligations of EU Accession Treaty on packaging waste recycling and recovery.

In parallel, there are education and information campaigns on waste management issues, noting that it is not only sufficient infrastructure development but also public involvement, to achieve effective systems of integrated waste management.

Table 5. Quantity of municipal waste: generated, collected, recovered and disposed, for 2003-2007

Municipal waste produced	Municipal waste collected	Municipal waste recovered	Municipal waste disposed	Year
7923787	6353315	19768	6333547	2003
8198800	6716600	83800	6632800	2004
8640000	7025256	145412	6879844	2005
8866424	6808837	40945	6767892	2006
8895190	6921660	72566	6849094	2007



Sludge from waste treatment plants in cities and other wastewater treatment plants with a composition similar to municipal wastewater can be used in agriculture only if they comply with national technical rules which transpose Directive 86/278/CE. In Romania, national limits for heavy metals contained in sludge are more stringent than UE directive. Typically, sewage sludge is dehydrated and then stored. Only a small amount of sludge is used in agriculture.

Table 6. Management of sludge, 2003-2007

Year	Dry sludge (tones)	Recovery sludge on non- agriculture lands (tones)	Incineration (tones)	Landfill disposal or owner's storage (tones)
2003	206146.01	4474	10.8	201661.21
2004	166599.24	1915	3868	160816.24
2005	134322.26	3824	750	129748.26
2006	137145.76	1720	0	135425.76
2007	138849	282	0	138567

Energy recovery from waste is one of the objectives of the National Waste Management Strategy.

In Romania, co-incineration of waste in cement kiln is made according to conditions specified in the environmental permit. The main condition is that waste recovery should not contribute to a significant increase in emissions and content of harmful substances in the end product.

Creating and implementing an integrated waste management system is also supported by economic and legal instruments integrated with other sectoral policies. Financing resources for an integrated waste management system is required by the law through:

- Environment Fund
- In addition to the state budget based on programs in the amounts allocated to this destination
- Local budgets
- Public-Private Partnership
- Structural Funds
- Banks
- Private investors
- Sectoral research and development programs
- ISPA, PHARE

In Romania, the Environment Fund Administration is the economic-financial tool for supporting and achieving priority environmental projects in accordance with rules and standards in force.

Environmental Fund contributes through:

- controlling and reducing air, water, soil pollution, including the use of clean technologies;
- protection of natural resources, waste management, including hazardous waste;
- protection and biodiversity conservation;
- education and public awareness on environmental protection.

Currently, Romania does not participate in the negotiations concerning the transport and storage of **radioactive wastes** from the European Union. Romania takes part, through the Nuclear and Radioactive Wastes Agency (ANDR), in the ERDO project (European

Repository Development Organization) which aims to analyze the possibility of developing a regional geologic storage deposit for highly active wastes.

The ERDO group (European Repository Development Organization), formed by 8 states, (The Netherlands, Italy, Poland, Romania, Slovakia, Lithuania, Slovenia and Bulgaria) analyzes at a theoretical level the feasibility of implementing the idea of a regional storage deposit.

The ERDO discussions don't approach the possibility of storage EU radioactive wastes in Romania because the amended Law no. 111/1996 concerning the safety, regulation, permitting and control of the nuclear activities prohibits the import of radioactive wastes. Romania continues its national program of building a deep-seated geologic storage deposit exclusively for the wastes produced in the country.

Currently, Romania has only one radioactive wastes storage deposit, the National Radioactive Wastes Deposit from Băița Bihor, where low and medium radioactive wastes with short life-cycle resulting from medicine, research and traditional industry are stored.

The radioactive wastes generated by the Nuclear Electric Plant from Cernavodă, currently being in intermediary storage in special installations at the location of the plant, require the construction of two new final storage deposits: a final surface storage space for the low and medium active wastes and a deep seated geologic storage space for those highly active. The storage for the low and medium active wastes will be operational until 2014 and the geologic storage for the highly active wastes will be finalized in 2055.

Both final deposits will have as funding source the Radioactive Wastes Management Fund, established in 2007 through the Ordinance no. 11/2003 amended and detailed in the Government Decision no. 1080/2007, thus complying with the principle 'the polluter pays'.

Constraints and challenges of waste management policies

Waste management policy, eco-design and clean technologies promotion are directly influenced by economical changes and financing possibilities.

Moreover, potential valuable resources for recycling and composting reach final disposal, and one of Romania's challenges in order to minimize this loss is to change mentality of people, public authorities and economic sector toward an environmental friendly behaviour.

Romanian Government supports the development of clean environmental technologies by financing programmes; strengthen of institutional capacity, bilateral cooperation and participation at international conferences.

Various research programmes run by the Ministry of Education Research, Youth and Sport aim developing of new environmental friendly technologies as well as new technologies on waste recovery.

Technical and scientific data regarding environmental aspects of waste are available on environmental authority web sites. The results of communication sessions, national and international conferences are also available on organisers' web sites (e.g. universities, NGOs, associations, others).

Chapter 5- TEN-YEAR PROGRAMMING PLAN ON SUSTAINABLE FORMS OF CONSUMPTION AND PRODUCTION

Addressed sustainable production and consumption throughout the life cycle of products and services are essential to create preconditions for sustainable economic transition. Should be better enhanced a correlation between economic growth and sustainable use of natural resources and sustainable production and consumption with an emphasis on sustainable industrial policy.

To ensure sustainable economic development, should be created the preconditions for sustainable consumption behaviour. To ask for sustainable products, consumers should be informed, must "demand" products labelled organic, the price of which consider the internalization of environmental externalities. To reach the consumer, distribution will be made at distances as close or transport modes which results in a minimized pressure on the environment. Products, from design stage to revalue certain materials were recovered from waste and to have as much potential components of recovery and reappraisal. A sustainable society is integrated in the environment, which includes producing smaller pressures on natural environment, the outputs of the economic system will be integrated, with the resources and energy already contained in the products, resulting small quantities of waste and reuse of selected waste.

Romania has implemented the EC Legal Framework for **Green Public Procurement (GPP)** (DIR. 2004/17 & 18/EC) at the National Level through the Emergency Governmental Ordinance no.34/2006. Thus, the contracting authority has the right to use awarding criterion based on *environmental characteristics* (if awarding criterion is the '*most advantageous tender from the economic point of view*') or define the technical specifications by relating to environmental standards (national, European or international).

The *Romanian National Action Plan on Green Public Procurement* has been prepared and is expected to be adopted this year. The Plan introduces a mix of voluntary and mandatory 'green' targets for 8 groups of products, services and works (*cleaning products and services, construction, lightning equipment, ecological food/drinks, furniture, IT equipment, copying paper*), a GPP monitoring scheme and penalties for the authorities that will not meet the targets.

In order to create a market for green public procurement in Romania, the Ministry of Environment and Forests has developed projects for dissemination, promotion and implementation of policies on GPP:

- *Promoting GPP by creating a framework for training public purchasers.* The project is funded through Structural Funds (EUR 250,000) and run by the Ministry of Environment and Forests. The project started in April 2009 and aims to train and certify 40 public procurers in the field of GPP, to provide one operational Guide to support GPP training sessions and to create a public procurers green network.
- *Developing emergent ecological markets in Romania.* The project is funded by the Norwegian Cooperation Programme - Innovation Norway (approx. EUR 2,000,000) and run by the Ministry of Environment in partnership with the Norwegian Ministry of

Environment, between July 2009 - April 2011. One of the components of this project aims to inform 400 producers, retailers and the scientific community about the ecological criteria for 9 categories of products, services and works and to train 400 public procurers on GPP issues in all 8 regions of Romania. Both projects are under development.

The implementation of the EC Legal Framework regarding GPP allowed the contracting authorities to include environmental criteria in awarding public contracts. But the use of this opportunity depends on a series of other factors that should be considered. The use of environmental criteria requires openness towards a new field of action, the existence of the needed information at the level of the procurers but also a framework to stimulation this approach. Thus, the implementation of the National Action Plan for Green Public Procurement is a step that will increase the awareness of the contracting authorities that they need to respect a minimum standard regarding the GPP. Also the Plan will help to disseminate the policy regarding GPP, all those fields of action having a positive dynamic in what regards the impact on environment.

The implementation of the National Action Plan can contribute to the stimulation of the offer of green products, services and works. Also, the development of eco-innovation is an opportunity that can contribute to the development of the market of green products, services and works that will inevitably orientate also the purchasers towards green procurements.

Many purchasers still believe that the green products, services and works are more expensive. But this opinion does not take into consideration the whole life cycle of the product. Thus, the analysis of the cost of the product should take into calculation: the procurement costs and the associated costs (deliver, installation, etc), the costs of functioning (including energy, spare parts and sustenance) the time of functioning and the periodicity of the revisions, the costs at the end life of the product (cease using, recycling). Thus, raising the awareness of the public procurers regarding the need to have a whole life cycle perspective of the costs of a product remains an important challenge. This is becoming even more significant in the context of the economic crisis and the necessity to cut the spending in public administration.

Eco-labelling

Between 2007 – 2009, there were awareness and information campaigns to educate the public and consumers, producers, manufacturers, wholesalers, providers, public authorities purchasing, traders, retailers and the public.

To this end, a number of activities have been carried out:

- organizing seminars to promote eco-label;
- encouraging the adoption system, in particular SMEs, thus supporting the development of this system;
- eco-label publicity through the media
- developing a section on the Ministry of Environment and Forests webpage:
http://www.mmediu.ro/vechi/departament_mediu/controlul_poluarii/eticheta_ecologica/eticheta_ecologica.htm;

-coordinating the elaboration of informative documents (brochures, booklets, posters, leaflets); the *'Use eco-products with eco-label'* and *'Eco-label – the guide of the products'* brochures were elaborated.

In this context were awarded four eco-labels: two for tourist accommodation services, one for portable computer and one for personal computer.

At national level, the Ministry of Environment and Forests, as competent authority for applying the provisions of the *Regulation no. 761/2001 allowing voluntary participation by organizations in a Community eco-management and audit scheme (EMAS)*, has organized in 2007-2009 period, various events aimed on the training of the institutions involved in the applying of the provisions of the EMAS Regulation, facilitating access to information on the main components and objectives of EMAS and the advantages of the EMAS registration which lead to environmental and business performance.

EMAS promotion activities and encouraging the organizations to the voluntary participation on EMAS had as a results 4 registrations under EMAS for 3 organizations and also 2 accreditation as environmental verifier.

Along with the elaboration of the National Plan for Sustainable Consumption and Production, will be establish planned actions to promote EMAS with the necessary financial resources allocation.

In order for **energy efficiency measures** to be effective, a change must occur in people's mentalities and behaviour. In this context, one of the most important aspects is the information campaigns targeting all economic sectors.

Within the **CEECAP – Implementing EU Appliance Policy in Central and Eastern Europe project**, the National Authority for Energy Regulation in collaboration with the importers and the dealers (Candy, Gorenje, Indesit/Ariston, Whirlpool and Domo) were promoted actions, based on energy labelling, to provide information for advising and motivating consumers' orientation towards energy efficient appliances.

Also, in the shops there were organised campaigns on energy labelling.

The information campaigns envisaged for the next period aims at the following area: improvement of the energy efficiency of domestic heating/cooling equipment, promotion of ESCOs, improvement of public lighting systems, promotion of the use of energy-efficient household appliances (refrigerators, washing machines, dishwashers, ovens, household air conditioners, etc) and energy-saving light bulbs, and the use of renewable energy resources in the public and residential sectors.

The success of energy efficiency measures largely depends on the education and awareness of all the users of various categories of energy on the need to reduce energy consumption and optimize the functioning of consumer energy program.

During 2009 was proposed **Industrial Policy document for the period 2010-2013 and Action Plan** which provides that Romania will promote an industrial policy focused on sustainable production and consumption patterns focusing on the use of renewable energy and products, services and technologies with low carbon and using resources effectively. It will

work to ensure the development of a dynamic market for environmental technologies, especially low-carbon technologies.

During 2007-2009 it has been implemented a number of industrial policy tools, such as:

- *Increasing Competitiveness of Industrial Products Program* that supports producers in the manufacturing sector to achieve the following activities:
 - Implementation and certification of management systems and quality or environmental management systems;
 - Implementation and certification of management systems and health security, social responsibility management systems and food hygiene and / or information security management systems;
 - Providing and/or improvement of testing and calibration laboratories and their accreditation, as appropriate;
 - Certification of products and / or obtaining eco-label products;
 - Execution of experimental models, prototypes, assimilation of new technology is made by the operators on the basis of research units - Romanian Development;

During 2007-2009 periods, 670 projects, with a value of RON 61.1 million, from above mentioned categories were financed from State Budget and finalized.

- *Stimulate the development of competitive agglomeration* (clusters, competitive clusters, growth poles, poles of urban development, etc.) In accordance with European industrial policy initiatives, which will consider the following:
 - Programs to identify potential areas of agglomeration of firms and support to accelerate this process in the desired direction, namely towards technology and innovative products and high quality;
 - Providing software support and development of networks between academic research and business operators in a given area;
 - - Regional marketing programs and promotion of innovative structures so successful.

Considering **energy efficiency** as one of the key priorities of Romania's energy policy, at national level, the institutional and legal framework has been created in conformity with the EU acquis.

Directive 2006/32/EC on **energy end-use efficiency and energy services**, which was adopted into national legislation in 2008, stipulates, in conformity with the provisions of Art. 14 (2), that EU Member States must undertake to reduce the consumption of energy by at least 9% over a period of nine years (2008 - 2016) as compared to the average consumption of energy for the previous five years for which data are available.

The intermediate target set for Romania for 2010 was 940,000 toe, which corresponds to a percentage of 4.5% of the average for the years 2001 - 2005.

This target was established based on the evaluation of the existing potential for energy savings in the fields covered by Directive 2006/32/EC.

To determine the overall evaluation of *energy savings* in 2008 were analyzed separately in the following sectors of the economy: manufacturing, industry, agriculture, construction and services. The analyses which have been performed by means of a simplified top-down model adapted to the available amount of primary data have led to the following results:

Table 7. [thousand toe]

Total savings against the previous year	2008
Agriculture	30.8
Industry	703.7
Constructions	119.2
Tertiary	526.7
TOTAL	1380.4

The calculations have been performed by using the energy intensity variation, respectively, the energy consumption for producing a unit of gross added value in the respective sectors. The calculation was influenced both by the energy efficiency measures and the changes in the production structure. It was very difficult to evaluate the results of the energy efficiency measures at macroeconomic level in the absence of a harmonized methodology for measuring energy savings resulting exclusively from energy efficiency measures.

Dynamic energy performance requirements for products, buildings and services.

The Romanian assessment of the progress made with the implementation of the Energy End-Use Efficiency and Energy Services Directive (ESD) is taking into consideration the results of the measures listed in the annex of the EEAP 2006 communication (COM (2006) 545 final), that must be implemented by the Member States and included in the NEEAP. This assessment is based on expert judgments and national case examples that promote energy efficiency policies aiming energy savings.

Legislative and supporting measures have been taken by the national authorities to strengthen and accelerate the implementation and enforcement of a comprehensive framework of EU directives and regulations to improve energy efficiency in energy-using products, buildings and services refers to energy efficiency labelling, the energy end-use efficiency and energy services, the energy performance of buildings and the eco-design requirements.

During 2007-2009 market surveillance activities on energy labelling were undertaken, focusing especially on verifying compliance with requirements for energy efficiency labelling of household electric appliances placed on the market, such as: refrigerators, dishwashers, light bulbs, washing machines, electric ovens etc.

The synthesis of the annual control actions on period 2007- 2009 is presented below:

Table 8.

Year	2007	2008	2009
Number of surveys	1335	1298	830
Warnings	226	329	110
Penalties	28	176	89
Compliances	1081	793	631

The former Romanian Agency for Energy Conservation (ARCE)¹, in present the National Authority for Energy Regulation (ANRE) has participated in the IEE project CEECAP (Implementing EU Appliance Policy in Central and Eastern Europe). The project has been focused on sustaining the implementation of energy labelling directives.

Since 2006, have actively collaborated with SenterNovem in supporting the introduction of Long Term Agreements (LTA) in Romania.

For this purpose a pilot project is ongoing to prove the value of the Energy Potential. The evaluation of the pilot could be used for further implementation of LTA. This project should be looked at a possible combination with the existing energy audit scheme of Romania.

By ANRE there were authorised energy auditors and have been attested energy managers in the field of the industrial sector, number of those being 340 during 2007-2009 periods.

In the same period (2007- 2009) the energy auditors carried out a number of 447 audits for which in 55 audits a potential of 342,890 toe/year energy savings has been identified.

Regarding the energy efficiency measures applied in buildings, in *the first National Action Plan for Energy Efficiency (2007-2010)* there were estimated the following energy savings by applying the thermal rehabilitation measures:

- approx. 250 blocks of flats in which thermal rehabilitation will be carried out;
- approx. 36,000 MW-h (about 3.0 thousand toe) energy savings

Until now, 781 blocks of flats have been thermal rehabilitated, the related energy savings being of 8.400MW-h (about 0.7 thousand toe).

Improving energy transformation

There is a great potential for co-generation in Romania and this can be exploited through the promotion of highly-efficient co-generation based on the demand for thermal energy. The promotion of highly efficient co-generation will lead to the following benefits:

- savings of primary sources of energy when compared to the separate generation of electrical energy;
- reduction of greenhouse gas emissions, especially emissions of CO₂.

The effectiveness of these measures will be greater if renewable resources, especially biomass, are used as fuel in the co-generation process.

Starting with the year 2010, biomass was introduced in the fuels structure of large combustion plans, with positive effects in terms of emissions reductions.

The projects mainly address to promote the use of renewable energy source, such as: solar energy, geothermal energy, biomass energy (sawdust, other wood waste).

Based on the Government Decision no. 219/2007 regarding the promotion of cogeneration based on a useful heat demand which is transposing the 2004/8/EC Directive, ANRE elaborated the legislative framework for promoting electricity produced from high – efficiency cogeneration, namely:

¹ In 2009 ARCE was incorporated within ANRE.

- Government Decision no. 1461/2008- approval of the procedure regarding the issuing of guarantees of origin (GO) for the electricity produced from high-efficiency cogeneration
- ANRE Order no. 87/2009- Methodology regarding the determination of the electricity produced from high-efficiency cogeneration which can be certified by guarantees of origin (GO)
- ANRE Order no. 85/2009- Monitoring procedure of guarantees of origin (GO) issued for the electricity produced from high-efficiency cogeneration
- Government Decision no. 1215/2009 regarding the establishment of criteria and conditions necessary for the implementation of the state aid scheme for the promotion of high – efficiency cogeneration based on a useful heat demand.

We appreciate that the application of this state aid scheme will lead, starting with 2011, to energy savings of minimum 342 thousand toe/year.

Financing energy efficiency, economic incentives and energy pricing

To help operators who wish to implement energy efficiency projects, the Ministry of Economy, Trade and Business Environment made available through the Sectorial Operational Program for Economic Competitiveness Enhancement, Priority Axis 4 Increasing energy efficiency and security of supply, in the fight against climate change, a line of funding from European Structural Funds worth about EUR 190 million for 2007 - 2013. The first call of proposal did not have the expected impact mainly due to economic crisis in which the economic operators opted first of all to invest in those assets which ensured their business continuity. The second call of proposal was launched on the 4th of January 2010 with a closing date on the 30th November 2010.

As for energy service market, ESCO activity has already started in industrial sector and Romanian Government is focused in facilitating ESCO activity in public sector.

A new opportunity for ESCOs energy management activity including performance guarantees is provided by the Ministerial Order no. 1767/2009 (on approval of Regulation for authorization of energy auditors and of Regulation for energy manager's certification) which creates the premises for the externalization of energy management activity from all energy consumers.

Some legislative barriers are still under discussion between relevant governmental bodies:

- Public procurement law (Emergency Government Ordinance no. 34/2006 regarding public acquisition contracts and concession contracts for public works and services) has no specific provisions on Energy Performance Contracting. In this context local authorities are reluctant in using a model contract for Energy Performance Contracting.
- Law no. 108/2004 for the approval of Government Emergency Ordinance no.108/2004 regarding local public budgets, has a specific provision which restricts the use of funds for utilities payments(including value of energy saved by Energy Performance Contracting) to be use for ESCO services reimbursement.

At the same time, energy efficiency and renewable projects have been financed from the state budget, through:

- the National Program to reduce energy costs for the population through increased energy efficiency and renewable energy use in 2007 (with a percentage for co-financing of max 27%) was approved by Government Decision no.1281/2007. It was applied for 37 projects in 31 local municipalities. Total energy savings was 135 thousand toes.
- the National Program for energy efficiency and renewable energy use in the public sector, co-financed by the state budget in 2009 approved by Government Decision no. 1661/2008, for the years 2009-2010. Through this National Program 33 projects were put into practice and the total energy savings reached about 126 thousands toe.

Projects address mainly to promote renewable energy use, such as: solar energy, geothermal energy, biomass energy (sawdust, other wood waste).

The year 2008 was the third year of operation of the system which promotes electrical energy from renewable energy sources (E-SRE). Regulatory activities related to this field focused on observing the operation of the legal and regulatory system, the behaviour of operators involved, in order to:

- emphasize the possible malfunctions and improve the existing regulatory framework
- achieve the target assumed by Romania, meaning 33% E-SRE from National electricity consumption in 2010.

Considering the gross domestic electrical energy consumption for 2008, published by the National Statistics Institute in the Monthly Statistical Bulletin, on December 2008, and the total production of E-SRE achieved in 2008 (hydroelectric energy production being in the past 15 years linearized), the E-SRE share in total gross electrical energy consumption of Romania was 28.3%, which means an achievement of 86.2% from the 33% target proposed for 2010.

Eco-efficiency and eco-design programs

The Eco-Design Directive (2005/32/EC) was fully transposed into national legislation through the adoption of Governmental Decision no. 1043/2007 regarding the ecodesign requirements for energy-using products and amending and repealing of some legislative acts

In accordance with EU Commission work program on implementing measures on ecodesign requirements it has been set the necessary national legislative and institutional framework regarding the five energy-using products categories - standby and off mode electric power consumption of electrical and electronic household and office equipment, simple set-top boxes, non-directional household lamps, fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaries able to operate such lamps, external power supplies – through Governmental Decision no. 1490/2009 regarding the setting of some measures for the implementation of Commission Regulations no. 1275/2008, no. 107/2009, no. 244/2009, no. 245/2009 and no. 278/2009, implementing Directive 2005/32/EC.

The Ministry of Economy, Trade and Business Environment is designated as national competent authority for coordinating the implementation of the provisions of these five Regulations and the National Authority for Consumers Protection is the national competent

authority for market surveillance related to products categories covered by these above mentioned Regulations.

Environmental Technologies Action Plan

The Ministry of Environment and Forests coordinates the elaboration and implementation of the policy in the field of environment technologies according to Government decision no. 1568/2008 regarding the approval of the road map for the implementation of the Environmental Technologies Action Plan.

At 28 January 2004, the European Commission has approved the Environmental Technologies Action Plan - ETAP with the communication from the Commission to the Council and the European Parliament on Stimulating Technologies for Sustainable Development: An Environmental technologies Action Plan for the European Union.

The plan promotes environmental technologies in order to reduce the pressure on natural resources and for the improvement of the quality of environment in the same time with the economic growth. Eco-innovation and environmental technologies can generate important contributions for the accomplishing of the objectives assumed by the European Commission.

The ETAP 2008-2009 road map implementation is carried out by the institutions which are taking place within the working group ETAP Romania. The structure of this working group is defined at the article 3 of the Government Decision no. 1568/2008. According to this decision the institutions which take place in the working group send to the Ministry of Environment and Forests information on the state of the actions implementation mentioned within Road Map. Also, under coordination of the ministry, the working group is setting up the road map for 2010-2013.

The action plan for environment technologies **ETAP** Romania 2008/2009 encompasses actions and projects under the following guide lines: actions support for research and development, improvement of the testing-certifying systems for environment technologies, improvement of the environment performance, making available the financing sources, the improvement of the market conditions, setting up a coherent legislation and monitoring for the green public procurement, information, education and training and promotion on green technologies at the global level.

Some of the actions taken by the Ministry of Environment and Forests and mentioned within the Action Plan are: promotion of the financing sources available through Environment Found, implementation in Romania of the concept industrial symbiosis (Project Pilot 2009-2011), promotion of the ecological label and dissemination of the green public procurement concept.

The LIFE Project '*Applying the principal of industrial ecosystems to regional development*' (*ECOREG*) has as objective to test in Romania the concept of 'industrial symbiosis' that was a success story in Great Britain coordinated by the UK government. This project tries to promote massive resources savings by innovative reutilization of waste generated by some economic agents. These taken wastes can become resources for other economic activities. The aim is to create a network of companies which act symbiotically that uses resources one from another through exchanges of wastes and secondary products. Counting the results of

these projects it will be evaluated the opportunity of promoting a national program for industrial symbiosis.

Also, the Project *Development of emergent ecological markets from Romania – EcoEmerge*, beside the component of green public procurement promotion, has also a component for Romanian market evaluation for environment technologies; identifying methods and tools for development of this market and setting up a national platform on the WEB basis for information and technological transfer.

The Action Plan 2008 - 2009 implementation shows that it has encouraged some projects in environment technologies which would have been difficult to be implemented without this action plan. Setting up a working group ETAP has supported a common forum of discussions and an efficient coordination of the actions taken by the institutions involved, offering in the same time a complete diagnosis of the entire policy regarding environment technologies at the national level.

ETAP is based on a communication of the European Commission in 2004. Now the discussions goes more on developing a plan for eco-innovation that is based on the framework of ETAP, having a new approach of the priorities set by the Commission in 2004.

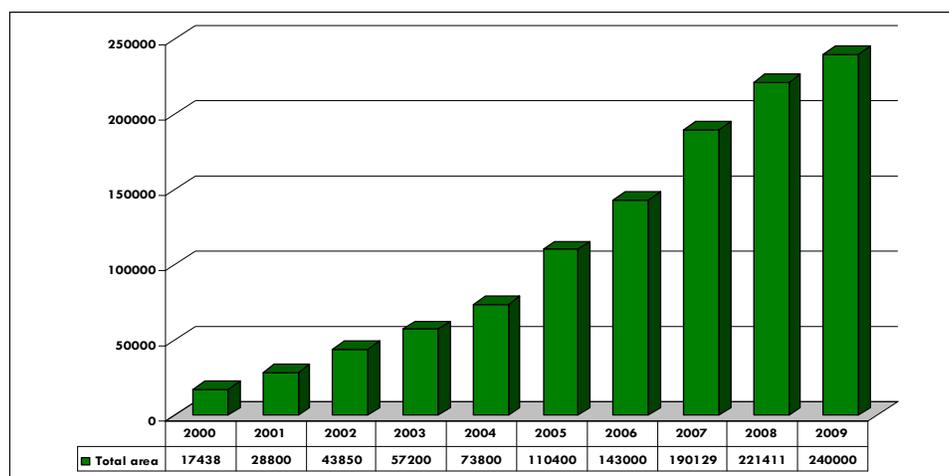
The fact that Romanian ETAP does not have its own budget has been one of the major challenges. Being under the conditions of the budgets of different institutions that implement diverse projects within the Plan, we faced the situation that some actions have been cancelled because of the lack of funds as a result of reducing the budgets. Also, because of the economic crisis the budget oriented for research has been lowered instead of getting bigger as estimated before the crisis, this having a direct impact on the possibility to initiate new actions. Another major challenge is the period of time covered by the new plan, 2010 - 2013. Taking into consideration that the economic situation from this moment does not allow any realistic estimation for this period, the development of the new plan proves to be a very complicated enterprise with a high level of uncertainty.

Organic farming

Romania has great natural and human potential for practicing organic farming. Organic farming system is a viable solution to address the negative impact of agriculture on the environment and product quality. The application of specific principles and rules for organic production mode creates the necessary conditions for the achievement of natural ecosystems, contributing to both sustainable development of society and economic development of rural communities.

Organic farming is a dynamic system in Romania with a weighted average annual growth rate of 23%. In 2009, the total area cultivated by the organic production method, was 240,000 hectares, representing an increase of about 13 times compared to the area cultivated in 2000 and 1.3 times compared to 2007.

Total area cultivated in organic farming



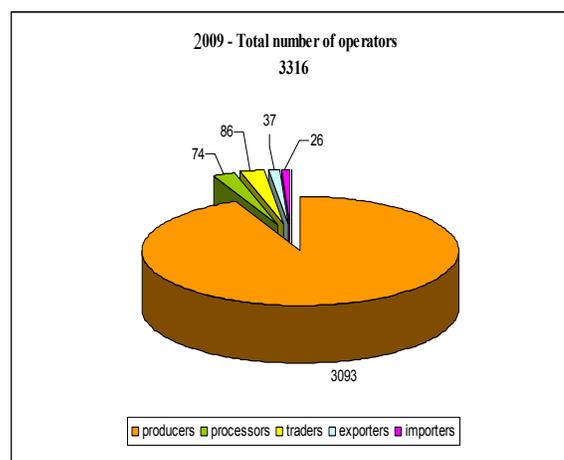
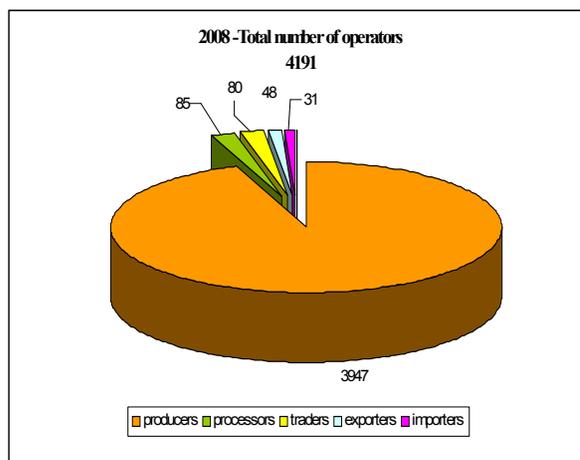
Source: MARD

The analysis of the main crops cultivated in 2009, shows that cereals have a high proportion of approximately 80,000 hectares (18%) followed by oil and protein with about 32,000 ha (14%). Collection and certification of plants and flowers from the spontaneous flora were conducted on an area of 80,000 hectares.

The livestock sector recorded growth of certified organic livestock in 2009, especially dairy cows and laying hens, an increase of approximately 15 times the annual average for the period 2000-2004 and about 14 times the recorded herds in 2005.

Number of operators (producers, processors, traders) registered for organic farming system in the Ministry of Agriculture and Rural Development (MARD), in 2009, (see figures below) was 3,316. If the period 2006-2008 recorded an increase in organic farming operators with 12% in 2007 compared to 2006, and with 9% in 2008 compared to 2007, in 2009 was recorded a decrease in the number of operators with 26% compared to year 2008.

Number of registered organic farming operators 2008-2009



Source: MARD

In 2009, organic farming producers could benefit of many support forms, which any registered producer in the sector and under contract with a control body could access. This support has resulted in direct payments under the single area payment scheme (SAPS), benefiting all producers (of organic and conventional farming), and in funding opportunities of organic farming sector through European programs, as follows:

- Investments in organic farming through National Rural Development Programme (NRDP) 2007-2013, *measure 121 – ‘Modernization of agricultural holdings’*, measure whose selection criteria favours the support of vegetable farms and organic farming system.
- improving the production, processing and marketing of products with higher quality standards through NRDP 2007-2013, *measure 123 – ‘Adding value to agricultural and forestry products’*, measure whose selection criteria favours the registered organic processors and the processors using organic materials.

In order to grant specific support to producers of organic farming, MARD, through General Directorate of Rural Development, is particularly concerned about launching a specific package of support to producers of organic farming per unit of area and culture, *introducing the National Rural Development Programme (NRDP), the organic farming sub measure, as part of measure 214, ‘Agri-environment payments’ from 2011, probably in the second semester, in terms of prior negotiation with the European Commission.*

MARD in cooperation with social partners (National Federation of Organic Farming, BIO Romania Association and Bioterra Association, representatives of producers and processors, s.o.) have identified a number of support ways from national budget to be granted to all producers according to Government Ordinance no. 14/2010 on financial measures to regulate state aid to farmers since 2010. Under the above named ordinance, is currently promoting a draft of Government Decision on state aid for producers of organic farming to encourage the achievement of quality products by supporting tax inspection and certification.

In order to increase the competitiveness of the Romanian organic farming products and competencies of the export units as well as to promote organic food on the international markets, in collaboration with Ministry of Economy, Trade and Business Environment was developed the National Export Strategy, the period from 2010 to 2014.

Producers of organic beekeeping are supported by ‘*National Programme for Beekeeping 2008-2010*’ in accordance with the provisions of Government Decision no. 556/2008, support measure that will continue in 2011-2013.

In order to promote organic products, support is provided up to 50% from European Commission for information and promotional programs proposed by professional and inter-professional organizations of the sector which involve at least 20% of the actual cost of operations.

Target indicators concerning the *Strategy of Organic Farming Development in Romania*, on medium and long term are:

- increasing of the cultivated areas under the organic production method, as follows:

- December, 31, 2011, 337,000 ha, 2.27% of the agricultural area;
- December, 31, 2013, 754,000 ha, 5.08 % of the agricultural area.
- increasing of the organic products consumption/inhabitant, such as organic products to represent 10% of foods sold domestically in 2013.

Action measures to implement the strategy developed in this section take into consideration the following:

- continuous review and supplement national legislation with new provisions of Community legislation;
- introducing of measure ‘Use of advisory and consultancy measures for farmers’ as part of National Rural Development Programme (NRDP), from 2010;
- launching of the national information and promotion campaign conducted over several years, to inform consumers, schools and other key factors on the food chain about the benefits of organic farming; campaign will be conducted in collaboration with professional organizations;
- the specialists of advisory domain will be trained on organic farming;
- setting up of educational farms network;
- introduction of organic education discipline as part of secondary education system;
- introduction of organic farming specialization as part of agronomical university education system;
- contracting and financing of the research concerning this agricultural system through a Sectoral Plan of MARD based on specific objectives;
- development of scientific research in organic farming with the aim to provide specific technologies to producers by setting up of the organic farming departments as part of the branch institutes and resorts;

To promote organic farming were organized national and international events, publishing of advertising (Romania participated on international fair for organic products Bio Fach-Germany 2009 etc.) and training of participants in the organic farming chain.

Problems and constraints facing organic agriculture are:

- insufficient degree of coordination and unification of the main participants in the organic farming chain;
- insufficient promotion of the concept of organic farming concerning the benefits of organic farming practices;
- insufficient development of the administrative capacity at the central/regional/local level;
- low level of education activities, advisory, extension and vocational training;
- low level of the services development (specific inputs: fertilizers, pesticides, seeds, ingredients, s.o);
- market (domestic and international);
- market poorly represented (internal and external);

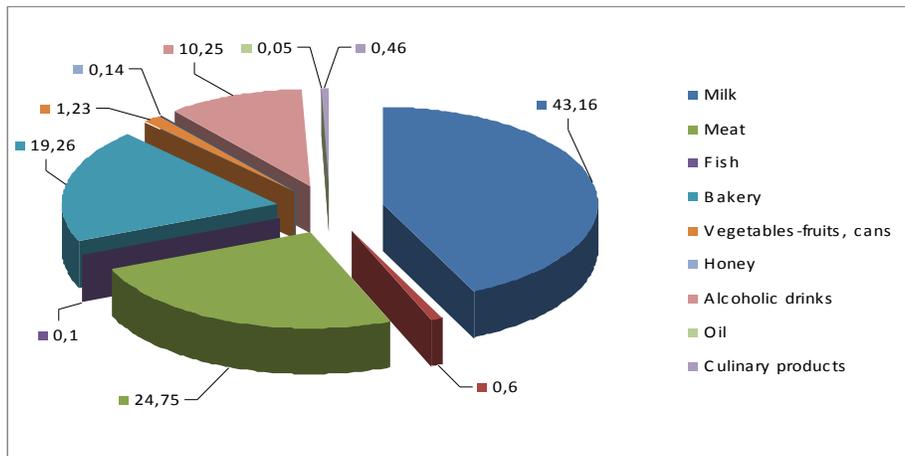
- insufficient incentive of the organic products export;
- low representation of the specific research programs on organic farming.

Traditional products

Taking into consideration the increasing importance of the traditional products, on October, 2008 has been set up the National Office of the Traditional Products and Organic, with the location in Brasov.

During the period 2005¹ - April 2009 has been tested 2,185 traditional products, out of which 1,143 during the period 2007 – 2009. The main categories of the traditional certificated products are those from milk, meat, bakery, drinks (as it is shown in figure bellow).

Share of the certificated traditional products at the national level, on products group



Challenges and shift to towards sustainable production and consumption are related to the synergy between sustainable use of natural resources and the search for efficient growth patterns. Should be more interconnected the management of natural resources and sustainable production and consumption, including sustainable industrial policy which will improve the environmental performance of products, increased demand for goods and more sustainable production technologies, and foster innovation. According to EU trends in sustainable development were formulated proposals to reform directives on environmental design and energy consumption is indicated on the label, and proposals to revise the Ecolabel and EMAS regulations. Directive on Integrated Pollution Prevention and Control (IPPC) is a key tool of sustainable production and eco-innovation.

¹ It begun traditional products certification

Conclusions

Close to the end of the first decade of the twenty-first century, after a long, traumatic transition to pluralistic democracy and a market economy, Romania still needs to overcome significant gaps relative to the other Member States of the European Union, while seeking to absorb and implement the principles and practice of sustainable development in the context of globalization, it outlines the premises of a uniform and inclusive vision created by implementation of the National Sustainable Development Strategy.

At three years since it became a member of the European Union, Romania begins its strategic approach to economic and social development within the Union's framework of values and rules. We need such a medium and long term vision, as we need to think concretely and objectively at our future and that of our children. Economic growth is the prerequisite for societal development. Yet it needs not be 'development at all costs' but one that is well balanced, that takes into consideration the environment and its resources, their capacity to regenerate or the possibility of replacing them with other resources.

The challenges in transport field, for Romania, are the modernization of urban infrastructure by developing a national impact study that takes into account the social and financial implications of implementation of such a system. It is clear outlined the necessity of a proper management for urban mobility, a multimodal approach of transport operations in order to improve traffic management and public awareness for the use of clean vehicles.

It's outlined the need to schedule actions in mainstreaming strategies on sustainable transport, spatial planning and appropriate land use. An efficient transport system represents an important component for the development of sustainable cities. A sustainable transport must be achieved for all transport modes, but only taking into account the principles of sustainable development. This development must have regard to improving links between cities by encouraging public transport services and management coordination, with the minimum conditions to ensure the general accessibility of public services for all citizens, paying special attention to vulnerable groups (children, elderly persons with reduced mobility). However, accessibility of public transport to areas with low population density and scattered core areas will be provided at minimum levels established.

Challenges associated with extractive industry highlight the need for efficient management of current operations by investing in new technologies that minimize direct and indirect impact on the environment and human health.

The use of clean technologies should be seen as an investment in the future which will allow future generations to grow without having to pay the costs of a polluted environment. Romania is affected by historical pollution from industrialized period when emphasis was placed on the development of polluting industries.

The national priority in the chemical field is to harmonize national legislation with EU regulations in the field. To identify existing gaps of infrastructures and legislation we need to assess the actual chemicals management system, using the procedure initiated by the Strategic Approach of International Chemicals Management (SAICM). Solutions in order to facilitate the human and financial resources allocating are essential, as also the revitalization of

environmental research sector regarding the on the environmental behaviour of chemicals and their environmental effects.

For waste, is indicated and necessary to develop and apply a particular strategy which will follow an effective and selective waste collection, followed by recycling, where appropriate, with the main aim to reduce the total amount of waste disposed by landfilling. This strategy should also regard the closure of the product life cycle which have become waste by ensuring markets for recycled products.

The most significant constraint in the waste management field is represented by the economic changes and funding opportunities. Potentially valuable resources for recycling and composting are send it to the final warehouse and one of Romania's challenge to diminish this loss is to change the mentality of the citizen, government and economic sector to an environmentally friendly behaviour.

The recent multiple crises, caused by the financial and economic system, could offer the occasion to re-examine the transition to a green economy by ensuring a green growth. We should avoid the pressures generating on the natural environment and focus our efforts towards sustainable use of natural resources and reintroduce on the economic system valuable resources and energy that are incorporated into different products and waste. One of the key challenges to change toward a sustainable consumption and production is the implementation of the "green marketing" concept, within the entire products' lifecycle and in all the component of the marketing mix and develop an efficient scheme for business to be more involved in the implementation of green economy, through re-using in the economic cycles of the post-consumption materials and energy, by re-thinking green management and marketing strategies. The consumers will be encouraged to buy ecofriendly products, the non-polluting technologies will be encouraged and in calculating the profit yielded by any economic activity, there will be a requirement to include also the potential costs the society might pay at a certain point in the future.

The synergies between sustainable use of natural resources and the objectives of NSDS regarding sustainable consumption and production are determining an integrated approach to draw up national action plans for the following areas: *the national plan for sustainable production and consumption* and *the national plan for sustainable use of natural resources*.