

2011 Survey of resource efficiency policies in EEA member and cooperating countries

COUNTRY PROFILE:

Slovakia



Country information on resource efficiency policies,
instruments, objectives, targets and indicators,
institutional setup and information needs

May 2011

This country profile is based on the information provided by Tatiana Gustafikova from the Slovak Environmental Agency. The information is current as of February 2011.

This country profile was prepared as part of the EEA-ETC/SCP 2011 survey of resource efficiency policies, which aims to collect, analyze and disseminate information about national experience in the development and implementation of resource efficiency policies in EEA member and collaborating countries. The work resulted in the following outcomes:

- **Short 'country profiles' (this document)** - self assessments prepared by countries, describing the current status of resource efficiency policies, including key strategies and action plans, policy objectives, instruments, targets and indicators used, institutional setup and information needs.
- **Summary report** - prepared by the EEA and ETC/SCP, the report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies information needs and knowledge gaps.
- A session on resource efficiency policies during the 2011 EIONET workshop to discuss further needs and to facilitate information sharing and experience exchange among EIONET members.

More information about resource efficiency policies, including an analytical report "Resource efficiency in Europe" and thirty one country profiles, can be found at:

<http://www.eea.europa.eu/resource-efficiency>

1. Resource use in Slovakia – facts and figures

1.1 General Facts and figures about the country



Source:
<https://www.cia.gov/library/publications/the-world-factbook/index.html>

Population (projected inhabitants for 2010) [1]	5,424,925
➤ Percent of total EEA-32	0.93%
Surface area (km ²) [2]	49,035
➤ Percent of total EEA-32	0.86%
GDP at market prices – Purchasing Power Standard – Current Prices (Million Euro, 2009) [3]	93,371.5
➤ Percent of total EEA-32 (minus Liechtenstein)	0.72%
GDP per capita in Purchasing Power Standards (PPS) [4] EU27=100 (2009)	73
Urban population (rate of pop., 2009) [5]	56.7%
Main economic sectors and their share in total GDP (2009 est.) [2]	
Agriculture	2.7%
Industry	35.6%
Services (2010 est.)	61.8%
EU accession date [6]	1.5.2004

Additional relevant background information on Slovakia (and on 37 other EEA member and cooperating countries) can be found at the SOER2010 website:

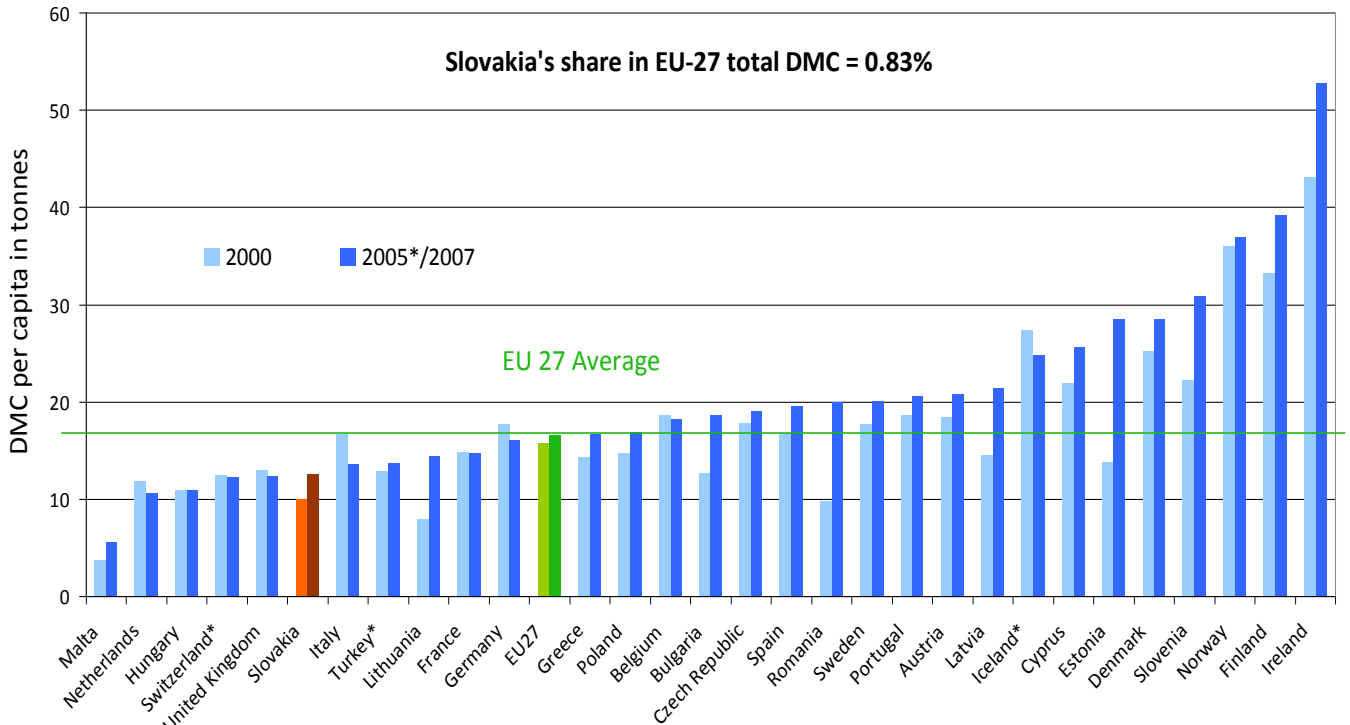
<http://www.eea.europa.eu/soer/countries/sk>

Factsheet on national waste policies for Slovakia is available at:

http://scp.eionet.europa.eu/facts/factsheets_waste/2009_edition/factsheet?country=SK

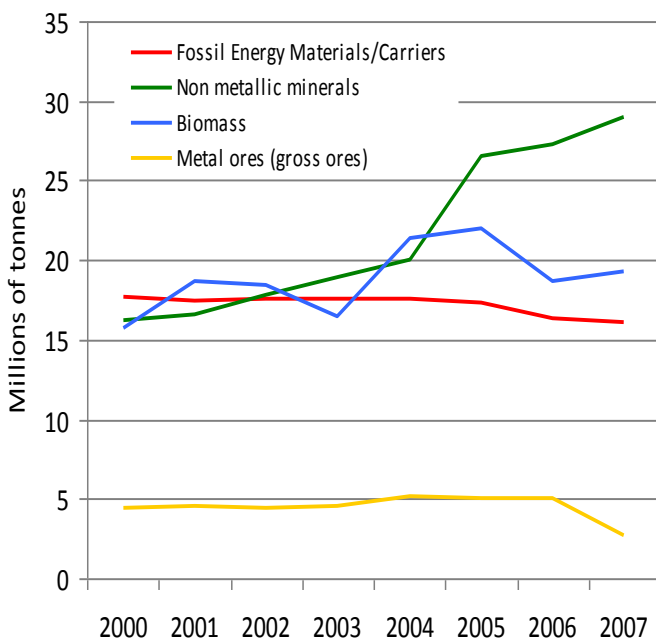
1.2 Facts and figures on resource efficiency for Slovakia

Use of resources per capita 2000 and 2007 [tonnes DMC/capita]



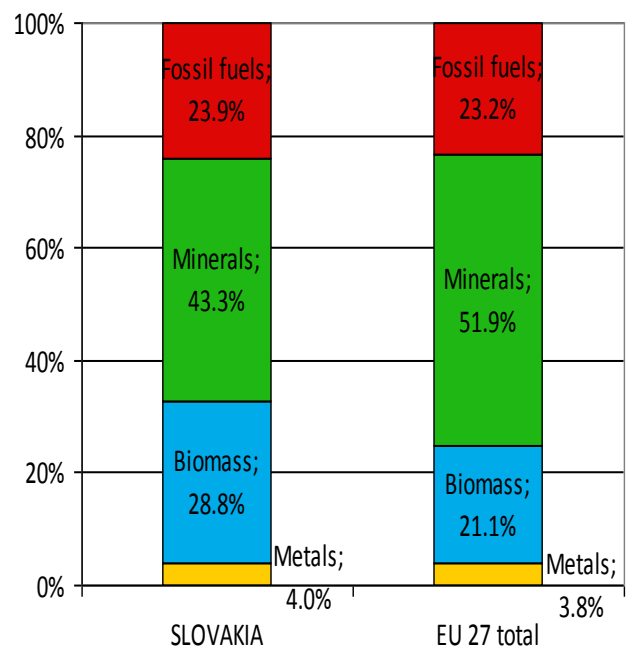
Source: Eurostat, OECD and Total Economy Database [7] * = For these countries data is for 2000 and 2005

Domestic Material Consumption by category over time, Slovakia



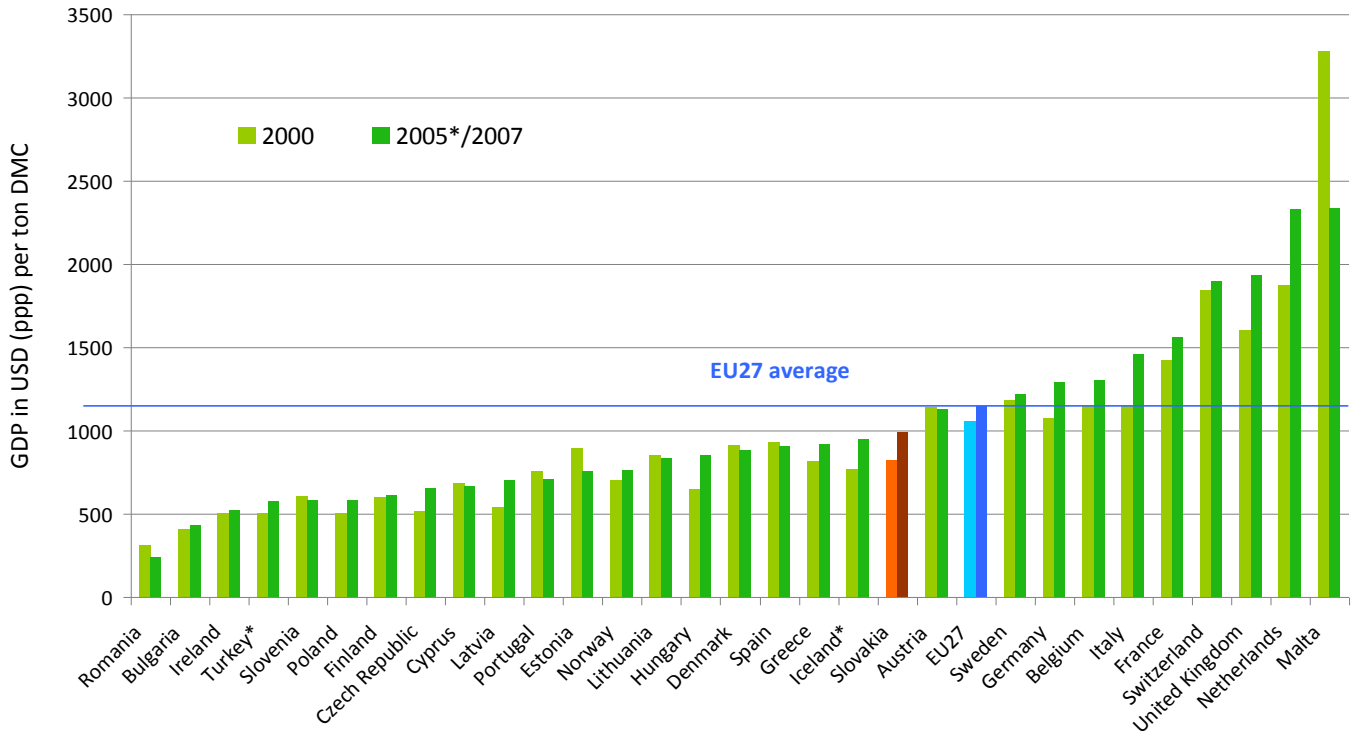
Source: Eurostat [8]

Breakdown of DMC by type of materials (2007)



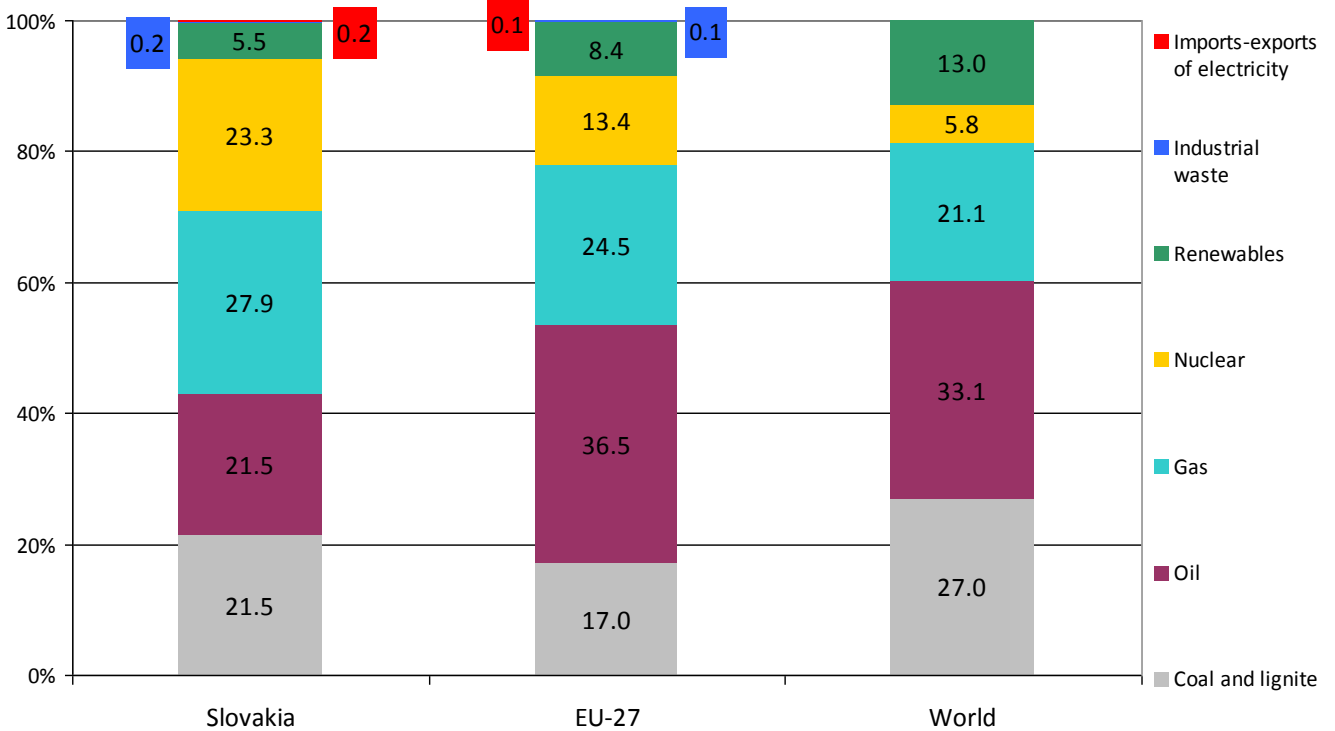
Source: Eurostat [8]

Material productivity 2000 and 2007 [USD ppp/ton DMC]



Source: The Conference Board, Total Economy Database, Eurostat [9]
 * = For these countries data is for 2000 and 2005.

Primary energy consumption



Source: Eurostat [10]

2. Evolution and main drivers for the development of resource efficiency policies

The main drivers for the implementation of resource efficiency policy in Slovakia are ensuring security of resource supply, the concepts of sustainable development and the activities within EU.

The challenge for Slovakia is to apply the principles of SD in every day use, assess the planned and realised activities through the SD criteria and the basic principles of the resource efficiency set in the National SD Strategy (2001) and the National SD Action Plan (2005-2010)" <http://www.tur.vlada.gov.sk/637/trvalo-udrzatelny-rozvoj.php>, English version available at <http://www.tur.vlada.gov.sk/785/the-slovak-republic-action-plan-for-sustainable-development-for-the-years-2005--2010.php>

Additional drivers are the international targets concerning the use of renewable resources, reducing CO₂ emissions, energy security, security of supply and access to resources and other tasks.

3. Overall Policy Approach for Resource Efficiency

Slovakia does not currently have a dedicated strategy or action plan on improving resource efficiency, but resource efficiency is address in the following documents:

The Slovak Republic Strategy for Sustainable Development

The Slovak Strategy for Sustainable Development was elaborated in 2001. One of the main goal of the strategy is reduction of energy and material consumption.

<http://www.tur.vlada.gov.sk/784/the-slovak-republic-strategy-for-sustainable-development.php>

The Slovak Republic Action Plan for Sustainable Development for the years 2005-2010

The Action Plan for Sustainable Development emphasizes priorities and assignments resulting from the Slovak National Strategy for Sustainable Development.

<http://www.tur.vlada.gov.sk/785/the-slovak-republic-action-plan-for-sustainable-development-for-the-years-2005--2010.php>

Position of the Slovak Republic to the national targets of Strategy Europe 2020

The government of the Slovak Republic had set up the national targets for the Strategy Europe 2020.

<http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=18151>

National Reform Programme for 2011-2014

The National Reform Programme of the Slovak Republic 2010 is the first programme under the new EU Strategy Europe 2020. As requested by the European Commission, this draft NRP mainly identifies macro-structural bottlenecks to growth and proposes measures to address them, in line with the Europe 2020 Integrated Guidelines. It was prepared on the basis of documents and information provided by individual ministries, takes into consideration short-term structural measures approved by the Slovak Government in September 2010, and in line with the Manifesto of the Government of the Slovak Republic.

<http://www.finance.gov.sk/en/Default.aspx?CatID=450>

Innovation Strategy of the Slovak Republic for 2007 to 2013

The main priority of the Innovation strategy is creating conditions for increasing innovation activities.

Innovation policy of the Slovak Republic for the years 2008-2010

The main goal of the Innovation policy is the elaboration of the Innovation Strategy into concrete measures and tasks.

Development Strategy of the Slovak Society

Long-term development strategy of the Slovak Republic up to the year 2030.

<http://www.vlada.gov.sk/20610/strategia-rozvoja-slovenskej-spolocnosti.php?menu=1644>

Main priorities concerning resource efficiency:

1. High quality of environment
2. Protection and sustainable use of natural resources, reduction of waste generation
3. Decreasing the demand of the energy and natural resources, increasing the efficiency of Slovak economy
4. Decreasing the share of non-renewable sources utilization with sustainable renewable sources utilization

4. Strategies or action plans to improve resource efficiency for individual economic sectors, products or product groups

Energy

A strategic document for the energy sector is **The Energy Policy (2006)**, which sets out principal goals and frameworks of power industry development in a long term perspective (for 25 years). The Energy Policy is a part of national economic strategy of the Slovak Republic, since ensuring maximum economic growth while retaining sustainable development is conditioned by reliability of energy supplies at optimum cost and adequate environmental protection.

The Concept of Using Renewable Energy Sources (RES) in Slovakia, approved in 2003, has created a base frame of development and promotion of using RES in all sectors in Slovakia.

The Action Plan for Renewable Energy Sources 2002-2012 adopted in 2002, detailed elaborated potential for development of RES and targets of RES policy.

The Report on progress in the development of renewable energy including the setting of national targets for using renewable energy sources (2004) informs of using RES, their potential and barriers to additional utilization. Report sets national indicative targets for energy production from RES.

The Slovak Government approved in 2004 **The concept of using agricultural and forestry biomass for energy purposes**, which is used to monitor the impact of existing legislation to promote renewable energy sources and biomass.

The **National Program for development of biofuels (2005)** covers indicative targets expressed by reference values for years 2006 – 2010 and at the same time it creates stimulative economic and legislative conditions for achievement of indicative targets introduced in Directive 2003/30/EC.

In April 2007 the Slovak government approved the **Strategy for a Higher Utilization of Renewable Energy Sources in the Slovak Republic**, which contains targets for the use of renewable energy sources to be achieved in electricity and heat generation by 2010 and 2015. These targets have been set based on the potential of individual energy sources, current utilization levels and their expected use in the future. In order to achieve these targets, Slovakia will carry out financial and legislative measures as well as measures in the field of education, science and research on RES.

The Biomass Action Plan for 2008 – 2013 (2008). The goals of the plan clearly highlight the importance of biomass availability and the real possibilities of Slovakia, the problems related to the practical use of biomass and the implementation of the commitments of Slovakia in the field of RES. Part of the material also includes support systems that are currently used by different sectors in increasing the share of renewables in the market.

In October 2010 the Slovak government prepared the **National Renewable Energy Action Plan** in which national targets for share of RES in a transport sector and energy sector in 2020 are specified.

Electricity produced from RES is comprehensively covered by **Act No 309/2009 on the promotion of Renewable Energy**, which was approved in June 2009. That law has improved the functioning of the electricity market in relation to renewable energy and created a stable business environment. It has delivered a long-term guarantee of feed-in prices for 15 years and has guided the path followed in the production of electricity from renewable energy sources by encouraging the construction of small and decentralized facilities.

Plans for local RES development are set out in **Concepts of Municipal Development in Heat Energy**. These are sectoral concepts drawn up by municipalities and are used when preparing a municipality's spatial planning documentation.

The Ministry of Economy and Construction **subsidizes biomass boilers and solar panels** for households from the central government budget. Installation must meet specified technical parameters.

Another of the key pillars of sustainable development is decreasing energy intensiveness, which can be given by increasing energy effectiveness. In this field the following strategies and plans are adopted in Slovakia:

Energy Security Strategy of the SR (2008) aimed to achieve competitive power engineering, ensuring safe, reliable and effective supply of all energy forms at reasonable prices taking into account consumer protection, protection of environment, security of supply and technical safety.

In 2007 was approved **The Concept of Energy Efficiency by 2016**. A main goal of the concept is reduce energy intensiveness to the average EU -15 level, to create a motivational background as well as to support sustainable resolutions and introducing progress innovation and energy efficient technologies to all sectors of the Slovakian economy.

The aim of the **Strategy of the state housing policy until 2015** is to develop a functional and regularly updated register of the existing housing stock, to adopt legal amendments of the current framework conditions of supply of energy for households, especially in terms of price and their breakdown in order to protect the end-users, to adopt and implement measures to reduce energy consumption in buildings construction, heating systems, hot water and to increase the utilization of non-traditional sources and RES.

Strategy of the energy efficiency in buildings until 2010 with outlook up to 2020 was adopted in June 2008 (Resolution of the Government of the Slovak republic No. 384 of 11 June 2008). The Strategy establishes the necessary institutional, technical and incentive framework for improving energy efficiency in buildings.

In May 2011 the second **Energy Efficiency Action Plan for 2011 – 2013** (2. EEAP) was adopted, which follows the first **Energy Efficiency Action Plan for 2008 – 2010**. The second plan is evaluating the 1st plan, quantifying intermediate targets by the year 2013, defining the existing as well as new measures of energy efficiency and financial and legal tools for achieving the national and European energy saving targets up to the Strategy Europe 2020 like a strong driver in this field. This plan identifies the public sector and buildings as one of the key sectors in meeting defined targets.

Transport and mobility

Operational Programme Transport 2007 – 2013 (2007) represents a programme document of the Slovak Republic for drawing on the EU funds in the transport sector for the years 2007 to 2013. (full version on website: <http://www.telecom.gov.sk/index/index.php?ids=17111>)

Programme of supporting Intelligent Transport Systems development (National system of transport information) – 2008, creates clear benefits in terms of transport efficiency, sustainability, safety and security, whilst contributing to the EU Internal Market and competitiveness objectives.

Extend public passenger transport instead of individual transport (2009). In the scope of passenger transport, the government support the extension of public passenger transport instead of individual transport.

Waste Management

Waste management Programme for 2006-2010 is the basic strategic plan for waste management. It includes targets for the disposal and recovery of waste according to waste categorisation as well as goals for selected waste flows.

- Used tires
- Paper waste
- Glass waste
- Plastics waste
- Biodegradable waste
- Textile waste
- Construction waste
- Packaging waste.

The new WMP for 2010 - 2014 is under preparation. The proposal of new Waste act is also under preparation and will include fundamental changes in hierarchy of waste management (according the Waste Directive). The new Programme of prevention of waste generation is under preparation also.

Forestry

Conception of Agriculture and Forestry development 2007-2013: part Forestry. This prioritises: supporting the development of green technologies, supporting the use of wood for energy purposes, support of ecological forest management, improving protective functions of forests - protection of soil and water resources, maintaining and improving forest condition, ensuring the non-productive functions of forests.

National Forest Programme of the Slovak Republic has the strategic goal to achieve ecological forest management. The main priorities are to support nature friendly forest management, support the development and use of environmentally friendly technologies and techniques, support the conservation, improvement and enhancement of biodiversity and support the use of forest biomass for energy purposes.

Water management

River Basin Management Plan of the Slovak Republic (Danube River Basin District and Vistula River Basin District), describes the formation process and characterization of river basin areas, results of impacts of human activities on water status, evaluation of status of waters, measures of achievement of the WFD objectives, which are included in the programme of measures.

Agriculture

The Biomass Action Plan for 2008 – 2013 (2008). The goals of the plan clearly highlight the importance of biomass availability and the real possibilities in Slovakia, the problems related to

the practical use of biomass and the implementation of the commitments of Slovakia in the field of RES. The part of the material also includes support systems that are currently used by different sectors in increasing the share of renewable in the market.

Industry:

Development of purposes, priorities and goals of the national development strategy for sustainable development in industrial policy. One of the main goals of the national development strategy for sustainable development in industrial policy is to increase effectiveness of using material and energy sources. The Strategy for SD in industrial policy contains, for example, a list of programmes supporting sustainable development in industry, and the development and application of environmental technologies in industry. *(2004 – 2013 – actual industrial policy)*.

Innovation strategy in the manufacturing sector. Innovation strategy in manufacturing includes a set of proposals for solution innovation in manufacture. There are for example development of new quality of steel for applications enabling decreasing steel stocks in industrial and other applications. (2007)

Action Plan for Energy Effectiveness for 2008 – 2010 (2007). Increase of total energy efficiency in industry.

Proposal for Innovation Policy of the Ministry of Economy of the Slovak Republic for the years 2011 – 2013 Innovation policy for industry, energy, energy effectiveness, extraction of solid propellant, oil, gas and raw materials. *(The Innovation Policy will be approved by the government)*

Raw materials policy (2004), ensures effective exploration and use of the minerals meeting all criteria of sustainable development.

Other policies

National action plan for green public procurement for the years 2007 – 2010. (NAP GPPI) The NAP on GPP proposes priorities, objectives and activities to achieve the implementation of environmentally friendly products, technologies and Environmental Management Systems in public procurement under the requirements of the European Commission. The preparing of the second **National action plan for green public procurement for the years 2011 – 2015** (NAP GPP II) is planned. (October/November 2011).

Other tools from environmental policy that contribute to resource efficiency through support of environmental technologies is the EU Environmental Technologies Action Plan. This has been adopted at national level of the Slovak Republic. **Roadmap for implementation of the Environmental Technologies Action Plan (ETAP I) in Slovak republic (2005)** (Government Resolution No. 1046/2005), It includes 12 activities, that were evaluated in 2008 and on the basis of which was established an update of national ETAP.

Updating of the **Roadmap for implementation of the Environmental Technologies Action Plan (ETAP II) in Slovak republic** (2008) (Government Resolution No. 19/2008) includes 11 activities. To

support communication in relation to the implementation of ETAP I and ETAP II a Working Group was created for ETAP in the Ministry of the Environment, composed of representatives of central government bodies, industry and other interested parties.

5. Individual types of resources identified as priority for national or sector-specific resource efficiency policies

Examples of types of resources that are identified and targeted by sector-specific strategies:

Renewable energy sources:

The Concept of Using Renewable Energy Sources (2003) includes:

- potential utilization of RES (utilizable and nonutilizable technical potential) of RES: biomass, wastes, biofuels, geothermal energy, solar energy, wind energy;
- analyzes the present state: support REZ on national level, international commitments, legislative instruments to support of RES utilization, financing possibilities, knowing and awareness, research and development, positive aspects and barriers;
- challenges and targets;
- implementation mechanism.

Action Plan for Renewable Energy Sources 2002-2012 (2002):

- elaborates the potential of renewable energy development, renewable energy policy objectives in relation to the general policy of renewable energy along with the policy of direct support, financing renewable energy projects and renewable energy policy implications;
- high priority: biomass utilization in central heating systems and enhance greater awareness of the reliability of renewable energy technologies in general.

The Report on progress in the development of renewable energy including the setting of national targets for using renewable energy sources (2004) includes:

- initial situation in Slovakia - indicative target, legislative, barriers, supporting measures, draft measures;
- a state of utilization of individual RES: water energy, geothermal energy, wind energy, solar energy, biomass, biogas, summary of the actual state;
- Targets: solution of variants, re-evaluation of the indicative target under EÚ directive, national indicative targets by 2010: 19 % production electricity from RES.

Strategy for a Higher Utilization of Renewable Energy Sources in the Slovak Republic (2007):

- inventory of contemporary knowledge on the potential of individual RES (total and technical), draft possibilities of commercial utilizing technologies, the proposed targets: to achieve 4 % renewable share of total energy consumption in 2010 and 7 % by 2015, 19 % production electricity from RES in 2010);
- measures for achieving the targets (assumed production and assessment of claim).

National Renewable Energy Action Plan (2010):

- summary of national renewable energy policy;

- expected final energy consumption 2010 – 2020;
- renewable energy targets and trajectories (national overall target, sector targets and trajectories);
- measures for achieving the targets (support schemes to promote the use of energy from RES in electricity, in heating and cooling and in transport);
- assessments: total contribution expected of each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from RES in electricity, heating and cooling and transport;

Biomass:*The concept of using agricultural and forestry biomass for energy purposes:*

- resources and energy potential of biomass produced in agriculture sector: agricultural biomass, forest biomass;
- the actual state of biomass utilization for energy purposes;
- barriers of implementing of biomass utilization for energy purposes (technical, economic, legislative and staffing barriers);
- drafts of the concept of the utilization and energy potential of agricultural biomass: utilization of agricultural biomass in agricultural sector and its utilization on the biomass market.

The Biomass Action Plan for 2008 – 2013 (2008):

- includes targets for biomass energy utilisation in Slovakia: reviewing of biomass availability (agricultural biomass, animal excrement, forest biomass, fuel from forest biomass, resources of biomass from wood-processing industry), determination the priority of biomass utilisation.

Energetic raw materials:*Energy Security Strategy of the SR (2008):*

- EU and Slovak energy policy and legislation;
- possible development scenarios in term of energy security of SR (coal, oil, gas, RES, uranium, heat, electricity, energy efficiency);
- possible impact of this strategy;
- draft of the main measures to ensure the energy security.

The Concept of Energy Efficiency (2007):

- provides a framework for activities on energy efficiency with a view to 2016;
- the main objectives: the gradual reduction of energy consumption to the level of the EU-15 Member States, to create a motivation background for the effective behavior of inhabitants and market participants, to promote sustainable solutions and innovations, and introducing advanced energy efficient technologies in all sectors of economy SR.

The Action Plan for Energy Efficiency for 2011 – 2013 (2011 – the main second implementation tool of The Concept of Energy Efficiency):

- follows the first Action plan for Energy Efficiency for 2008 – 2011 and evaluates measures proposed in it;

- defines national intermediate targets for the next three years : Increase of total energy efficiency in public sector, increase of total energy efficiency in industry, Increase of total energy efficiency in buildings, push for low energy and passive house standards with new buildings, increase of total energy efficiency in transport; 2,7 % reduction of final energy consumption by 2013 (8 362 TJ);
- sets financial and legal tools, assesses existing and new energy efficiency measures in individual sectors of economy for 2011 – 2013 (public sector (26,7 %), the buildings (21 %) and industry (29,7 %) play a main role in energy efficiency saving targets for this period).

MoE SR and SIEA is currently evaluating 1NEEAP and preparing the second Energy efficiency action plan for 2011-2013 (2NEEAP), which shall be adopted in April 2011.

Strategy of the state housing policy until 2015

The aim of the Strategy is to:

- develop functional and regularly updated register of the existing housing stock,
- adopt legal amendments of the current framework conditions of supply of energy for households, especially in terms of price and their breakdown in order to protect the end-users,
- adopt and implement measures to reduce energy consumption in buildings construction, heating systems, hot water and to increase the utilization of non-traditional sources and RES.

Strategy of the energy efficiency in buildings until 2010 with outlook up to 2020

The Strategy was adopted in June 2008 (Resolution of the Government of the Slovak republic No. 384 of 11 June 2008). The Strategy establishes the necessary institutional, technical and incentive framework for improving energy efficiency in buildings.

Raw materials - minerals:

Raw materials policy (2004)

- to ensure effective exploration and use of the minerals with meeting all criteria of sustainable development.

6. Strategic objectives, targets and indicators on resource efficiency

Example of strategic objectives and targets:

Energy

- Decrease of the use of fossil fuels (Energy Security Strategy of the SR (2008));
- Renewable's share of total energy consumption 4 % in 2010 and 7 % by 2015 (Strategy for a Higher Utilization of Renewable Energy Sources in the Slovak Republic (2007));
- Increase of total energy efficiency in industry (Action Plan for Energy Efficiency for 2011 – 2013);
- Increase of total energy efficiency in buildings (Action Plan for Energy Efficiency for 2011 – 2013);
- Push for low energy and passive house standards with new buildings (Action Plan for Energy Efficiency for 2011 – 2013);
- Increase of total energy efficiency in public sector (Action Plan for Energy Efficiency for 2011 – 2013);
- 2.7 % (8 362 TJ) reduction of final energy consumption by 2013 (Action Plan for Energy Efficiency for 2011 – 2013)
- Increase the total share of RES (Package of measures aimed at achieving the targets of the Kyoto Protocol);
- 5.75 % share of biofuels on total energy consumption of fuels in 2010 and 10 % share in 2020 (National Program for development of biofuels (2005), (Energy Security Strategy of the SR (2008));
- 19 % production electricity from RES in 2010 (Strategy for a Higher Utilization of Renewable Energy Sources in the Slovak Republic (2004));
- Decrease energy intensiveness to level EU – 15 states (Energy Security Strategy of the SR (2008).

Waste

- Achieve for the material recovery 70 % of total generated waste in 2010 (WMP 2006-2010);
- Increase energy recovery of waste to 15 % of total generated waste in 2010 (WMP 2006-2010);
- To minimize the amount of the landfilled waste to 13 % of total waste generated in 2010 (WMP 2006-2010);
- In 2010 incinerated waste only with energy recovery (WMP 2006-2010).

Surface water, groundwater and waste water

- to ensure the connection to public sewerage network of all inhabitants living in the agglomerations with more than 10 000 inhabitants by the end of 2010;
- to ensure discharge and full biological treatment of waste water in the agglomerations with more than 2 000 inhabitants by the end of 2015;
- to implement the measures to protect, enhance and restore the surface water bodies, with the aim to achieve good surface water status by December 2015;

- to implement the measures to protect, enhance and restore the groundwater bodies and to ensure the balance between abstractions and recharges, with the aim to achieve good status of groundwater by December 2015;
- to achieve the compliance with all standards and objectives for water related protected areas by the year 2015;
- to implement the measures with the aim to reduce pollution by the priority substances gradually and to cease or phase out emissions, discharges and losses of the priority hazardous substances by December 2020.

GHG emissions

- to reduce GHG emissions by 8 % during the period 2008–2012 related to the base year (1990) level - the Kyoto Protocol
- 20 % reduction (based on 1990) of GHG emissions until 2020 - Europa 2020 strategy

Biomass

- Financial support for biomass energy utilisation;
- Introduction of technologies aimed at biomass energy utilisation;
- Support of science, research and education in the field of biomass energy utilisation.

Indicators used in the indicator reports

Example of SD indicators

(complete set, only in Slovak <http://enviroportal.sk/indikatory/kategoria.php?kategoria=2> :)

- Change in land use
- Soil contamination
- Fertiliser consumption
- Manure consumption
- Utilisation of forest resources
- Percentage of managed forest land
- Surface water abstraction by utilization purposes
- Groundwater abstraction by utilization purposes
- Specific water consumption per capita
- Waste recovery
- Percentage of separated waste to total waste amount
- Primary production of renewable energy resources
- Contribution of electricity from renewable resources to total electricity consumption
- Environmental product labelling

Example of other indicators – sectoral and environmental

(complete set, only in Slovak <http://enviroportal.sk/indikatory/schema.php?schema=32>)

- Domestic used extraction
- Domestic Material Consumption
- Direct Material Input (DMI)
- DMC/GDP
- Consumption of solid fuels by industry
- Eco-efficiency of industry with regard to consumption of selected fuels

- Eco-efficiency of transport
- Eco-efficiency with regard to fuel and energy consumption
- Energy Efficiency – Final energy consumption/Gross final energy consumption
- Eco-efficiency of agriculture with regard to fuels, energy and electricity consumption
- Environmental efficiency of forestry – biomass consumption

7. The institutional setup for the development and implementation of resource efficiency policies

Primary responsibility for the aforementioned strategies, action plans and policies lies with Ministry of Economy, Ministry of Environment, Ministry of Agriculture and Rural Development, and their special organisations, for example Slovak Environmental Agency www.sazp.sk Slovak Innovation and Energy Agency <http://www.siea.sk/>, with cooperation with other ministries. A working Group for ETAP in the Ministry of the Environment, composed of representatives of central government bodies, industry and other interested parties to support communication in relation to implementation of ETAP I and ETAP II

The Ministry of Economy of the Slovak Republic takes initiatives driven by economic and commercial activities (industrial policy, construction, energy and raw materials - resource, material and energy efficiency).

The Energy sector (including fossil fuels) is under responsibility of the Ministry of Economy, which prepares Energy policy, concepts, strategies, action plans etc. in collaboration with other national authorities (the Ministry of Environment, the Ministry of Agriculture and Rural Development, agencies, Self governing regions). The **Slovak Innovation and Energy Agency**, the advisory body of the Ministry of Economy, plays a key role in the development and implementation of resource efficiency policies.

8. Selected policy instruments or initiatives on resource efficiency presented in more detail

1. Environmental management

One of the tools defined in the Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy (COM 2008/397) for strengthening environmental potential of industry is a **Community eco-management and audit scheme (EMAS)**. Regulation (EC) 1221/2009 of the European Parliament and Council Regulation on the voluntary participation of organizations in a Community eco-management and audit is carried through in the Slovak Republic **Act no. 491/2005 on environmental verification and registration of organizations and the Ministry of Environment Decree no. 606/2005**.

In Slovakia, five organizations – 3 of manufacturing and 2 in professional, scientific and technical activities – have been registered in EMAS by 31st December 2010. The table provides examples of environmental targets set by organization.

Indicator	Environmental target	Number of organizations applying an indicator
energy efficiency	Reduction of energy consumption	1
	Reduction of energy consumption on days off work	1
	Reduction of energy consumption for lighting	1
material efficiency	Enhance oil recovery	1
	Reduction of gas consumption	2
water	Reduction of water consumption	1
	Replacement of drinking water for technological purposes by utility water	1
waste	streamlining the collection and waste separation	2
	reduce the generation of municipal waste	1

Implementation of EMAS in Slovakia supports the Operational Programme "Competitiveness and Economic Growth (OP)" managed by the Ministry of Economy through the Priority Axis 1 - Innovation and Growth Competitiveness, Measure 1.3 Support for innovation activities in enterprises.

2. Environmental labelling

The National environmental label scheme, which awards the environmental label "**Environmentally friendly product**", takes into account efficient use of natural resources in developing environmental criteria in the special conditions for each product group. In 1997 Ministry of Environment of the Slovak Republic launched the National Program for National Evaluation and Labelling of products. **Act No. 469/2002 on environmental product labelling, as amended**, from the 1st December 2002 regulates the conditions and procedure for granting national environmental label "Environmentally friendly product". The label is currently awarded to 146 products.

3. Environmental Technologies

Within the frame of ETAP I and ETAP II were realized following activities:

- **Support for research and development of environmental technologies**
 - Ministry of Education in cooperation with the Agency for Research and Development supported the realization of 24 projects with a total of €1 610 155.

- **Support of eco-design**

- The National Council of the Slovak republic approved act No. 665/2007 on environmental design and use of energy-using products /Act on Eco-design.
- Revision and amendment of Act of the National Council of the Slovak republic No.264/1999 on technical requirements for products and conformity assessment and on change and amendment of certain acts Ministry of Economy adopted 9 executive measures to Directive 2005/32/EC in 2009.

- **Support of eco-innovation projects**

- Environmental Fund supported 37 projects through grants of 1 866 662 €
- Recycling Fund supported 18 projects by total of 1 524 244 €
- In 2008-2009 the Recycling Fund supported 2 600 178 tonnes of waste for processing and 166 000 kilograms of vehicles for recycling
- The initiative JEREMIE was allocated 158 000 000 € from ERDF and 27 882 353 € from state budget.

- **Support of higher use of renewable energy sources**

- According to Government decree No. 108 from 4 February 2009 “Long-term strategy of use of agricultural and non-agricultural crops for industry purpose” 19 projects were approved with overall allocation of 50 017 243 €. These were supported within the frame of Operation programme of Environment targeting the use of renewable energy sources.

4. Education

The Slovak Environmental Agency, in cooperation with British experts, prepared the innovation school programme named **Ecological footprint**. The programme is aimed at all kindergartens, elementary and secondary schools. The programme takes place in the interactive surroundings of www.ekosptopa.sk. The base is the internet calculator of school ecological footprint in 8 categories of consumption

- Energy
- Heating
- Water
- Food
- Waste
- Transport
- Buildings
- Shopping

This programme is modern tool for environmental education and is currently used in 478 schools from SR.

5. Research and Development

The scientific project supporting by Slovak Research and Development Agency <http://www.apvv.sk/agentura?lang=en>

Material flows analyse in management of natural sources focusing on energy utilisation of agricultural biomass (2008 – 2010)

Main objectives of the projects are:

- to elaborate the study on MFA indicators development in the SR, based predominantly on methodological guideline of the Eurostat;
- search for application of the results obtained in policy-making process (e.g., under the process of strategic/conceptual documents developed related to the issue of natural resources management and its protection, as well as in the field of monitoring and evaluation of sustainable development and Lisbon process in the SR),
- to analyse and to make a comparison of material flows in the SR and the CR after the splitting of the C-SFR: which are the consequences of different starting point of these economies and the different reforms adopted,
- to determine potential of agriculturally used biomass for energetic purposes in specific regions of the SR with help of created methodology.

The organisations involved in this project are: Slovak Agricultural Research Centre – Grassland and Mountain Agriculture Research Institute, Slovak Environmental Agency and Soil Science and Conservation Research Institute.

9. Topics of interest and information needs for follow up work

- Framing national resource efficiency programmes.
- Sharing of good practices and experiences from the national resource efficiency strategy setting and implementation to sector strategies.
- Indicators aiming to the resource efficiency.
- Institutional setup for the development and implementation of resource efficiency policies.

10. References

10.1 Facts and figures about the country

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<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb010&plugin=0>

[5] World Bank, Migration and Remittances Factbook 2011

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DMC data from Eurostat Database, Material Flow Accounts, and OECD, Population data from Eurostat Database, Population, and The Conference Board — Total Economy Database, September 2010. www.conference-board.org/data/economydatabase/

[8] Eurostat

Material flow accounts, env_ac_mfa, uploaded June 2010

[9] The Conference Board, Total Economy Database, Eurostat

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[10] Eurostat

Energy statistics, uploaded Oct 2010

<http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/database>

[11] Total Economy Database, IFF Database. WI Database, Eurostat, OECD, IEA Database

GDP data and Labour data from The Conference Board — Total Economy Database, September 2010, www.conferenceboard.org/data/economydatabase/; DMC data for 1970–1999 (EU-15): IFF database; DMC data for 1992–1999 (EU-12): WI database; DMC data for 2000–2007: Eurostat Database on Material Flow Accounts except Turkey: OECD database; TPES data from IEA Database

10.2 Resource Efficiency Policy References

National SD Action Plan (2005-2010)

<http://www.tur.vlada.gov.sk/637/trvalo-udrzatelny-rozvoj.php>

English version available at <http://www.tur.vlada.gov.sk/785/the-slovak-republic-action-plan-for-sustainable-development-for-the-years-2005--2010.php>

The Slovak Republic Strategy for Sustainable Development

<http://www.tur.vlada.gov.sk/784/the-slovak-republic-strategy-for-sustainable-development.php>

The Slovak Republic Action Plan for Sustainable Development for the years 2005-2010

<http://www.tur.vlada.gov.sk/785/the-slovak-republic-action-plan-for-sustainable-development-for-the-years-2005--2010.php>

Position of the Slovak Republic to the national targets of Strategy Europe 2020

<http://www.rokovania.sk/Rokovanie.aspx/BodRokovaniaDetail?idMaterial=18151>

National Reform Programme for 2011-2014

<http://www.finance.gov.sk/en/Default.aspx?CatID=450>

Development Strategy of the Slovak Society

<http://www.vlada.gov.sk/20610/strategia-rozvoja-slovenskej-spolocnosti.php?menu=1644>

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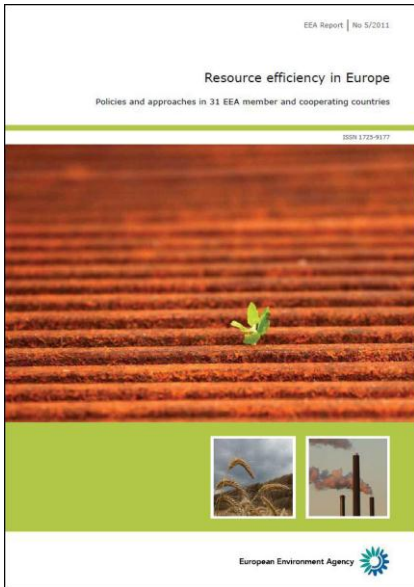
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SD indicators

<http://enviroportal.sk/indikatory/kategoria.php?kategoria=2>

Sectoral and environmental indicators

<http://enviroportal.sk/indikatory/schema.php?schema=32>



Resource efficiency in Europe

Policies and approaches in 31 EEA member and cooperating countries

Further information about resource efficiency policies, including the analytical report and thirty-one detailed country profiles, are available on the EEA website:

<http://www.eea.europa.eu/resource-efficiency>

Selected examples of resource efficiency policies, instruments or targets presented in the thirty one detailed country profiles

