

FRESHWATER COUNTRY PROFILE

SLOVAK REPUBLIC

Decision-Making

Programmes and Projects

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- C. Protection of Water Resources
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- E. Water and Sustainable Urban Development
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Status

Capacity-Building, Education, Training and Awareness-Raising

Information

Research and Technologies

Financing

Cooperation

Decision-Making: Sustainable development: The Government of the Slovak Republic is the resulting decisive body. MF SR is a body responsible for this area. MŽP SR and ŠÚ SR are the cooperating bodies. The Government of the Slovak Republic, NR SR, sectors, state administration authorities, organisations, municipalities, production enterprises. Changes in the political orientation of society after 1989 brought about modifications in sustainable development approaches. The Ministry of the Environment was created to protect the environment, establish zoning and construction procedures, conduct geological research, and provide an integrated information and monitoring system on the environment for the entire Slovak Republic. State administrative bodies established agencies to address environmental concerns at the local level. The Ministry acts as the principal state supervisory body and identifies conservation strategies in collaboration with other state administrative and legislative bodies. According to the Government, the greatest contribution to the work of state administrative bodies responsible for the environment was the establishment of the Slovak Ministry of the Environment, the Slovak Environmental Inspection, and the eight regional and (from January 1, 2004) 50 district administration offices with their environmental branches. The Ministry of the Environment has the mandate to analyze the conclusions of the United Nations Conference on Environment and Development (UNCED) and incorporating the principles into the environmental policy of the Slovak Government. The Ministers and Directors of other central administrative authorities were likewise entrusted with employing and incorporating the conference conclusions within the environmental programmes of their respective ministries. Progressive transformation of the political system in Slovakia has been reflected in the Constitution of the Slovak Republic adopted by the Slovak National Council on September 1, 1992. The Constitution guarantees all civil rights and freedoms, including the right to environmental and cultural heritage protection. Significant success has also been achieved recently in the establishment of environmental laws.

The past and present negative consequences of social and economic influences on the environment are mitigated by approximately 750 regulations of varying legal force. Air, water, and forest protection regulations have been extensively revised and new regulations concerning waste management, the state administrative system for the environment, and the State Fund for the Environment of the Slovak Republic have been implemented. Some regulations that were difficult to implement and enforce have been already incorporated within legal norms by replacing outdated laws with new ones. These cover a number of areas that have not been addressed before and are currently being used effectively. Slovak National environmental policy is based on an analysis of the state of the environment and an evaluation of the overall framework for environmental issues. National policy determines areas of National environmental priorities, which are subsequently divided into long-, medium-, and short-term sustainable development objectives. The time required to accomplish the long-term objectives to ameliorate environmental conditions and achieve sustainable development in Slovakia may be 20-50 years or possibly longer. Medium-term objectives, obtainable by the period 2000-2010, focus on slowing the processes of environmental deterioration and mitigating the impact of the damaged and polluted environment on life expectancy and public health, as well as eliminating activities that place a burden on the environment. The implementation of a National environmental policy is expected to fulfill the pre-conditions for Slovak convergence with European environmental standards and facilitate admission to European organizations. However, the Government has noted that environmental issues are too complex and responsibilities too divided for the strategy to remain the mandate of a single ministry at the National level. The strategy must be incorporated and defined in the environmental policy provisions of individual ministries and further developed at the regional level with the participation of local governments and citizen groups. This has to be provided through the implementation of the recently developed National Environmental Action Programme (NEAP) approved by the Governmental Resolution No. 350/1996. The Programme defines the concrete conceptual, legislation, organizational, educational, training, and especially the investment measures behind the activities of various legal bodies that aim to reach objectives of the adopted National environmental policy.

Water resource management: The National Council of the Slovak Republic (NR SR) and the Slovak Government are the resulting decisive bodies. The Ministry of Environment (MŽP SR) is the body responsible for this area. Other cooperating bodies are the Ministry of Health (MZ SR), the Ministry of Interior (MV SR), the Ministry of Economy (MH SR), Slovak Environmental Protection (SIŽP), SAŽP, regional and district offices, departments of the environment and divisions of state water administration. "The Conception of Water Management Policy" approved by the NR SR and the Slovak Government in

1994, deals with use of water. The State Water Management Policy is aimed at providing the citizens with drinking and supply water, transfer of municipal waste water, protection of territory against floods, protection of waters, use of hydroelectric potential of water courses, and it is legislatively regulated in legal and policy documents. The updated Water Management Policy for the period up to 2005 will be prepared in 2000.

The State Environmental Policy in accordance with its conception reflects environmental policies in countries of OECD and EU. Level of compliance with environmental legislation of the Slovak Republic with legislation of EU is in the area of water management 78% and in waste management 78%. This policy follows precautionary principle, "polluter pays" principle, principle of acceptable ecological risk and principle of the best available technology. Objective of the governmental policy up to 2010 is to provide 3617,1 thousands of population (66 %) with public sewerage system. In reflection to the past trend of sewerage system development, the present policy will need more progressive trend. As a consequence of Governmental decision No.491/2002 Coll., the gradual harmonisation of existing sewerage systems and WWTP operation is foreseen due to higher demands on pollution concentration in discharged waste waters after 2005 than is up to 2004. In close future it will be necessary to harmonise sewerage system and WWTP operations with the requirements of the EU legislation - mainly 91/271/EEC (Urban Waste Water Treatment Directive) and 2000/60/EC.

Programmes and Projects:

A. Integrated Water Resources Development and Management: The need of integrated approach to planning and management of land resources in the area of industry requires a new approach to strengthening this task. This is expected to be carried out on the basis of measures included in Elaboration of Principles of Industrial Policy of the European Union in the Slovak Republic (1999). The criteria concerning the integrated land management and sustainable use of land resources are laid down directly in the legislation related to protection of the registered agricultural land resources. See also under Decision-Making.

The Slovak Government has approved "the Programme of Reforestation of Lands not Suitable for Agricultural Production". This programme supposes that by 2000 50,000 hectares of agricultural land will be reforested. In 2001 1,1142 hectares including so-called "white areas" were afforested. Because of lack of available financial sources for afforestation for the next years there is a proposal for cancelling the "afforestation programme". 3,536 hectares of land were afforested in the framework of this programme. Further afforestation of lands owned by non-state sector will continue after approval of SAPARD project (2000). The issue of providing necessary drinking water resources is also closely related to the issue of the need for forestation of the areas excluded from the forest resources with a view to developing tourist structures and services. As regards the investment activity in mountain tourist resorts (e.g. establishments offering lodging, catering and additional services, cableways and ski lifts, ski routes and systems for their technical snow-covering), we pursue and observe the principle of substitution forestation of the areas that have been deforested in connection with the above activity. The aforesaid principle is also pursued while developing other major tourist locations across the Slovak Republic's territory

B. Water Resources Assessment:

The quantity and quality of different groups of surface and ground waters in the Slovak territory are monitored by a partial monitoring system. Of the entire 8,210 km of economically important rivers, 3,723.3 km are monitored. The quality of ground waters has been monitored in Slovakia since 1982 in 26 key water management areas by the Slovak Institute of Hydro-Meteorology. The monitoring network of ground water consists of a total of 344 monitoring units. The most significant of these areas is part of the 10 protection areas of natural water accumulation. In addition, some 24 protection zones of natural healing resources and natural spring water resources have been registered. The most extensive monitoring network has been created in the Žitný ostrov area, which is the largest drinking water source in Central Europe. See also under

C. Protection of Water Resources, Water Quality and Aquatic Ecosystems Protection of the quality and supply of surface water and groundwater and their rational use is carried out in accordance with the jurisdictional act following the acts on water and on state administration in water management currently in force. Application via state administration authorities is being carried out by means of hydro-ecological

plans, principles of water protection, state review of surface water and groundwater, annual report on water quality and guidelines of central water management authority.

D. Drinking Water Supply and Sanitation: See under Decision-Making.

E. Water and Sustainable Urban Development: The total number of population connected to public water supply was in the year 2001 4, 498 thousand inhabitants, which is 83.6% from total number of Slovak Republic population. The rise in connected population presented 0.7 % in 2001. The development level of public water supply system is regionally unbalanced. The highest rate of connected inhabitants is in Bratislava region, and the Slovak average is exceeded also in Trenčín, Žilina and Banská Bystrica region. Behind the Slovak average is the development of public water supply systems in Košice and Prešov region. Much more differenced is the state of drinking water supply in perspective of Slovak districts, where the share is about approximately 50% (Vranov nad Toplou, Sabinov, Bytca, Košice-surround) up to the border of saturation (Bratislava, Prievidza, Martin, Banská Bystrica, Partizánske, ...) From total number of 2 883 municipalities, Slovakia has built the public water supply in 1517 of them, i.e. 52.6%. The waste water discharge and treatment is assured in all municipalities with population number of more than 10,000 inhabitants. In sense of a "transition period" agreed within EU will until all municipalities in range of 2,000 – 10,000 inhabitants 2015 provided with sewage and waste water treatment system.

F. Water for Sustainable Food Production and Rural Development: Withdrawals in agriculture are monitored in two categories – irrigation and other withdrawals, where animal husbandry prevails. For irrigation were in the year 2002 withdrawn 43, 4 mil.m³. The irrigation water withdrawals fluctuate rapidly in dependence on climatic situation of particular year or on state subvention policy. The total withdrawals are evaluated as very low, in comparison to moisture crop deficit). The withdrawals for other purposes were made in 2002 in size of 25,3 mil.m³, and the decisive part of it were the direct withdrawals from ground water sources. The ratio of withdrawals by this group is moderately decreasing. Water for industry, energetic and other consumers in industrial area is assured from several sources. In the year 2002 the withdrawals were performed mostly from surface water sources – 577,9 mil.m³, thereout 266,9 mil.m³ were taken to flow water-cooling of power-plant blocks. The capacity of ground water withdrawals was 70,9 mil.m³ and from public water supply 120,8 mil.m³. The total amount of withdrawals was 769,6 mil.m³. The ratio of withdrawals by industry group has moderately decreasing trend.

G. Impacts of Climate Change on Water Resources: The third National Report on Climate Change is under preparation. The third National Report on Climate Change is under preparation. In last 100 years the trend of average annual air-temperature (T) growth by 1.1 °C and decrease of annual precipitation total (R) by 5.6% in average has been noticed. The decade 1991 – 2000 has by its characteristic of air temperature, precipitation total, evapotranspiration, snow cover and other indicators approached to the conditions expected in the year 2030 (scenario of expected climatic changes for Slovakia). By comparison of hydrological regime after the year 1990 with reference period in general becomes clear that in central and eastern part of Slovak territory came to significant decreases in long-term month discharges, with exception of May and June. In western part of Slovakia the runoff was moderately increased in winter periods, while the summer and autumn period were drier compared to the normal. The decrease of yield of monitored sources has been observed. The decreases are monitored up to the 10%. On the other hand in the area of two orographic units – Little Carpathian Mountains and White Carpathian Mountains – we register their increase by 5%. Although the issue of drought and desertification does not belong to the most urgent ones in Slovakia at present, the prognosis of climate development (increase of average temperatures, lowering of rainfall and subsequent processes of land and ecosystem degradation) makes it necessary to expect that processes of desertification can be demonstrated also in our conditions. A study related to the issue of desertification for support of accession to the Convention to Combat Desertification has been prepared. In 1999 the research project "Impacts of Predicted Changes on Properties and Functions of Soil in the Slovak Republic" was completed.

Status: *Socio-economic aspects*: The existence of poor population in the Slovak Republic was neither admitted for a long time, nor it was a subject of broad discussion. Changes of socio-economic situation of citizens due to price liberalization, inflation, growth of living costs and unemployment caused an increase of

number of people who were not able to tackle the negative changes of their living conditions immediately without assistance. This required enhanced attention and care from side of the state devoted to these groups of citizens. The most attacked groups were households with four and more children, incomplete households with children and households with unemployed members of family. As far as perceiving the troubles is concerned, housing is the most problematic area for households. It is estimated that Slovakia has a deficit of 180,000 flat units and current support programmes are insufficient and if concrete effective measures are not adopted this deficit will be growing. It will be necessary to support special forms of housing dedicated to low income households and to groups with specific needs (e.g. people in social need and seriously handicapped people), taking into account their material and financial conditions.

Number of inhabitants of Slovakia increased from 3.0 millions in 1921 up to 5.379 millions in 2001, which means that during this relatively short period the number of inhabitants doubled. Intensification of agriculture, development of industry and transport, extensive urbanization and irrational economic objectives with significant adverse impacts on the environment of Slovakia and mainly on biodiversity are connected with this fact. The average density of population is 109.9 inhabitants per km². This fact is, however, determined by a factor that settlements in Slovakia are primarily concentrated in flats and depressions while mountain areas are populated very sparsely. That means that in the main areas of settlements the density of population is many times higher (in max. 1,300 inhabitants per km².) The average age of inhabitants of Slovakia was 70.09 in 1960 (67.70 males and 72.5 females) and it has moderately growing tendency. Population is slowly getting old and natural growth rate is gradually lowering. Medium life span at birth was 73.57 years in the year 2001 (69.54 males and 77.60 females). Mortality rates were 9.70 per thousand in the years 1960-2001.

Geography: The forest percentage in Slovakia (39.3 of the total territory of Slovakia in 2001) is still overreaching the average European level with the tendency to increase further. Desertification and drought is not currently urgent in Slovakia.

Water resource management: Drinking water from public water pipeline systems was in the year 2002 in Slovakia is provided to 83.9% inhabitants while groundwater accounts for 83.6 % of current capacity of water sources, water reservoirs for 13.25% and surface water flows with direct withdrawal for 3.15%. Treated surface water is provided to 25% of inhabitants (in region of Central and Eastern Slovakia - in region of Eastern Slovakia it is 50%). 13,444 samples from public water pipeline systems are controlled each year in Slovakia. Microbiological defects are found in 4.75% of controlled samples, chemical defects in ca 1.32% of samples, while increased (over limit) level of nitrates in drinking water is found in the Southern, Western and Eastern districts of the Slovak Republic. In activities of tourism entities related to the investment process and operation of tourist establishments and services, the principles are consistently complied with for cost-effective management of drinking water resources and discharge of mechanically and biologically clean waste waters following their efficient cleaning at wastewater treatment plants. In making use of geothermal waters for recreational purposes, the principles are consistently observed for biological cleanliness in discharging them back into surface flows. The observation of the above principles is one of the conditions for issuing a building permit pursuant to the provisions of Building Act No. 103/2003 Coll.

Use of surface water and water reservoirs for recreational purposes is a subject of approval by health protection authorities. It is also valid for resources of thermal water used for recreation. The basic task of the health protection sector is to regulate protection of human health. According to the act on protection of human health the authorities assess proposals for establishing, determination and use of zones of hygienic protection of water resources including specific regime for protection of water quality, capacity as well as assurance of health irreproachableness of drinking and supply water in water resources, and proposals for use of water resources for providing inhabitants with drinking and supply water and establishing the water reservoirs. Water resources in Slovak are also used for hydropower plants, and inland water transport. The European arterial waterway, the Danube river, flows through this part of Slovakia. Water transport is represented only by the Slovak part of the River Danube (ca 172 km). >From the point of view of the Slovak Republic, the Slovak part of the River Danube is used mainly for international cargo and tourist passenger transport, in particular on routes Bratislava – Budapest, Bratislava – Vienna. The lower parts of the River Váh and a part of the River Bodrog are navigable to limited extent.

Capacity-Building, Education, Training and Awareness-Raising: MŽP SR /Ministry of Environment SR/ – is a central authority of state administration for protection of quality, amount and rational utilization of waters. In competence of this authority are monitoring of quality and quantity of ground and surface waters, evidence of discharged pollution from point municipal and industrial pollution sources, elaborating of National water balance and of water management river basin plans. By enactment of “competence” Act there belongs into competence of MŽP SR the methodical management of water companies, management of river administrators, elaboration of conceptions in the area of water utilization, the construction sewage and waste water treatment plants and flood protection.

The competence of MZ SR /Ministry of Health SR/ – is responsibility for public health. It has also responsibility for determination of requirements drinking water and a control and monitoring of drinking water quality. From hygienic point of view belongs to the competence of the resort bathing water and control of operation of public swimming pools and basins. In competence of MV SR /Ministry of Interior/ are regional and district authorities - sections of environment (from January 1, 2004), which are in water territories the responsible first and second level allowance authorities for waterworks and water manipulation. MV SR administers the sections of environment only in organization and personnel aspect, the expert activities are provided by MŽP SR. MHSR /Ministry of Economy SR/ - use of water in industry and energy production.

Information: Information is gathered and processed by the Statistic Office of the Slovak Republic. In the framework of establishment of systems of integrated environmental and economic accounting the introduction of assessment system of data and information collection and enforcement of national accounting systems are being planned.

Research and Technologies: The Water Research Institute conducts research on water management. Scientific and technical projects in water management are aimed at use of biotechnologies with the aim to increase the level and deal with possibilities of application of biotechnological processes in treatment of groundwater for drinking purposes and treatment of waste waters and drinking waters. Gasification of biomass is being developed in the area of wastewater treatment plans. See also under G. Impacts of Climate Change on Water Resources on Programmes and Projects.

Financing: State budget of the Slovak Republic, finances of cities and towns, internal sources of water management enterprises, finances of industry, loans, pre-accessing funds (PHARE, ISPA, SAPARD).

Cooperation: Regional and district offices, the Danube Commission (water transport), bilateral cooperation on frontier waters with Ukraine, Hungary, Poland, Austria and the Czech Republic, WHO, UN. Slovak Republic is a party to: the Convention on Wetlands of International Importance especially as Waterfowl Habitat (1990/1990); the Convention on Protection and Use of Transboundary Watercourses and International Lakes (accession 1999) and the convention on cooperation for the protection and sustainable use of the Danube river (Danube River Protection Convention) – accession 1998.

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