

Environment and Health Performance Review

Slovakia



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ABSTRACT

The present report describes and evaluates the current environment and health situation in Slovakia. It evaluates strong and weak points of the national environmental and health status and brings recommendations from independent experts. The conclusions and recommendations are based on the detailed Environment and Health Performance Review (EHPR) carried out in the country. The review identified the most important environment and health problems, evaluated the public health impact of environmental exposures and reviewed the policy and institutional framework taking into account the institutional set-up, the policy setting and legal framework, the degree and structural functioning of intersectoral collaboration and the available tools for action.

This project was developed by the WHO Regional Office for Europe as a follow up to the commitments made by Member States at the Fourth Ministerial Conference on Environment and Health in Budapest in June 2004 to reduce children's exposure to environmental hazards. The project was designed to provide the evidence base for developing and implementing such actions. The EHPRs are country-based interdisciplinary assessments that WHO/Europe carries out at the request of Member States. Through the EHPRs, Member States receive support in the reform and upgrade of the overall public health system.

Keywords

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Foreword

The purpose of this report is to convey a clear picture of the current environment and health situation in Slovakia. It evaluates both the strong and the weak points of the environmental and health status in the country and includes recommendations made by independent experts. The preparation process for the Environment and Health Performance Review began in December 2006. A first country visit for organization purposes took place from 15 to 17 January 2007, and was followed by the evaluation mission in Bratislava from 23 to 27 April 2007. During this field visit, the WHO team met 30 representatives from 17 institutions in various sectors involved in environment and health. The national contributors are acknowledged at the beginning of the report. The cut-off date for the information summarized in this report is the 27th of April 2007, last day of the mission.

The Environment and Health Performance Review for Slovakia was carried out thanks to the efforts and support of the Slovak Public Health Authority, under the supervision of Dr Ivan Rovný. Special thanks go to Dr Katarína Halzlová, Environment and Health focal point, and her team, who organized the visit, contacted all relevant sectors, provided background information and shared their valuable time.

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Executive summary: Main conclusions and recommendations

Main conclusions

- The prevention of risks resulting from environmental hazards is poorly reflected in the health sector agenda. The preventive approach should be strengthened.
- There is no regular funding of environment and health; a systematic funding scheme should be developed.
- Economic arguments/health costs are not used for setting priorities; the systematic use of integrated economic analyses would be beneficial.
- Knowledge concerning environmental risks to health has to be improved, not only among civil society but also within the medical profession.
- Monitoring of environmental health determinants is performed by a wide range of institutions, without any clear coordination; the monitoring methodology should be streamlined.
- An adequate national system needs to be developed and implemented to monitor the impact of environment and health policy implementation.
- Information systems, including the European Environment and Health Information System at regional level should be used to strengthen environment and health; there is a need for reliable data.
- Knowledge of and the methodology for health impact assessments should be improved; given the emphasis on the assessments in the new Public Health Act, current procedures do not seem to be developed enough.

- The lack of effective communication with civil society must be addressed: the right stipulated in the Slovak Constitution to timely access to full information on the state of the environment and the causes and consequences of its condition does not seem to be realized.
- There are different opinions on the relevance and effectiveness of the National Environment and Health Action Plan.
- The definition of environment in the Public Health Act reflects the approach of the World Health Organization.

The main environment and health issues in Slovakia include water, ambient air pollution and traffic injuries, considered from both a health and an environment angle.

An environment performance review conducted by the Organisation for Economic Co-operation and Development (OECD) in 2002 found that surface water quality had improved very little during the 1990s and that drinking water quality very often exceeded the limit values for heavy metals and ammonia (1). The present review shows that considerable improvements have been achieved in the years since then. Slovakia has an adequate improved water supply, both at urban and at rural level, and the low number of reported outbreaks of disease arising from drinking-water provides an indication of its quality.

But, besides specific environmental health risks, there are concerns regarding structural aspects of environment and health policy-making. The current government programme stresses health care rather than public health and, consequently, environmental determinants of health have been given little priority in the country. Although environmental health threats are clearly addressed and recognized in political principles (the Government Manifesto, State Health Policy, etc.), there is still no structural approach to environment health. This is reflected in the lack of specialized environmental health professionals and curricula, and in the limited institutional capacities and resources attributed to the environmental health sector. Environmental health falls under the responsibility of the Ministry of Health, through its Public Health Authority (PHA); however, the funds and personnel attributed to the relevant services are not sufficient to ensure

implementation of all the necessary actions and measures. The lack of resources is one of the biggest challenges/problems in environment and health work in Slovakia.

The recommendations formulated in the OECD's environmental performance review for Slovakia focused mainly on the introduction of economic instruments. Emphasis was put on the need for enforcement and compliance mechanisms linked to environmental regulations, and the need for greater transparency on tax exemptions. Although many efforts have been made in this area in the past years, economic instruments for environmental policies are a rather new issue in Slovakia.

Slovakia has made progress on compilation of and access to environment information. The right of access to information is stipulated in the Slovak Constitution. Environmental hazards are identified and monitored by the Slovak Environmental Agency at the request of the Ministry of Environment and in cooperation with various other bodies, including health institutions such as the PHA. Health data are collected at municipal level by the National Health Information Centre. Although a significant volume of data has been collected, there is a need to standardize the collection mechanisms and processing procedures. Monitoring is conducted from a health or an environment perspective and there tends to be a lack of linkage between the two. Although access to information about environmental conditions and the health status of the population is a basic right in Slovakia, there is still little awareness of environmental risk factors in society. A national environmental health information system needs to be further developed and implemented, and knowledge of and the methodology for health impact assessment (HIA) improved. The Slovak Environment Agency should be more closely involved in the subregional implementation of the European Environment and Health Information System (ENHIS).

The institutional set-up of the actors involved in environment and health covers a broad range of sectors but there is no specific institution/agency in charge of environment and health assessment and actions. The PHA's resources are not sufficient for it to assume clear leadership. The example of water and sanitation shows the multitude of ministries involved.¹

¹ Irrigation water, water for animals and processing water are analysed by the Ministry of Agriculture; the Cohesion Fund Department of the Ministry of Construction manages

Slovakia has made significant progress in developing an intersectoral approach in environment and health policy-making. Indeed, intersectorality is an institutionalized process in developing national legislations and regulations. The third phase of the National Environment and Health Action Plan, adopted in 2006, has been successfully implemented and is an example of an effective tool for establishing a general framework of environmental health priorities. Nevertheless, although cooperation between different sectors has substantially improved, there is still not a real “health in all policies” approach. The sectors tend to deal with each component of environment and health individually, rather than adopting a truly intersectoral approach. Health arguments are not taken into consideration by other sectors in their decision-making processes or when drafting regulations. Health costs as a consequence of exposure to environmental hazards are very seldom taken into consideration.

environment and transport projects in cooperation with the education and transport ministries (waste water treatment plan, drinking water supply, water management); waste water treatment is dealt with by nine companies using Cohesion Fund resources; water supply is the responsibility of the Ministry of Environment, together with water supply companies and municipal authorities.

Introduction

Main objectives of the Environment and Health Performance Reviews

- To assist Member States in building up a national institutional framework that will make it possible to draft national action plans addressing children's health and environment.
- To provide a country-based analytical description of the environmental situation.
- To determine whether health policies are well designed to prevent ill health caused by environmental determinants.

Preventing disease and injury is at the heart of public health and health systems. The environment is responsible for as much as 24% of the total burden of disease (2).

Environmental health comprises those aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. According to the definition used by the WHO Regional Office for Europe, environmental health includes both the direct pathological effects of chemicals, radiation and some biological agents, and the effects (often indirect) on health and well-being of the broad physical, psychological, social and aesthetic environment (3). In the course of this report, the relationship between environment and health will be denoted as "environment and health". This covers all human health issues that are related to environmental factors and all environmental factors that may (possibly) affect health (either negatively or positively).

In 1989, the Regional Office launched the environment and health process through a series of ministerial conferences, with the aim of eliminating the most significant environmental threats to health as rapidly as possible, based on the premise that prevention is better than cure.

Environment and health issues are essentially cross-sectoral, and human health can only be protected from the risks posed by a hazardous or contaminated environment through the coordinated input of different sectors, and a greater capacity on the part of the health sector to enlist the support of these different actors in order to develop a high level of targeted activities and to ensure consistency and synergy with other relevant commitments made by Member States (4,5).² The importance of coordinated input from different sectors has been underlined by the call for the development of national environment and health action plans (NEHAPs) made at the Second Ministerial Conference in Helsinki (6) and by the theme of the Third Ministerial Conference held in London in 1999, “Action in Partnership” (7). Following the Fourth Ministerial Conference on Environment and Health, in Budapest in June 2004, and the commitments made by Member States to reduce children’s exposure to environmental hazards, countries are now seeking support for implementation work.

The World Health Organization (WHO) Regional Office for Europe has therefore initiated a project to provide the evidence base for developing and implementing such actions. Through detailed environment and health performance reviews (EHPRs), it provides country-based analytical descriptions of the environmental situation in Member States. The major areas of this strategic analysis are the institutional set-up, the policy setting and legal framework, the level and structural functioning of intersectoral collaboration, and the available tools for action. This interdisciplinary assessment objectively examines the relevant policy and institutional framework and gives guidance for strengthening environment and health policy-making, planning preventive interventions, ensuring service delivery

² *Budapest Declaration (5)*:

Member States:

(paragraph 6) recognize “the relevance of national environment and health action plans (NEHAPs) ... and commend the continuing efforts to implement and evaluate them”;

(paragraph 20c) call on organizations to establish mechanisms “for coordinating technical and financial assistance to the newly independent states and countries of south-eastern Europe, in order to stimulate legislative and institutional reforms, strengthen countries’ capacities and effectively reduce exposures to environmental hazards and their health impacts”;

(paragraph 20d) invite the WHO Regional Office for Europe “to support the initiative of the newly independent states and some countries of south-eastern Europe to reform and upgrade their sanitary/epidemiological services and set up public health systems”.

and conducting surveillance in the field of environment and health. The most important environment and health problems in the country are identified and the public health impact of environmental exposure is assessed. The national performance review is conceived as an integral part of the planning and management of environment and health services, and is performed at the request of the Member State concerned.

The EHPRs take account of a programme of environmental performance reviews launched in 1991 by the Organisation for Economic Co-operation and Development (OECD) to help OECD member countries improve their individual and collective performances in environmental management; the programme was mandated to the United Nations Economic Commission for Europe (UNECE) in 1993 in order to ensure coverage of the whole region of Europe (8,9). In the period 1997–2004, the WHO Regional Office for Europe contributed to the environmental performance reviews, providing a review of the health aspects related to the environment.

Since environmental management is the focus of the environmental performance reviews, the Regional Office saw the interest in using this existing tool and developing its analysis to cover the relationship between human health and the environment, and between the environment and health policy management (10,11,12).

The EHPRs are in line with and draw upon the national profiles of children's health and environment developed by WHO headquarters (13) and are strongly linked to ongoing Regional Office environment and health programmes. The information about the national approach to linking environmental conditions and public health, its importance for healthy environmental policy, and measurement of the countries' progress towards the targets set in the Europe-wide action programmes is recorded within the WHO European Environment and Health Information System (ENHIS) (14). As in the case of ENHIS, the environment and health performance reviews focus on risk factors that most affect the health of European children. At the Fourth Ministerial Conference on Environment and Health in 2004, ministers agreed to prioritize four regional priority goals (RPGs) for Europe (4):

- RPG I: prevent and significantly reduce the morbidity and mortality arising from gastrointestinal disorders and other health effects, by ensuring that adequate measures are taken to

improve access to safe and affordable water and adequate sanitation for all children;

- RPG II: prevent and substantially reduce health consequences from accidents and injuries and pursue a decrease in morbidity from lack of adequate physical activity, by promoting safe, secure and supportive human settlements for all children;
- RPG III: prevent and reduce respiratory disease due to outdoor and indoor air pollution, thereby contributing to a reduction in the frequency of asthmatic attacks, in order to ensure that children can live in an environment with clean air;
- RPG IV: reduce the risk of disease and disability arising from exposure to hazardous chemicals (such as heavy metals), physical agents (e.g. excessive noise) and biological agents and to hazardous working environments during pregnancy, childhood and adolescence.

The implementation of EHPRs is made possible by the European Commission (EC) through its Directorate-General for Health and Consumer Affairs (DG SANCO). In support of the European environment and health process, the EC has identified the need to develop and strengthen policy actions to reduce the risk of disease and disability arising from agents in the environment in Europe and is co-funding this WHO Regional Office activity.

Each EHPR is carried out, at the request of the Ministry of Health of the country concerned, by two WHO technical experts. It takes the form of semi-structured interviews with national technical representatives and policy-makers. Two series of reviews are being conducted; one is part of the project funded by DG SANCO, and the second results from the bilateral biennial collaborative agreements between WHO and the different ministries of health. The Slovak EHPR is part of the former.

The EHPR is made up of the steps described below.

1. The standardized methodology for the review developed at the beginning of the process is applied to all Member States.
2. Consultations are held with the head of country office and assistance/advice is sought on timing and the personnel involved.

3. Prior consultations are held with the environment and health focal point/project counterpart within the Member State.
4. Relevant policies, information, evidence and data are collected and analysed; and the WHO field visit is organized by the national counterpart.
5. The field trip by the WHO technical team to the country takes place; interviews are conducted with pre-selected representatives of different sectors and institutions.
6. A draft report is compiled, summarizing the information collected during the field visit.
7. A final report with recommendations for action is submitted back to the counterpart, the head of country office and interviewees.
8. Final conclusions are presented to policy-makers at a national workshop.

All the EHPR final reports will be collated into a single global report to be presented at the WHO Fifth Ministerial Conference on Environment and Health to be held in Italy in 2009.

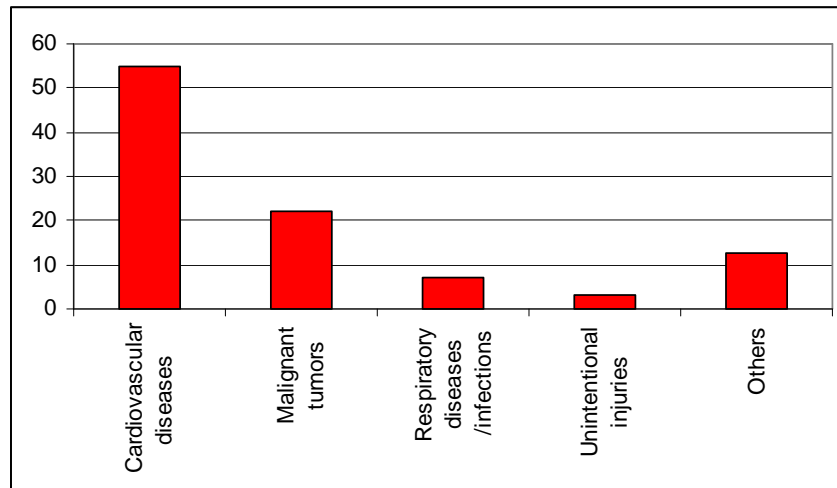
I. Health characteristics of the Slovak population

Conclusions

- Main causes of death: cardiovascular diseases and cancer
- WHO estimate of the environmental burden of disease for Slovakia: 16%

Life expectancy at birth in Slovakia in 2005 was 70 for men and 78 for women (15). In 2004, diseases of the circulatory system accounted for 55% of all death, 22% of deaths were due to cancer, respiratory infections and diseases ranked third followed then by external causes of death (16).

Figure 1. Leading causes of death in 2005



Source: Health Statistic Yearbook of the Slovak Republic

Approximately 120 children under 14 die annually as a result of accidents in Slovakia. Traffic accidents in children and young people under 19 account, on average, for half of all deaths in this age category (17).

The standardized mortality rate for road traffic injuries in children and young people aged 0–24 years in Slovakia is 8.2 per 100 000, somewhat below the average in the WHO European Region. Nevertheless, road traffic injuries contribute significantly to the overall burden of mortality in the under-25 age group. Child (1–19 years) mortality resulting from unintentional injuries is slightly above the median range for European countries. However, since the distribution of mortality rates is quite skewed, the rates in Slovakia are more than 50% higher than those reported in the one third of countries in the Region with the lowest mortality (18).

Respiratory diseases are the most common reasons for children's absence from school because of sickness. Allergic diseases are predominant. According to the National Register of Bronchial Asthma, the most prevalent form of childhood asthma in the 5–9 year age group is allergic asthma (19). The infant mortality rate resulting from respiratory diseases in 2001 was 8.34 per 1000 live births, which is higher than the median in the European Region (1.6 per 1000) (18).

WHO estimates for the burden of disease in Slovakia show that environmental risk factors accounted for 16% of the total burden of disease in 2004 (20).

II. Priorities/concerns in the country

Conclusions

Environment and health risks and major determinants of health

- Water, ambient air pollution, sewage
- Chemicals from waste landfills (nickel, heavy metal, arsenic)
- Traffic

Public health

- The priority of the health system is health care rather than public health. The Ministry of Health focuses on a curative approach rather than preventive actions.
- Development of the health care system is not homogenous across the different ethnic and social groups (e.g. the Roma population).
- Socioeconomic inequalities are reflected in the level of exposure to environment health threats.

Structural concerns

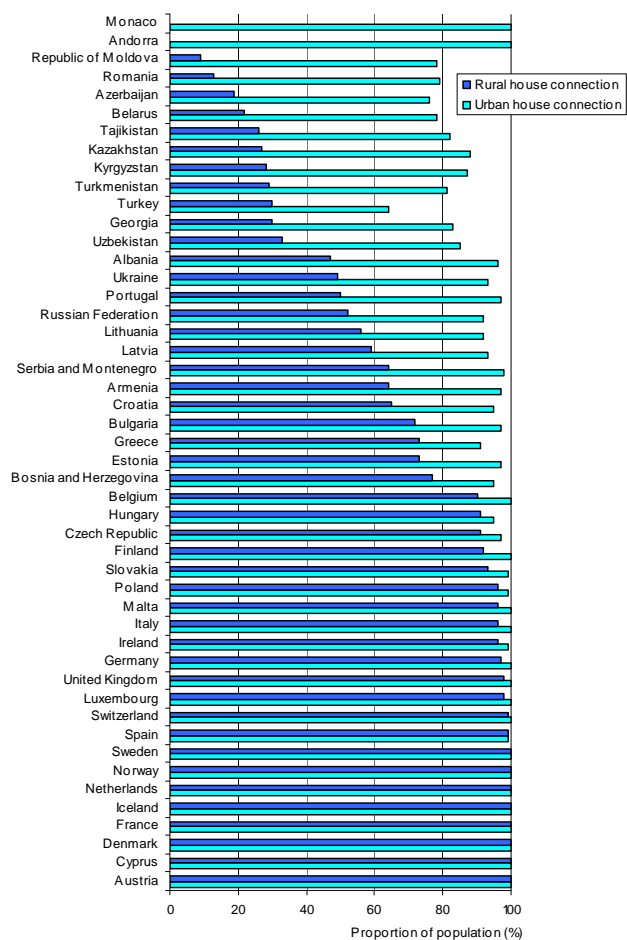
- Changes in government make it difficult to sustain an intersectoral approach in environment and health.
- Frequent changes in personnel and a lack of qualified staff make implementation of the NEHAP difficult.
- There is an underexplained fragmentation of actions and programmes among different actors, resulting in a lack of efficiency.
- Communication between the sectors is inadequate.
- There is not enough reliable data; support from WHO is required in this regard.
- There is a lack of appropriate tools for environment and health information.

With the support of DG SANCO, and in collaboration with partners from 18 Member States, including Slovakia, the Regional Office for Europe has developed the European Environment and Health Information System (ENHIS) (14), which has enhanced the availability and comparability of data on environment and health.

The system focuses on the health issues identified in the Children's Environment and Health Action Plan for Europe (CEHAPE) as priorities for pan-European action, particularly its four RPGs. The information covers health issues related to environment, environmental issues affecting children's health, and actions aimed at reducing or preventing health risks (14).³

³ For all information and data quoted in this section, see the country profile of Slovakia (http://www.enhis.org/object_class/enhis_enhis2_country_profiles.html) and the ENHIS fact sheets.

Figure 2. Percentage of the population with access to an improved water supply in urban and in rural areas, WHO European Region, 2004 or most recent available data



Source: ENHIS (14), Fact sheet 1.2.

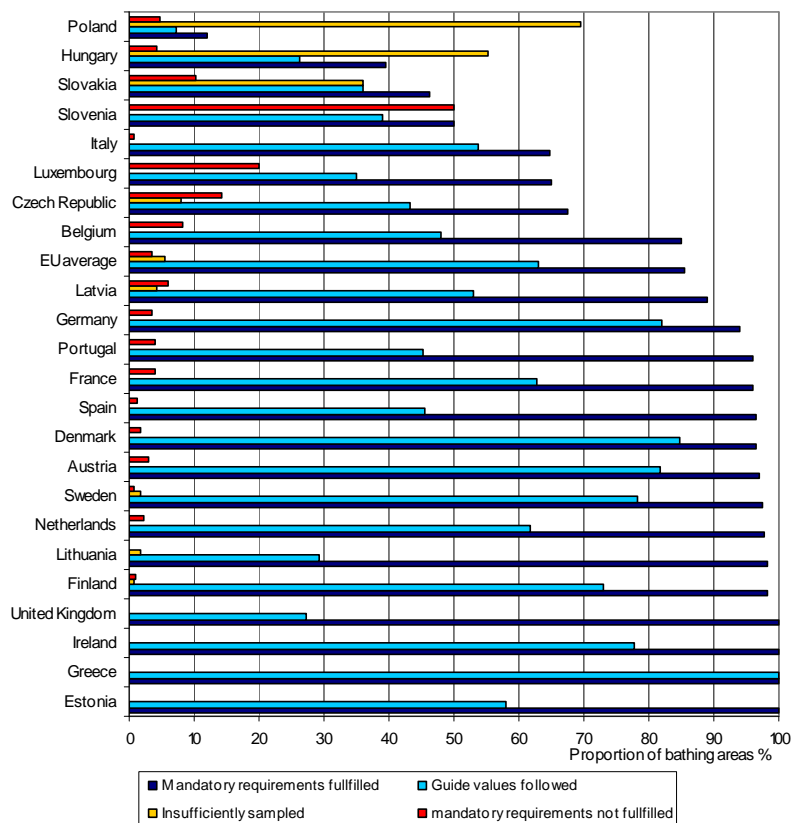
The risk to children's health related to poor access to safe drinking-water and sanitation is still substantial in many rural areas in the WHO European Region, especially in the eastern part.

Slovakia has an improved supply of safe water in both urban and rural areas. According to data from the Ministry of Environment's Annual Report for 2006, 86.3% of the population was connected to the public water supply and 57.1% of the population was connected to a sewage system (21). However, according to the official data reported by Slovakia to the WHO/United Nations Children's Fund joint monitoring programme and used in the ENHIS fact sheets, the percentage of the population connected to sanitation and wastewater facilities shows that improvements still have to be made. In rural areas, 45% of the population are not connected to sanitation facilities and 48% of the population are not connected to wastewater facilities. Improved wastewater treatment can reduce the burden of diarrhoeal diseases.

However, despite the fact that the mandatory requirements for freshwater zones in Slovakia were complied in only in 46% of bathing areas (Slovakia lies in the lower third percentile in the comparison between EU Member States), the low number of reported outbreaks of diseases arising from drinking-water provides an indication of its good quality.⁴ Insufficient sampling frequency has influenced the data on the status of bathing water quality in the country. These results have also been communicated to the European Commission. In the assessment of bathing water quality conducted in 2006, Slovakia complied with the mandatory requirements in 92% of cases (22).

⁴ Variations between countries should nevertheless be interpreted carefully due to the varying efficiency of surveillance systems.

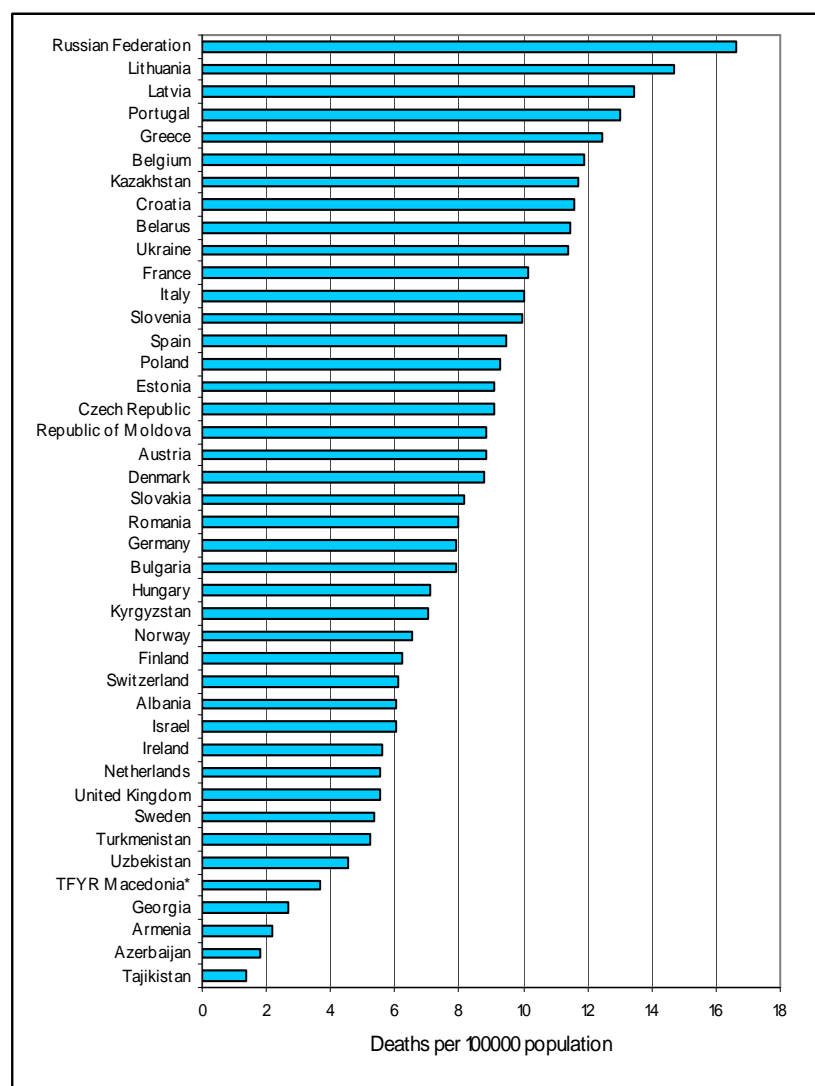
Figure 3. Bathing water quality for freshwater zones in the European Union, 2005



Source: ENHIS (14), Fact sheet 1.4.

Unintentional injuries are among the leading causes of morbidity and mortality among children and adolescents in the Region. In Slovakia, the mortality rates resulting from road traffic injuries in children and young people aged 0 to 24 years (8.15 per 100 000) and those resulting from unintentional injuries in the group aged 1 to 19 years (2.71 per 100 000) are consistent with the European average but are still unacceptably high.

Figure 4. Standardized mortality rates for traffic injuries in children and young people aged 0–24 years in the WHO European Region, as averages for 2002–2004 or the three most recent years for which figures are available



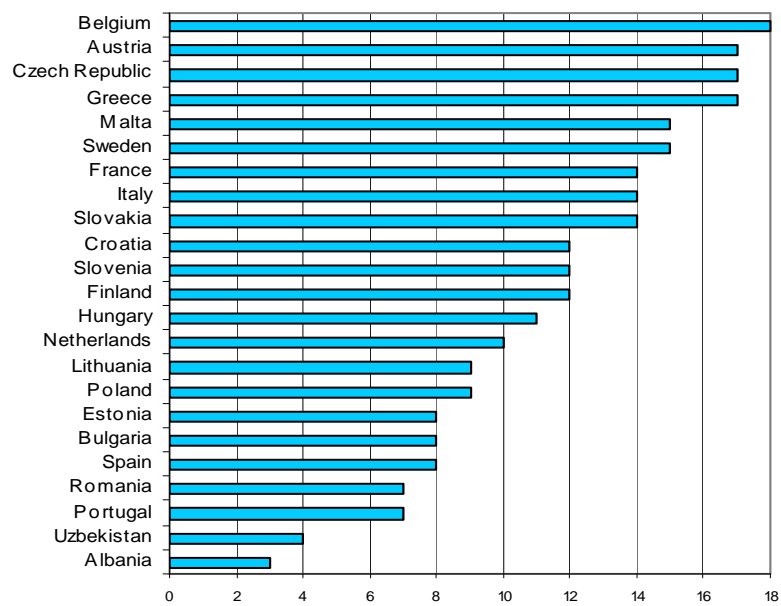
Source: ENHIS (14), Fact sheet 2.1.

The ENHIS analysis shows that the high prevalence of unintentional injuries has increasingly been recognized as a national priority. The indicator summarizing the implementation of 10 policies towards

injury prevention shows that, in the WHO European Region, Slovakia is in the upper group of countries who have a commitment towards injury prevention.

A safe environment that encourages personal mobility and physical exercise is important for health and the prevention of obesity and excess body weight. While the prevention of injuries seems to be commonly accepted in Slovakia, policies to reduce and prevent excess body weight and obesity in children and adolescents could still be improved on.

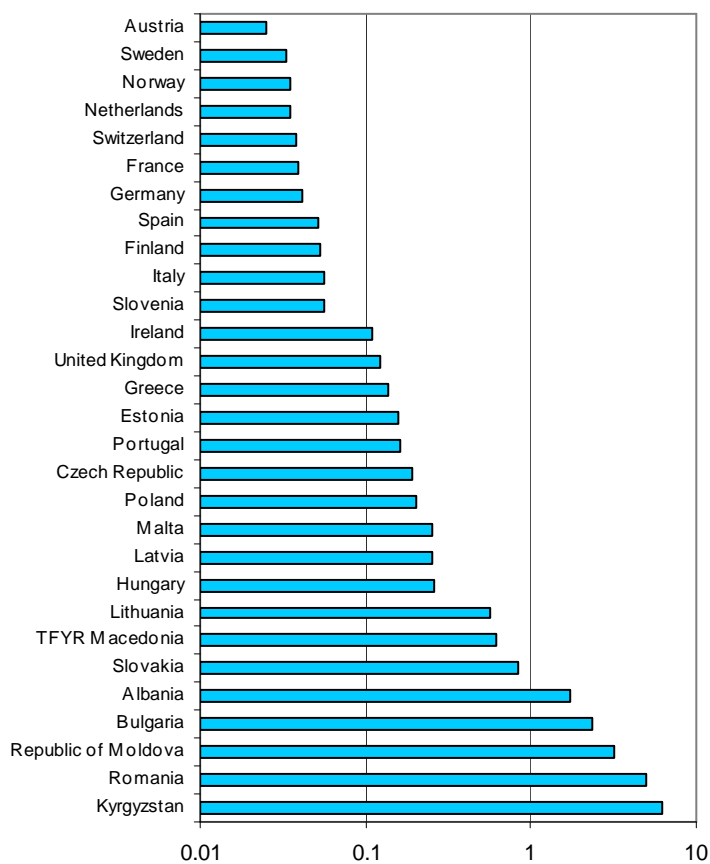
Figure 5. Degree of implementation of 12 national policies aimed at the reduction of unintentional injuries in selected countries, 2006⁵



Source: ENHIS (14), Fact sheet 2.6.

⁵ This indicator is computed as the sum of scores given to 12 policies. The score for each policy has a range from 0 to 2: 0 = no policy, 1 = existing legislation, clearly stated and partially implemented or enforced, 2 = existing legislation, clearly stated and substantially implemented or enforced. The maximum score is 24.

Figure 6. Post-neonatal mortality rate due to respiratory diseases in the WHO European Region per 1000 live births, 2001



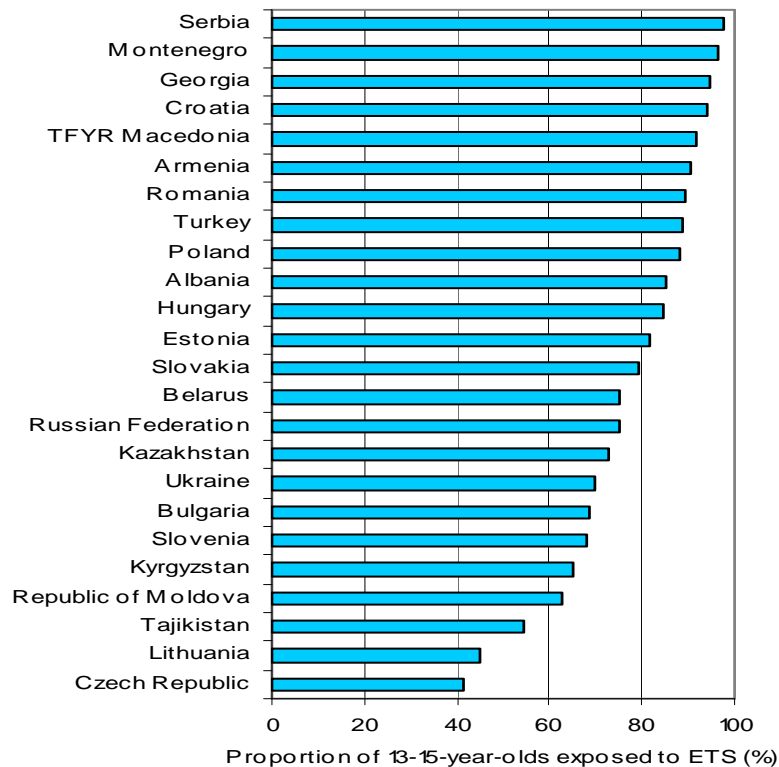
Source: ENHIS (14), Fact sheet 3.2.⁶

With a rate of 0.83 post-neonatal deaths owing to respiratory diseases per 1000 live births, Slovakia is one of the countries in the WHO European Region most affected by this type of health risk.

Multiple factors, including indoor and outdoor air pollution, interact to determine respiratory health.

⁶ Data for France, Slovakia, Switzerland and TFYR Macedonia (The former Yugoslav Republic of Macedonia) are for 2000.

Figure 7. Proportion of 13–15 year olds exposed to environmental tobacco smoke in their homes, 2002–2005



Source: ENHIS (14), Fact sheet 3.4.

Seventy-nine percent of Slovak children in the 13–15 year age group are exposed to environmental tobacco smoke (ETS) at home. This level is very high and Slovakia is strengthening its policies to reduce exposure of children to ETS.

The mean concentration of particulate matter of 10 micrometers or less (PM₁₀) calculated for four cities in Slovakia is 34 µg/m³, putting Slovakia among the countries of the European Region (for which data is available) with relatively more polluted cities. On the other hand, the exposure of children aged 0–14 years to the use of solid fuels in the home, at 5%, is much lower than in many other countries in the European Region.

National assessments list high nitrogen dioxide (NO₂) exposures (both outdoors, from traffic-related air pollution, and indoors, from gas used for cooking/heating in 70–80% of houses), dust mites and moulds as further problems affecting respiratory health.

Leukaemia is the most frequent type of malignancy among children in industrialized nations. It is a subject of considerable public concern, especially in the areas perceived as having excessively high incidence and in relation to putative environmental causes such as radiation and chemicals. In Slovakia, the standardized incidence per million per year is 37.9, which is lower than in most countries in the Region. The age-standardized rates of melanoma in men aged under 55 is also lower than in many other countries. However, children in Slovakia are exposed to a high level of dioxins in human milk. The following clarifying information has been received since completion of the review: the figures showing high levels of dioxins are not valid for the entire Slovak population. The results mentioned above might be generated by local case studies, mainly in the eastern part of the country. Adequate data in this regard is not available.

Summarizing the results obtained from the overview provided by the ENHIS indicators according to the four RPGs defined in the CEHAPE, Slovakia seems to be mostly affected by shortcomings in the areas of water and sanitation, exposure to ETS and PM₁₀ and, at a slightly lower level, by unintentional injuries among children. The distribution of structural funds from the European Union (EU) confirms this priority setting: 50% of the funds are invested in improving the national water sector.

These country priorities are very much in line with the priorities and concerns expressed by public health professionals in Slovakia. Water and air quality are perceived as being major risk factors for the health of the Slovak population. Although the ENHIS analysis shows that solid fuels are less used than in other countries of the Region, social inequalities and rising fuel prices still result in the burning of solid waste.

Water quality problems are seen to be relevant from the perspectives of many different sectors, especially in relation to the effects of chemicals. Approximately 100 locations in Slovakia were considered

to be at risk, because of old dump sites (heavy metals in water) and the production of nickel and special medicines.

In addition to the specific environmental health risks, concerns focus on structural aspects. Children are not specifically declared to be a national priority in environment and health programmes. The current government programme stresses health care, rather than public health, as a priority. As a result, environment and health has been rather neglected. Frequent changes in government have made it difficult to maintain a sustainable approach to environment and health. It is felt that this has resulted in fragmentation of actions and programmes and a lack of communication between the sectors. Continuing changes in personnel have also made the implementation of the NEHAP difficult. Expertise gained by public health professionals in the field of environment and health is often lost through structural changes in the various services.

Socioeconomic inequalities are still a major determinant of exposure to environmental health risks in Slovakia and have not been sufficiently recognized as such. They can also be observed in access to health care services. The review showed that specific areas and population groups (e.g. the Roma population) do not fully benefit from the health care services, and this results in a higher prevalence of certain diseases (acute respiratory diseases in children) in specific population groups. The government has various programmes and projects that address the health of the Roma population. Under the Decade of Roma Inclusion, 2005–2015 programme, community health activities are carried by field workers (in 2007, there were 30 workers) (23).

III. Institutional set-up

Conclusions

- The PHA and the regional centres are the main bodies in the health sector responsible for health risks resulting from environmental factors; they are directly linked to the Ministry of Health and funded by it.
- The role of medical doctors in the environment and health process is not well defined; they are mainly seen as the interface with civil society, but have no specific responsibility related to environmental health.
- Emphasis has always been put on the curative approach rather than prevention. The latter is limited to preventive examinations and vaccinations; this results in little involvement of paediatricians in environmental health issues.
- The Slovak medical associations do not sufficiently recognize the environmental determinants of health.
- There are numerous institutions and sectors that deal with environmental risk factors; but health arguments are not predominantly or explicitly linked to the reduction of environmental risks.
- Many nongovernmental organizations (NGOs) focus on children's well-being; however, there are no NGOs that focus on environment and health.
- Local governments implement environment and health measures mainly through construction- and urban planning-related acts.
- Environmental impact assessments are mainly delegated to private environmental services.

Recommendations

- The existing capacities of the national and regional public health authorities and centres should be upgraded and strengthened.

- The medical profession should be more actively involved in preventive actions – better information generated by the PHA and direct collaboration with medical societies would help in this task.
- Improved and stable employment opportunities for environment and health professionals should be created.
- Continuing professional education for environment and health professionals should be introduced and university curricula adapted.
- Environment and health NGOs representing public and professional interests in environment and health policy- and decision-making should be strengthened.

A. Sociopolitical situation, political system and infrastructure

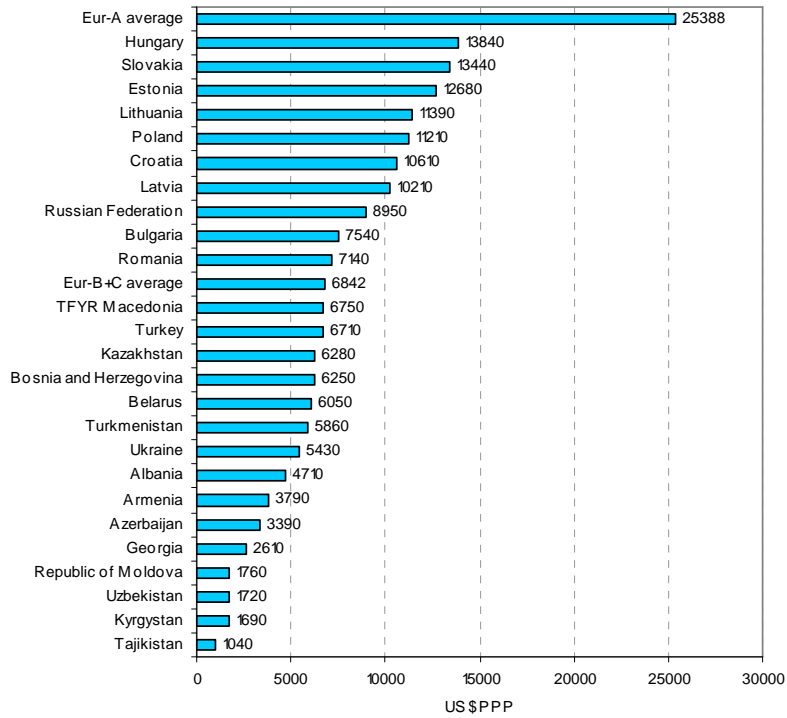
Slovakia was founded on 1 January 1993 after the split of the former Czech and Slovak Federal Republic. Slovakia is a parliamentary republic. The National Council (parliament), has 150 members who are elected by proportional representation for a four-year term. The President is elected directly by the people for a five-year period. Since 1996, Slovakia has been divided administratively into 8 regions and 79 districts, one region being the capital, Bratislava. The local authorities are the district “bureau”, which has the power to raise local taxes and has responsibility for roads, schools, utilities and public health. Both mayors and municipal councillors are elected. The different nationalities represented in the country are Slovaks (86%), Hungarians (10%), Roma (2%), and other (2%)(24). However, according to the World Bank’s 2002 report, Slovakia has one of the largest Roma populations in Europe – informal estimates suggest that there are between 420 000 and 500 000 Roma in Slovakia, or between 8% and 10% of the population. This estimate suggests that a large proportion of the Roma population tends to report another nationality.

In 1999, the Government adopted a new public administration reform strategy aimed at strengthening a dual-element public administration system consisting of state and territorial administration (25).

Slovakia became a member of the EU in 2004.

Between 1991 and 2001, the economically active population increased by 48 000 people, representing almost half (49.6%) of the total population. The number of women in the economically active population increased slightly from 46.9% in 1991 to 47.7% in 2001 (25).

Figure 8. Gross national income per person in 2003 (26)



Source: World Bank (2005)

In 2003, health spending accounted for 5.9% of gross domestic product (15).

B. Health sector

The main authority dealing with health risks related to environmental factors in Slovakia is the Úrad verejného zdravotníctva [Public Health Authority] (PHA) (27).

The Ministry of Health has no separate department in charge of environment and health. It supports environment and health activities through the funds provided to the PHA. The Ministry of Health is the main state executive body responsible for health protection and health care. It sets the main priorities of state health policy and submits the relevant necessary draft legislation to the government (25).

The PHA fulfils the role of the executive body of Ministry of Health of Slovakia in the field of public health and environment and health through its Department of Environment and Health. All public health issues are delegated to the PHA. As shown by the review on health care systems in transition (25) undertaken by the WHO Regional Office for Europe, public health services in Slovakia have their origins in the hygiene stations established under the socialist health system that were transformed into institutes of hygiene and epidemiology in 1992. The perception of public health has since then shifted from focusing primarily on hygiene and state control to primary prevention, health promotion and health impact assessment.

The PHA's specialized activities in environment and health are health protection in the fields of:

- environmental hygiene
- children's and young people's health
- nutrition
- food safety
- cosmetic products
- preventive occupational medicine
- health protection against radiation
- epidemiology
- medical microbiology
- health promotion

- health statistics
- factors related to living conditions.

The PHA has the following main tasks: to draft and comment on legislation/acts/concepts for all strategies; to conduct monitoring, control and surveillance, as well as supervision of monitoring (drinking-water, bathing water); to maintain contact with the EU; and to carry out technical supervision.

It can impose restrictions on the use of drinking-water if it represents a danger to health, as well as on bathing water that does not meet requirements. It can also ban or restrict the market launch, sale or use of cosmetic products if these represent a danger to public health.

The Authority's operations cover the whole territory of Slovakia, working through a network of 37 regional public health authorities. In each regional centre, one person heads the regional department of environment and health, dealing mainly with the control and monitoring of specific environmental hazards. It is the responsibility of the municipalities to then impose penalties, approve decisions concerning local constructions, etc. A substantial part of the PHA's capacity is devoted to issuing permits and approvals of various actions possibly related to environment and health. There is little capacity for strategic assessment and actions.

However, the size of these departments does vary from centre to centre. At national level, there is a shortage of human resources: at the time of the review, the Department of Environment and Health had only 10 staff to cover all the environment and health-related projects.

The professional structure of the environment and health services in Slovakia is not adequately developed in terms of the policy framework, existing institutions and professional profiles. The Slovak Medical Association does not sufficiently recognize the environmental determinants of health, and the role of medical doctors in the environment and health process is not properly defined: they are mainly seen as the interface with society but have no specific environment and health responsibility. Such a view is largely sustained because the lack of continuing professional development on environment and health prevents them from functioning effectively in the constantly changing world of environmental threats. This results in

a lack of awareness about environmental health risks (e.g. poor water quality). The Medical Association does not organized specific sessions on environment and health.

Within primary health care, a change from a preventive approach to a more curative approach has resulted in the decreasing involvement of paediatricians in environment and health issues. This seems to reflect a situation that was common before the political reforms that took place in eastern Europe in the late 1980s. However, there also seems to be a trend in the opposite direction, as the Society of Paediatricians is currently trying to set up a special sector within the health care department on children's health care, with the aim of conducting more educational activities (e.g. through the production of manuals on various environment-related health hazards). There seems to be a gap between the existing structures and the desire of medical professionals to strengthen a more preventive approach.

C. Other sectors

Environment

Core responsibility for environmental protection lies with the Ministry of Environment, which is responsible for evaluating environmental pollutant risk levels and for developing strategies, activities and projects. It is in charge of the monitoring of outdoor air pollution, including PM₁₀ levels, according to EC requirements but without specific consideration of the health aspects.

Outdoor air monitoring is mainly performed by the Slovak Hydrometeorological Institute under the direction of the Ministry of Environment. The Institute brings together the national meteorological service, the national hydrological service and the national air pollution service.

Smaller projects implemented at regional level are the responsibility of the regional environmental offices, under the supervision of the Ministry of Environment. The regional offices have to give their approval for permits to be issued by the municipalities.

The Slovak Environmental Agency is responsible for environmental protection and landscape planning in accordance with principles of sustainable development. The Agency is a professional organization

of the Ministry of Environment, with nationwide powers established in 1993. It provides expertise to the Ministry of Environment and functions as an advisory technical body. Financed by the Ministry of Environment until 2001, the Environmental Agency now receives only partial funding from the Ministry, its remaining funds being project-related. Its structure consists of a headquarters in Banská Bystrica and seven specialized centres in different parts of the country:

- Centre of Environmental Policy and Informatics in Banská Bystrica
- Centre of Environmental Education and Promotion in Banská Bystrica
- Centre of Waste and Environmental Management in Bratislava
- Basel Convention Regional Centre in Bratislava
- Centre of Integrated Landscape Protection in Bratislava
- Centre of Landscape-Ecological Planning in Prešov
- Centre of Environmental Project Programming in Banská Štiavnica

The Agency works in close collaboration with the Regional Environmental Centre for Central and Eastern Europe.

Transport

The Ministry of Transport also addresses public health. A special unit is responsible for occupational health, food safety, educational health, epidemiology and noise in the specific context of railway workers. Environmental hazards such as water, waste and indoor air fall under the responsibility of the Ministry of Transport when located around railways.

The Ministry of Transport is mainly responsible for the strategic and conceptual development of environmentally friendly and safe transport structures. The Road Safety Council (BECEP), which was set up in 2004 as an interdisciplinary consulting body⁷ with the

⁷ Members of the BECEP include representatives from the ministries of: Interior, Finance, Defence, Justice, Education, Environment, Health, Telecommunication and Transport, and Construction.

Ministry of Transport as chair, has established priority actions for road safety. Its activities focus mainly on educational campaigns.

Education

In the field of environment and health, the Ministry of Education develops and finances projects on environmental and health education, focusing on environmental protection projects or health promotion campaigns at school level. However, the health impacts of environmental hazards and environmental developments are not addressed explicitly.

Economy

The Ministry of Economy is the central authority for the control and management of hazardous chemical materials, biocides and detergents. It is also the central authority of the state administration responsible for industry, energetics, heating and gasworks industry and trade and consumer protection (Act 575/2001 of the Collection of Laws (Coll.LL.)) (28). The Ministry assesses the impact of hazardous materials and substances, and it is responsible for spot checks of packaging and for ensuring that new products comply with international regulations. In the implementation of the new European Community regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Ministry functions as an intermediary between the industry and the international regulations, as well as having an advisory capacity for enterprises. A number of centres under the aegis of the Ministry of Economy are responsible for the control and management of hazardous substances:

- the Centre for Chemical Safety
- the Centre for Chemical Substances and Preparations
- the Consumer Institute.

The Ministry's activities are supported by the Trade Inspectorate. As the main body in charge of market surveillance in the non-food area, the Inspectorate assumes the relevant responsibilities of the regional and district state administration authorities. It cooperates with those authorities dealing with veterinary and food issues, health protection and customs. It carries out random tests and implements the EU rapid alert system for all dangerous consumer products (RAPEX), with the exception of food, pharmaceutical and medical devices.

Agriculture

The Ministry of Agriculture has main responsibility for monitoring food safety. Since 1996, it has been responsible for assessment of food contamination (including in soils and forests), in collaboration with the PHA and the Environment Ministry. The main focus is on soil, water, fauna and flora, with irrigation water, water for animals and processing water subject to particular analysis. The Ministry acts as information provider: if contamination is detected, the relevant sectors are informed and asked to take over.

Research in food safety is undertaken by the food safety department, the food research institute, and the department of toxic organic pollutants at the Slovak Medical University. The Ministry of Agriculture cooperates closely with these institutions.

Construction

The urban and regional development aspects of environment and health are dealt with by the Ministry of Construction, mainly under its regional development strategy. The Ministry is responsible for the control of contaminants in building and construction materials and their effects on health.

The urban planning department assesses the quality of building surroundings and reviews urban plans according to health requirements.

The Ministry collaborates with the Research and Development Institute for Building Construction (VVUPS-NOVA) which aims to foster energy efficiency in buildings in Slovakia. VVUPS-NOVA assists national policy-makers by preparing the legal framework (directives, regulations, technical rules, technical standards) pertinent to building construction. It is also responsible for research and development in relation to energy-efficient buildings, the rehabilitation of existing building stock, and the implementation of pilot and demonstration projects.

Labour, Social Affairs and Family

The Ministry of Labour, Social Affairs and Family focuses on children's protection from an environment and health perspective only

in terms of occupational health and the provision of drinking-water for the Roma population. It is the supervisory agency of the labour court and stipulates the conditions under which children are entitled to work. The Ministry sets its priorities for the social inclusion of minorities and work to combat poverty (2006–2008) and has made the provision of drinking-water one of its main objectives.

Local governments

Municipalities form the basic unit of local government. The Law on the Municipal System in Slovakia stipulates the right of municipalities to decide on all local matters with regard to administration and property. Many functions have been moved to subdistrict level. Since 2004, more responsibilities have been transferred from the national administration to the municipalities, with the aim of increasing the efficiency and quality of state administration.

The municipalities finance their activities primarily from their own funds and from national subsidies. Not all revenue sources are owned by the municipalities and they must therefore fulfil specific expenditure obligations decided by the central government.

Municipalities are responsible for ensuring the drinking-water supply – they own public water supply systems or public wells, which have to comply with mandatory hygiene requirements. The municipalities' status, functions and capabilities to address other environment and health issues is not systematically organized.

Related areas of responsibility are:

- the construction of housing and connected infrastructure
- the maintenance and administration of public property
- local public transport (in big cities)
- local roads and parking places, public areas, public light and water supply networks.

The municipalities do not have environment and health departments. Their work looks mainly at environmental considerations, such as the creation or retention of green spaces in urban areas and waste management. Their legal capacity to deal with environment and health issues is indirect: the laws are drafted by the parliament, but

municipalities may comment on them and have to implement them. For instance, municipalities control all construction-related projects by issuing permits to builders and investors on the basis of assessments carried out by the PHA. Where the PHA receives complaints related to specific environmental risk factors and finds that limit values (noise, etc.), have been exceeded, it is the municipalities that are responsible for applying sanctions.

From a purely health perspective, the municipalities have statutory responsibility for a number of issues. In particular, the municipal health support centres have, since 1994, had the responsibility of performing health screening and health check-ups.

Nongovernmental organizations

Public participation in the development of and policies related to environment and health services can be channelled through the work of nongovernmental organizations (NGOs). Since children are particularly vulnerable to environmental pollution, they are the focus of advocacy efforts for greater protection from health risk factors.

In Slovakia, there are now literally hundreds of NGOs across the country. However, none of them deal directly with environment and health. Nationally, the role of NGOs is mostly one of awareness-raising, rather than attempting to influence environment and health-related regulations, a task generally considered to be the responsibility of other associations/institutions. However, the NGOs tend not make use of the financial/economic arguments in their awareness-raising work.

The Children's Fund is one of the major NGOs in the country. It focuses on children with disabilities, social projects tackling harmful home environments, social consulting, leisure time organization, and accident and injury prevention. There have been some notable activities and achievements in these areas. The project "Preventing child deaths", for example, was a strong contribution to traffic injury prevention. The campaign mainly involved information activities through billboards, radio and television broadcasts, advertising, etc. and was conducted in close collaboration with the Ministry of Transport, the PHA and insurance companies.

Although the example of the Children's Fund includes a high level of recognition by and cooperation with government institutions, the effective role that NGOs can play in environment and health policy-making has nevertheless not been recognized by the appropriate ministries. They do not have systematic contact with NGOs, and collaboration is clearly dependent on the type of project concerned.

IV. Tools for management: policy setting/legal framework

A. Public health: Hard law

Main conclusions

- The country's political principles (the Constitution and the Government Manifesto) put the priority on environmental protection; environmental health/public health is acknowledged mainly in relation to food safety, physical activity and occupational safety.
- The main determinants of public health, as recognized by the new Public Health Act, are the environment, lifestyles, genetic factors and health care.
- The definition of environment in the Public Health Act follows the WHO definition: the physical, chemical, biological and economic factors of the living and working environments related to public health.
- Children and young people are considered a priority in tackling environmental health determinants through the Public Health Act; children are also a priority in the state health policy but this is not translated into specific actions and programmes.
- The priorities of the national health promotion programme are in line with CEHAPE priorities.
- Partnership among institutions and sectors is recognized as an essential tool for supporting public health (Public Health Act, the national health programme and the state health policy).
- Partnerships between particular components of society are recognized as supporting and helping to improve public health.
- The need for health impact assessments is recognized.
- The importance of public health is acknowledged at local level through municipal acts that include the legal obligation to create the conditions for and promote healthy lifestyles.
- Health is not always a priority in other legally binding documents addressing environmental risk factors.

Recommendations

- Financing mechanisms and institutionalized mechanisms for supporting partnerships in public health should be created.
- The quality of health impact assessments should be assured through training and certification in standardized methodologies (based on WHO recommendations).

In article 36 of the Slovak Constitution (29), which came into force in 1993 and was amended in 1998 and 1999, environment and health are referred to mainly in relation to the protection of safe working conditions: health at work should be protected through equitable and adequate working conditions; and special attention should be paid to women, minors and people with impaired health, who are entitled to enhanced protection of their health at work as well as to special working conditions.

The Constitution stipulates the right to a favourable environment (art. 44, 1), and the duty to protect and improve the environment (art. 44, 2–4). Adequate and timely information on the state of the environment and its changes and their consequences is also a basic right of all citizens (art. 45).

The Government Manifesto is secondary legislation that provides for statutory control of environmental protection (30). Its major provision concerns the protection of environmental components, stewardship of the environment and the rational use of resources. It mainly covers the following priorities:

- reduction of air pollutants through support for the use of renewable energy sources;
- development and expansion of the railways and combined transport, with the objective of improving the environmental protection and enhancing transport safety;
- prevention of environmental disasters;
- development of environmentally friendly and safe business practices;
- improved urban quality and aesthetics.

In respect of environment and health, the Manifesto sets out the relationship between the quality of urban development and physical activity.

The main issue in ensuring health is food product quality control through integrated control of the whole food chain. The objectives are a high level of protection people's health, protection of consumer rights, and the food security of the State.

The main legal instrument relevant to environment and health is the new Public Health Act, No. 355/2007. Aspects of the Public Health Act relevant to environment and health are the recognition of the environment as a basic health determinant, alongside lifestyle, genetic factors and health care. The environment is defined as the physical, chemical, biological and economic factors of the living and working environments related to public health. The major environmental determinants identified in the Public Health Act are the following:

- urban planning
- pollution
- water
- radiation
- thermal comfort
- ventilation
- physical, biological and chemical agents
- hygiene
- noise and vibrations
- electromagnetic fields
- occupational health.

The Act focuses on children. It increases the responsibility of the PHA in ensuring specialized testing of components of the living and working environments and of biological material, and monitoring of drinking-water and bathing water quality. Particular emphasis is placed on the organization of the work at different levels (regional authority and municipal levels).

In accordance with the State Health Policy approved by the government in November 2000 and the WHO Health for All policy, as introduced at national level, the health minister is called on to report once every two years on the achievements in reducing health inequalities and improvements that ensure a healthy start to life, better health for children and adolescents, and healthy aging. The achievements of multisectoral cooperation in disease reduction are also to be reported on.

The government adopted the National Health Programme (31) by Resolution 39/2005 of 6 July 2005. The Programme is designed as a system of rapid response to actual health problems, aiming at reducing health risk factors. It includes the methodology, measurements required, tools and activities to be implemented by the PHA and monitored by the Ministry of Health. The Programme and associated projects are coordinated by the PHA; the PHA assesses the health impact of the Programme using WHO health impact assessment (HIA) methodology.

Of the 11 priorities set, the policy commitments relevant to environment and health concern:

- healthy lifestyle
- injury prevention
- healthy working conditions
- healthy living conditions
- physical activity.

The Construction Act establishes building standards that will ensure a high quality living environment. It contains provisions on the safety of the materials and construction methods used and sets building quality standards that have been approved by the PHA.

At local level, policy commitments relevant to environment and health can be found in the municipal acts, which lay out the legal obligation of municipalities to create and promote healthy lifestyles through adequate environments, among others. The example of Bratislava's new master plan shows that efforts are being made to promote intersectorality to ensure that plans for the living environment take different factors into account.

B. Public health: Soft law

Conclusions

- The NEHAP covers a wide range of relevant institutions and stakeholders.
- The Children's Environment and Health Action Plan, with its RPGs, is a tool to support and help guide national processes.
- The role of the NEHAP can be to help decide among existing priorities (Ministry of Economy), or to set new priorities (Ministry of Education).
- The NEHAP has been used to harmonize environment and health activities and to define them more clearly.
- In the NEHAP, education on environment and health focuses mostly on specific issues, rather than on professional education.
- As a government act, the NEHAP has been approved by all ministries and is supported by a good representation of the relevant sectors.

Recommendations

- The NEHAP is not currently strong enough to ensure the inclusion of environment and health in the relevant health acts; it should be made more binding.
- Institutional and human resources should be allocated to implementation of the NEHAP, both in the relevant sectors/institutions and to ensure coordination in the health sector.

The term "soft law" refers to quasi-legal instruments which do not have any legally binding status and which are "weaker" than traditional law, referred to as "hard law" (see above). The NEHAP can be considered to be a soft instrument or tool. The government first approved the NEHAP in 1997. It was developed with the participation of all ministries, who were required to approve it in order to have it recognized as a government act.

The NEHAP provides a general framework and understanding of priorities in environment and health, and a basis for raising environment and health higher on the political agenda.

The NEHAP was updated and approved by the government in 2000. It set the following priorities: food safety, air pollution, provision of drinking water, health promotion in the working environment, housing, environmental health services, public relations and relations with NGOs, and education and training in environmental health. Two local environment and health action plans have been developed (for Nitra and Banská Bystrica).

The NEHAP was revised in 2005 after the fourth Ministerial Conference on Environment and Health in Budapest, in June 2004, and was accepted by the government in January 2006. The main regional priority goals of the Children's Environment and Health Action Plan for Europe (CEHAPE) were included in it, and 43 measures with corresponding tasks were formulated. The new NEHAP (NEHAP III, 2006) covers the following priority issues:

- the four CEHAPE regional priority goals
- bio-monitoring
- the environment and health information system
- climate change and health
- research, education and training on environment and health.

The members who participated in the preparation of the revised NEHAP and who are current active members of the NEHAP group represent various ministries and institutions: the PHA, the ministries of education, environment, economy, social affairs and family, transport, agriculture, construction and regional development, the National Statistical Office, University Hospital Bratislava, the Children's Hospital, the Children's Fund, the Slovak Association of Primary Care Paediatricians, regional public health authorities and the public health department of the Slovak Medical University.

Different ways have been chosen to implement the NEHAP. Policy commitments by the sectors involved in the NEHAP include those listed below.

- Ministry of Labour, Social Affairs and Family: cooperation with the work of the NEHAP started with NEHAP II and focused on children's protection in occupational health; under NEHAP III, the Ministry is responsible for CEHAPE RPG I on drinking-water, focusing on the Roma population. Its CEHAPE work is in line with its own programme on social inclusion of minorities and against poverty (2006–2008).
- Ministry of Economy: the Ministry is in charge of the assessment and control of imported hazardous products, chemical preparations and packages of hazardous products on the market from an environment and health protection point of view; these activities are part of the Ministry's programme and represent its contribution to the NEHAP.
- Ministry of Education: awareness of drinking-water quality, drinking-water regime in schools, road safety education, and prevention of smoking are the main activities in the framework of the NEHAP. The Ministry also focuses on improving the construction of schools and training teachers. Some of the objectives have been included as additional priorities in the Ministry's objectives, others reflect existing priorities.

The CEHAPE has been an effective tool in helping the different sectors to strengthen their internal focus on environment and health when setting their priorities and planning their activities. The way the RPGs are formulated makes the CEHAPE feasible and implementable. Nevertheless, changes in personnel and priority setting in the NEHAP group resulting from changes in government and ministry organization have weakened the effectiveness of the coordination group. No funds are allocated to the NEHAP activities within any of the ministries involved, making it difficult to formulate new activities and priorities beyond those already included in their programmes.

Environment and health are therefore only partially addressed. The effectiveness of the NEHAP needs to be strengthened by ensuring that all sectors share its strategic view, by allocating funds and human resources and by upgrading the NEHAP to primary legislation, to ensure that environment and health are taken into account by the different acts.

Through the PHA and its department for hygiene and environment, the health sector is responsible for leading NEHAP implementation. Additional financial and staff resources are needed for this coordination function to be fulfilled.

C. Economic aspects/financing

Conclusions

Financing

- There is no regular funding of environment and health.
- When an environment and health programme is adopted by the government, a budget is not automatically attributed to it.
- Related ministries (e.g. the finance ministry) welcome the environment and health activities, but do not provide any financial contributions.
- Shortages in general resources (staff and financial) at the PHA make work in environment and health difficult.
- Budget allocation to the different public health priorities is not transparent.
- Health outcome priorities (e.g. injury prevention) are not automatically distributed in budget allocation.
- Structural funds from the EU go mainly to support the water sector.

Economic

- Economic arguments/health costs are not used for setting priorities or for informing/convincing policy-makers to take preventive measures.
- Economics at the personal level are used as an argument, whereas the public health economic argument is not.
- Innovative strategy is strongly supported in the country but the fact that a strategy is environment-friendly or promotes health is not used as an argument (Ministry of Economy).
- There is no comprehensive policy related to transport emissions.

Recommendations

- Extend the use of economic instruments such as emission trading schemes.
- Make more systematic use of integrated economic analysis (e.g. cost-benefit analysis) in environment and health policy-making.

- Review existing environment-related taxes from the perspective of health expenses.
- The protection of public health should figure more prominently in legislation related to both the environment and economic development.
- Economic instruments should be applied to encourage enterprises to observe health and safety standards, as well as to report all occupational disease.

Policies and strategies designed to address environment and health conditions should always be supported by the necessary resources or a formal mechanism that will ensure those resources can be raised. Lack of funds is one of the biggest challenges/problems in the country's environment and health sector. Early in 2007, the PHA had to reduce its overall costs for both resources and staff, by 7%, and this automatically resulted in a shortage of resources in the environmental health department. Budget allocation within the PHA has to be streamlined and made more transparent.

With the exception of the national health promotion programme, budgets are not automatically attributed to a programme or a strategy when it is adopted at government level. If a sector plans or implements environment and health-related activities and programmes in the framework of the NEHAP, it needs to apply for funds on an annual basis.⁸ Sources of funds can be very different; for example, the NEHAP-related activities of the Ministry of Labour, Social Affairs and Family have been financed by state lottery money.⁹ This lack of institutionalized funding mechanisms makes any development of environment and health strategies difficult to sustain.

The lack of funds for environment and health structures is also reflected at local level. Local authorities have to implement project activities from the municipal budget but rely on some form of additional funds from ministry level. In Bratislava, the municipality had initiated activities to encourage healthy behaviour in young families through the promotion of physical activity. However, these

⁸ This applies, for example, to the Ministry of Education.

⁹ For 2006–2008, their budget was 26 million Slovak koruna.

activities had to be stopped in 2004 and passed over to the PHA because of lack of funds. Other environment and health prevention activities, such as a road traffic injury campaign, are processed by television stations against a fee that has to be paid by the institutions involved.

There is no economic support or involvement either from the Ministry of Finance. Although the Ministry of Economy is a part of the environment and health process through the NEHAP, it does not make any financial contribution to ensure implementation of the process. There have been attempts to support industry in integrating environmentally friendly methods and using renewable energies. European structural funds have been used for this purpose, supporting the use of biofuels. However, the priority of the Ministry of Economy is to promote general innovative strategies aimed at strengthening the economic growth of the country. Environmental and health aspects are taken into account only marginally.

Although environment and health does not receive any privileged support (compared to industry, for instance), the application criteria for project proposals do take account of the impact of proposed strategies on health.

Any economic instruments used in environmental policies are restricted to tax differentiations. Individuals, state and private companies pay a special tax on vehicles. The tax depends on the engine capacity. There is no other comprehensive policy related to transport emissions or any tax benefits for energy-related investments that impact on air emissions.

In summary, integrating environment-related economic instruments into economic development policies is a new issue in Slovakia and has to be strengthened. The health costs of environmental pollution should be at the heart of policy-making and used to strengthen the preventive approach towards the environmental burden of disease.

At consumer level, the choice of buying appliances with low energy consumption is clearly driven by economic considerations and less from an emission reduction perspective. However, it appears that it is not only the general public who set little importance on health arguments: estimates of health costs resulting from environmental

hazards are not taken into account in setting priorities or taking preventive measures at governmental level either.

V. Intersectoral collaboration

Conclusions

- All governmental regulations go through an intersectoral consultation process (involving all ministries) before being sent for approval by the government.
- Under the state health policy, the Minister of Health has to report on multisectoral achievements.
- The Ministry of Health, through the state health secretary, is responsible for coordinating activities with other ministries.
- The health arguments seem to be taken into consideration by other sectors verbally, but not in practice.
- Representatives of different ministries sit on the Ministry of Health coordination board for state health policy: this encourages their interest in the area.
- Intersectional collaboration in the area of transport (BECEP, joint action plan, NEHAP, NGOs) is well developed.
- At local level, establishing a master plan entails collaboration between all sectors.

Recommendations

- Ministry of Health leadership in the environment and health process should be strengthened.
- Dialogue between different sectors at regional level should be strengthened.

Intersectorality in developing national legislation and regulations is an institutionalized process in Slovakia. All government regulations have to go through an intersectoral consultation process before being sent for approval to the government. Representatives of all ministries have to approve the draft or make comments as appropriate. Where corrections are required, the draft regulation has to be sent back to the ministry responsible to be amended accordingly.

To ensure multisectoral involvement by the Ministry of Health, the state health policy stipulates that the Minister should report to

parliament on multisectoral achievements. This applies not only to general collaboration across the sectors but also when dealing with very specific diseases (communicable diseases). Ministries representing sectors other than health are therefore encouraged to participate in the Ministry of Health coordination board on the state health policy.

The state secretary of health is responsible for coordinating activities with other sectors, especially in the field of environment and health.

The need for collaboration between different sectors and operational levels within the health sector is also recognized by regulations governing interaction between national and local administration. The Public Health Act states that the regional public health authorities have the obligation to cooperate with the relevant departments, units and individuals at municipal level.

Although it is formally recognized that cooperation between different sectors is an essential prerequisite for health protection, health arguments are not given the importance they deserve by other sectors in the decision-making process, when drafting regulations, etc. Health costs as a consequence of exposure to environmental hazards are seldom used in priority setting or informing and convincing policy-makers to take preventive measures.

The gap between theory and practice seems to be underlined by the attempts of paediatricians over the past seven years to create centres at municipal level that would facilitate the dialogue between different sectors. Discussions have been held with representatives of the Ministry of Health, and of regional and local governments, but with no result.

A general problem felt and shared by the various actors involved is the lack of communication between different sectors. There often seems to be a fragmentation of actions and programme priorities, resulting in a lack of efficiency in specific areas.

For instance, programmes of the Ministry of Education targeting child labour are not related to projects on the same issue run by the Ministry of Labour, Social Affairs and Family.

On the other hand, there are other examples of intersectoral collaboration that functions well. The Cohesion Fund Department within the Ministry of Construction, which is responsible for managing environment and transport projects, cooperates extensively with the environment and transport ministries (modernization of the road infrastructure, railways, waste water treatment plants, drinking-water supply, water management, reduction of air pollution related to local heating plans). The same is true of the Ministry of Education and the PHA, which have been cooperating in the development of information brochures for children aiming at discouraging them from smoking.

The NEHAP also presents multiple opportunities for intersectoral collaboration in preventing health outcomes resulting from environmental risks.

Many efforts have been made to encourage multisectoral collaboration in preventing road accidents. The creation of the Road Safety Council (BECEP) (32) and the Joint Action Plan on Transport and the Environment (33) are based on the concept of cooperation and shared responsibilities.

VI. Tools for action

Conclusions

- Public health monitoring is performed by many different agencies and institutions and at different levels (national, municipal, etc.).
- Monitoring concerns either health or environment; there is a lack of combined health and environment data.
- HIA assessment seems to be inadequately covered by the health sector.
- The existing procedures for HIA do not seem to be well developed.
- There is little appreciation of environment and health and prevention in the current medical curriculum.
- There are not enough experts with strong environment and health knowledge.
- There is no specialized or supplementary training for paediatricians in environmental health issues.
- In both secondary and primary schools, environment is dealt with as a cross-sectional subject and the health impacts of environmental factors are not looked at explicitly.
- There is little awareness of environmental risk factors in society (e.g. environmental tobacco smoke, noise, etc.).
- There is no recognized national centre of environment and health expertise able to develop and upgrade national programmes, provide training and capacity-building, and maintain a high level of environment and health assessment.

Recommendations

- Further strengthen environmental impact assessment procedures.
- Develop HIA procedures.
- Expand the use of strategic environmental assessment.
- Provide more public information about the right to health information, environmental information and the burden of health attributable to environment.

- Encourage public participation in decision-making.
- Make better use of the Slovak Environmental Agency for strengthening ENHIS at the national level.
- Prioritize the further development and implementation of the National Environmental Health Information System, building on the work already done, and further expand current work on environmental health impact assessment.
- Improve both the knowledge and application of HIA methodology, in view of the new Public Health Act.
- Further develop the legal framework for environmental health impact assessment.
- Intensify the training of environmental health specialists, including international training for a limited number of specialists and participation in international research projects.
- The Ministry of Health should increase the resources available to the PHA's environmental health department for the assessment and investigation of health effects and the development of a communication structure for feedback to the reporting regions and districts.
- Structures for communication concerning the status of environmental risk factors should also be supported and financed by other sectors.
- Public information and awareness raising should be promoted.
- A national centre of excellence for environment and health assessment should be developed.

A. Monitoring

Monitoring of environmental health parameters can be used to indicate the level of compliance with a standard but also to assess trends over time. With the exception of those hazards whose monitoring is regulated by EU legislation, there is no national requirement for monitoring environmental indicators under Slovak law, nor is there any sanction if the necessary data is not provided.

Health data are collected by the National Health Information Centre, but public health monitoring is also conducted at local level. Municipalities have the obligation to report to the city council on the health status of the inhabitants. An annual report on the health status of Bratislava has been drawn up every year since 1996, and includes an overview of preventive measures taken at local level. The Ministry of Health is obligated to submit a report on the health status of the population to all other ministries once every two years, giving information on all health risks, including environmental determinants.

Environmental hazards are identified and monitored by the Slovak Environmental Agency. One of the government's long-term objectives includes the completion of an integrated environmental monitoring and information system. Until the end of 1993, there was no comprehensive system for environmental evaluation based on regularly monitored indices. Through Resolution No. 449 of 26 May 1992, the government adopted the Concept of Environmental Monitoring in the Territory of Slovakia and the Concept of an Integrated Information System on the Environment in Slovakia. The Ministry of Environment was given responsibility for creating and implementing these systems, in cooperation with other ministries and departments.

The Slovak Environmental Agency is the lead agency in monitoring, and cooperates with the Centre for Waste Management. It uses standard indicators, as defined by existing international agencies (the European Environment Agency, Eurostat, OECD), and sustainable development indicators, primarily to provide the internationally required statistical data. It produces a yearly report on the environmental situation in the country. The report is owned by the Ministry of Environment and distributed to local communities. However, because of a lack of financial resources it is not widely disseminated in civil society.

ENHIS is considered to be a driving force for analysis of the environment and health situation in the country. However, this is mainly done at national level because of the lack of data for the regional and local levels.

Drinking-water and bathing water are monitored by the PHA at the consumer level, whereas the monitoring of the water quality at supply level (source) falls under the responsibility of the water supply operators.

Water research institutes collect data on the quality of water along the whole production and delivery chain. The monitoring of water intended for irrigation and animal consumption, however, is the responsibility of the Ministry of Agriculture.

There is no central register for children's accidents, and it appears that there is little or no coordination between the various services concerned. Information on accidents is registered by the Statistical Institute, as well as by police departments. A central registry is planned for 2009, under the coordination of the Ministry of Health, which made this commitment at a national conference on the prevention of child injuries in November 2007.

A similar problem of overlapping can be found in the monitoring carried out by the Ministry of Environment and the Ministry of Transport in relation to air quality. For instance, the Ministry of Environment is responsible for monitoring air pollution, the work being carried out by its hydrometeorological institute. However, the Ministry of Transport is in charge of monitoring the effects of transport on the environment. PM₁₀ has been monitored regularly since 1999, and the results are reported annually in the Annual Environment Assessment Report of Slovakia. PM_{2.5} is also regularly monitored. Data on air quality are then analysed by the PHA.

In the field of food contamination, controls have been undertaken and data collected since the 1990s but not on a systematic, preventive basis. Data on food contamination are collected in the case of problems and outbreaks. In 1996, an environment monitoring system was established under the leadership of the Ministry of Environment, focusing on 12 subsystems. The assessment of three subsystems: soil, water (irrigations and animal consumption), and fauna and flora; and food contamination monitoring are the responsibility of the Ministry of Agriculture. The assessment of food contamination is undertaken in cooperation with the PHA and the Ministry of Environment. The health sector is responsible for nutrition. The food safety department is responsible for three main areas: a) monitoring of contaminants in selected locations; b) food basket analysis; and c) analysis of wildlife and fishery. Large farms and chicken farms fall mostly under the Ministry of Agriculture control system. There are large farms with permanent controls (the last foot and mouth disease epidemic occurred in 1973 and there was an outbreak of pig plague in 2001). Agricultural soils are monitored every 5 years in 50 stations. The main parameters analysed are cadmium, mercury, lead, arsenic, nickel, nitrates, polychlorinated biphenyls (PCBs). Dioxins are not analysed, perhaps because of lack of funds. Once a location is established, the whole production chain is analysed. PCB monitoring is nevertheless mainly done in the framework of research projects (EU project, but also with the support of funds from research projects financed by the United States), in close collaboration with the food safety department, the food research institute, and the department of toxic organic pollutants at the Slovak Medical University. Food basket analysis is undertaken in 10 places in Slovakia; 25 samples are taken twice a year, and chemicals are monitored: nitrates, PCBs, veterinary drugs, pesticides and selected additives. The control of baby foods falls mainly under

the responsibility of the Ministry of Health. In respect of general foods, the Ministry of Agriculture collects information only when contamination is detected in food already marketed. In such cases the relevant authorities (veterinarian authority, health authorities or environment authorities) are contacted and take over. Food hygiene falls under the responsibility of the Ministry of Health.

The Slovak State Veterinary and Food Administration is the state administrative body that carries out veterinary checks, veterinary inspections and veterinary surveillance, and prescribes measures based on the results of such activities in line with the Veterinary Care Act 488/2002 Coll.LL., as amended. In accordance with the Food Act 152/1995, the Administration's food surveillance division supervises the production, handling and market launches of foodstuffs of animal origin, foodstuffs of plant origin and tobacco products, with the exception of catering services and foodstuffs supervised by the health protection authorities. The Administration carries out food safety surveillance, including of genetically modified foodstuffs, as well as surveillance of food and tobacco advertising.

In conclusion, it appears that there is a considerable amount of statistical data available in Slovakia on health trends and on specific environmental parameters, but there is a need to develop homogenous collection mechanisms and processing procedures. In addition, the available data are not systematically communicated to the public, resulting in a lack of public awareness of environmental threats to health.

B. Environmental impact assessment and health impact assessment

Environmental impact assessment (EIA) was introduced in Slovakia by means of the Slovak Act on Environmental Impact Assessment in 1994 (EIA Act, No. 127/1994). It provides a comprehensive approach to strategic environmental assessment (SEA) and includes the requirement to assess development policies and legislative proposals in relation to their assumed impact on the environment. Part 4 of the EIA Act (Article 35) presents a brief procedure for environmental assessment that is obligatory for proposed development policies in the areas of energy supply, mining, industry, transport, agriculture, forestry and water management, waste management and tourism. In

addition, the Act covers territorial planning documentation for regional and residential settlements in selected areas and any legislative proposal that may have an adverse impact on the environment. Slovakia is preparing to draft regulations to govern the implementation of SEA requirements.

Environmental risk assessment falls under the responsibility of the Ministry of Environment, which is also responsible for impact assessment (specific projects, activities, policies and action plans).

Other ministries, as well as regional and local authorities, also participate in the impact assessment process.

The Ministry of Economy gives its expert opinion on the EIA conducted by the Ministry of Environment on the basis of its sustainability criteria. If the evaluation by the Ministry of Economy is not in line with the assessment made by the Ministry of Environment, a revision can be requested. Environmental acts need to be evaluated with regard to their financial impact (competitiveness and economic growth). The evaluation by the Ministry of Economy is appended to the act as an annex.

Since 1992, research on the impact of transport on environment has been the responsibility of the Ministry of Transport, carried out mainly by the Institute of Transport and focusing on emissions from transport. A transport impact assessment was completed in 2006, looking at the impact of motorways and determining the least harmful traffic options. However, the parameters used for the assessment did not consider air pollution, noise exposure, etc. but focused on the impact of the motorways on residential areas (from an urban development perspective).

Implementation of the results of EIAs for proposed projects is ultimately the responsibility of the municipalities, which have to issue or deny construction permits. The EIAs are performed by authorized companies commissioned by the Ministry of Environment, the Ministry of Health and the Ministry of Economy. Private investors need to pay for two assessments: the EIA and the “counter-assessment” commissioned by the Ministry of Environment.

According to Law No 24/2006, EIAs should also include a health impact assessment, i.e. each territorial planning document has to include both an environmental impact assessment and a health impact assessment. However, it is not clear to the reviewers whether or how thoroughly the health impact assessments are carried out. Where a health impact assessment is performed, it is done by private companies, not the health sector, and often also includes a social impact assessment. There is no uniformity in the methodologies used. Implementation of environmental health impact assessments on a larger scale requires staff with the necessary qualifications to be available to the relevant division/institution of the Ministry of Health.

The role of the health sector in regard of impact assessment for construction projects is to issue the building authorization.

C. Capacity building

Slovakia has no specialized institution for educating or training environmental health professionals. There is an environmental health department within the public health faculty of the Slovak Medical University, which also has a separate occupational health department. Other concerns on environment and health, mostly related to food contamination, etc., are part of the curricula of the Slovak University of Agriculture in Nitra. The Slovak Medical University department of environmental medicine focuses its activities on research into the relationship between exposure to environmental factors (e.g. prenatal and postnatal exposure to organic and inorganic xenobiotics, and other selected environmental factors) and children's health.

The department for environmental health and environmental medicine emphasizes a purely scientific education. Environmental health management is not sufficiently recognized. There is currently only limited content in the curricula on preventive approaches to public health. As a result of this, the profiles of environment and health professionals are not adequately established and are, unfortunately, sector-specific. This is despite the fact that there are large numbers of professionals (food hygienists, toxicologists, epidemiologists, veterinarians, laboratory personnel etc.) working towards common goals.

No mechanism for specialization or continuous professional training in environment and health for existing medical staff has been developed. Paediatricians and general practitioners need systematic training to raise their awareness of children's health and environment issues. General assemblies of the medical and other associations have never dealt with environmental risk factors of health.

The educational structures result in there not being any single environmental health profession in Slovakia. As mentioned earlier, the main environmental health services are delivered through the PHA, under the leadership of the Ministry of Health. A precondition for heading the environmental departments of the regional public health centres is that a staff member must have attended a postgraduate course in environmental hygiene under the aegis of the Slovak Health University.

Educational curricula need to be changed to integrate environment and health modules and to improve the quantity and the quality of trained environment and health professionals. Training courses for senior professionals in environment and health risk factors, principles and management should be developed in order to overcome the lack of experts in this field in Slovakia.

One positive example in this respect is Trnava University, where the faculty of health care and social work has introduced environmental health as a subject in its Master's degree curriculum. Students have to pass exams in the following subjects: environmental health, epidemiology and health management.

The need to strengthen environment and health education applies also to the primary and secondary school levels. Slovakia actively promotes education on environment as a cross-sectional subject. Funds are made available by the Ministry of Education and projects are chosen with the support of the Ministry of Environment. Thirty projects were funded in 2007 with budgets ranging from 75 000 Slovak koruna for local projects (schools) to 250 000 Slovak koruna for a national project.

However, these projects tend to emphasize nature conservation (nature trails, conservation of specific areas, energy saving), and not the effects of environmental hazards on health. These needs are now

being recognized and, in the framework of the NEHAP, the Ministry of Education is strengthening its efforts to raise awareness of: drinking-water; the effects of urban development on road safety; and the positive effects of traffic playgrounds on safety management. The Ministry of Education is, however, only responsible for school curricula; environmental education and education concerning the health risks resulting from environmental factors have to be further strengthened at municipal level.

D. Communication

Public participation is a key element in environment and health policy-setting and can only be ensured if an adequate level of information is provided. Freedom and availability of information are basic societal rights. Anyone in Slovakia has the right to ask for and gain access to information held on the environment and the health status of the population. When threshold values of monitored parameters (e.g. PM₁₀) are exceeded, this is reported in the media. The Slovak Environmental Agency issues regular reports on the environment but, although approximately 2000 copies of the report are printed, there are no additional funds to widely disseminate the results. The Agency also organizes annual conferences on environmental status for professionals, the public and for children. The annual ENVIROFILM festival has taken place in Banská Bystrica for the past 10 years, with awards given for the best films on environmental issues from throughout the world. It is a place where film makers, environmentalists, journalists and members of international associations of environmental festivals meet.

Public interest in the environment and health status has increased in the recent years. Nevertheless, there is still a lack of knowledge on many major environmental hazards. There is little awareness of environmental tobacco smoke and air pollution caused by transport, and the effects of climate change have only recently become known. A survey undertaken several years ago on public knowledge of water quality showed that only 50% of the people interviewed knew about the possible risks. As events like World Water Day show, there is increasing public interest in having the water tested.

In general, there is no funding mechanism developed for communication activities at ministry or institute level. Although, for

example, the PHA is often consulted by the press (e.g. when the smoking ban was introduced), no budget allocation exists for developing targeted communication strategies.

The experience of NGOs shows that raising awareness through television campaigns is costly and depends on the policy of each television station.

Public information and education on environment and health risks will be essential for ensuring the successful implementation of environment and health policies. The role of journalists and the media as partners in the development of communication strategies should be given more importance.

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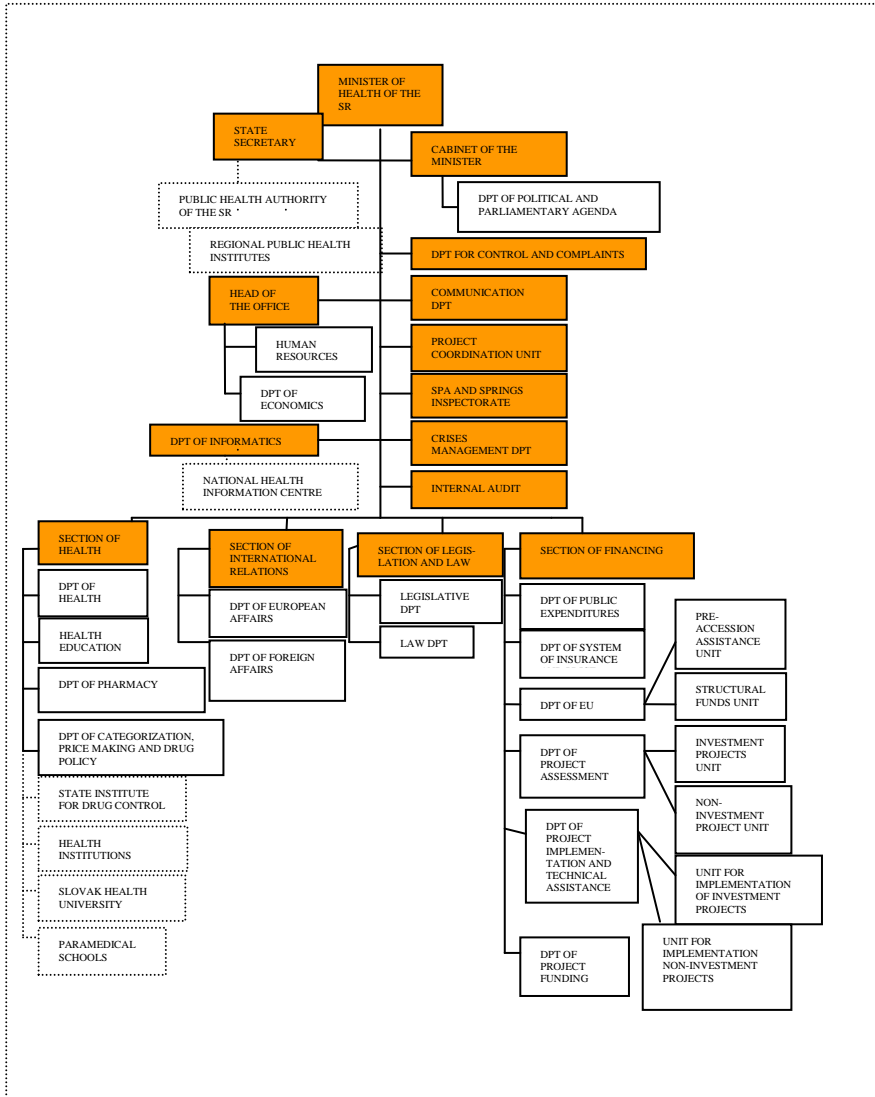
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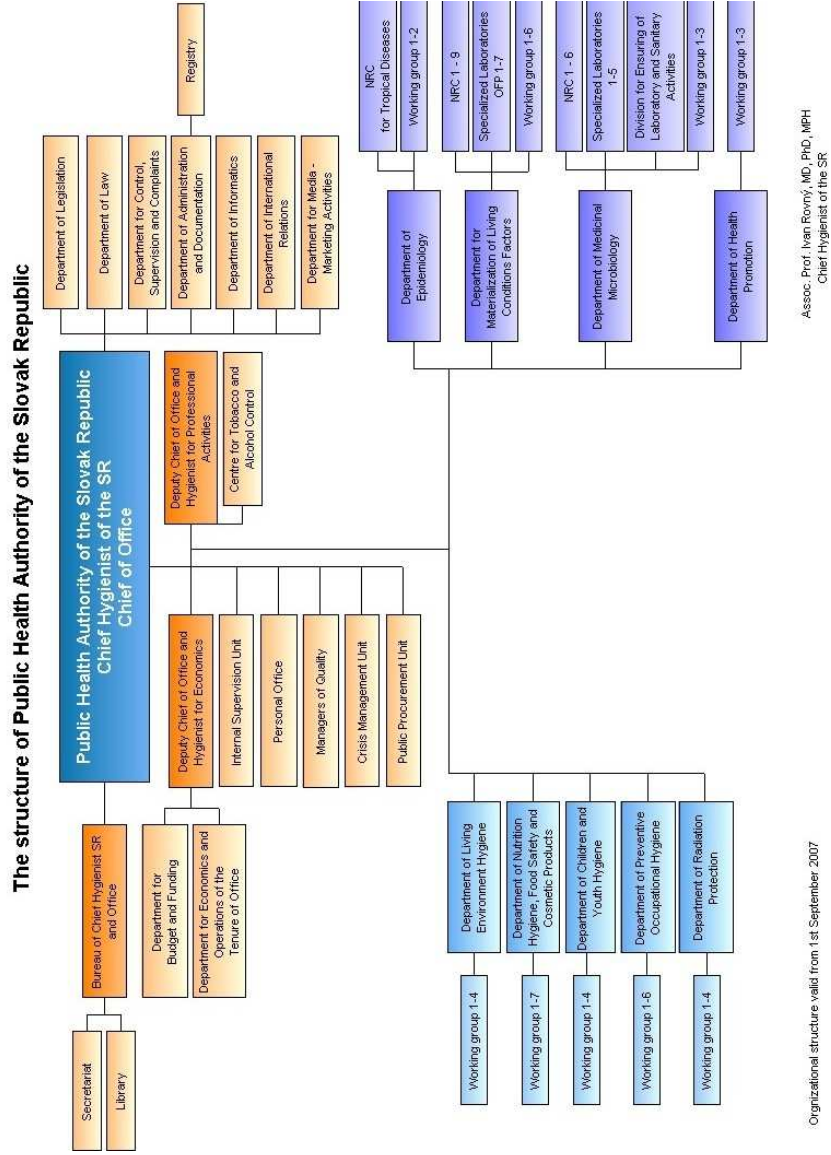
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VIII. Annexes

A. Organizational chart of the Slovak Ministry of Health



B. Organizational structure of the Public Health Authority of the Slovak Republic



C. Additional information by RPG: overview of directives, regulations and protocols

RPG I: Water and sanitation

Summary

Clean water is one of the main environment and health issues in Slovakia, in terms both of environmental risks to health and of policy efforts undertaken. Considerable improvements in water supply, both at urban and at rural level, have been achieved in recent decades. Drinking-water quality has been substantially improved, contributing to a fall in the number of waterborne disease outbreaks in the country. Nevertheless, the houses of more than half the rural population have no connection to sanitation or wastewater facilities.

Many different sectors are involved in issues related to water safety, the importance of which is acknowledged by the financial support provided. Under the NEHAP, management of water safety is allocated to different ministries. The Ministry of Labour, Social Affairs and Family is responsible for the provision of drinking-water to the Roma population, while the Ministry of Education works to raise awareness of drinking-water quality and the need for a drinking-water regime in schools. Fifty per cent of the EU structural funds are invested in the national water sector.

Surveillance, an essential tool in the control of waterborne diseases, is performed by many different institutions, depending on the type of water. There is a need for harmonization of monitoring procedures and centralized access to data.

In conclusion, substantial effort has been put into the development of water and sanitation strategies but there is still a need for greater public awareness of the risks of water quality.

Institutional set-up

Public Health Authority, water companies, Ministry of Agriculture, Ministry of Labour, Social Affairs and Family, Ministry of Environment, Ministry of Construction, Water Research Institute.

- Irrigation water, water for animals and processing water are analysed by the Ministry of Agriculture.

- The Ministry of Construction's Cohesion Fund Department manages environment and transport projects in cooperation with the Ministry of Environment and the Ministry of Transport (waste water treatment plan, drinking-water supply, water management).
- Waste water treatment: the Cohesion Fund started with nine waste water treatment companies as beneficiaries (measurable targets for public supply defined in the 2004–2006 strategy).
- Water supply is ensured by the Ministry of Environment, water companies and municipal offices.

Tools for management

Main laws/policies recently established in this area

International

- Council of the European Union Directive 98/83/EC on the quality of water intended for human consumption
- Council Directive 91/271/EEC concerning urban wastewater treatment
- Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; adoption: 22 March 1989; entry into force: 5 May 1992; Slovakia: succession: 28.05.93
- UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes
- Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes; signature: 17 June 1999; entry into force: 4 August 2005; Slovakia: signature: 17 June 1999; ratification: 2 October 2001
- Council Directive 76/160/EEC related to bathing waters
- Convention on Cooperation for the Protection and Sustainable Use of the River Danube

National

- Law No. 355/2007 on Public Health
- Slovak Water Act No. 364/2004
- Regulation No. 354/2006 on requirements for and control of the quality of water intended for human consumption

NEHAP

- Under NEHAP III, the Ministry of Labour, Social Affairs and Family is responsible for ensuring the provision of drinking-water (RPG I) to the Roma population.
- The Ministry of Education has responsibility for raising awareness in respect of drinking-water and encouraging a drinking-water regime in schools.

Economic aspects/funding

- Fifty per cent of the structural funds from the EU go to the water sector (water protection, floods, nature), with priority on sanitation, waste and sewage.
- The water supply system is undergoing continuous development; nevertheless, cost is frequently a barrier in access to water.

Tools for action

Monitoring

- The monitoring of drinking-water and bathing water is controlled and coordinated by the PHA at consumer level; and by the water companies at the public supply level (source).
- Water quality is the responsibility of the water supply network operators.
- The Water Research Institute collects data on water quality throughout the consumption chain.

RPG II: Injuries and Physical activity

Summary

Injuries and poisoning are the third cause of death in Slovakia. The mortality rates resulting from road traffic injuries and unintentional injuries in children and young people are consistent with the European averages but remain unacceptably high. However, Slovakia is one of a group of countries in the WHO European Region that show a high level of commitment to injury prevention in their policies.

Prevention of road traffic injuries falls mainly under the responsibility of the Ministry of Transport but efforts are currently being made to involve other sectors. The BECEP programme follows a multisectoral approach with shared responsibility; under the current NEHAP, the Ministry of Education is also strengthening education on road safety. Road traffic injury prevention is also a core activity for national NGOs. Prevention of unintentional injuries is the responsibility of the Ministry of Economy when related to product safety issues.

Although efforts have been made in preventing unintentional injuries, there is still no central register for children's accidents and it appears that there is little or no coordination among the various services collecting data.

Institutional set-up

- Bezpečnosť Cestnej Premávky [the Road Safety Council] (BECEP) was set up in 2004; it is a consultative interdisciplinary body, chaired by the Ministry of Transport and including representatives from the ministries of the interior, finance, defence, justice, education, environment, health, telecommunications and transport, and construction.
- The sub-committee on education organizes campaigns focusing on children, cycle helmets, child seats in cars, and traffic education at primary school.
- The Ministry of Construction's Cohesion Fund Department is responsible for managing environment and transport projects in

cooperation with the Ministry of Environment and the Ministry of Transport (modernization of the road and rail infrastructure).

- The Ministry of Transport has collaborated with NGOs in producing television features on the theme.
- The Children's Fund runs the "Children shouldn't die" campaign that focuses on safety for children.
- The urban planning department deals with planning the area around new constructions; responsibility for enforcement lies with the municipality.
- The Trade Inspectorate conducts and analyses public opinion surveys and questionnaires; many people consider the safety argument to be very important.

Tools for management

Main laws/policies recently established in this area

International

In September 2001, the European Commission issued a new common transport policy in the White Paper "*European Transport Policy for 2010 – Time To Decide*" (COM 2001/370), which hoped to provide solutions to the lack of harmonious development in the area. One major difficulty identified in the White Paper was the absence of an appropriate environment for the implementation of political intentions in the transport sector, meaning that, even in the developed EU countries, application was often delayed.

The basic environmental and social principles expressed in the policy are: reduction of environmental pollution, health protection, traffic safety, quality of life, and affordability of transportation.

The main objectives related to environment and health are:

- to decrease the negative environmental effects of transport by developing mass public transport, optimizing traffic requirements through land use planning, making transport more environmentally friendly, and developing the use of non-motorized modes of transport;
- to increase the quality and the development of transport services by improving the quality of transport, harmonizing the technical

conditions in the transport market, and applying modern information and communication technologies and telematics in transport; and

- to enhance traffic safety and protection by improving internal safety, security and protection in transport.

European Union Directive 88/378/EEC on the safety of toys for children aged under 36 months

European Union Directive 67/548/EEC regulating the classification, packaging and labelling of dangerous substances

National

Slovakia has a transport policy that forms the basis for the elaboration and implementation of development concepts for individual modes of transport until 2015. Its aim is to establish transparent conditions and minimize risks of access to the transport market and infrastructure, and to satisfy the constantly increasing transport demands of society (transportation of goods and people) in a required time and to a desired level of quality with a simultaneous decrease in the negative impact of transport on the environment. These aims must be achieved within the framework of ensuring sustainable development that includes economic development, social solidarity and environmental acceptability.

The Joint Action Plan on Transport and the Environment is based on the government's programme proclamation, the strategic and conceptual documents of the transport and environment sectors, and forecasts for economic and social development in the country. The Action Plan also includes details of the documents agreed by the Slovak delegation at the first Regional Conference on Transport and the Environment organized by the United Nations Economic Committee for Europe in Vienna in November 1997.

The Action Plan covers joint activities aimed at encouraging physical activity; nevertheless, the policy to encourage cycling in the cities has not really been successful, as the cycle paths do not link places of interest to the population.

Speed limits: no speed limits are set for residential roads; in towns the speed limit is 60 km/h, in contrast to the 50 km/h limit applied in all other EU countries.

The government has also approved the National Road Safety Plan, 2005–2010 with the following priorities: road vehicle safety, road safety, traffic education, health education and traffic psychology, road safety legislation, supervision of road safety and traffic flow, promotion in the media, and national and international coordination.

- Law on technical equipment and product requirements; there is a list of products that have to be checked before going on the market; there are accredited agencies that can put the CE sign (denoting conformity with relevant European standards) on products.
- There are regulations stipulating the distance between home and school.
- Regulations exist on the minimum required area of green spaces.

NEHAP

- Under NEHAP III, the Ministry of Education is responsible for road safety and traffic playgrounds.

Economic aspects/funding

- Activities at city level such as the projects “A day without cars”, traffic playgrounds, and “Bratislava is getting slimmer” are financed from the municipal budget.
- The BECEP road safety programme had a budget of around 10 million Slovak koruna for 2007, 90% of which was financed by the Ministry of Transport.
- A policy promoting cycle paths was adopted in 2004 but not enough funds were made available for its implementation.
- The National Transport Plan is funded by the Ministry of Transport; other institutions/stakeholders (municipalities/NGOs) can apply for funds.
- The PHA has no budget allocation for injury prevention.

Tools for action

Education

- There is no specific target for traffic accident reduction; the major focus is on education.

Safety promotion

- Activities organized by the Ministry of Transport, in cooperation with the Ministry of Education, focus mostly on education and safety promotion (e.g., children's traffic playgrounds).

Monitoring

- The NGOs observe a lack of publicly available data and the absence of any register for child injuries (expected for 2009).
- There is no central register for children's accidents.

Product checks

- The Consumer Institute or the Trade Inspectorate (under the Ministry of Economy) deal with accidents resulting from consumer products.
- The Trade Inspectorate, under the Ministry of Economy, conducts random testing; the EU rapid alert system for dangerous consumer products, RAPEX, is in force; and there are many independent associations/enterprises that conduct tests.

RPG III: Air quality

Summary

The review has shown that air pollution is one of the major environment and health issues in Slovakia, together with water safety and unintentional injuries. Respiratory diseases are the fourth cause of death and particularly affect children. Slovakia is characterized by a high level of exposure to ETS and PM₁₀ but it is strengthening its policies to reduce exposure of children to ETS. In the framework of

the current NEHAP, focus has been put on preventing children smoking.

In summary, at national level, air quality management is focused on achieving compliance with EC directives but no system has been put in place to assess the population's exposure to air pollution or to evaluate its impact on health. There is no long-term plan to reduce exposure and the different sectors still do not have a coordinated approach. This is also reflected in an overlapping of the monitoring of air quality by the Ministry of Environment and the Ministry of Transport.

Institutional set-up

Health sector

- The State Health Institute in Banská Bystrica has an air quality centre.

Other sectors

Local communities

- The municipality (police) imposes the ban on smoking; authority is then transferred to district level.

Ministry of Environment

- Outdoor air pollution comes under the responsibility of the Ministry of Environment.
- The air quality centre measures air pollution levels and gives suggestions to the municipality on how to deal with specific cases.

Ministry of Economy

- The Ministry cooperates with the Department of Industry and the Ministry of Environment when discussing acts related to air pollution; it has direct links with the Department of Industry.

Ministry of Construction and Regional Development

- The Ministry of Construction's Cohesion Fund Department manages environment and transport projects in cooperation with

the Ministry of Environment and the Ministry of Transport (reduction of air pollution related to local heating plan).

- The Cohesion Fund Department is responsible for the following tasks under NEHAP III: construction and housing; research tasks regarding contaminants in schools. The Research and Development Institute for Building Construction acts for the Ministry in conducting research on fungi.

Tools for management

Main laws/policies recently established in this area

International

- Directive 2002/3/EC of the European Parliament and of the Council relating to ozone in ambient air
- Air Quality Framework Directive (EC) 96/62 on ambient air quality assessment and management (updated with Directive 2002/3/EC)
- Council Directive 96/61/EC concerning integrated pollution prevention and control
- Directive 2001/81/EC of the European Parliament and of the Council on national emission ceilings for certain atmospheric pollutants
- Council Directive 1999/30/EC relating to the limit values for sulfur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air
- Directive 2000/69/EC of the European Parliament and of the Council concerning limit values for benzene and carbon monoxide in ambient air
- Council Recommendation 2003/54/EC on the prevention of smoking and initiatives to improve tobacco control
- Directive 2001/37/EC of the European Parliament and of the Council on the manufacture, presentation and sale of tobacco products
- Directive 2003/33/EC of the European Parliament and of the Council on the advertising and sponsorship of tobacco products

- UNECE Convention on Long-Range Transboundary Air Pollution; entry into force: 1983; Slovakia: succession: 28 May 1993
- WHO Framework Convention on Tobacco Control; entry into force: 27 February 2005; Slovakia: signature: 19 December 2003; ratification: 4 May 2004
- Kyoto Protocol to the United Nations Framework Convention on Climate Change; adoption: 11 December 1997; entry into force: February 16, 2005; Slovakia: signature: 26 February 1999; ratification: 31 May 2002; entry into force: 16 February 2005

National

- Law on the protection of non-smokers, enacted 12 February 1997; effective 1 July 1997, article 7.1. and article 8 (repealed). A new tobacco control law was approved by the government in February 2004, transposing into national legislation Directive 2001/37/ES of the European Parliament and of the Council of 5 June 2001 on the manufacture, presentation and sale of tobacco products

Tools for action

Monitoring

- Air monitoring is conducted by the Hydrometereological Institute, under the Ministry of Environment.
- The Ministry of Transport monitors the effects of transport on the environment (main pollutants).

RPG IV: Chemicals and food safety

Summary

Other environmental hazards to public health, associated mainly with changing behaviour, institutional infrastructure and the socioeconomic situation, include chemicals, especially in food, and children and young people at work.

Occupational health is largely recognized by national legislation (Constitution, Public Health Act, National Health Programme, etc.).

The second NEHAP also stressed occupational health as a national priority. The PHA's Department of Preventive Occupational Hygiene deals with safety in the working environment in accordance with Public Health Act No. 355/2007 (replacing No. 126/2006). It provides an overview of workers in hazardous environments.

In respect of food contamination and chemicals, data show that children in Slovakia are exposed to a relatively high level of dioxins in human milk. As mentioned in the report, the following clarifying information was received after the review was carried out: exposure to high levels of dioxins does not affect the entire Slovak population. The results mentioned above might come from local case studies mainly from the eastern part of the country. However, there is not adequate data to provide a clearer picture.

Analysis of the policy response in regard to food safety shows a large variety of data collected under the responsibility of multiple sectors; however, major policy response efforts are undertaken only if contamination is detected.

Institutional set-up

- The Ministry of Interior takes charge in the case of disasters.
- The Ministry of Economy is responsible under RPG IV for two tasks related to chemicals: assessing the impact of chemical hazards; and conducting spot checks of the packaging of hazardous products.
- There is state administration of chemical substances, in the form of cooperation between the Ministry of Environment and the Centre for Chemical Substances and Preparations.
- The Centre for Chemical Substances and Preparations is involved in the testing of products.
- Where biological or chemical agents are identified in the housing environment, the PHA evaluates the situation, makes recommendations for reconstruction, and explains how to ventilate; brochures on the subject are planned.
- Under NEHAP III, the Ministry of Economy is responsible for the control of imported products (the Centre for Chemical Substances and Preparations deals with the management of

chemical substances) and packaging controls; these activities are a regular part of the Ministry's activities and are not specifically funded through the NEHAP.

Tools for management

Main laws/policies

Chemical/physical hazards

International

- Council Directive 97/43/EURATOM to protect patients from excessive exposure to radiation for medical use and ensure that there is minimum exposure during pregnancy and early childhood
- UNEP Stockholm Convention on Persistent Organic Pollutants (POPs); adoption: 22 May 2001; entry into force: 17 May 2004; Slovakia: signature: 23 May 2001; ratification: 5 August 2002
- United Nations Protocol on Heavy Metals; adoption: 24 June 1998; entry into force: 29 December 2003; Slovakia: signature: 24 June 1998; ratification: 30 December 2002
- Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market
- Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market
- Regulation 1907/2006 concerning the registration, evaluation, authorization and restriction of chemicals (REACH)
- Regulation EC 850/2004 of the European Parliament and of the Council on POPs; entry into force: 20 May 2004
- Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste
- Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control
- Council Directive 96/29/EURATOM (Title VII: Significant increase in exposure due to natural radiation sources)

National

- Slovak National Council Act 126/2006 Coll. LL. on Protection of Human Health that determines conditions under which a young organism can be exposed to dangerous chemical factors
- Transposition of the European Union chemical legislation into Act 163/2001 on chemical substances and chemical preparations. EU legislation was taken into consideration in preparation of the Act, which was later amended by Act 128/2002.

Noise

- Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on noise emission in the environment by equipment for use outdoors
- Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise
- Council Directive 86/594/EEC of 1 December 1986 on airborne noise emitted by household appliances

Occupational health

International

- International Labour Organization Convention No 182: Worst Forms of Child Labour Convention 1999; ratification: 20 December 1999; entry into force: 19 November 2000
- Convention on the Rights of the Child; adopted and opened for signature, ratification and accession: 20 November 1989; Slovakia: ratification: 28 May 1993
- Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work
- Council Directive 92/85/EEC of 22 October 1992 concerning the safety and health at work of pregnant workers and new or breastfeeding mothers

- Framework Directive 89/391/EEC on Health and Safety at Work (particularly sensitive risk groups must be protected against the dangers which specifically affect them)

National

- Labour Code: Slovak National Council Act 126/2006 Coll. LL. on the Protection of Human Health
- Slovak National Council Act 95/2000 Coll. LL. on Labour Inspection
- Slovak Government Regulation 286/2004 Coll. LL. provides a list of work activities and workplaces forbidden to adolescent employees and determines employer obligations in employing adolescents.

Food safety

- Regulation EC/178/2002 of the European Parliament and of the Council on the general principles and requirements of food law

Intersectoral collaboration

- An interdisciplinary working group has been set under the authority of the PHA in case of chemical accidents (civil defence, chemical defence, fire brigade and environment).
- The Centre for Chemical Safety, which previously came under the aegis of the Ministry of Health, is now under the Ministry of Economy (one person from the PHA involved).

Tools for action

Monitoring

- Monitoring of polychlorinated biphenyls (PCBs) is a statutory task of the Ministry of Agriculture.
- PCBs are analysed mainly in research projects.
- Slovakia is participating in the EU project on health risks of PCBs; some funding also comes from United States university projects.

- There are currently 50 PCB monitoring sites; the situation is improving and the levels detected are now below the limit values set in national standards.

Specifically on food safety:

- A food safety monitoring system (contamination assessment) has been in place since 1996 under the Ministry of Agriculture: 12 subsystems (including soil, forest and contaminants) currently fall under the responsibility of the Ministry, which collaborates with the PHA and the Ministry of Environment.
- Monitoring is by location; once the location is identified, the whole production chain is analysed; 50 sites are looked at every 5 years, with specific analyses for: cadmium, mercury, lead, arsenic, nickel, nitrates and PCBs, but not dioxins, perhaps because of lack of funds.
- Food basket analysis is carried out at 10 sites, with 25 samples taken twice a year and monitored for nitrates, PCBs, veterinary drugs and pesticides.
- Wildlife and fisheries are also monitored.
- Food control is the responsibility of the Ministry of Agriculture; nutrition comes under the authority of the health sector.
- The Slovak Medical University has a food safety department, a food research institute, and a department of toxic organic pollutants.
- The main focus is on soil, water, fauna and flora.
- The results of the controls have been collected since the 1990s but this does not give an objective picture, because controls have only been undertaken when there was a problem.
- Only some information is available on food at the level of the consumer; where contamination is found in commercially available foods, the veterinary authority, the health authorities or the environment authorities are contacted, and they advise on action to be taken.
- There are permanent controls on large farms (most recent epidemics: foot and mouth disease, 1973; and pig plague, 2001); and big chicken farms.

Priorities

- Soil and water are still contaminated with polychlorinated phenol.
- Heating is a source of air pollution (e.g. gas cooking); wood is used in the countryside because of high gas prices; coal and brown coal are also used.
- POPs from gardening, especially in rural areas.
- Use of pesticides.
- As a result of the introduction of EU regulations, the chemical safety situation seems to be under control. Nevertheless, about 100 sites have been identified as hazards because of old dumps. The biggest problems seem to be: nickel production, special medicine production, sulfur trioxide and heavy metals.

Construction/urban planning

Institutional set-up

- Municipalities issue the permits to build (including to private individuals) but approval is needed from the public health offices and from the environmental offices; no difference is made in the legislation between private and public construction work.
- Noise barriers come under the responsibility of the Ministry of Transport; the Ministry of Construction does not lay down specific requirements.

Tools for management

- Building can be stopped by the construction office if there are justified concerns.
- The construction law contains regulations on materials and health and safety requirements.
- Access for the disabled is required only if the building is meant to be used by people with disabilities.

- Complaints on noise go to the municipal authorities; however, the PHA gives them guidance on what needs to be done and the reasons.
- The municipal authorities also impose fines for exceeding noise levels; the revenue from the fines goes to the municipality.
- Noise barriers are the responsibility of the Ministry of Transport; the Ministry of Construction does not lay down specific requirements.

Intersectoral collaboration

- All sectors of the municipal authorities have been involved in the development of Bratislava's new master plan.

Tools for action

- The Ministry of Health is currently preparing noise maps for Bratislava.
- The previous noise maps date from 10 years ago; according to EU requirements, new maps now have to be drawn up.

D. Abbreviations

BECEP	Bezpečnosť Cestnej Premávky [Road Safety Council]
CEHAPE	Children's Environment and Health Action Plan for Europe
CO	carbon monoxide
Coll.LL.	Collection of Laws of the Slovak Republic
DG SANCO	European Commission Directorate-General for Health and Consumer Protection
EC	European Commission
EHPR	Environment and Health Performance Review
EIA	environmental impact assessment
ENHIS	European Environment and Health Information System
ETS	environmental tobacco smoke
EU	European Union
HIA	health impact assessment
NEHAP	National Environment and Health Action Plan
NGO	nongovernmental organization
NO ₂	nitrogen dioxide
OECD	Organisation for Economic Co-operation and Development
PCB	polychlorinated biphenyl
PHA	Public Health Authority
PM _{2.5}	particulate matter of 2.5 micrometers or less
PM ₁₀	particulate matter of 10 micrometers or less
POPs	persistent organic pollutants
RAPEX	European Union rapid alert system for all dangerous consumer products
REACH	European Union Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals
RPG	regional priority goal
SEA	strategic environmental assessment
SSVFA	Státna veterinárna a potravinová správa SR [Slovak State Veterinary and Food Administration]
UNECE	United Nations Economic Commission for Europe

VVUPS-NOVA

Výskumno-vývojový Ústav Pozemných
Stavieb [Research and Development Institute
for Building Construction]

WHO

World Health Organization

E. Currency

Monetary unit: Slovak koruna

Exchange rates: annual values

Year	1 USD
1 Nov. 2003	34.69
1 Nov. 2004	31.23
1 Nov. 2005	32.10
1 Nov. 2006	28.62
1 Nov. 2007	23.04

Source: Official WHO/United Nations exchange rates¹⁰

F. Country map



Source: United Nations Map, No. 3803 Rev. 2, May 2004

¹⁰ Official WHO/United Nations Exchange Rates (per US dollar) [web site]. Geneva, World Health Organization (<http://www.who.int/bfi/ExchRate/exindex.asp>, accessed 10 April 2008).

Following the Fourth Ministerial Conference on Environment and Health in Budapest in June 2004, and the commitments made by Member States to reduce children's exposure to environmental hazards, countries are seeking support in Implementation. WHO Regional Office for Europe has initiated a project to provide the evidence base for developing and implementing such actions through detailed Environment and Health Performance Reviews (EHPRs).

The EHPRs are country-based interdisciplinary assessments that WHO Regional Office for Europe carries out at the request of Member States. Through the EHPRs, Member States receive support in the reform and upgrade of the overall public health system. They identify the most important environment and health problems, evaluate the public health impact of environmental exposures and review the policy and institutional framework taking into account the institutional set-up, the policy setting and legal framework, the degree and structural functioning of intersectoral collaboration and the available tools for action.

Based on this analysis, as an integral part of the planning and management of environment and health services the EHPRs provide guidance for strengthening environment and health policy making and for planning preventive interventions, service delivery and surveillance in the field of environment and health.

The present report conveys a clear picture of the current environment and health situation in Slovakia. It evaluates strong and weak points of environmental and health status in Slovakia.

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