



EUROPE

Environment and health performance review

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Lithuania

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ABSTRACT

This report describes and evaluates the current environment and health situation in Lithuania. It evaluates the strong and weak points of the national environmental and health status and presents recommendations from independent experts. The conclusions and recommendations are based on a detailed environment and health performance review carried out in the country. The review identified the most important environment and health problems, evaluated the public health impact of environmental exposure 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.

The WHO Regional Office for Europe developed this project to follow up 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 action. The environment and health performance reviews are country-based interdisciplinary assessments the WHO Regional Office for Europe carries out at the request of Member States. Through the environment and health performance reviews, Member States receive support in reforming and upgrading the overall public health system.

Keywords

ENVIRONMENTAL HEALTH
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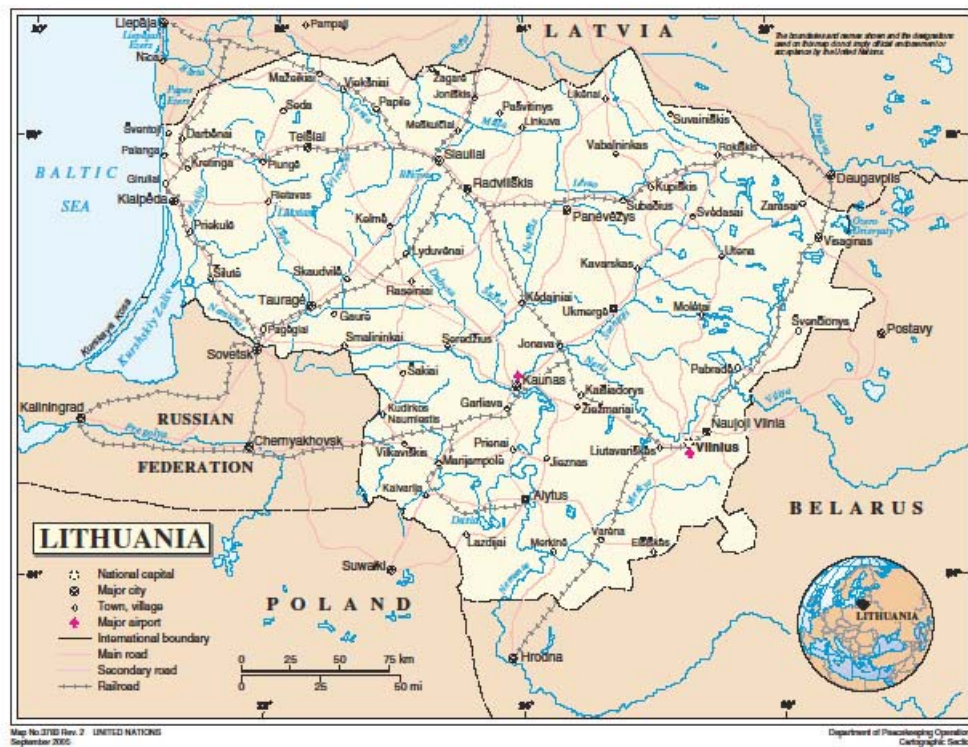
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Abbreviations

ECTS	European Credit Transfer and Accumulation System
EHPR	Environment and Health Performance Review
ENHIS	European Environment and Health Information System
ESPAD	European School Survey Project on Alcohol and Other Drugs
EU	European Union
GDP	gross domestic product
NEHAP	National Environment and Health Action Plan
NGO	nongovernmental organization
PM	Particulate Matter
REACH	Registration, Evaluation, Authorization and Restriction of Chemical Substances
WHO	World Health Organization

Map of Lithuania



Source: United Nations Map, No. 3783 Rev. 2, September 2005.

Foreword

This report aims to convey a clear picture of the current environmental and health situation in Lithuania. It evaluates the strong and weak points of the environmental and health status in Lithuania. It also includes recommendations from independent experts. The process of preparing the environment and health performance review began in June 2008. It began with discussions between the World Health Organization (WHO) and the Ministry of Health and the State Environmental Health Centre of Lithuania about the most relevant actors and institutions in the area of environment and health that the environment and health performance review needs to cover. The evaluation for this report took place 13–17 October 2008, in Vilnius, Kaunas and Kėdainiai. During their visit, the WHO team met about 80 representatives from more than 20 institutions of various sectors involved in environment and health. The national contributors are acknowledged at the beginning of this report. Although most information described in this report is based on the mission undertaken to Lithuania in October 2008, the cut-off date for some of the information summarized in this report is 21 April 2009, when a workshop was held in Vilnius and comments and discussion of the environment and health performance review draft report took place. This cut-off date also applies to the annexes, which include the organization chart of the Ministry of Health and of the State Environmental Health Centre. These charts were provided in April 2009, at a time of organizational restructuring. Since April 2009, various changes may have occurred in the structure and responsibilities of the various institutions, as well as in their staffing.

Thanks to the efforts and support of the Lithuanian Ministry of Health, the environment and health performance review for Lithuania was carried out under the supervision of the Undersecretary of State of Health, Romualdas Sabaliauskas. Special thanks are due to Rita Pazdrazdyte, from the Ministry of Health, who was helpful in arranging contacts with other ministries, and especially to Ingrida Zurlyte and her team from the State Environmental Health Centre (Aida Laukaitienė, Valdas Uscila, Viktorija Buzytė) for providing a wealth of background information on Lithuanian environment and health priorities and Lithuanian environment and health actors and their mandates, and for organizing the visit and preparing an intensive schedule for the mission.

Special thanks are extended to the WHO Country Office for Lithuania and especially the head of country office, Robertas Petkevicius, who supported the preparation and implementation of the project since its beginning.

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Executive summary: main conclusions and recommendations

Main conclusions

The regulatory situation for environment and health in Lithuania is rather adequate, and it benefits significantly from the development of European Union legal requirements. Although improvements are still necessary in particular areas, the main challenge for Lithuania is to implement and execute the regulations to monitor their implementation, and to evaluate the effectiveness of both the regulations and their implementation.

In early 2009, there was still no official programme on environment and health that provided a basis for national activities or brought together activities from various related sectors. Both the National Environment and Health Action Programme and the Children's Environment and Health Action Plan for Europe – initiated as tools to coordinate and support intersectoral work on environment and health – are yet in place.

Collaboration between ministries and stakeholders does exist to varying degrees and on different levels. Several intersectoral committees have successfully been set up to manage ongoing policy processes. In general, the Ministry of Health handles environment and health issues, and integration of non-health sectors needs to be strengthened. This is especially relevant in view of the current lack of accountability for actions on environment and health in non-health sectors.

The institutional landscape in the field of environment and health is large. There is a wealth of institutions and agencies taking care, more or less, of specified tasks and activities that relate to environment and health. In some areas, clarity is lacking on the potential overlaps and/or redundancies when different actors work in closely similar areas.

Environmental and health monitoring is developed at an adequate level, but integrated information and analysis is insufficient and is rarely used as a key argument in decision-making. This is especially true for health impact assessments and cost-benefit analyses in environmental policy-making.

There is no national list of environment and health priorities that guide the development of an environment and health work agenda, the development of research activities and policy actions, or the participation in international projects. Ongoing research and participation in international projects is scattered and results are not being sufficiently transferred and used in the country to counteract environment and health challenges.

Education on environment and health for medical and public health professionals is not yet fully developed. In parallel, information campaigns, directed at the public, on the relevance of environmental issues and related health effects are as much needed as are increased support to and integration of nongovernmental organizations in the environment and health field.

Funding and provision of human resources is a key challenge for the environment and health sector in Lithuania. This applies both to the national level, where environment and health tasks are often dealt with on a formal scale only, and to the local level, which in recent years received many mandates and tasks, sometimes without the provision of adequate funds.

Recommendations

Policy and institutional frameworks

An official programme on environment and health is to be established to fulfil the legal commitment and to provide a strong and official basis for national action. Such a national programme would have to provide official mandates and tasks to all actors and ministries involved and would therefore increase collaboration, sense of ownership, and accountability for action, especially in the non-health sectors.

The institutional responsibilities of the many actors in the field of environment and health need to be reviewed and streamlined within the Ministry of Health. Clear terms of references should be developed (including collaborative mechanisms to jointly work on more complex issues) to prevent duplication. The coordination of environment and health activities through one leading institution, such as the State Environment and Health Centre (Ministry of Health) and backed by a high-level intersectoral mechanism is recommended.

Specific centres or units that focus on preventive and collaborative activities for environmental health with other sectors should be established in different ministries and should actively contribute to (and be evaluated against) the reduction of environmental risk factors for the population's health.

Adequate and effective enforcement of environment- and health-related policies and regulations needs to be considered as a key component for future action and can be done through regular monitoring and a system that evaluates potential health effects and the effectiveness of such policies and regulations.

Human and financial resources

To ensure an effective response to environment and health issues, specific and appropriate human and financial resources should be allocated – on a national, regional and local scale – to environment and health services as one of the health system's key cornerstones of preventive action.

There is a general need for increased integration of environment and health aspects in medical education and continued training for health experts. Given the increasing importance of primary health care, family doctors and nurses, in particular, should be trained in the various aspects of environment and health to support preventive action. In addition, the occupational health services should be developed further.

Research and information

A national list of strategic environment and health priorities should be developed. This list could inform the public, the media, the medical community, and the health and environment community. Such a list would be a potential basis for: (a) extending educational profiles and creating strong synergies between education and research; (b) developing a research programme or, at least, a list of research priorities; (c) guiding the participation of Lithuanian experts in international projects; and (d) enabling the government to harvest – through adequate mechanisms – results of such activities for national policy-making on environment and health.

Environment and health information needs to be more frequently used as a basis for policy discussions and political decisions. In particular, this requires the provision of data on the cost-effectiveness of environmental health actions and on the economic benefits of adequate environmental conditions.

Information and campaigns need to be better communicated to the public, and environmental health aspects should systematically be covered in educational curricula for communities of health experts. Closer collaboration with nongovernmental organizations is suggested, to further increase the voice of the public in the field of environment and health politics.

By its nature, environment and health is an intersectoral task that requires effective collaboration between health and non-health authorities, such as those dealing with environment, transport, housing, social, economic and regional planning. The effectiveness of this collaboration is an essential prerequisite for successful environmental health services.

Following up on earlier activities to review the environmental and health-related performance of countries (such as the United Nations Economic Commission for Europe Environmental Performance Reviews, undertaken in Lithuania in 1998), the World Health Organization (WHO) carried out a comprehensive environment and health performance review to assess the current level of capacity in Lithuania in 2008–2009. The review considered a wide variety of actors within more than 30 agencies and institutions and evaluated their performance and environmental health-related objectives, as well as their intersectoral contributions and commitment.

This report provides the full assessment of the review and presents the results obtained. It also presents: the main conclusions and recommendations on the national status of environment and health; the institutional set-up and the mandates of the involved actors; the policy framework; and the intersectoral implementation of specialized tasks, such as monitoring, impact assessment and capacity building. The main results are outlined below.

Lithuania has a qualified set of institutions and centres that deal with national challenges in environment and health. The majority of these institutions and centres are part of the Ministry of Health, which comprises the State Environmental Health Centre and other centres and institutes that deal with specific areas of environmental health. However, other relevant actors with key mandates in the field of environment and health are empowered directly by the government (such as the State Food and Veterinary Service) or are within other ministries (such as the Environmental Protection Agency and the Environmental Impact Assessment Division of the Ministry of Environment; the State Labour Inspectorate of the Ministry of Social Security and Labour; and the road safety and environmental safety units of the Ministry of Transport and Communications). This diversity of actors is accompanied by a diversity of mandates and objectives, which therefore suggests a review and consolidation of the responsibilities of each actor. It also suggests allocating the overall leadership and coordination of environment and health issues – for example, with the State Environmental Health Centre.

Within the health sector, action is recommended to increase and further extend health services that relate to settings and specific environmental conditions and/or to provide local services beyond traditional health care. Examples would be the already existing occupational health services, home nurses, or school-based initiatives. The current reform

of public health care structures, which increases capacities for public health care and prevention on municipal levels, provides further opportunities.

Intersectoral collaboration is a major challenge for action on environmental health in Lithuania. This is often due to a lack of commitment or input from relevant stakeholders. Health and non-health actors have often revealed conflicting positions on responsibilities for health-related action, as well as diverging perceptions of the duties and mandates of health actors. Within the non-health sector – where awareness of the health relevance of their actions is often marginally expressed – environmentally triggered health problems are considered to be a requirement for providing care and treatment, and not a call for environmental protection. Also, since the work programme of non-health institutions rarely includes health aspects or related performance indicators, the overall assessment shows that (despite their relevance) non-health actors often are not strongly committed to contribute to the reduction of environmental health risks within their respective working area.

Therefore, non-health actors need to increase their commitment to and accountability for environment and health outcomes. Ideally, this commitment should be part of the institution's work plan, which would include the health target and indicator goals to be achieved.

The policy and regulatory framework in Lithuania has benefited greatly from the establishment of European norms and regulations, since the country became a Member State of the European Union. Lithuania has installed a quite adequate policy framework that provides norms and standards and regulation of a diverse number of environmental health processes and conditions.

Although this regulatory framework needs to be improved and developed further, discussions with policy-makers and technical experts indicate that implementing the regulatory framework – and its monitoring and evaluation – is a major challenge in Lithuania. Specifically, the discussion centred on healthy lifestyles (such as physical activity, eating, smoking, drinking and drunk driving), but it also covered environmental problems, such as compliance with norms and standards (such as speed limits, food safety standards or guidance for handling chemical products in the occupational setting). Many experts consider the improvement of state bodies and their capacities to carry out adequate and frequent measures to monitor and ascertain that policies and regulations are complied with to be a key area for action towards improving environmental health conditions.

Although regulatory frameworks are established for specific areas of environment and health, these frameworks tend to be sectoral and coordinated by different actors, and are only marginally connected. Therefore, what is missing is a national programme on environment and health that covers related activities carried out by different actors. The lack of such a programme directly contributes to and enhances the difficulties in intersectoral work described above, especially since such a national programme would be the foundation needed to engage various actors.

The initiation of a national programme – or a national environment and health action programme based on WHO guidance on environment and health – would provide a unique opportunity to implement actions and structures that have been recommended to improve the environment and health performance of Lithuania. Such recommendations include:

- overall coordination of activities by one defined institution or centre;
- review and modification of duties and responsibilities of relevant actors;

- development of shared responsibility for action and opportunity for setting clear targets and milestones for actors from health as well as non-health sectors;
- identification of a national environment and health priority list that can be used to orient the work programme, make policy-making more effective, and coordinate research activities in national and international contexts; and
- parallel identification of government funds and ministry budgets for achieving the targets for which respective ministries or agencies are responsible.

The provisions of the Law on Public Health Care that relate to environmental health actions should be fully used to set the relevant policy commitment and organizational mechanisms.

Information on environment and health and the country's capacity to assess and report it needs to be strengthened. The data flow and exchange between national, regional and local levels, as well as between different institutions, should be streamlined. Particular areas for collaboration and data exchange are: the implementation of environmental impact assessments and health impact assessments – and all general territorial planning issues involving environment and health actors; environment and health monitoring; and environment- and health-related databases owned by specific institutions.

The establishment of a national system to regularly report on environment and health indicators, together with the accompanying database, would be a useful tool for developing and monitoring the environmental health situation and time trends within the country. It would also provide evidence-based information for discussions of policy.

Educating health professionals on the basic principles of environment and health needs to be further developed, as it is currently negligibly visible in medical studies and is also neglected as a major part of public health studies. As a consequence, environmental health factors are rarely considered in public health decision-making. Increased reflection of environmental risk factors and their relevance to health in health-related university courses would therefore be very valuable, as would be the consideration of environmental health issues as part of continued education schemes.

In parallel with providing evidence and knowledge to professionals, environment and health information campaigns that target the public are needed to address the particular problem of unhealthy lifestyles and to generate awareness of the health impacts of people's environments. The need for a clean and safe environment is not yet appreciated, and there is still a high level of unacceptable behaviour, ranging from drunk driving to illegal waste dumping. Partnerships with the media – as well as official regulations on, for example, banning tobacco advertisement or social marketing – could be considered.

Also, national research activities are taking place in isolation and do not serve national needs; rather, they result from academic contacts with international networks. Nationally, research projects are uncoordinated and their results are unsynthesized, leading to missed opportunities for knowledge transfer from science to policy. The development of a national research programme (or a set of priorities) and a national focal point on such research activities are needed to enable greater strategic coordination and exploitation of (inter)national research work or policy programmes.

Specifically, research is needed to inform policy processes and decision-makers about the health effects of their decisions and to develop cost–benefit assessments that describe the economic value of preventive action and investments in such projects as infrastructure development or regional and urban planning.

I. Introduction

The main objectives of the environment and health performance reviews are to:

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

Background

Environmental health comprises the aspects of human health and disease determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that 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 (1). 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 related to environmental factors and all environmental factors that may (possibly) affect health (either negatively or positively).

According to the *Tallinn Charter: Health Systems for Health and Wealth* (2):

Within the political and institutional framework of each country, a health system is the ensemble of all public and private organizations, institutions and resources mandated to improve, maintain and restore health. Health systems encompass both personal and population services, as well as activities to influence the policies and actions of other sectors to address the social, environmental and economic determinants of health.

The environment is responsible for as much as 20% of the total burden of disease (3, 4).

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, to develop a high level of targeted activities and to ensure consistency and synergy with other relevant commitments made by Member States (5, 6).¹ In 1989, the WHO Regional Office for Europe launched the environment and health process through a series of ministerial conferences, with the aim of eliminating

¹ *The Budapest Declaration* (6):

- recognizes "the relevance of national environment and health action plans (NEHAPs) ... and commend the continuing efforts to implement and evaluate them" (paragraph 6);
- calls 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 20c); and
- invites 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" (paragraph 20d).

the most significant environmental threats to health as rapidly as possible, based on the premise that prevention is better than cure.

The importance of coordinated input from different sectors has been emphasized by the call for the development of national environment and health action plans (NEHAPs) made at the Second Ministerial Conference in Helsinki (7) and by the theme of the Third Ministerial Conference held in London in 1999, “Action in Partnership” (8). Following the Fourth Ministerial Conference on Environment and Health, in Budapest in June 2004 (9), and the commitments made by Member States to reduce children’s exposure to environmental hazards, countries are now seeking support for work to implement these reductions. The WHO Regional Office for Europe has therefore initiated a project to provide the evidence base for developing and implementing such actions.

Objectives

Through detailed environment and health performance reviews (EHPRs), the WHO Regional Office for Europe provides country-based analytical descriptions of the environment and health 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; 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 EHPR process

EHPRs are based on a programme of environmental performance reviews launched in 1991 by the Organisation for Economic Co-operation and Development to help its member countries improve their individual and collective performances in environmental management. The programme was mandated to the United Nations Economic Commission for Europe in 1993, to ensure coverage of the whole European Region (10, 11). 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 the environmental performance reviews focus on environmental management, the Regional Office recognized the benefits of such country-specific tools and expanded the methods to cover the relationship between human health and the environment, and between the environment and health policy management (12–14).

The EHPRs are in line with and draw upon the national profiles of children’s health and environment developed by WHO headquarters (15) and are strongly linked to ongoing WHO Regional Office for Europe environment and health programmes. The WHO European Environment and Health Information System (ENHIS) records information on: national approaches to linking environmental conditions and public health; their importance for healthy environmental policy; and measurement of the countries’ progress towards the targets set in the Europe-wide action programmes. The ENHIS provides reliable and standardized information about the health status of children, its determinants

and its trends. It uses internationally available data sources and monitors and evaluates the effectiveness of policies.

The ENHIS is a standardized approach within the EHPRs to analyse a situation from a European (Region-wide) perspective. The analysis is then further complemented by the information gathered in the review process (16), the reports of the Lithuanian Health Information Centre, as well as by the information of the preliminary assessment based on ENHIS indicators in a national context.

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 for Europe (5):

- regional priority goal 1: 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;
- regional priority goal 2: prevent and substantially reduce adverse health effects of 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;
- regional priority goal 3: 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; and
- regional priority goal 4: reduce the risk of disease and disability arising from exposure to hazardous chemicals (such as heavy metals), physical agents (such as 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, through its Directorate-General for Health and Consumer Affairs. In support of the European environment and health process, the European Commission identified the need to develop and strengthen policy actions to reduce the risk of disease and disability that arises from agents in the environment in Europe and is co-funding this WHO Regional Office for Europe activity.

Methods

A team of WHO technical experts carries out each EHPR at the request of the health ministry of the country concerned. It takes the form of semi-structured interviews with national technical representatives and policy-makers. A series of two reviews are conducted: one is part of the project funded by the Directorate-General for Health and Consumer Affairs of the European Commission; the second part is the result of bilateral biennial collaborative agreements between WHO and the different health ministries. The Lithuanian EHPR is part of the former.

The EHPR is comprises the steps described below.

1. The standardized method for the review developed at the beginning of the process is applied to all Member States.

2. Consultations are held with the head of the WHO country office, and assistance and advice are sought on timing and the personnel involved.
3. Prior consultations are held with the environment and health focal point or project counterpart within the Member State.
4. Relevant policies, information, evidence and data are collected and analysed, and the national counterpart organizes the WHO field visit.
5. The field trip by the WHO technical team to the country takes place; interviews are conducted with preselected representatives of 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 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 March 2010.

Structure of the report

The status of the environment and health situation in Lithuania summarized in this report reflects the situation in the first decade of the 21st century and can be considered as a national baseline analysis after the commitments taken at the Fourth Ministerial Conference in Budapest in 2004. The cut-off date for the information and data summarized is 21 April 2008, although most information in this report is based on discussions with the WHO team that took place 13-17 October 2008 in Vilnius, Kaunas and Kėdainiai.

The report has six chapters. The first chapter introduces the project and the objectives and methods of the EHPR. Chapters II and III describe the health characteristics of the Lithuanian population and the major health and environment priorities in Lithuania. Chapters follow on the institutional set-up in environment and health (IV), the legal framework under which environment and health policy is implemented (V), and the tools available for the operation of environment and health services (intersectoral collaborative mechanisms, monitoring, environment and health impact assessment, and capacity building) are described in chapter VI. Recommendations are formulated, depending on the background situation, and are clearly set out at the beginning of each chapter. The cut-off date for the information presented in this report is April 2009.

II. Health status of Lithuania's population

Conclusions

- Cardiovascular diseases, cancer and external causes are the main causes of death.
- Road traffic injuries contribute to high mortality rates.
- Unhealthy lifestyles are a national health challenge.
- WHO estimates that the yearly environmental burden of disease for Lithuania is 19%.

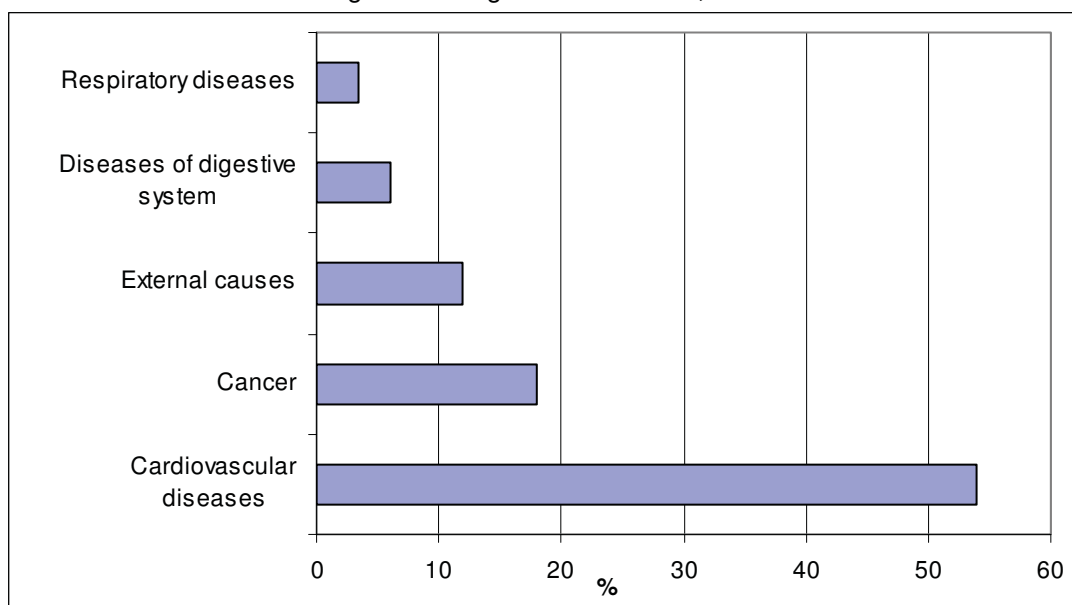
Life expectancy at birth in Lithuania was 65 years for men and 77 years for women in 2007. In comparison with other new European Union (EU) Member States, life expectancy in Lithuania falls within those countries with high life expectancy for women only.

In 2006, cardiovascular diseases and cancer accounted for 54.3% and 18.2%, respectively, of all deaths (17). The largest percentage of deaths due to cardiovascular diseases was caused by ischaemic heart disease (62.8%) and cerebrovascular diseases (24%). The majority of people who died from circulatory system diseases were 60 years of age and older. Cardiovascular diseases and cancer are the leading causes of deaths in most countries of the WHO European Region, although their share varies between the countries.

Fig. 1 shows the leading causes of death in 2006. Even though the number of deaths caused by external causes decreased by 3.8% in 2006, the mortality rate resulting from these causes remains high, in particular in young and medium age population groups. Suicides were the most widespread external cause of death (almost 20% of all external causes), followed by road traffic accidents (16.8%), injuries from falls (10.4%), and alcohol poisoning (9.1%). Lithuania has the highest death rate from suicide of all EU countries and is among the countries with high death rates from this cause in the European Region.

Since 2004, diseases of the digestive system have ranked fourth among the most prevalent causes of death, surpassing diseases of the respiratory system, which used to occupy this rank. In 2006, diseases of the digestive system accounted for 5.2% of all deaths, and those of the respiratory system accounted for 3.8%.

Fig. 1. Leading causes of death, 2006



Source: Lithuanian Health Information Centre (17).

The annual report of the National Health Board for 2007 (18) summarized the health status of the Lithuanian population as follows.

Summing up the country population's health situation that had been extensively analysed in the report, it can be seen that the major problems still are chronic noncommunicable diseases and traumas. The burden of these diseases is especially significant on the country's economy and the increasing number of premature deaths of the working age population. The chronic diseases are the main causes of the increasing expenditure and the work load on the health care system in the fast aging population.

Concerning health behaviour, the prevalence of daily smoking rose since 1994 and levelled off after 2000, mostly in women. In recent years, among regular daily smokers aged 15 years and older, smoking has tended to decrease, but the problem persists, as in the entire EU.

The frequency of drinking strong alcohol in Lithuania has not changed in the last 12 years, and the frequency of drinking beer is increasing continuously. As a result, the health system is challenged with a troubling problem: the increase in mortality due to alcohol-related diseases, especially in young adults. In 2006, there were 1484 alcohol-related deaths, mostly due to alcoholic hepatic disease (47%), accidental alcohol poisoning (33%) and alcoholic cardiomyopathy (15%). The impact of alcohol on children and the situation among them is especially alarming. Data show that from 2001 to 2006, alcohol intoxications in the age group of 7–14-year-olds increased from 19 to 269 cases (14 times). In the age group of 15–17-year-olds, it also increased, from 37 to 250 cases (7 times). By the end of 2006, there were 101 cases of alcohol psychoses per 100 000 population, which is almost twice as many as in 2001 (18).

Overall dietary habits have changed positively, especially the increased consumption of fresh vegetables and the decreased use of butter. Also, the prevalence of physical activity has increased, and in 2006 the proportion of people reporting leisure time physical activity for at least 30 minutes four times or more a week was 23%. Still, the prevalence of overweight and obesity has a tendency to increase – in particular, in men.

WHO estimates of the burden of disease in Lithuania show that environmental risk factors accounted for 19% of the total burden of disease for the year 2004 (19).

Children's health overview

Infant mortality is very important when assessing population health and social and economic developments in a country. In Lithuania, infant mortality decreased significantly in the last 10–12 years and accounted for 6.8 deaths per 1000 live births in 2006. Nevertheless, the rate is still higher than the average rate in EU Member States before 2004.

The under-5 mortality rate – that is, the probability of dying by age 5 per 1000 live births – has decreased over time, from 11 deaths per 1000 live births to 9 deaths per 1000 live births, but is still higher than that of the average for EU Member States before 2004. For under-5 mortality due to injuries, Lithuania ranks the highest among all EU Member States and significantly higher than the average for EU Member States before 2004. The under-5 mortality rate due to pneumonia follows a similar pattern, and Lithuania is among the countries with the highest rates.

In Lithuania, the standardized death rate for road traffic injuries in children and young people aged 0–24 years is 14.9 deaths per 100 000 population and is the second highest in the WHO European Region. Mortality among children (1–19 years) due to unintentional injuries (drowning and submersion, poisoning, falls, and exposure to smoke, fire and flames) is well above the median range of other countries in the European Region.

With an average rate of 0.57 postneonatal deaths from respiratory diseases per 1000 live births, Lithuania is among the group of countries with the highest rates. The data Lithuania reported on asthma and allergies – the most common chronic diseases in children – to the International Study of Asthma and Allergies in Childhood show a low prevalence of asthma (6.7%) in 13–14-year-olds. Also, in 6–7- and 13–14-year-olds, the prevalence of allergic rhinoconjunctivitis symptoms is low and decreasing.

III. Environment and health priorities

Conclusions

Environment and health risks and major determinants of health

- Overall, the environment and health situation has improved.
- Potential health risks arise from the use of groundwater from wells dug for drinking and food preparation in about 1 million inhabitants, mostly in rural areas.
- People are exposed to high levels of particulate matter smaller than 10 µm in ambient air, with transport as the major source of pollution: increases in the number of cars, many of them old, lead to pollution hot spots in urban centres. No functional solutions have yet to be implemented.
- Indoor environments show high levels of contamination from environmental tobacco smoke, as well as having problems with damp and mould.
- Illegal dumping of waste remains a problem for environmental protection and a potential threat to health.
- The number of deaths from road accidents is high, despite road safety measures.
- Exposure to noise is considered an increasing concern.
- Policies to prevent leisure and home accidents are inadequate.
- Both civil society and government institutions have little awareness of the health risks of climate change.
- Health and environment data are not sufficiently combined and analysed for policy-relevant monitoring and assessment.

Public health

- Preventive objectives that reduce environment and health risks are often not explicitly considered to be a public health priority.
- Socioeconomic inequalities are reflected in the objectives of the national health programme, but are seldom explicitly reflected in the priorities set by environment and health activities and programmes.
- Alcohol consumption remains a major health threat, both for individuals and society.
- Children are a key priority of the public health system.

Structural concerns

- Priority setting in environment and health should be supported by the use of standardized tools.
- Funding of public and environmental health actions is often inadequate, especially in the field of health promotion and illness prevention.

Recommendations

- Policy measures on prevention and elimination of exposure to harmful environmental risk factors have to be strengthened, both by acting to reduce the level of pollutants and risk factors and by aiming at behavioural changes within the Lithuanian population.
- Surveillance of waterborne and foodborne diseases and their outbreaks is in need of strengthening, to ensure timely and reliable information for action on epidemics. Improvement entails linkage of epidemiological and laboratory data – that is, human and veterinary databases and the introduction of methods that increase specificity.
- Additional efforts should be made to raise awareness of the adverse effects of tobacco smoke in home environments through various means, such as brochures and television spots.
- Conditions in indoor environments, especially biological contamination (dampness and mould), need to be tackled. This entails applying an integrated approach and looking at the problem from the perspective of the built environment, thus taking into consideration indoor air quality and population exposure, home safety, and the challenge to provide affordable energy for heating homes in winter.
- Further efforts should be put into developing and implementing policies for preventing injuries that result from transport, home and leisure activities and work, as well as evaluating their effectiveness.
- Assigning a clear national mandate on compiling data on water quality and using modern European approaches (such as WISE (20)) is needed to bring together diverse information on water that can be used to produce health risk assessments related to drinking-water.
- Public campaigns and incentives should be developed to promote the purchase of new cars that conform to minimum environmental requirements and to promote and strengthen public transportation.
- Illegal waste dumping should be tackled through public information campaigns on its adverse environmental effects, and economic instruments (such as substantial fines) should be introduced to refinance public authority clean-up work.
- Unhealthy behaviour (such as inadequate nutrition, alcohol consumption, smoking and lack of physical activity) needs to be tackled by health actors in intensive collaboration with other stakeholders.
- The identification of environment and health priorities should be strengthened at the national and subnational level.
- Efforts should be directed towards identifying all data sources according to the methods underlying the ENHIS system.

With the support of the Directorate-General for Health and Consumer Affairs of the European Commission, and in collaboration with partners from 18 Member States, including Lithuania, the WHO Regional Office for Europe developed ENHIS (16), which has enhanced the availability and comparability of information on environment and health across the Region.

The system focuses on the health issues identified in the Children's Environment and Health Action Plan for Europe (5) as priorities for pan-European action, particularly its four regional priority goals. The system covers health issues related to environment,

environmental issues that affect children's health, and actions for reducing or preventing health risks (16).²

Access to safe and affordable water and adequate sanitation

Access to a regular, clean and safe drinking-water supply, to improved wastewater and sanitation, and safe bathing water are an essential part of public health.

According to the information available – from the surveillance of *foodborne and waterborne diseases* in Lithuania and, in particular, the decreasing rate of shigellosis and the levelling off of salmonellosis at low levels – Lithuania's water and sanitation may be considered to be of relatively good quality. Nevertheless, rotavirus infections are on the rise, and the greatest share of foodborne and waterborne diseases occur in the home. The high rate of unspecified bacterial agents illustrates the need to further improve the existing surveillance system.

According to the official data reported by Lithuania to the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation in 2006 and used in ENHIS Fact Sheet No. 1.2 (22), 93% of the population in urban areas had access to an improved water supply in the home, and 57% in rural areas had access (22): This is important, because it indicates a considerable urban–rural disparity (Fig. 2).

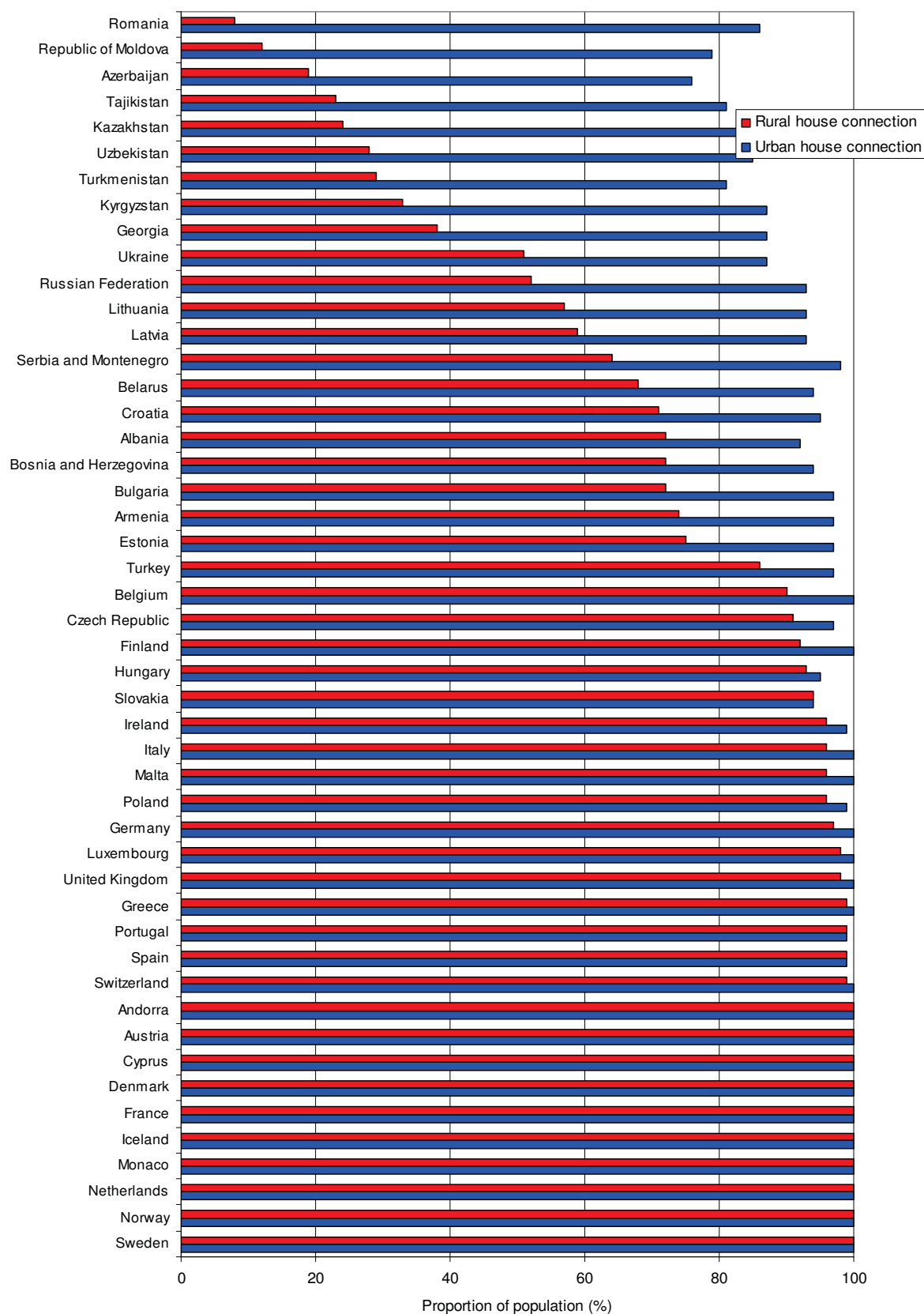
The percentage of the population served by a sewerage system connected to a wastewater-treatment facility and a safe wastewater disposal system indicates the potential level of pollution to be expected from domestic point sources entering the aquatic environment. This is important because this pollution adversely affects the health of inhabitants. With the considerable progress made in Europe since 1995 to increase coverage, 69% of the population in Lithuania was connected to wastewater treatment facilities in 2005. This percentage is still relatively low (Fig. 3). With 91% of the population connected to sanitation facilities in the home in urban areas, Lithuania is among the new EU members with highest proportion of the urban population connected (Fig. 4), but a difference of 40 percentage points still remains between urban and rural dwellers.

In 2007, 407 drinking-water providers maintained 1918 drinking-water facilities in Lithuania, and all drinking-water resources came from groundwater aquifers (State Environmental Health Centre, unpublished data, 2008). The well heads for the public water supply in most cases are located in urban settings and are considered as low risk. A considerable proportion of drinking-water facilities (90%) are small water suppliers. In 2007, 60% of all inspected drinking-water facilities (1845) were identified as having irregularities in water quality, and those mostly come from small water sources. The main quality problem is the increased concentration of iron, manganese, sulphate, chloride and fluorine.

About a million inhabitants (mostly in rural areas) use groundwater from dug wells for drinking and food preparation. Bacteriological contamination in half of the dug wells and also high levels of nitrates are the hazards that compromise drinking-water quality. According to a Ministry of Health order from 2002, the regional public health centres are responsible for controlling the dug well-water in places with pregnant women and babies up to 6 months of age.

² For all information and data quoted in this section, see the ENHIS country profile of Lithuania (21) and ENHIS fact sheets, a number of which are noted in this review.

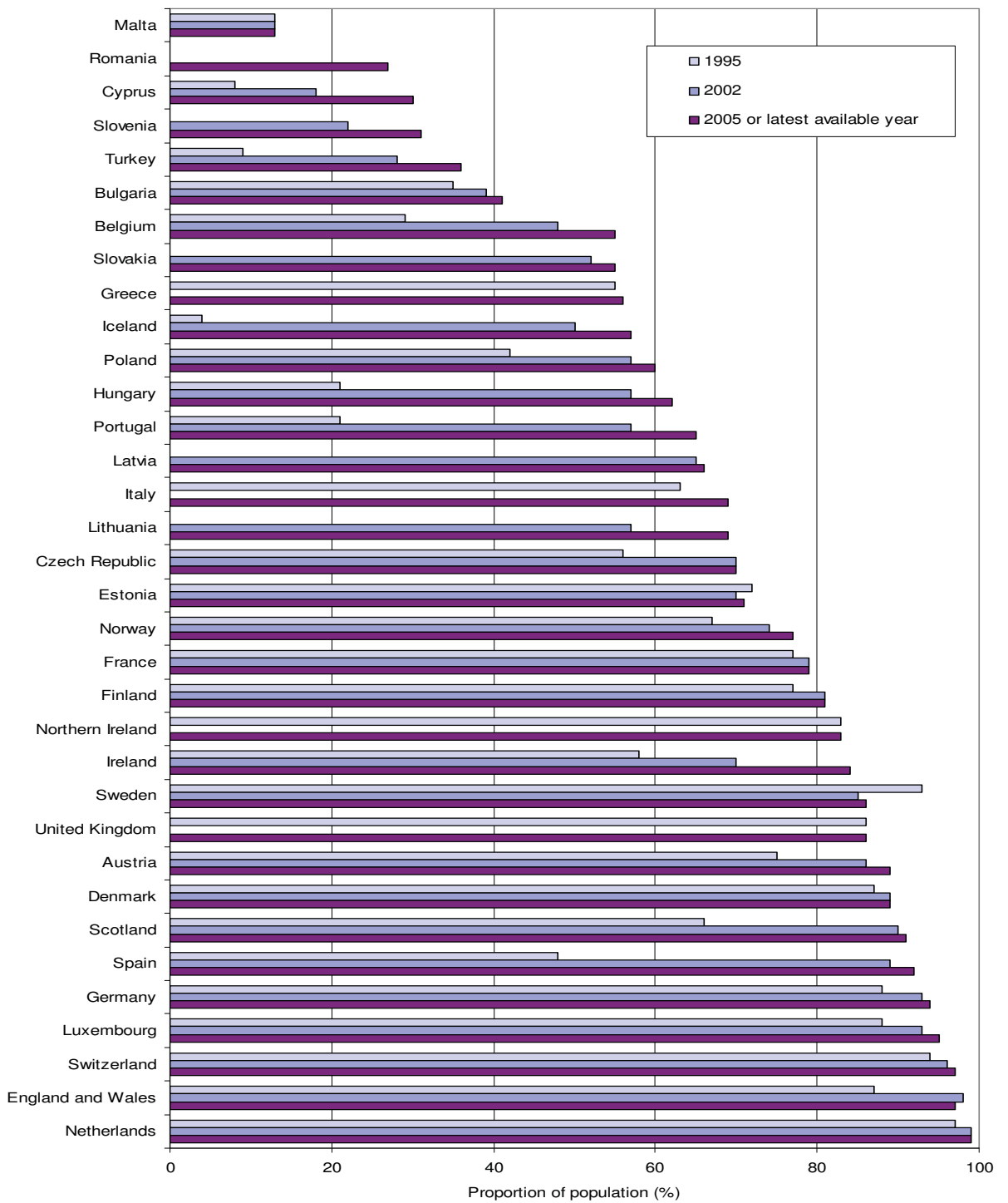
Fig. 2. Percentage of the population with access to an improved water supply in urban and rural areas, selected countries in the WHO European Region, 2006 or last available year



Notes. Data for Belgium are for 1995; data for Finland, Bulgaria and Turkmenistan are for 2004. Also, Serbia and Montenegro became two separate Member States of WHO in September 2006. In this fact sheet, the data refer to the then one country of Serbia and Montenegro.

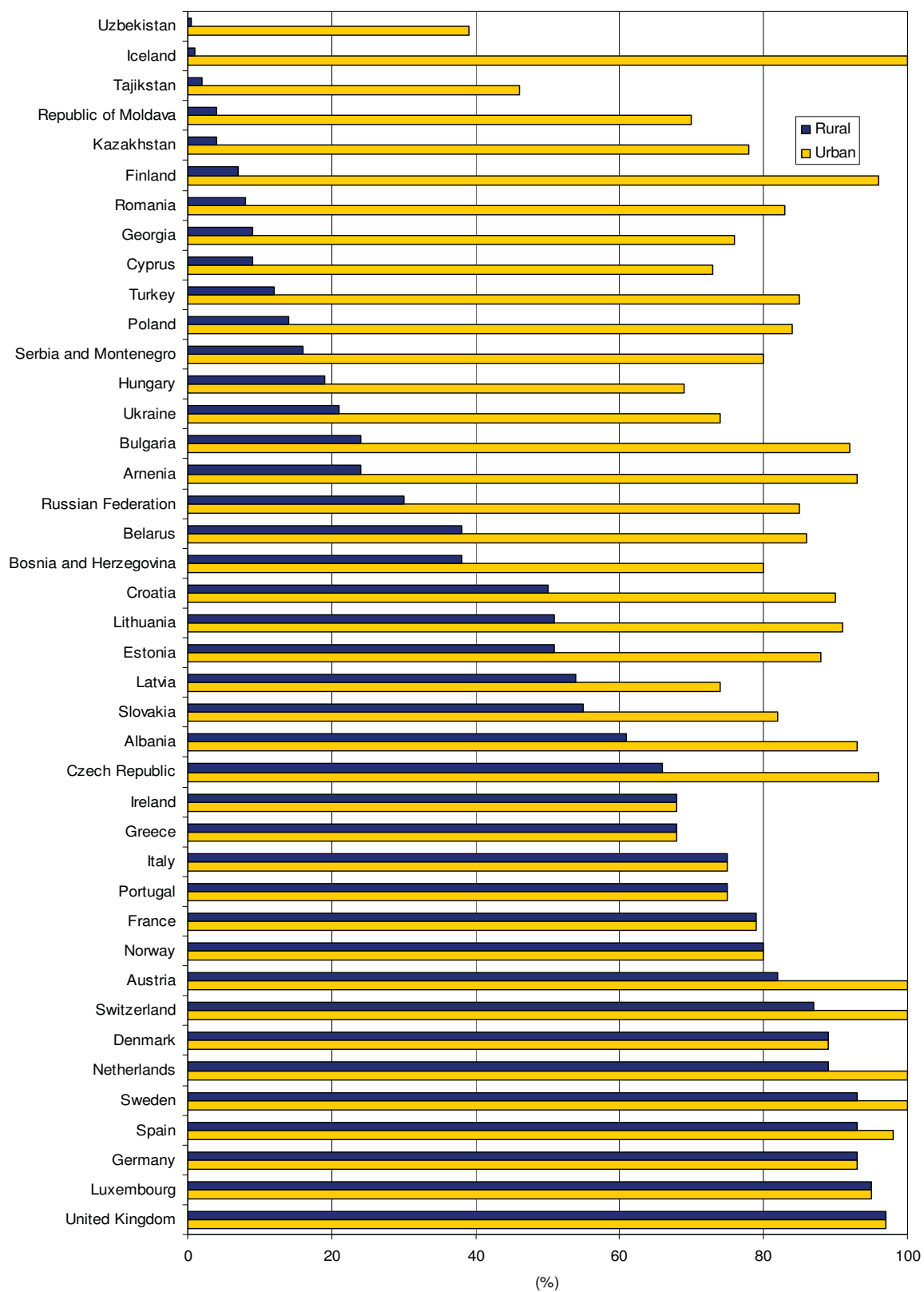
Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (23).

Fig. 3. Changes over time in the population connected to wastewater treatment facilities, selected European countries, 1995–2005



Source: Eurostat (24).

Fig. 4. Percentage of the population connected to sanitation facilities in urban and rural areas, selected countries in the WHO European Region, 2004



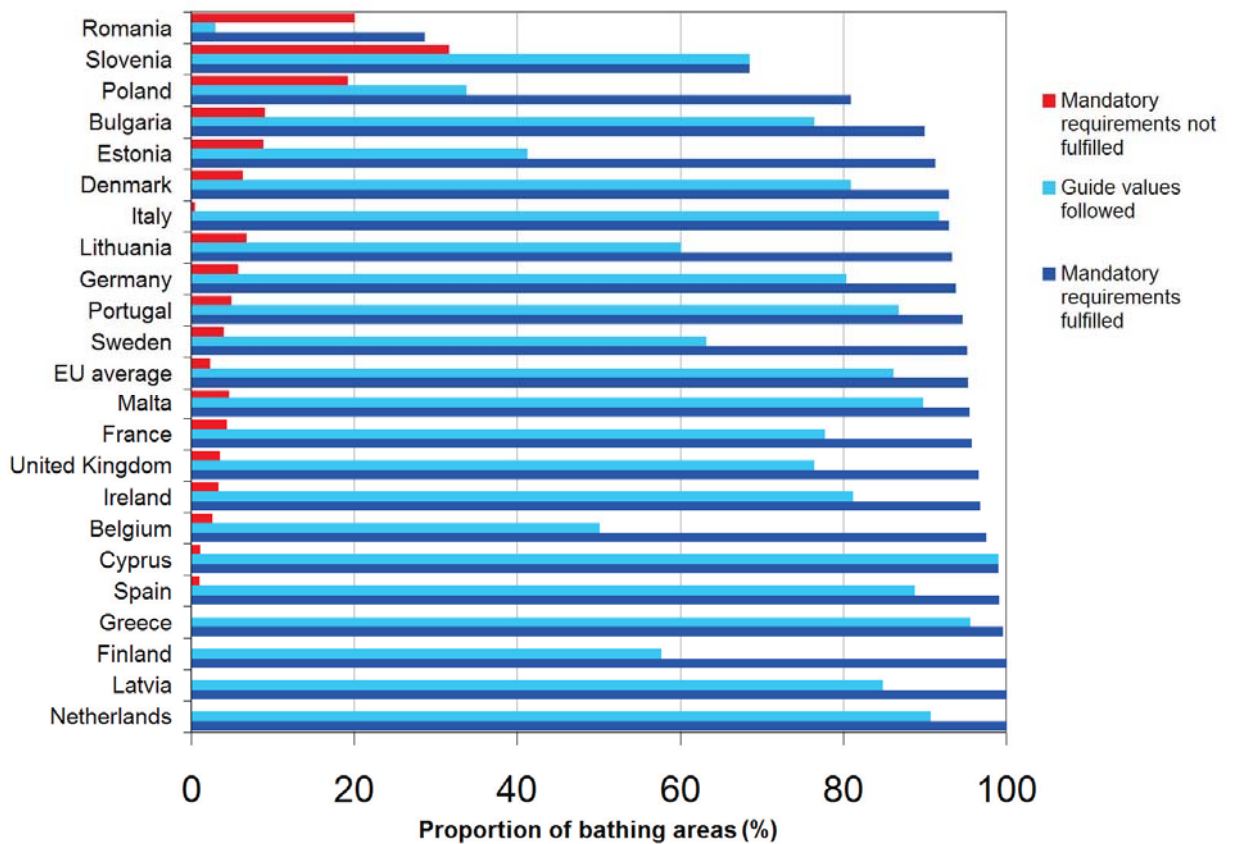
Note. Serbia and Montenegro became two separate Member States of WHO in September 2006. In this fact sheet, the data refer to the then one country of Serbia and Montenegro.

Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (23).

The Lithuanian Geological Survey uses integrated environmental geological mapping techniques to examine the quality of groundwater supplied to the population and the sources of contamination. In response to water-related health risks, a programme that evaluates these risks and the use of groundwater resources for the drinking-water supply in Lithuania for 2007–2025 had the following main targets: (a) evaluate groundwater resources (2007–2009); (b) prepare measures that protect drinking-water resources and improve drinking-water quality (2007–2011); and (c) establish an integrated information system between the administrations involved. It is also worth mentioning that water safety plans that follow the WHO novel approach to drinking-water safety and health are being introduced in two Lithuanian counties: Klaipėda and Neringa (25).

With respect to *recreational water environments* in Lithuania, compliance with the mandatory guidelines of the European Commission Bathing Water Directive for both freshwater and coastal zones was very high in 2007 (26). Of the coastal bathing waters, 93.3% met the mandatory values in 2007 (Fig. 5). This is a decrease from the two previous years, when all coastal bathing waters met mandatory values. The same evolution can be seen in the compliance rate with the guideline values. In 2007, 60% of the coastal bathing waters met the more stringent guideline values, which is a decrease of 6.7%, compared with the 2006 season. One bathing water was not in compliance with the mandatory values (6.7%), which is an increase compared to 2006. No coastal bathing water had to be closed during the 2007 season.

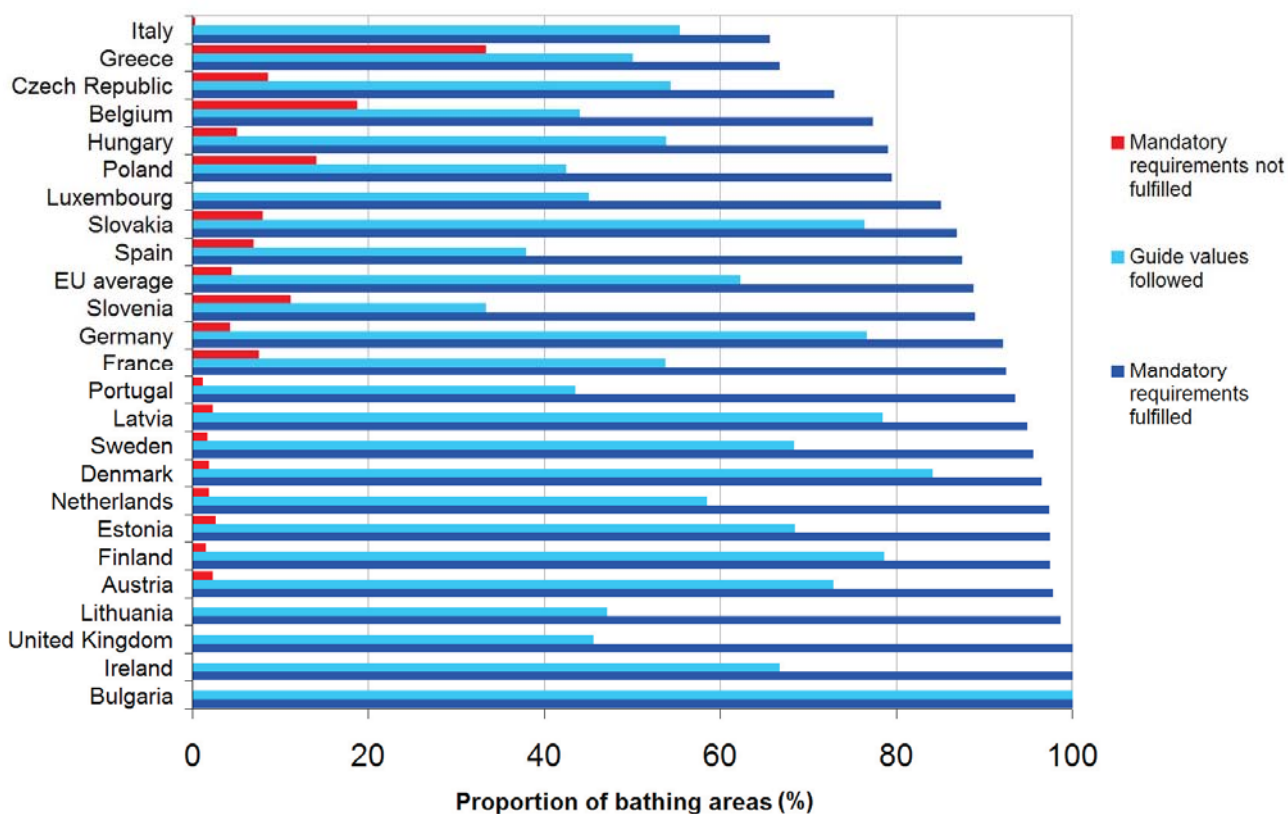
Fig. 5. Bathing water quality for coastal zones in the EU, 2007



Source: EU Water Information System for Europe (27).

Of the freshwater bathing waters, 98.6% met the mandatory values in 2007 (Fig. 6), which is a slight improvement over the previous year. As in the previous year, there were no non-compliant and no prohibited bathing waters in 2007. For the third successive year, the compliance rate with mandatory values remained above 98%. This result is excellent. The compliance rate with guideline values has increased slightly during the last three years, but still remains below 50%.

Fig. 6. Bathing water quality for freshwater zones in the EU, 2007



Source: EU Water Information System for Europe (27).

The 2006 Law on Drinking-water Supply and Wastewater Treatment, which came into force in 2007, was followed by the National Strategy on Drinking-water Supply and Wastewater Treatment 2008–2015; they set the policy agenda on water infrastructure development in Lithuania. The investments over the period 2007–2013 – which will be up to LTL 1857 billion (about €535 billion) and will be allocated from the EU Structural Fund and the public budget – should result in significant progress and modernization of the water services and management. Despite these improvements, integrated information support is still missing. Such support would enable the monitoring and evaluation of the relevant policy actions from water source to consumers and would allow involvement of all information actors and the application of a public health-based approach.

Reduce adverse health effects of accidents and injuries and enhance physical activity

Unintentional injuries are a serious public health problem in Lithuania. They are among the leading causes of morbidity and mortality: in 2007 injury fatalities ranked third after those from cardiovascular diseases and cancer. Two thirds of men and a third of women in the

group of 15–44-year-olds die from injuries – only the *tip of the injury burden iceberg*. The burden of injury in Lithuania can be described in numbers by a pyramid based on routine statistics, as follows: number of deaths, about 5000; number of hospital discharges, about 70 000; and outpatient admissions, more than 400 000. The relatively higher rate of severe injuries and the low quality of primary and emergency care might explain the steep incline of the pyramid.

In 2006, *road transport injuries* claimed more than twice as many fatalities in Lithuania as was recorded for the EU average and led to considerable human, material and economic losses (about 3% of the gross domestic product) (P. Ignotas, Chairperson of the Association of Lithuanian Auto-business Entrepreneurs, unpublished data, June 2007). The most recent data show that 2008 was the year with the lowest number of fatalities since the country's independence in 1990. In 2008, there were 4897 road traffic accidents, 24.1% less than in 2007. The 498 people that died in those accidents were less than a third (32.7%) of those that died in 2007, and the 5940 people injured in 2008 were less than the corresponding number for 2007, by 26.1%. The standardized death rates due to road traffic injuries in children and young people aged 0–24 years (14.9 injuries per 100 000 population) are the second highest in Europe (Fig. 7).

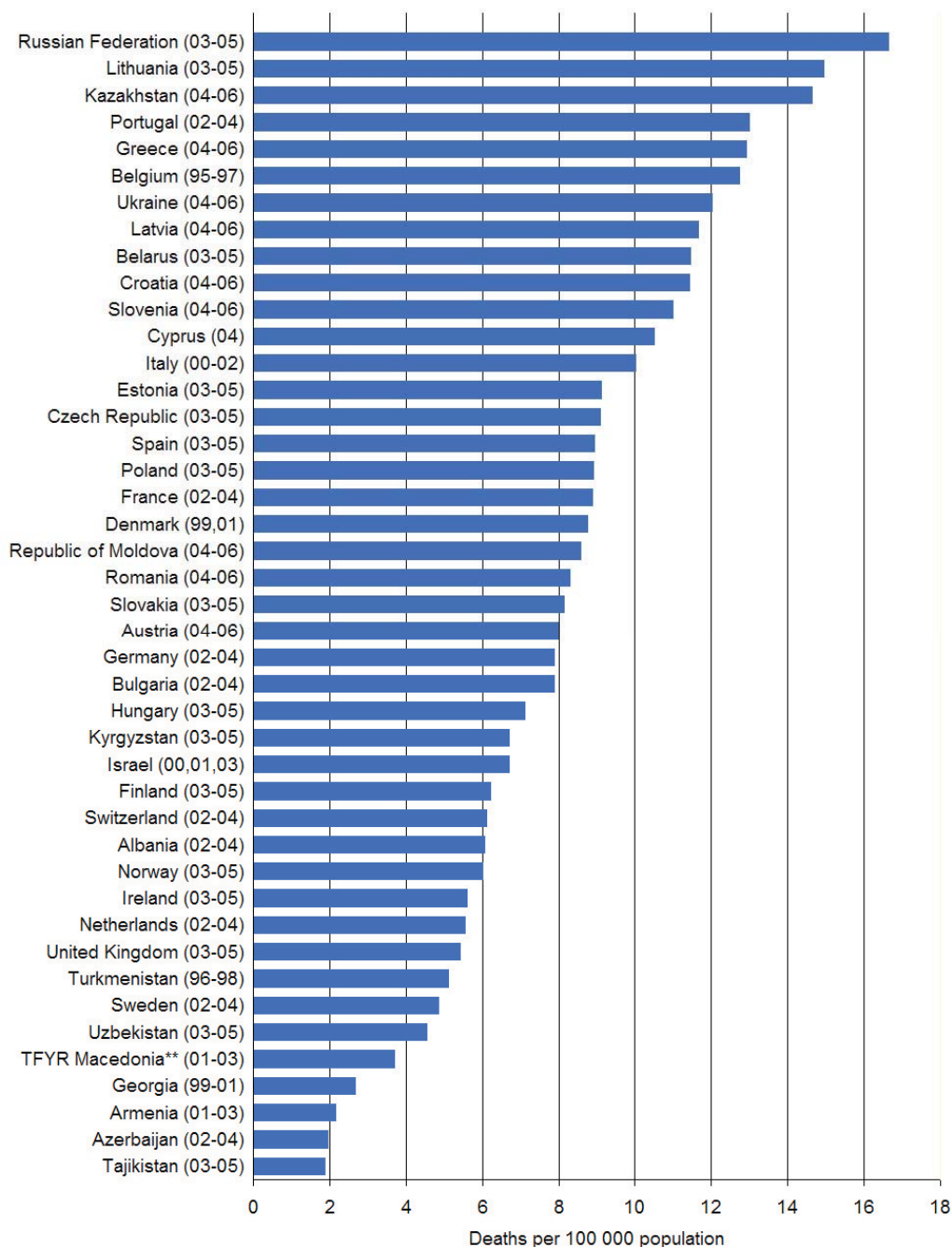
In 2006, mortality from road transport injuries in the age group 0–24 years was 20.5 deaths per 100 000 population, and the time trend that takes into account the latest data from 2007 shows a levelling off of this unacceptably high rate. The most prone are 15–24-year-old boys and young men, and the main factors are the use of alcohol when driving, risky behaviour, unsafe speed and driving without a licence.

After road transport, *injuries at home* contribute the largest share of mortality from unintentional injuries in Lithuanian children. Lithuania ranks among the countries in the Region with the highest child mortality rate from cause-specific unintentional injuries, such as drowning and submersion, poisoning, accidental falls and fires.

Among EU countries, Lithuania, Estonia and Latvia have the highest death rates for unintentional injuries in children (0–19 years). In 2006, deaths (per 100 000 population) from poisoning in children 0–19-years-old were most frequent in Estonia (2.22), Romania (1.97), Lithuania (1.75) and Latvia (0.92). The Baltic countries were among the five EU Member States with the highest death rates for drowning and submersion per 100 000 population: Latvia (5.66), Lithuania (4.63) and Estonia (2.52). Rates of child deaths due to fire are also the highest per 100 000 population: Estonia (1.74), Latvia (1.20) and Lithuania (1.13).

According to data from SVEIDRA, the information management system of the Compulsory Health Insurance Fund, 325 000 traumas and poisonings were reported (96 per 1000 population) in Lithuania in 2006. Of these, 67 000 were in children. Also, shoulders, arms, hips and legs were the most frequent injuries at home in the period 2001–2006, and head injuries were in third place. In 2006, the State Patient Fund registered 5097 cases of child poisoning (26.5% of all poisonings). According to State Environmental Health Centre data for analysed cases of poisoning investigated, the main causal agents continued to be medications and alcohol. Poisoning by household chemical products, such as cleaning detergents and cosmetics, has remained at the same level for many years.

Fig. 7. Standardized death rates for traffic injuries in children and young people aged 0–24 years in the WHO European Region, as averages of the most recent three years



Note. The parenthetical material following the country names corresponds to the three-year period of the data.

* TFYR Macedonia = The former Yugoslav Republic of Macedonia.

Source: European mortality database (28).

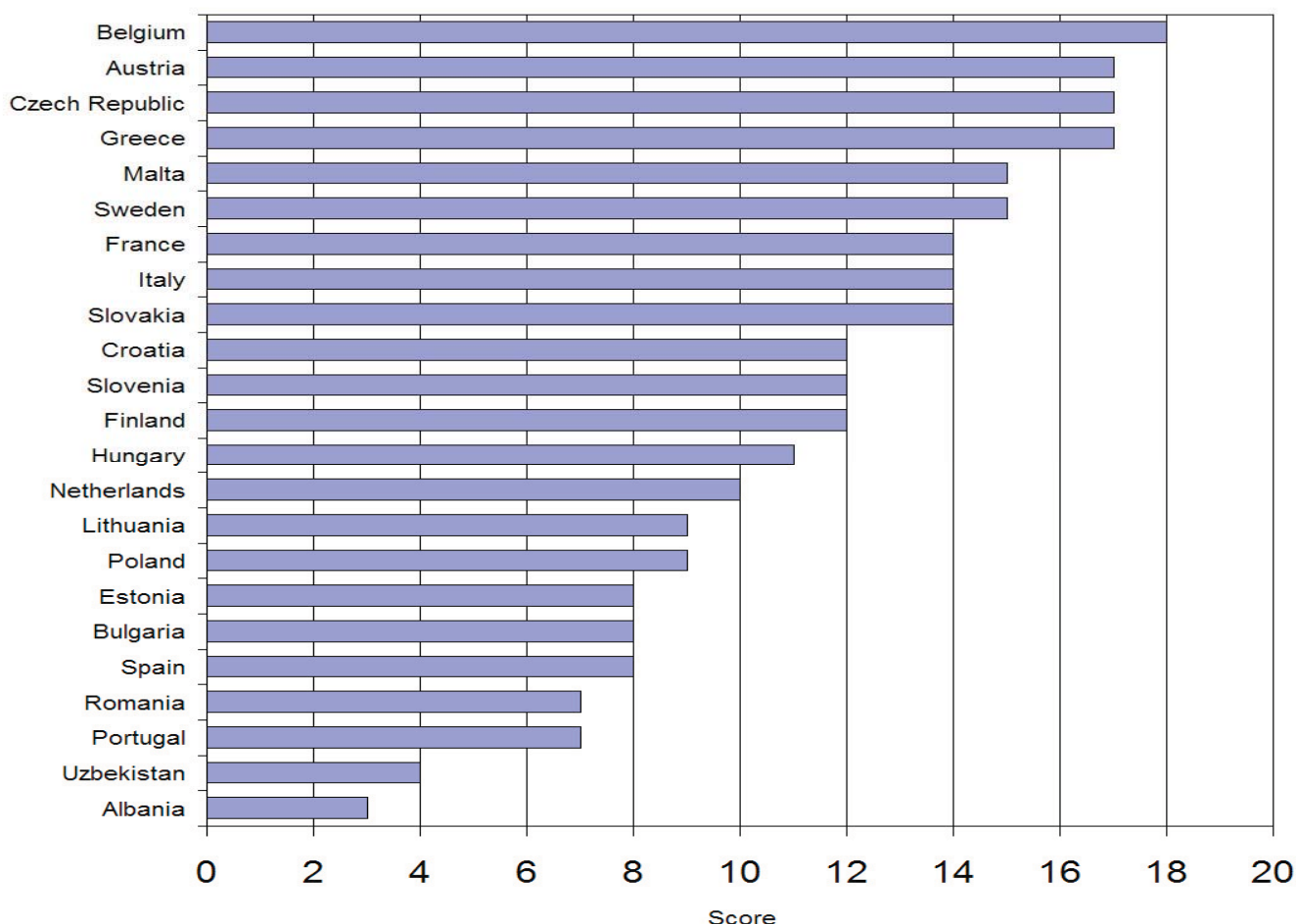
In the framework of the Biennial Collaborative Agreement between the Ministry of Health and WHO for 2006/2007, Lithuania developed a comprehensive report on the status of home accidents: *Home accidents in children and home safety regulations in Lithuania: status quo report* (29). The objectives of the report were to: (a) identify available information on physical injuries (including poisoning) in children in and around the home; (b) review current regulatory approaches; and (c) propose regulatory measures that should be adopted or improved to enable reducing the likelihood of accidents and the severity of injuries in selected children's injuries at home. An investigation of safe environments in homes in Klaipėda City, carried out in 1999 and 2004 and reviewed in the report, analysed

the distribution of the main risk factors for injuries at home and their changes over time. The investigation found that considerable improvements in safety were made in windows, radiators, cooking equipment and electrical outlets in the homes of families with injured children. The improvements were driven by changes in attitudes and public approaches to home safety, along with economic changes.

The indicator summarizing the implementation of 12 policies for preventing injuries (excluding road traffic injuries), based on information from 23 WHO European Region Member States, shows that Lithuania is within the range of countries with moderate to low commitments to injury prevention (Fig. 8).

Lithuania has implemented and enforced the following specific policies on: (a) banning the sale of fireworks to children / adolescents; (b) mandatory child-resistant packaging for nonpharmaceutical products with the potential to poison; and (c) banning the use of drawstrings in children’s clothing. Further reinforcement of the regulatory framework is needed. In particular, it is needed in: requirements for barrier fencing for public and domestic pools; building codes requiring working smoke detectors on all dwellings; and mandatory child-resistant packaging for pharmaceuticals.

Fig. 8. Degree of implementation of 12 national policies for reducing unintentional injuries in selected countries, 2006



Note. The total score for degree of implementation is the sum of the scores for each policy: 0 = no policy; 1 = partly implemented or enforced; and 2 = substantially implemented or enforced.
Source: Policies to reduce and prevent selected unintentional injuries (falls, drowning, poisoning, fires and choking) in children and adolescents (30).

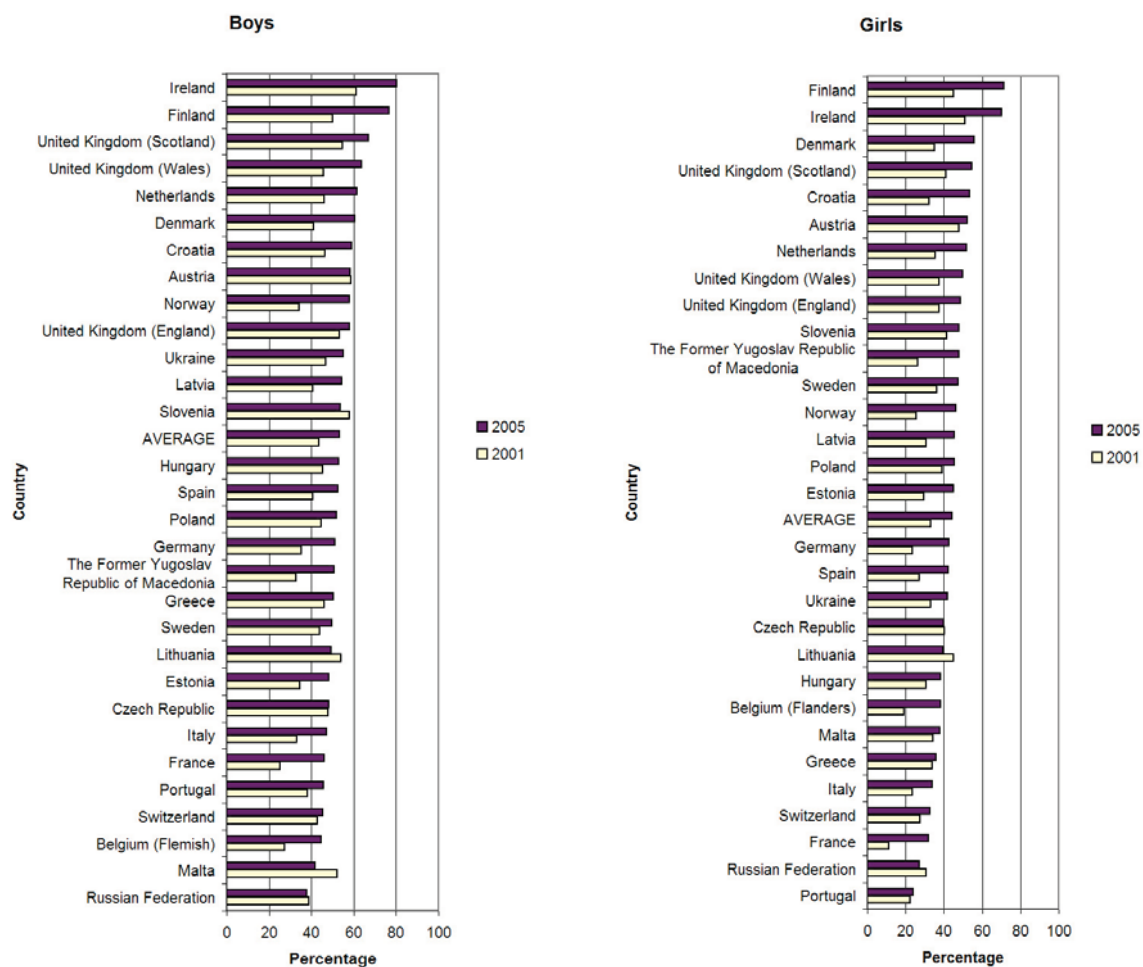
Among other things, the report *Home accidents in children and home safety regulations in Lithuania: status quo report* (29) concluded that there is a need to strengthen the capacity of the State Territorial Planning and Construction Inspectorate (Ministry of Environment), and relevant regional and local administrations, to efficiently perform their mandate in construction surveillance and control. Equally, it concluded that child home injury prevention should become a strong part of the National Injury Prevention programme, with specific action on child poisoning, falls and burns.

It is important to point out that formulating and planning injury prevention actions and monitoring the progress of their implementation will substantially benefit from an integrated surveillance system on unintentional injuries. The system should facilitate access to information on diverse health end-points collected by different authorities, as well as access to different information cross-sections by, for example, type of the injury and risk. Overall, the prevention of injuries can be strongly improved in Lithuania, and the country has recently developed policies to reduce and prevent accidents, especially road traffic accidents.

A safe environment that encourages *personal mobility and physical exercise* is important for health and the prevention of obesity and excess body weight. Due to physical exercise, excess body weight and obesity in children and adolescents have steadily declined. With a score of 19, Lithuania scores well above the midpoint (12) of the scale of indicators on policies to reduce and prevent excess body weight and obesity in children and adolescents. Self-reported data from the countries participating in the Health Behaviour in School-aged Children survey show that Lithuania scores well on the rate of teenagers being physically active at the level recommended by the moderate-to-vigorous physical activity guidelines (Fig. 9). Furthermore, on the prevalence of excess body weight (including obesity) among 13- and 15-years-old children, Lithuania ranks among the best performing countries. According to a regularly conducted survey within the Finbalt Health Monitor (31) – an international project with the participation of Estonia, Finland, Latvia and Lithuania, since 1994 – in 2006 the proportion of people reporting leisure time physical activity for at least 30 minutes four times or more a week was 23%, while in 1994 this proportion was 16% among men and 14% among women. Lithuania has so far taken part in four rounds of the Health Behaviour in School-aged Children surveys, as shown in the report *Inequalities in young people's health: HBSC international report from the 2005/2006 survey* (32). Recently, it has joined a new international monitoring programme, together with 12 European countries, on child growth and development in 6–7-year-old children, with a focus on nutrition and physical activity.

Several activities and campaigns to promote physical activity and sports among school and preschool children have been undertaken in the last few years (33). A new law, the Law on Physical Education and Sports (34) was adopted in 2006. It lays down the principles of physical education and sport, regulates the competence of state and municipal institutions in this field, and regulates the organization of physical education and sport. It also regulates physical exercise in educational establishments, the competence of nongovernmental physical education and sports organizations in the development of physical education and sports, the training of sportsmen, and the development of a system of competitions. Moreover, it regulates activities of physical education and sports specialists, the basis of the development of professional sports and the principles of organizing sports competitions and events, and also lays down the requirements for sports facilities.

Fig. 9. Percentage of children and adolescents undertaking sufficient physical activity in selected countries of the WHO European Region, 2001 and 2005



Source: Inequalities in young people's health: HBSC international report from the 2005/2006 survey (32).

Also, the improvements of the infrastructure that relate to building a continuous network of pedestrian and bicycle paths in the suburbs of major cities and towns should further encourage healthy and safe mobility.

Ensure environments with clean air to reduce respiratory diseases

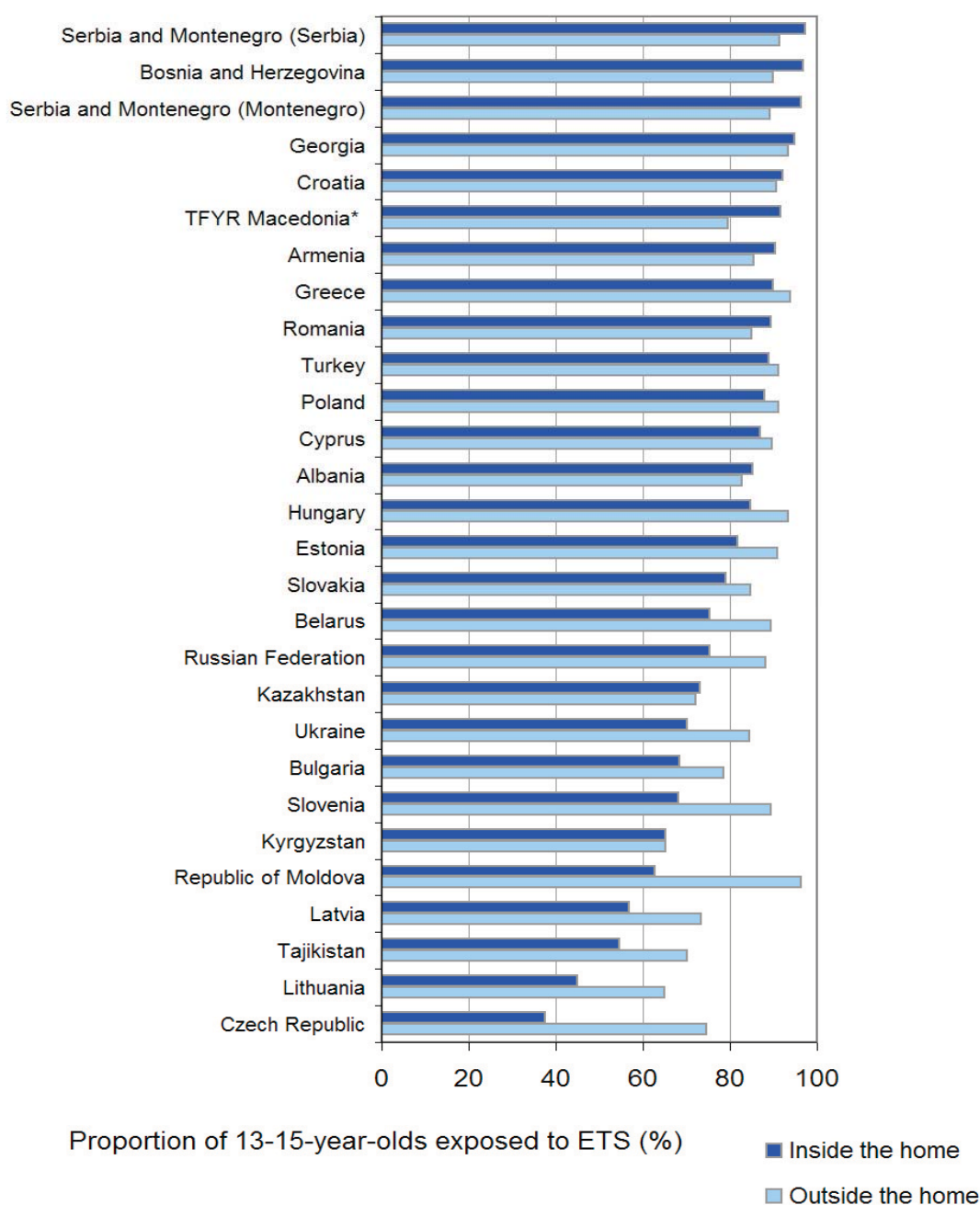
Multiple factors interact to determine respiratory health, including indoor and outdoor air pollution. With a rate in 2006 of 0.35 postneonatal deaths per 1000 live births due to respiratory diseases, Lithuania is among the countries with high levels of mortality in this category in the Region. Although the mortality rate has decreased since 2001, it still remains higher than in countries in the western part of the European Region. With respect to the prevalence of asthma, the rate for it in Lithuania is below that of the countries most affected by the corresponding health risks; and for asthma symptoms in Lithuania in both young people 6–7 and 13–14 years of age, the rates in Lithuania have not changed. The same holds true for allergic rhinoconjunctivitis, and Lithuania shows one of the lowest prevalences of this condition among the countries taking part in the International Study of Asthma and Allergies in Children – a large worldwide epidemiological study on allergic rhinitis and its impact on asthma, following internationally developed guidelines and methods. Results of the study show that the prevalence of allergic rhinitis in Lithuania has increased over a six-year period, from 1.4% to 2.4% in the 6–7-years-old group and from 4.5% to 6.2% in the 13–14-years-old group.

About 45% of Lithuanian children in the age range of 13–15 years are exposed to *environmental tobacco smoke* at home, and 65% are exposed outside of home (Fig. 10).

With respect to the prevalence of *daily smoking* in 15-year-old children, Lithuania ranks among the countries with low levels that have decreased from 2001/2002 to 2005/2006. This is particularly true of boys, which has led to a decrease in the gender-related difference. A similar pattern in gender difference can be observed in adults: the prevalence of daily smoking among Lithuanian women for a 12-year period has increased from 6% to 15% in 2006, whereas men tend to smoke less. The changed gender differences in smoking may be associated with broader changes in the status of women in high- and medium-income countries.

Environmental tobacco smoke is the most significant indoor air quality health issue: it increases the health risks of air contaminants from indoor sources to a clearly higher level than those of air contaminants from outdoor sources, and Lithuania is strengthening its policies to reduce children's exposure. The WHO tobacco control database (35) and the information summarized in ENHIS Fact Sheet 3.7 (36) show a ban on smoking in public transportation. Creation of smoke-free public places has been enforced progressively, and in 2007 smoking was banned in bars and restaurants. Lithuania is among the countries with the highest performance in implementing 100% smoke-free environments. Also, preventing active smoking and promoting health activities and campaigns have been undertaken, which affects the prevalence of smoking. It can be expected that these policy developments will lead to a reduction in the prevalence of smoking and also of passive smoking (the prevalence of exposure to environmental tobacco smoke). A greater effort is needed to monitor and evaluate the health gains.

Fig. 10. Proportion of 13–15-year-olds exposed to environmental tobacco smoke inside and outside their homes, 2002–2007



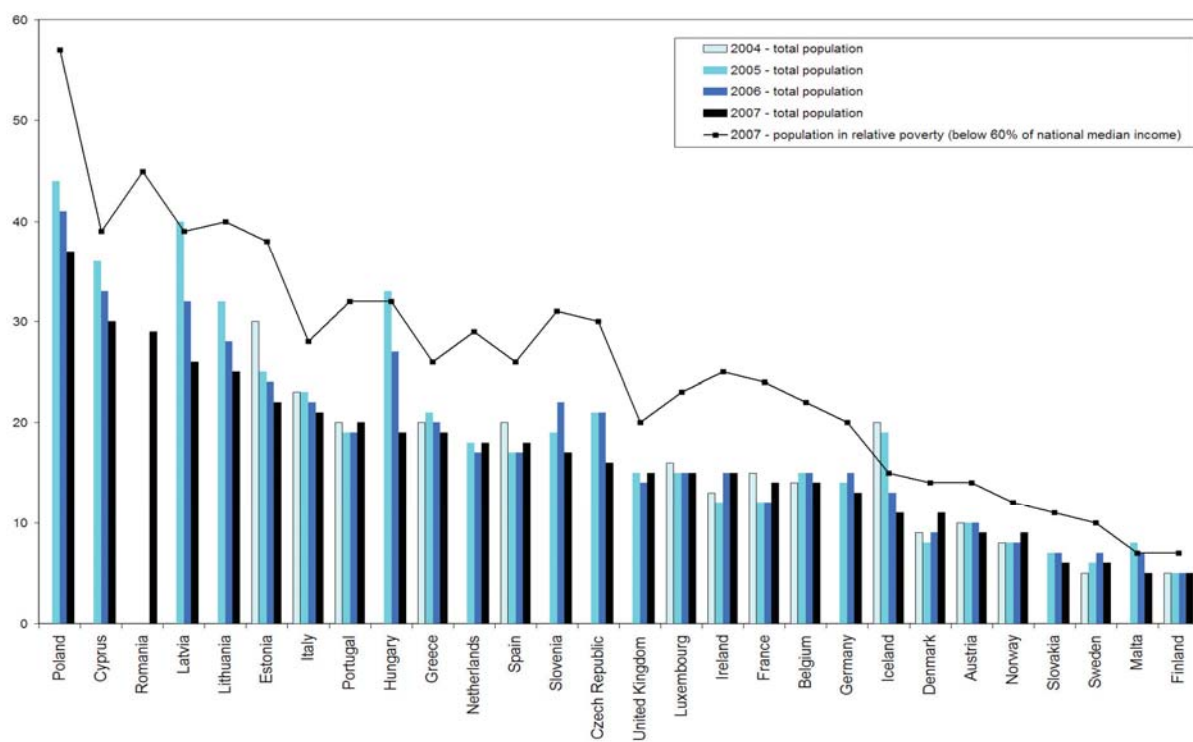
Note. Serbia and Montenegro became two separate Member States of WHO in September 2006.

*TFYR Macedonia = The former Yugoslav Republic of Macedonia.

Source: Exposure of children to environmental tobacco smoke (37).

According to data from Eurostat, Lithuania has a high prevalence of dampness in its housing stock (38), which may pose health risks for sensitive population groups and may support the growth of indoor mould. Although the prevalence has been declining over the last years, it still affects one quarter of the population in Lithuania. Fig. 11 shows the proportion of the population living in homes with dampness for the recent years, and indicates that in 2007, the less affluent population groups are much stronger exposed (40%) than the total population (26%).

Fig. 11. Proportion of the total population living in homes with self-reported problems of dampness, 2004–2007, in %



Source: Eurostat, Statistics on Living Conditions and Welfare (38).

According to data derived from a WHO survey on housing and health (39), 28.2% of all households in Vilnius complain of dampness or condensation in dwellings (including attics and basements). In 12.1% of these cases, households have that problem often or permanently. About the same proportion of cases (12%) also indicated poor indoor air quality.

Households that indicate problems with dampness or condensation more often find these problems in the kitchen (51.3%), bedroom (50.3%), living room (47.1%) and bathroom (23.0%). Problems with visible mould growth in the dwelling appear in 18% of households, and in 6.6% of cases mould is growing permanently. Also, the odour of dampness or mould was experienced in at least one room in 8.8% of the dwellings. Moreover, condensation signs were noted at windows in at least one room where wallpaper, paint and other surfaces were damp. Furthermore, 1.6% of dwellings had no operational lighting or had not installed it at all in at least one room.

With average PM_{10} levels of $20.2 \mu\text{g}/\text{m}^3$ calculated for Lithuanian cities in 2006, Lithuania is among the countries of the European Region (for which data are available) with relatively low levels of outdoor air pollution in urban areas. Outdoor air pollution has tended to decrease, and urban air quality monitoring and reporting has been significantly improved (40). Information on air quality monitoring is available from the Environmental Protection Agency web site (41) in almost real time (one hour later).

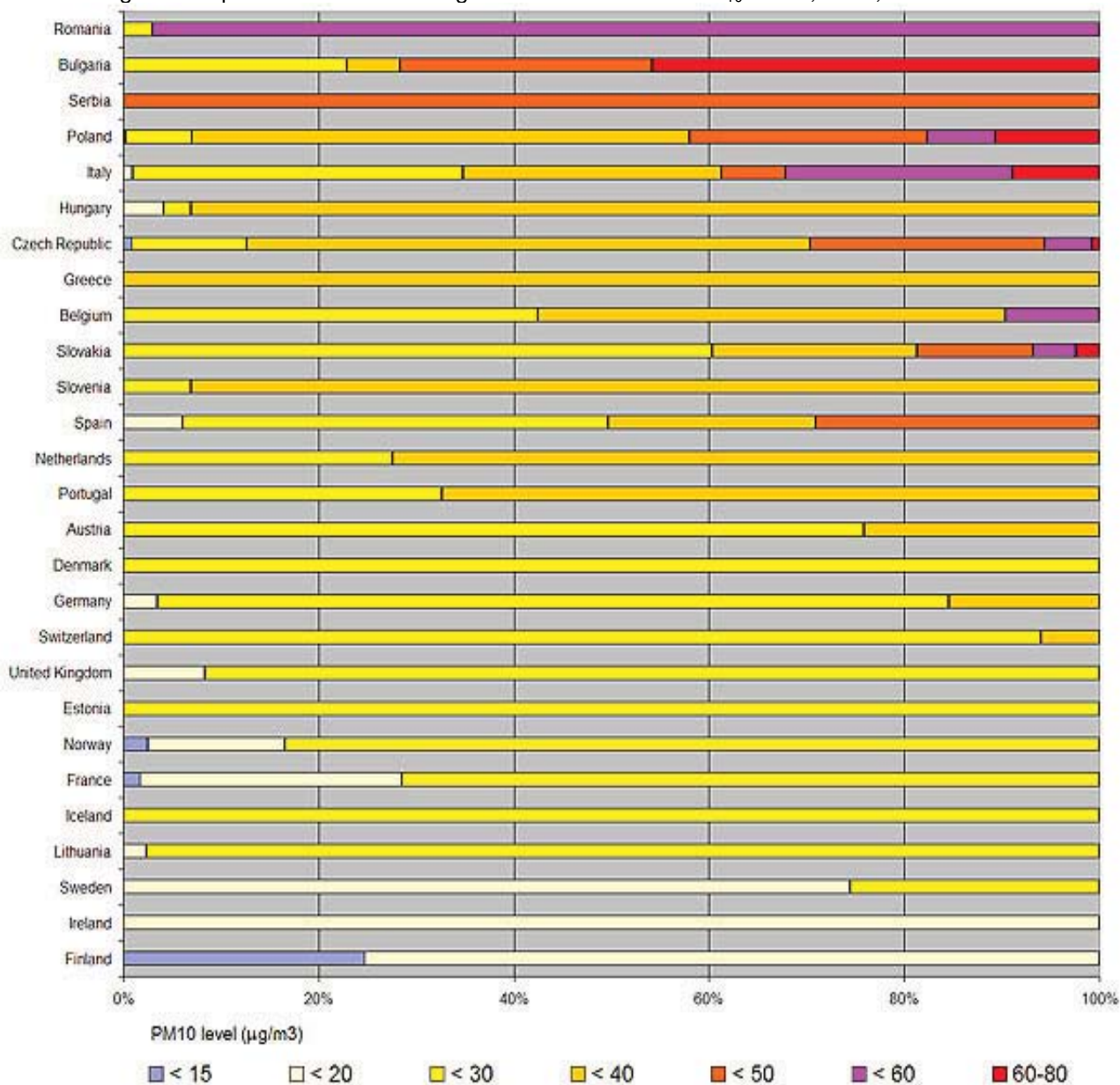
Fig. 12 shows the population exposure to PM_{10} in various European cities in 2006. This is expected to approximate the exposure in children, assuming children comprise similar proportions of the cities' populations. It should be noted that, despite the relatively low average, more than 97% of the urban population in Lithuania is exposed to levels exceeding the WHO air quality guideline level of $20 \mu\text{g}/\text{m}^3$, and this presents a risk to children's health.

Among the major contributions to urban air pollution, road transport is becoming ever more important. Assessments show that *automobile transport emissions* account for up to 88% of the total amount of air pollutant emissions in Lithuania, with 75% of the cars older than 11 years. In 2005, the Government of Lithuania adopted a resolution on a long-term strategy for the development of a transport system: (a) with lower negative impact on the environment; (b) with high energy efficiency; (c) that promotes the use of clean fuels, of electric and hybrid vehicles for city travels (especially for city services); (d) that tightens the requirements for exhaust gases and noise; and (e) that introduces zones that stimulate healthy and safe mobility. For example, local authorities encourage people to use *green* means of transportation: Siauliai has 46.3 km (and 30 km out of city) of bicycle lanes already built, installed and marked; Kaunas has 40.7 km of bicycle lanes; Utena has 10 km of bicycle lanes; and Panevėžys has 91 km of bicycle lanes and pedestrian walks. These developments received high approval from the public.

Lithuania needs to strengthen public health capacity in order to use existing air quality information to assess population exposure and related health impacts, following ENHIS methods.

From the beginning of 2007, in the cities of Klaipėda and Šilutė, monitoring of smaller particulate matter of 2.5 micron aerodynamic diameter ($PM_{2.5}$), which are of higher relevance to health, has started. The average annual concentration of $PM_{2.5}$ reached $9 \mu\text{g}/\text{m}^3$ in 2007 in the Klaipėda and Šilutė stations, with levels of up to $18\text{--}20 \mu\text{g}/\text{m}^3$ in February and March and $5\text{--}8 \mu\text{g}/\text{m}^3$ during the other months of the year.

Fig. 12. Proportion of children living in cities with various PM₁₀ levels, 2006, in %



Source: AirBase (42).

In recent years in Lithuania, *ozone* in the ambient air has become another major concern. The highest levels of the pollutant are in the city suburbs in spring and summer, when the sun's activity is greatest.

Reduce disability and disease arising from exposure to hazardous chemicals, physical and biological agents and hazardous working environments

Leukaemia is the most frequent type of malignancy among children in medium- and high-income countries. It is a subject of considerable public concern, especially in areas perceived as having an excessively high incidence and in relation to putative environmental causes, such as radiation and chemicals. In Lithuania, the standardized

incidence of leukaemia in children under 15 years of age is 44 cases per million population per year. It is lower than the age-standardized average of 34 WHO European Region Member States for which data are available, and Lithuania ranks among the countries with medium-to-low incidence of leukaemia in the Region.

With regard to *chemical hazards* in the environment and their potential effects on health, Lithuania has started human biomonitoring of persistent organic pollutants – in particular, of polychlorinated biphenyls – since 1991. The investigations have been carried out in human blood, breast milk and sebaceous tissue. In 2008, the country joined the WHO survey on persistent organic pollutants in human breast milk; thus, good quality, representative information of the whole country, based on uniform study protocol and samples analysed in officially accredited laboratories, can be expected in the near future. Also, the country has been actively involved with 15 European countries in the EU Sixth Framework Programme integrated project on food quality and safety, which assesses the impact of long-term, low-level mixed element (such as lead, cadmium and mercury) exposure in susceptible population groups.

The Institute of Hygiene is in charge of assessing public-health-related exposure to lead, according to an order from the Minister of Health from 2004 that regulates biomonitoring of lead in the general population. The first phase of assessment took place at the end of 2005 and in early 2006.

Since 2004, several regulatory measures have been undertaken to reduce the adverse effects of chemical hazards, such as chemical substances and preparations, on the environment and population health. These measures cover the active ingredients in pesticides (plant protection products), pesticide residues and food additives, as well as methods for assessing their toxicity, mutagenicity and other effects on health. A series of regulations have been enacted to protect children from exposure to chemicals in toys and other products. For example, a recently introduced national public health standard will cover the use of alternatives to phthalates in medical equipment, particularly for long-term use by children. However, data are unavailable on exposure to chemical pollutants in indoor settings.

It is worth mentioning that a database on chemicals, their physical and chemical properties and national use is being introduced under the Environmental Protection Agency. This database will further evolve to meet the requirements of the Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH) Regulation (EC 1907/2006) (43).

With respect to *environmental noise pollution*, information can be derived from strategic noise mappings that follow the requirements of Environmental Noise Directive 2002/49/EC (44). In 2007, the exposure of the population of Vilnius (553 904 inhabitants) and Kaunas (378 943 inhabitants) to noise can be described as follows. For Vilnius, more than 40% of the population is exposed to noise from road traffic that exceeds L_{den}^3 of 55 dB(A) and more than 35% of the population is exposed to noise levels L_{night}^4 of 50 dB(A). More than 7% of the population is exposed to high levels of noise from road traffic that exceed L_{den} of 65 dB(A), and more than 21% of the population is exposed to levels higher than L_{night} of 55 dB(A). At those levels, health is affected. For Kaunas, more than 50% of the population is exposed to noise from road traffic that exceeds L_{den} of

³ L_{den} is the day-evening-night noise level based on the energy-equivalent noise level (L_{eq}) over the whole day (24 hours) with a penalty of 5 dB(A) for evening-time noise and 10 dB(A) for night-time noise.

⁴ L_{night} is the night noise level based on the energy-equivalent noise level over the night-time period.

55 dB(A), and more than 38.8% is exposed to noise levels L_{night} of 50 dB(A). More than 6.7% of the population is exposed to high levels of noise from road traffic that exceed L_{den} of 65 dB(A) and more than 16% is exposed to levels higher than L_{night} of 55 dB(A).

The results of the strategic noise mapping of Vilnius International Airport show that more than 13 000 (2.3%) Vilnius inhabitants are exposed to aircraft noise that exceeds L_{den} of 55 dB(A) and another 10 000 (1.8%) are exposed to aircraft noise exceeding L_{night} of 50 dB(A).

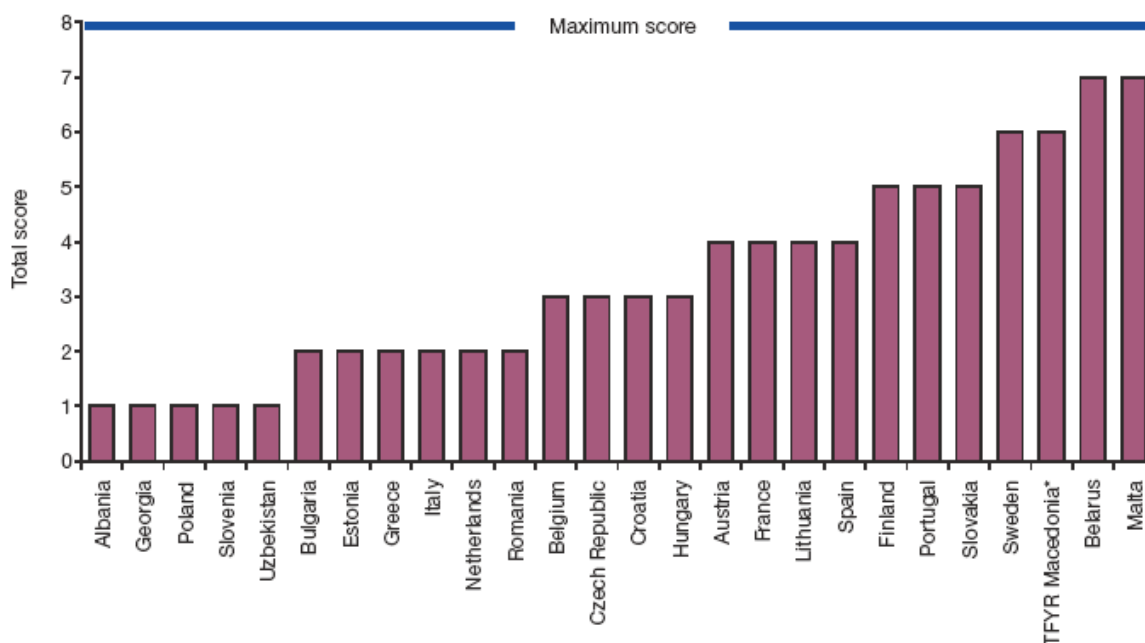
These trends are likely to remain unchanged, owing to the persistent growth of traffic – especially, road and air. The noise strategic mapping activities under the implementation of Environmental Noise Directive 2002/49/EC (44) are advancing progressively. For example, to fulfil Environmental Noise Directive 2002/49/EC obligations by the end of 2008, Kaunas Municipality updated strategic noise maps of road transport and prepared noise maps for railroads and industry. Municipalities in the second stage of implementing Environmental Noise Directive 2002/49/EC (Klaipėda, Šiauliai and Panevėžys) have already initiated strategic noise mapping.

Neighbourhood noise is also considered a serious problem. The Ministry of the Interior (Police Department) is responsible for noise control in residential environments. In 2008, police officers signed more than 8000 citations for infringing on and disturbing public quiet. However, effective mechanisms for implementing Environmental Noise Directive 2002/49/EC are lacking.

According to data from the EU Survey on Income and Living Conditions for the year 2005, 19.6% of Lithuanians declared they were affected either by noise from neighbours or from the street versus 13.7% of Lithuanians who declared they were affected by pollution, grime or other environmental problems.

Children are particularly vulnerable to damage caused by *ultraviolet radiation*: a good deal of exposure to ultraviolet radiation occurs in childhood and thus determines the risks for severe diseases, such as malignant melanoma and skin cancer. It is particularly important to increase the promotion of sun protection behaviour and to ban the use of sunbeds by young people. The age-standardized rates of melanoma among people younger than 55 years of age in Lithuania is lower than in many other countries, especially the northern part of the Region and especially for males. In Lithuania, the difference in age-standardized rates of melanoma between males and females is almost fivefold. The country ranks among countries with a medium-to-high incidence of melanoma in females. Lithuania shows a high degree of implementing actions to reduce the population's exposure to ultraviolet radiation (Fig. 13).

Fig. 13. Degree of implementation of action to reduce exposure of the population to ultraviolet radiation in 26 countries in the WHO European Region, 2006



* TFYR Macedonia = The former Yugoslav Republic of Macedonia.

Source: *Policies to reduce the excessive exposure of children to ultraviolet radiation* (45).

The incidence rate of *foodborne and waterborne diseases* has tended overall to increase in the last 10 years, reaching almost 500 cases per 100 000 population, with salmonellosis, campylobacteriosis, rotaviral infections and unspecified bacterial foodborne and waterborne diseases on the rise. The latter account for 43% of all foodborne and waterborne diseases, followed by viral-specific diseases (19%), salmonellosis (12%) and other bacteria-specific diseases (11%). In the period 2005–2007, salmonella was the causal agent for 32% of all outbreaks, followed by unspecified bacteria (26%) and rotavirus (24%). The majority (60%) of foodborne and waterborne disease infections occur at home and very seldom in public settings (such as schools and kindergartens, restaurants, bars and canteens or medical care facilities); in 25% of these infections, the place they occur is unknown.

A series of measures were enacted to monitor and assess reproductive health, and a set of indicators were put in place to report on birth weight, congenital malformations and time to pregnancy, in order to detect potential hazards to reproductive health. Also, a list of indicators that relate to children was endorsed by a government resolution in 2004, and software was developed to retrieve selected statistical information on children's health from the SVEIDRA database.

With regard to *hazardous waste*, the disposal of pesticide waste has been dealt with by exporting it to a large incineration plant outside of Lithuania, which disposed of more than 780 tons of pesticides. To deal with the issues of disposal of hazardous industrial waste and to better utilize secondary waste, four regional hazardous waste disposal sites are being provided with appropriate technological equipment and transport, to extend their capacities in handling such waste; EU funds support this work.

Applied research on the management of hazardous waste has been carried out and is the basis for current programmes and standards for long-term storage, incineration and utilization of hazardous waste.

Summary

In summary, the main problems identified by ENHIS for Lithuania are:

- injuries and accidents (on the road, as well as at home)
- indoor environment pollution, such as exposure to mould and environmental tobacco smoke
- air pollution, and especially the level of particulate matter in some areas
- water quality and water supply
- disposal and treatment of (hazardous) waste
- environmental noise.

The distribution of environmental risk factors is strongly affected by socioeconomic inequalities. The social dimension, however, often is not sufficiently reflected in the priorities set by public health and environmental policy actions and programmes. Socioeconomic inequalities therefore remain a major determinant of exposure to environmental health risks in Lithuania.

Available EU funds (from such sources as the EU Investment Bank and EU revitalization programmes) support mostly the structural development of the country, focusing specifically on revitalizing the urban and built environment. Nevertheless, the review has shown that, in public health, the effect of the built environment on health has been recognized only in the context of risks from emissions that arise, for example, from construction materials. Still needing further development are, for example, the role of home safety measures in preventing injury and the effects of thermal insulation measures on the indoor environment.

The identification of environment and health priorities should be strengthened at the national and subnational levels. Most of the information used by ENHIS is available in Lithuania. Also, the State Environmental Health Centre has been actively involved, from the very beginning, in developing environment and health indicators and in establishing an information system and has gained considerable experience in preparing and using information in the framework of the Directorate-General for Health and Consumer Affairs of the European Commission ENHIS projects. Efforts should be directed towards identifying all data sources according to the methods that underpin the ENHIS system. The establishment of a framework for the access and exchange of this information, to ensure its use for assessing health needs, would strongly support public environment and health policy-making. The cost-effectiveness of such an intervention can be considered to be very high.

IV. Institutional set-up

Conclusions

- The country public health infrastructure is established, and the extension of public health services to the municipal level is a very positive development, bringing health promotion, education and targeted services and activities to the local level.
- The complexity of the organizational framework, with its variety of different actors and sometimes unclear responsibilities, could lead to partial overlaps and difficulties in implementing activities and programmes.
- Regional public health centres have little access to available databases and to information at the national level, as well as from other regions. This leads to duplicated work and ineffective use of resources – in particular, in response to public requests.
- Information flow and data reporting across the various hierarchical levels and devolved administrations are not sufficiently streamlined. As a consequence, controversial data on, for example, food-related disease outbreaks are presented by different actors.
- Collaboration of health and other sectors is often affected by the misconception that health sector duties are restricted to providing health care. As a result, other ministries do not see the importance of collaboration.
- The current institutional set-up does not sufficiently enable intersectoral collaboration. In most cases, final responsibility for practical improvement is with the Ministry of Health, although the Ministry is not in charge of the regulations that affect environmental health-related conditions.
- Despite the considerable number of health services that extend beyond the occupational scope provided in larger companies, cooperation between the Ministry of Health and the Ministry of Social Security and Labour is not effective, which may result in the scope and quality of services provided by companies being different.
- With regard to emergency preparedness, each ministry has an independently developed plan, but such plans lack sufficient exchange and coordination among the relevant sectors. For example, the Health Emergency Situations Centre is not linked to the Ministry of the Interior, which is in charge of civil protection plans.
- Only very few nongovernmental organizations deal with environment and health. Most of them focus on environmental management or specific environmental topics or represent health-related groups (such as patient groups).

Recommendations

- Within the Ministry of Health, it is necessary to identify one agency or department to be in charge of all environmental health issues and to coordinate and oversee the activities of other health sector agencies in this field. Clear allocation of responsibilities for environment and health in other ministries should be requested by the Ministry of Health, to enable high-level interaction.
- The work of the municipal public health bureaus should be evaluated, to make timely adjustments that ensure their work is effective. In the meantime, resources should be invested in extending the work of local bureaus in a variety of services and public health areas and in the continuing training and capacity building of their staff.

- Regular exchanges between – and information platforms with – municipal public health bureaus would also help to increase their effectiveness and to pool resources and capacities. Regional public health centres should all have access to one commonly shared database and a so-called one stop shopping information service, to ensure consistent responses to public health challenges, and should keep all actors updated with recent evidence and data.
- For interministerial working groups that support national priorities for action, staff time needs to be adequately allocated, so that these institutional mechanisms do not create an additional burden on the ministries and their normal budgets.
- Among the possibilities for facilitating collaboration between the two actors most involved in environment and health (the Ministry of Health and the Ministry of Environment) are the following: move one staff member into the other ministry to act as a liaison officer; or create a bilateral environmental health unit with a joint dedicated mandate and funded and staffed evenly by both ministries.
- Collaboration between the Ministry of Health and the Ministry of Social Security and Labour could maximize the effectiveness of health care provision, as well as preventive measures in the occupational setting, given the already existing health service infrastructure.
- Occupational health services need to be strengthened by reviewing and discussing technical and educational support and bolstering the core institutional capacity and human resource capability for dealing with the special health needs of working populations and for extending their health promotion services.
- Interministerial exchange and collaboration on sectoral emergency preparedness plans is absolutely necessary to identify potential weaknesses and conflicts in those sectoral plans and to develop a more sustainable and well-coordinated planning mechanism.
- A supportive environment should be provided to foster the further development of nongovernmental organizations dedicated to environment and health. Current nongovernmental organizations should be included in policy development processes and intersectoral committees in a systematic and regular way.

This chapter gives an overview of the political system and infrastructure of Lithuania. It outlines the institutions involved in environment and health policy-making and their mandate and responsibilities. Institutions involved in the health sector with a special emphasis on the environment and those involved in all other relevant sectors have been considered. The chapter also provides an insight into the public health infrastructure. The following list of entities and activities in environment and health is not complete. For example, little information is provided on social regulations and their effects on health, on social integration or social support to poor households or on the level of civil protection and its potential health relevance. As to the scope of this review, it is necessary to note that only those institutions that have activities related to environment and health as specific objectives are mentioned and described.

Also, Lithuania is currently undergoing a range of structural changes initiated by the government. These changes may lead to the modification of the institutional landscape of national and/or regional agencies and institutions related to environment and health. Part of the restructuring, for example, is the development of a new system for providing public health services. This new system focuses on public health bureaus that provide health and preventive services at the local (municipal) level, which will substantially change the

delivery and (possibly also) type of health services. Annex 1 shows Lithuania's health system involvement in environment and health issues.

Socio-political situation, political system and infrastructure

Lithuania is one of three Baltic states. Situated along the south-eastern shore of the Baltic Sea, it shares borders with Latvia to the north, Belarus to the south-east, and Poland and the Russian Federation exclave of Kaliningrad Oblast to the south-west. Lithuania entered the EU in May 2004. Its population is 3.4 million.

The Lithuanian head of state is the president. With the approval of parliament, the Seimas, the president has the right to appoint the prime minister and, on the latter's nomination, appoints the rest of the cabinet. The unicameral Lithuanian parliament, the Seimas, has 141 members.

The administrative structure of Lithuania is based on 10 counties – Alytus, Kaunas, Klaipėda, Marijampolė, Panevėžys, Siauliai, Tauragė, Telšiai, Utena, and Vilnius – that are further subdivided into 60 municipalities. The counties are ruled by county governors appointed by the central government. They ensure that the municipalities adhere to the laws of Lithuania and its constitution. The county government oversees local governments and their implementation of national laws, programmes and policies. Municipalities have their own elected government. The municipal council elects the mayor of the municipality and other required personnel.

The country's population is 84.6% Lithuanian. Several sizable minorities exist, such as Poles (6.3%), Russians (5.1%), and Belarusians (1.1%).

In 2003, before joining the EU, Lithuania had the highest economic growth rate among all candidates and Member States. Since 2004, economic development has continued to be high, with the annual growth of the gross domestic product (GDP) above 5% each year. Lithuania, however, was recently also strongly affected by the global economic crisis: in December 2008, the GDP was down 2.0% from the level of December 2007.

Most of the trade Lithuania conducts is within the EU. As of the fourth quarter of 2008, the unemployment rate stood at 7.9%. The litas (LTL), the national currency, has been pegged to the euro (€) at the rate of €1.00 = LTL 3.4528 since 2 February 2002, and Lithuania is expecting to switch to the euro in 2013. Of the GDP, 5.5% was spent in 2005 on health-related expenses. Table 1 shows some macroeconomic indicators for Lithuania.

Table 1. Macroeconomic indicators

Indicators	Year				
	2005	2006	2007	2008	2009 (prognosis)
GDP (€billion)	20.9	23.9	28.4	32.3	29.1
Growth of GDP (%)	7.8	7.8	8.9	3.1	-10.5
Annual inflation (%)	2.7	3.8	5.8	11.1	5.8
Foreign direct investment (€billion)	6.9	8.4	10.3	9.1	–
Exports (€billion)	9.5	11.3	12.5	16.1	–
Growth of exports (%)	27.1	18.7	11.1	28.4	-0.5
Imports (€billion)	12.4	15.4	17,8	21.0	–
Growth of imports (%)	25.5	23.5	15.4	18.0	-12,3
Unemployment (%)	8.3	5.6	4.3	5.8	13.5

Note. Data are based on information from the Government Department of Statistics, the Ministry of Finance, and the Bank of Lithuania.

Source: Basic economic data: Lithuanian economy at a glance (46).

Health sector

In Lithuania, the main health institutions responsible for addressing health risks related to environmental factors are:

- the Ministry of Health, through its Public Health Department (Public Health Care, Public Health Strategy and Health Promotion divisions);
- the State Public Health Service, along with 10 regional public health centres;
- the State Environmental Health Centre (under the Ministry of Health);
- the Radiation Protection Centre (under the Ministry of Health);
- the State Health Information Centre (under the Ministry of Health);
- the Centre for Communicable Disease Prevention and Control (under the Ministry of Health); and
- the Centre for Health Emergencies (under the Ministry of Health).

In addition, the State Food and Veterinary Service takes all health-relevant protection actions in relation to food items, food handling, and drinking-water. The State Food and Veterinary Service is not under the Ministry of Health, but reports directly to the national government.

Another relevant institution that coordinates work on environment and health in Lithuania is the National Health Board. The Board was set up in 1998 as an institution for health policy and intersectoral collaboration, coordinating public-health-related issues and acting as an advisory body for the Seimas and the Government of Lithuania. It coordinates the policies on alcohol and tobacco control, prevention of drug abuse, disease prevention and control, and implementation of the State health programmes. The National Health Board is accountable to the Seimas and presents annual reports on the status of the population's health and the implementation of health and health care policy (18). Its activities are funded from the state budget.

The *delivery and infrastructure of the public health services* are being reformed to extend services to the local level, and this reform will include environmental health issues. The core of the reform, implemented since 2006, is the establishment of public health bureaus with a wide range of services in a number of municipalities; the bureau objectives are to be closer to the citizens and to provide more effective public health care and prevention services. The opening of municipal public health bureaus (ongoing in 2008 and 2009) will thus add a new layer to the public health system infrastructure. The establishment of local public health bureaus also reinforces the local authority's capacity, as each municipality has an environment unit and a health unit, but these do not focus on public health and preventive measures. The extension of the public health system is the government's response to recent developments in public health status that show that, in many areas (especially healthy lifestyles and some health outcomes), the situation is not improving and at times is even worsening, which obviously cannot be addressed adequately by the existing structures of local health units (their main task being the management of the local health care services and institutions).

The main objectives of the municipal public health bureaus, of which 29 have already started their work, are therefore to:

- increase the level of awareness, activity and responsibility of municipalities
- improve local monitoring of – and setting of priorities for – health actions
- make public health service programmes (especially primary care) more effective
- provide more effective policy advice to local authorities
- develop tailored prevention campaigns and programmes.

The functions of municipalities for which public health bureaus should be established are spelled out in the 2002 Law on Public Health Care, revised in 2007 (see Annex 3, Section 6); they are to:

- carry out public health monitoring;
- organize public health promotion;
- develop, adopt and implement municipal health programmes, taking into account the dominant public health problems of a municipality;
- participate in implementing national public health strategies and programmes;
- fulfil the public health care needs of children and young people, coordinate activities of health specialists working with schools, and take care of student health programmes;
- involve social partners in public health promotion activities.

The workforce of each public health bureau will include a minimum of four staff (director, health monitoring specialist, public health programme implementation specialist and public health promotion specialist) with the tasks of establishing and strengthening cooperation with local social stakeholders. In particular, the staff will address schools and institutions for children within the bureau's health promotion activities. In as much as the bureaus are supposed to serve a number of municipalities, some with different characteristics, each bureau will have a specific set of objectives that allow it to integrate local priorities. The work of the bureau is reported to the director of the municipal administration, and financial and technical performance (internal and external) will be audited.

Within their mandate – and, in particular, in the health promotion area – municipal public health bureaus have major responsibility for environmental health-related issues, such as the promotion of physical activity, healthy living conditions and indoor air quality, and healthy lifestyles. To successfully implement these tasks, the municipal public health bureaus need to collaborate intensely with environmental and social actors in the municipalities. The local branch of the Environmental Protection Agency is one of the main actors, and a broad range of local agencies help develop local health strategies.

Funding for the new bureaus is provided by the municipalities and the government (through Ministry of Health funds), and the State Sickness Fund provides some public health care funding for health promotion work in schools. For rural municipal bureaus, additional funds are available to work on health inequities.

Two entities provide guidelines. The first, the State Health Information Centre, provides guidelines on methods for municipal public health monitoring and for review of the monitoring programmes. The second, the State Environmental Health Centre, develops legal acts for the overall operation of the bureaus; it also provides guidelines on methods for public health services, management and training. During the period 2009–2012, the project Improvement of Public Health Services on the Municipal Level was funded by the European Social Fund (structural support); the municipal public health bureaus are the target group for project implementation.

The regional public health centres are part of *the State Public Health Service*, which was established under the Ministry of Health in 2000. It brought together regionally dispersed public health offices to:

- ensure public health safety
- protect consumers' rights within the limits of its competence
- implement the public health safety policy of Lithuania and the Ministry of Health
- promote EU integration in the field of public health safety.

From a national perspective, the State Public Health Service is under the Ministry of Health. Ten *regional public health centres* are subordinate to the State Public Health Service and focus on public health safety control. Each regional public health centre has its branches (divisions) in municipalities. However, these divisions are not independent legal units; that is, although located within the regions, the regional public health centres are still considered part of the national system (see Fig. 14).

To ensure a safe environment for public health, public health centres assess economic and commercial activities and issue hygiene certificates. These certificates are necessary when starting a health care, educational or other service facility, such as swimming pools, saunas, hairdressers, sport clubs and hotels. Public health centres are also involved in controlling and supervising public buildings – from a health perspective. They also assess the impact of these facilities on public health, based on an analysis of the planned economic and commercial activities, and decide on the need to implement a health impact assessment. When the health impact assessment is conducted by an authorized authority, the public health centres analyse and approve the reports. The public health centres also analyse the complaints of citizens (for example, about noise) and handle identifying and managing disease outbreaks, as well as providing notification of such outbreaks.

Care has been taken to avoid duplicating the responsibilities of regional and municipal health offices; therefore, the regional public health centres had to transfer the mandate for health promotion and other local services (such as outpatient clinics and school nurse programmes), together with the respective staff, to the municipal public health bureaus, which now handle that function. The regional public health centres, however, do work increasingly with local authorities as well. The public health infrastructure within the country is illustrated schematically in Fig. 14.

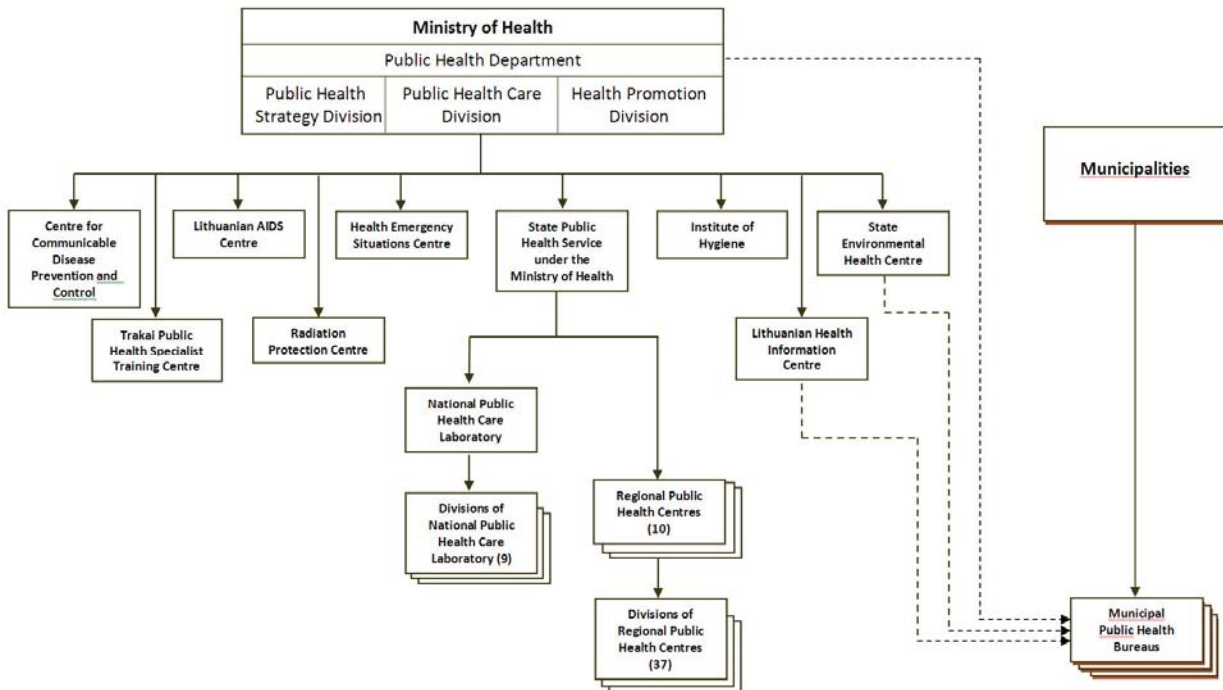
The regional public health centres are supposed to benefit from all information sources and databases maintained at the national level. In the case of the Kaunas Regional Public Health Centre, however, access to and exchange of information needs to be enhanced, as there is no direct interaction between the regional public health centres. Similarly, centres may solve problems without other centres knowing and benefitting from their solutions. Also, access to national-level databases could be improved.

At the national level, the *Public Health Department of the Ministry of Health* is the department that handles environmental health-related issues. The activities are shared among its three divisions: Public Health Strategy, Public Health Care, and Health Promotion. In its broadest sense, public health care includes activities to recognize, measure and tackle health challenges through population-based interventions. The main tasks of the Public Health Care Division are to:

- prepare and implement public health policies and care services
- coordinate governmental, regional and municipal activities in the public health sector
- promote healthy life styles and disseminate information.

The work of the Public Health Department is based on the 2002 Law on Public Health Care (amended in 2007; see Annex 3, Section 6), which has a specific charter and legal requirement for the government to adopt the NEHAP. In addition, the Department's work incorporates guidance from the EU public health strategy for 2008–2013 and the EU Second Programme of Community Action in the Field of Health 2008–2013, which also identified concrete measures on environment and health.

Fig. 14. Public health infrastructure with the municipal public health bureaus in Lithuania



In recent years, the *Public Health Strategy Division's* work on reforming public health care and establishing municipal public health bureaus has been its major focus and achievement. The Division is responsible for formulating the national public health strategy, for implementing it, and for annual strategic planning of public health care activities (within ministerial strategic planning). Overall, the Division plays an important role in preparing public health strategies, implementing them and, in particular, coordinating the different actors involved.

The *Health Promotion Division* focuses its work on preventing and managing noncommunicable diseases, such as cancer, cardiovascular diseases, asthma, diabetes and obesity. Nutrition and physical activity are the main fields of work for preventing these outcomes.

In Lithuania, the average diet contains too much fat, and action plans on this problem have already been developed. The same is true for physical activity, which has been identified as a national challenge and has led to the initiation of several campaigns and activities with the goal of stopping the increasing prevalence of overweight in the population by the year 2010. The driving force behind this action is the National Food and Nutrition Strategy (implemented during 2003–2010), which aims to achieve a mean body mass index of 21 kg/m² in Lithuanians and to increase the number of physically active pupils to 50% by 2010. At the local level, the municipal bureaus are expected to promote physical activity.

Also, campaigns against alcohol consumption – one of Lithuania's public health challenges – have been put in place. The year 2008 has been year of sobriety. There is a strong nongovernmental organization coalition against alcohol and tobacco, and social advertising of nonsmoking has been put in place. Preventing smoking is also one of the key objectives of the healthy school network, which is coordinated by the Ministry of Health and Ministry of Education and Science.

The *Public Health Care Division* is responsible for the environmental aspects of health, extending the meaning of *care* beyond the purely medical or institutional care meaning. The Division's work areas relate to environmental health issues and risk factors, environmental impact assessments, and sanitary protection zones. Besides its focus on the environment, the Division deals with:

- communicable diseases and related threats, emergencies and pandemics
- injury prevention
- control of alcohol and tobacco use
- children's health
- health inequities.

As many of the topics dealt with involve non-health institutions, the Division has a number of intersectoral programmes with other ministries, but it is usually the lead entity, with some contributions from other stakeholders.

With regard to alcohol consumption, there is now a major legal adaption of the law on the sale of alcoholic beverages: from 1 January 2009 and on, alcohol sales are banned from 22:00 to 08:00. This ban is valid for restaurants and pubs, as well as for shops and kiosks. In parallel, it is forbidden to have alcoholic beverages in the passenger space of cars during this period of time. Alcohol commercials on TV are now banned from 06:00 to 23:00, and

a new alcohol prevention programme is currently being drafted (the current programme ends in 2010) and will tackle Lithuanian society's daily problems with alcohol.

The work on reducing alcohol consumption is fuelled by the EU target for 2010, for which Lithuania is to reduce consumption by 25%. This target will be difficult to achieve, because alcohol consumption has risen strongly since 2008. The main problem areas are low-class families and teenagers. National data show that 70% of suicides are related to alcohol consumption, while estimates suggest that of the 15 000 families considered at risk due to their social background, 80% are categorized as such due to alcohol consumption. Also, of the estimated 100 occupational deaths per year, about 70% are alcohol related. The Ministry of Health is pursuing more strict regulations, but reinforcement is needed to bring that issue to the parliament. Taxation and other economic approaches have not been used: so far the price of alcohol has increased much more slowly in recent years than, for example, that of food items and other goods, making alcohol consumption relatively cheap, thus paving the way for more consumption. The counterargument used by the Ministry of Finance is based on the probable increase in illegal consumption, which has been observed in the case of (smuggled) cigarettes, since cigarettes have become more expensive based on EU regulations. Estimates of the illegal consumption of alcohol place it now at about 30% of total consumption.

In the specific case of occupational accidents triggered by alcohol, the Ministry of Health did collaborate with the State Labour Inspectorate to issue a set of recommendations to companies on how to deal with alcohol consumption in the workplace. It is hoped that these recommendations will become a commonly accepted and implemented standard in place of the practice of each company using its own method of handling the problem.

With regard to alcohol consumption and driving, the national threshold value for blood-alcohol level was 40 ml, but it has changed as of 1 January 2009 to 20 ml for professional drivers and for drivers in their first two years after receiving a driver's licence. Breath testing for alcohol has also been strengthened.

In the area of injury prevention, the Health Promotion Division is involved in developing and implementing the injury prevention programme, which runs from 2000 to 2010 and focuses on the prevention of primary trauma (such as improved surveillance systems, measures on poisoning and prevention of injuries to the elderly). Despite this specific action, the number of unintentional injuries is still one of the highest in the EU, and injury prevention remains a priority. Also, the Division participates, on behalf of the Ministry of Health, in Road Safety Commission efforts to tackle road traffic injuries – considered since 2006 as a national priority. Extending the work on road safety, the Ministry of Health issued an order on the health status of professional drivers, and the regulation on contraindications for the profession is becoming more stringent.

With regard to tobacco, a third of the population smokes, but it is much more common for men (43–44%) than for women (about 15%). In recent years, there has been some good news about smoking: its prevalence among teenagers has decreased, which may be the first effect of the discussion and implementation of regulations that ban it. Since 2000, advertisements for tobacco products have been banned, and since 2007 a ban on smoking in public places (such as restaurants, pubs and public transport) has been implemented. Since June 2008, after the last amendments of the 1995 Law on Tobacco Control (see Annex 3, Section 6), smoking is also banned in casinos and Internet cafes (Article 19 of the

Law). It is noteworthy that, in Lithuania, the execution of the ban in public places was highly welcomed by the public: according to Ministry of Health data, 75% of Lithuanian society supported its introduction, including 51% of smokers. For private areas and (especially) the home, there is no restriction and also there are no campaigns by health actors to reduce such smoking.

With regard to the use of drugs, the Ministry of Health shares the mandate with the Drug Control Department, which is directly under the government. The Department issues yearly action plans that are based on intersectoral collaboration with various actors, among which is the National AIDS Centre. Examples of actions carried out by the actors involved are: the drug control measures implemented in prisons by the Ministry of the Interior; prevention work in schools coordinated through the Ministry of Education and Science; and the preparation of information campaigns by Ministry of Health. In part due to this work, the number of drug users has been kept at the same level since 2003; before 2003, it had been rising strongly. Currently, the Drug Control Department is considering the introduction of methadone programmes, as well as the public provision of clean needles to drug users who inject drugs intravenously.

State Environmental Health Centre

The State Environmental Health Centre is responsible for public health care and environmental health issues. Its objective is to ensure that the environment does not present any health risk to current or future generations. It merged with the National Nutrition Centre to become the main advisory institution to the Ministry of Health on environmental public health. Annex 2 shows the structure of the State Environmental Health Centre.

With a focus on healthy environments, the Centre focuses on the prevention of environmental risk factors in the following areas: air pollution, chemical safety, biocides, noise, soil pollution, water pollution, waste management, disease and injury prevention, child safety, artificial and built environments, spatial planning processes, and global environmental issues, such as climate change. The State Environmental Health Centre is in charge of: developing hygiene regulations on drinking-water and dug-well water quality (limit values); providing technical support to the Ministry of Health, to help it coordinate its work on implementing the Protocol on Water and Health in Lithuania; receiving annual reports from the State Food and Veterinary Service on drinking-water quality; and undertaking analysis on the healthiness of water, according to the list of environment and health indicators.

State Environmental Health Centre specialists collect and analyse information about environmental health conditions and indicators, create databases and information systems, carry out epidemiological studies, and forward their results and recommendations to government bodies, interested institutions and the public. The State Environmental Health Centre also participates in and contributes to the development and reform of the national health system and health regulations, and it reports to the Ministry of Health on environmental health issues. It collaborates with international organizations; it also collects information about poisonous chemical materials and products and poisonings with these materials in Lithuania and brings this information to the public.

The State Environmental Health Centre is the main institution that transfers EU legislation into national law for the following sectors: the movement of free goods (such as chemicals, biocides and cosmetics), environmental safety (noise and health care waste) and consumer safety (non-food goods).

The Noise Prevention Division of the State Environmental Health Centre is responsible for implementing tasks assigned to the Ministry of Health to ensure implementation of the 2004 Law on Noise Management (No. IX-2499) and to coordinate and ensure implementation of Environmental Noise Directive 2002/49/EC (44). Also, the Noise Prevention Division is in charge of submitting reports to the European Commission on the implementation of Environmental Noise Directive 2002/49/EC in Lithuania and is a member of the National Reference Centre of the European Environment Agency.

The Noise Prevention Division technically, administratively and informatively supports the Noise Prevention Council which, with the Vice Minister of Health as its chairperson, acts as an advisory body to the government. The members of the Noise Prevention Council are undersecretaries of noise management in responsible ministries, representatives from government and municipal institutions, and representatives of research and public institutions that do work on noise prevention. The annual reports of the Noise Prevention Council on the state of noise prevention are presented to the government and published and are available to the public, together with a set of conclusions and recommendations to be implemented.

The State Environmental Health Centre develops guidelines on methods for preventing environment and health risks and promotes these to public health institutions in the health sector at the state, regional and (also) municipal level. The Centre is also involved in health education, both in informal continued training and in the health education of the population. With respect to the latter, 150 presentations have been made at different events, and 100 audio clips and special broadcasts have ensured good media coverage. Besides production of research papers and papers on methods, 50 leaflets and brochures – on, for example, creating health-supporting environments and healthy ageing – were published to serve municipal health boards and public health bureaus, and the Ministry of Education and Science. Together with Vilnius University and other universities, the Centre has helped train professionals who work as staff for the public health bureaus – with about 2000 professionals taking part in 30–40 course offerings each year. Also, the Centre provides health education services to first-aid drivers and hygiene education to some workers.

The State Environmental Health Centre is responsible for coordinating activities on children's health and the environment within the Children's Environment and Health Action Plan for Europe (3) and for reporting this to WHO. A government legal act regulates the programme for implementing children's health promotion (including environment and health) actions for the period 2008–2012. The Centre is involved in preparing legal documents and norms for kindergartens and schools and in preparing risk communication and information for other sectors.

Furthermore, the State Environmental Health Centre coordinates the activities of the Lithuanian Network of Health Promoting Schools. At the international level, the Centre is a member of the Network Planning Committee of the Northern Dimension Partnership in Public Health and Social Well-being and also a member of the Schools for Health in Europe network (47). The Centre also takes part – together with 12 countries – in a new

European project for promoting healthy eating and physical activity in schools, by providing guidance to policy-makers and through advocacy.

Also, the State Environmental Health Centre participates in developing and implementing the National Law on Public Health Monitoring and the National Public Health Monitoring Programme and in developing requirements for municipal public health monitoring programmes; it is responsible for the environmental health monitoring part of these programmes. It is also responsible for collecting and analysing data on environment and health indicators – according to the list of such indicators adopted by the order of the Minister of Health – and for disseminating this information.

Radiation Protection Centre

The *Radiation Protection Centre* was organized under the Ministry of Health in 1997. It coordinates the activities of the executive branch of government and other bodies of public administration and local government in the field of radiation protection. It does this by exercising state supervision and control of radiation protection, monitoring and expert examination of public exposure. The main objectives of the Radiation Protection Centre are to:

- protect members of the public and radiation workers from the hazardous effects of ionizing radiation;
- coordinate the radiation protection activities of different agencies; and
- organize and conduct supervision and control of radiation protection, evaluation and expertise as it pertains to the exposure of members of the public and radiation workers.

Besides identifying radon-exposed dwellings, which does not represent a major problem in Lithuania, the work of the Centre focuses on reducing ionizing radiation in health care settings.

Lithuanian Health Information Centre

The *Lithuanian Health Information Centre* is responsible for preparing and disseminating information on the health status of Lithuania and for supporting health care activities. Instead of a uniform health information infrastructure based on indicators at different administrative levels (available through the Lithuanian Health Information Centre), data on health status, determinants, health care institutions and expenditures from various data holders⁵ are collated, and a short annual report is published, which is also available on the Internet (48). The system of health indicators used in the WHO European health for all database (49) is being implemented in Lithuania, and the WHO Regional Office for Europe Data Presentation System has been in place for several years. Because of problems with

⁵ The various data holders that contribute are: Statistics Lithuania, the Social Insurance Fund Board, Disability and Working Capacity Assessment Office to the Ministry of Social Security and Labour, the State Patient Fund, the Centre for Communicable Disease Control and Prevention, the State Environmental Health Centre, the Hospital of Tuberculosis and Infectious Diseases, the State Centre of Mental Health, the Lithuanian AIDS Centre, the State Occupational Diseases Register, the Institute of Oncology of Vilnius University, Kaunas University of Medicine, the Compulsory Health Insurance Fund Information System (SVEIDRA), and the State Health Information Centre.

confidentiality, the Centre cannot get access to mortality data by sex, age and cause of death at the municipal level that are currently with the national Statistical Department. This will be resolved within the next two years, as the data are transferred to the Centre. Developments in e-health, which include huge personal health databases, will certainly play a major role in sustaining the health information infrastructure and in improving data quality. The Statistical Department holds the personal mortality data; morbidity data are in the database of the Compulsory Health Insurance Fund, which covers up to 95% of all health care systems.

Centre for Communicable Disease Prevention and Control

The Centre is one of the institutions appointed by the Ministry of Health to conduct surveillance of communicable diseases and also as a competent authority to communicate with the European Centre for Disease Prevention and Control. The Centre's main tasks are to organize, coordinate and methodically guide the epidemiological surveillance of communicable diseases. In doing so, the work of the Center aims to reduce the morbidity of communicable diseases and to reduce disability and mortality from these diseases in Lithuania. The Centre for Communicable Disease Prevention and Control receives reports on 82 statutory notifiable diseases; cases (using standard case definitions), detected by physicians, and outbreaks of foodborne and waterborne diseases go to the State Food and Veterinary Service for investigation. The outbreak investigation scheme introduced by order of the Minister of Health relies on the county public health centres and their regional departments and also on the county and city food and veterinary services.

The Centre for Communicable Disease Prevention and Control focuses on data collection. A few years ago all laboratories under different public health institutions (including the Centre for Communicable Disease Prevention and Control) were joined into one National Public Health Care Laboratory, which is now subordinate to the State Public Health Service under the Ministry of Health. The State Food and Veterinary Service undertakes outbreak investigations only for foodborne and waterborne communicable diseases.

In case of communicable diseases, emergency physicians, epidemiologists and laboratories quickly notify (by phone, fax or e-mail) the regional public health centres, which in turn communicate it to the Centre for Communicable Disease Prevention and Control and the Health Emergency Situations Centre. The existing surveillance system of foodborne and waterborne diseases in Lithuania, however, has shortcomings that relate to the lack of links between human and veterinary databases, between epidemiological and laboratory data, and to the lack of regulations on determining phage and molecular typology. Currently, a project is being implemented to resolve the weaknesses and, in particular, to establish a national reference laboratory for microbiological diagnostics; the project will also develop and implement a strategy for determining the typology of clinically and epidemiologically significant microorganisms and will implement a computerized communicable disease reporting system.

While undertaking activities related to data collection, analysis and dissemination of environment and health indicators, the State Environmental Health Centre receives data and information on communicable diseases from the Centre for Communicable Disease Prevention and Control. The task of the State Environmental Health Centre is to combine information on all environment and health indicators and to assess the environment and

health linkages (possibly in the future). All these activities are defined in orders of the Minister of Health (such as the list of environment and health indicators and the list of institutions that submit data to the State Environmental Health Centre) and other relevant orders. Some laboratories are at the National Public Health Care Laboratory, and some reference laboratories for AIDS are at the National AIDS Centre or at the Infectious Diseases Hospital.

Health Emergency Situations Centre

The Health Emergency Situations Centre is part of the overall civil protection system led by the Ministry of the Interior and the State Commission on Emergency Situations. One of the main goals of civil protection in the field of health protection is to prepare the public sufficiently for possible extreme situations and – in emergency situations – to provide medical and psychological first aid. Also, services need to ensure preparedness for quick responses to such health threats as international terrorism or newly emerging communicable and noncommunicable diseases. Social support for inhabitants and restoration of minimal social living conditions are among other urgent tasks.

As a part of this overall approach, the Health Emergency Situations Centre is the institution responsible for organizing, coordinating and controlling the preparedness of health care institutions and their activities in case of emergency. The main tasks of the Centre are:

- health system and health service preparedness;
- national focal point functions of the International Health Regulations;
- preparation of legal regulations and recommendations for methods of preparedness and activities in emergency health care settings;
- administration and planning of the State Medical Reserve Division of the Centre;
- monitoring cases of poisoning and transferring information on them;
- state control of dangerous establishments (according to the Seveso II Directive); and
- coordination of ambulance dispatch centres.

The Centre is – as required by the national crisis law, which gives specific functions to each ministry – responsible for maintaining the adequate functioning of health institutions in an emergency through its Emergency Situations Prevention Division. For dangerous establishments and companies handling dangerous goods, the Centre sends out inspectors to about 20 establishments classified as dangerous – according to the quantity of chemicals, they are subsumed to level II⁶. There is, however, no validated risk assessment method applied, and the database on the respective establishments is located at the Fire and Rescue Department, which is under the Ministry of the Interior – where reorganization is underway currently.

On environmental disasters, the Centre has prepared and put on its web site (50) advice for the public in case of the heat waves (in Lithuanian, English and Russian). Information for

⁶ The exact definition of level II is contained in Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances (SEVESO Directive) amended by the Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003 and Directive 2003/105/EC of the European Parliament and of the Council of 16 December 2003.

the public on cold, flooding or other disasters is usually put on its web site, when appropriate.

The Centre collaborates with the Ministry of Environment, the Ministry of Foreign Affairs, the Ministry of the Interior, the Fire and Rescue Department, the State Food and Veterinary Service and other institutions, but there is no exchange of emergency plans between the individual ministries. Because the Centre focuses on the medical and health care services and their ability to function in times of crisis, there is no information available at the Ministry of Health on drinking-water supply or energy supply, as these are the responsibility of the local authorities.

State Food and Veterinary Service

The State Food and Veterinary Service was established in 2000, by bringing together the former State Veterinary Service, the State Hygiene Inspection and the State Quality Inspection in one government institution that performs official food and veterinary control – from field to fork.

The State Food and Veterinary Service is the agency that controls food products and drinking-water. It thereby implements legislation, regulations and hygiene requirements issued by the Ministry of Health to control food quality and food handling activities.

The Service's mission is to guarantee that high-quality food is placed on the market and to monitor food-handling processes. In addition, the Service oversees animal health and welfare and deals with consumer rights in relation to food and food-related services. Developments in the EU guide the Service's main activities. The Service, which has been granted an international accreditation certificate in accordance with the International Organization for Standardization, is one of the first official food safety and veterinary control bodies in the EU. Also, the German Accreditation Council has certified the State Food and Veterinary Service, thus ensuring independence, effectiveness, transparency and uniformity of the control exercised.

The national Law on Food regulates the State Food and Veterinary Service activities to enforce: the: Ministry of Agriculture's requirements for quality and composition of food, for raw materials, for growing plants for human consumption and for organic food; the Ministry of Health's regulations on food contaminants and additives, labelling, novel foods, genetically modified organisms and packaging materials; and the Ministry of Economy's general rules for labelling. The State Food and Veterinary Service consists of 11 departments, and the director of State Food and Veterinary Service is also Chief Veterinary Inspector of the State. The main specialized divisions of the State Food and Veterinary Service (and the areas for which they are responsible) are the:

- Animal Health and Welfare Division
- Veterinary and Public Health Division
- Food Division
- Centre for Contingencies and Contagious Diseases
- Strategic Planning and Quality Management Division.

The National Food and Veterinary Risk Assessment Institute, part of the State Food and Veterinary Service, provides research and laboratory capacity for risk assessment of food items and epidemiological analyses of diseases. The Food and Veterinary Audit Department monitors and evaluates the activities of the State Food and Veterinary Service, and geographical coverage of the service is maintained through State Food and Veterinary Service offices in 10 counties, 5 cities and 34 districts.

The State Food and Veterinary Service runs several information systems, such as food information, veterinary information and management, control of financial operations, state border control, register of food handling businesses that hold veterinary approval, document management, and a register of veterinary preparations. The food information system contains a register of food handling establishments (25 618 altogether), inspections and consumer complaints. Starting in 2009, the number of inspections will decrease, so that the food handling businesses will be distributed in three risk groups, and the number of inspections will be based on potential risk.

The framework of investigations of outbreaks of acute infectious intestinal disease or food poisoning is as follows. After an outbreak is detected (two or more cases with the same symptoms), public or private health care institutions notify the county public health centre, which in turn notifies the Centre for Communicable Disease Prevention and Control and the regional State Food and Veterinary Service. The Risk Assessment Institute and the National Centre for Research in Public Health perform laboratory tests to verify the foodborne origin and the causal agent. Notifications are also sent to the European Commission. The findings of the tests and the list of businesses that present a risk to the public are then publicized (51). The State Food and Veterinary Service is a key national authority, and it works together with the Ministry of Justice (through the State Consumer Rights Protection Agency), the Ministry of Health (through the State Public Health Service), and the Ministry of Economy (through the State Non-food Inspectorate) on the enforcement of consumer protection rights, under the Law on Consumer Protection.

The State Food and Veterinary Service is one of the competent authorities in Lithuania for the control of publicly supplied drinking-water, according to the Law on Drinking-water (see Annex 3, Section 6). The Service is in charge of the state control of drinking-water – that is, it checks and audits the monitoring performed by the drinking-water suppliers – and of the presentation of the annual statistical report on monitoring findings. The Service uses its EU accredited laboratories and a risk assessment-based control of drinking-water to control publicly supplied drinking-water. Territorial State Food and Veterinary Service inspectors check drinking-water safety and quality at the sites of drinking-water extraction, treatment and supply. In the case of unsafe water, they inform the local municipality, State Food and Veterinary Service headquarters, the institutions of the Ministry of Health and the Ministry of Environment, and consumers and consumer organizations. The Service uses the food information system for drinking-water control, and the suppliers of drinking-water and waterworks are registered in the food control information system.

Data on drinking-water quality move from the drinking-water suppliers to the territorial State Food and Veterinary Service and then to State Food and Veterinary Service headquarters. From there, they go to the Ministry of Health, the Ministry of Environment and the European Commission. Every three years, the State Food and Veterinary Service must submit to the European Commission a report on drinking-water quality and safety.

Currently, there is no interinstitutional information system for gathering, sharing and using the monitoring data.

Training environmental health professionals

Good environmental health requires competent public health practitioners aware of the challenges. The Vilnius University Medical Faculty has a long-standing tradition of training hygienists with a focus on environmental health issues. As a reflection of modern public health demands, the University's curricula were amended in 1998 to include public health specialties. Similarly, Public Health Master and PhD courses were established at Kaunas University of Medicine in 1994.

The length of studies for a bachelor degree in the public health programme is four years, and this includes 240 European Credit Transfer and Accumulation System (ECTS) credits. A holder of a Bachelor's Degree in Public Health should have a good insight into Lithuanian, EU and WHO policy priorities in the area of public health and modern public health issues. A graduate has to be able to: carry out public health safety regulations and controls; apply preventive measures for improving environmental health; analyse the prevalence of chronic noncommunicable and communicable diseases in the population; suggest preventive measures and assess their efficiency; provide public health services to various groups of residents; and implement health education and promotion programmes.

Candidates for a Master of Public Health degree take courses for two years, which includes 120 ECTS credits. A holder of the Master of Public Health degree should know Lithuanian and EU health policies, have teamwork, leadership and information technology skills, have the ability to perform scientific research, know about the formation and implementation of health policies, and be able to evaluate relationships between population health and their surrounding environment. Public health specialists are able to: demonstrate expertise in this area; carry out a public health safety evaluation of the risk factors that influence environment and health; monitor public health; and interpret environmental and health indicators. A graduate also has the ability to plan and carry out health promotion and health education activities that involve communities, nongovernmental organizations and other sectors.

Despite integration of some environmental dimensions into these courses, the professional and academic profiles on environment and health are not sufficiently developed. Also, the role of medical doctors in the environment and health process is not adequately defined; they are mainly seen as the interface between the health sciences and society, but have no specific environment and health responsibility or profile. Environmental health elements are therefore rather rare in the education schedule for medical students and are almost exclusively limited to the education of public health students.

The low profile of environmental health is largely reflected in a lack of interest by students, which shows that environmental concerns are only marginally expressed in medical universities and that environmental health is not considered a relevant field of work. Public health elements integrated into medical studies are therefore mostly elements of occupational medicine and social medicine, which covers, for example, teaching about health impact assessments and social health determinants. However, Kaunas University of

Medicine sees medical doctors becoming increasingly interested in public health issues after they leave the university and start work.

National specialized public health institutions (such as the State Environmental Health Centre and the Radiation Protection Centre) are the main bodies providing relevant training for public health professionals in municipal and national authorities.

According to national health policy documents, such as the National Health Concept adopted in 1991, one health priority is primary health care development. A system of family doctors exists in primary health care centres. Doctors are supposed to take part in prevention; in their routine work, however, they can hardly do that – except, for example, to ask patients about their smoking habits.

Environment and health research

Research on environmental health issues is restricted mainly to student master degree and PhD degree theses and relates mostly to occupational risks (such as heavy metals), environmental triggers of cancer, and social determinants. Nationally, there is no environmental health research programme, and projects undertaken by agencies and universities depend mostly on successful fund raising. These individual agencies, however, are not linked strategically, and the priority needs of Lithuania for participation in larger or international projects have not been discussed. Research activities therefore remain isolated fragments, and often results are not applied or implemented. Also, an inventory of national environment and health research has been made only within the NEHAP process and needs to be updated.

Finally, several technical and research-related activities – most of them international – have been implemented to address the socioeconomic determinants of health and health inequalities in Lithuania. Kaunas University of Medicine is a major centre for analysing the territorial, educational, marital status and some economic-related differences in public health and includes this information in an annual report. In Lithuania, as in many other countries, cardiovascular diseases together with mental and psychosocial health are important contributors to health inequalities and health-related behaviour. The University has been involved in key projects on health inequalities through EU public health action programmes, such as the Tackling Health Inequalities in Europe project and the European Urban Health Indicators System.

Other academic institutions and institutes with research activities are Vilnius university (focusing on cancer epidemiology and risk factors, ecological allergology, nutrition, quality of life of children and other population groups in relation with environmental factors), Siauliai University (focusing on aerobiology (pollen monitoring), public health risk factors investigations in educational institutions, public health inequalities and evaluation of relevant interventions), Klaipeda University (focusing on sustainable recreation and tourism development, safe environments for children and young people, health and quality of life of elderly) and the Institute of Hygiene (Ministry of Health) which is focusing on occupational health issues.

Other sectors

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 all sectors involved. Therefore, next to health actors, the following relevant ministries, agencies and institutions with direct or indirect impact on environmental health conditions in Lithuania were also covered by the EHPR (not an exhaustive list):

- the Ministry of Environment (Environmental Quality Department, Environmental Impact Assessment Division, Spatial Planning Department, Construction and Housing Department), the Environmental Protection Agency and regional environmental protection departments;
- the Ministry of Transport and Communications (in relation to road safety, noise, air pollution, and the means of transportation);
- the Ministry of Agriculture (State Plant Protection Service);
- the Ministry of Social Security and Labour and the State Labour Inspectorate (in relation to social protection and occupational health); and
- the Ministry of Education and Science.

The following section analyses the responsibilities of these actors for environment and health conditions and policy-making.

Environment

The *Ministry of Environment* forms and manages the country's state policy on environmental protection, forestry, utilization of natural resources, geology and hydrometeorology, territorial planning, construction, and provision of utilities and housing. It also coordinates policy implementation.

In formulating its goals, the Ministry of Environment assesses the data derived from environmental observations, takes into consideration the conclusions of scientific institutions and public opinion, and follows existing strategic and legal documents. The goals of the Ministry of Environment and its subordinate institutions are to:

- implement the principle of sustainable development;
- set preconditions for rational utilization, protection and restoration of natural resources;
- ensure provision of information about the state of the environment and its forecasts to the public;
- create conditions for the development of construction businesses and the provision of residential housing; and
- ensure proper environmental quality, taking into account the norms and standards of the EU.

Within the Ministry of Environment, the responsibility for health-relevant environmental conditions lies within the *Environmental Quality Department*, which has divisions on air,

water, climate change, waste and chemicals. The work of the Department follows the Environmental Protection Strategy established in 1996, but this strategy addresses mostly issues of sustainability and does not address environmental health issues as a core value.

The main tasks of the Department are to:

- develop management policies for ambient air-, water- and soil-quality and the use of these resources, and management policies for dangerous chemicals and waste;
- develop a management strategy for dangerous chemicals and coordinate intersectoral activities in this field;
- develop the National Strategic Plan for Waste Management and coordinate and control implementation of this plan;
- prepare draft legislation for air quality, dangerous chemicals and waste management and coordinate their implementation;
- develop norms for pollutant emissions (including radioactive materials), waste management requirements, and recording procedures for pollutant emissions and waste;
- develop procedures for issuing permits for pollutant emissions (including radioactive materials) and waste management;
- participate in developing and implementing policies on water resource safety and coordinate water quality management with neighbouring states; and
- transpose EU norms and international standards and treaties into Lithuanian regulations.

In the *Air Quality Division*, which is responsible for the management of all issues that relate to ambient air quality (with implementation being done through the regional environmental protection departments and the Environmental Protection Agency), all European Commission requirements and directives are transposed into national law. To fulfil the ambient air quality directive that affects the two major agglomerations (Vilnius and Kaunas), new measurement equipment has been purchased and measurement campaigns are carried out by the Environmental Protection Agency, covering all air quality parameters, including persistent organic pollutants. Based on the current exposure levels, it is expected that the limit values on particulate matter and nitrogen dioxide (NO₂) can be met, although PM₁₀ is considered a challenge due to the increase of traffic. For PM_{2.5}, national pollutant levels are below the compliance threshold. However, local programmes and action plans exist in case local levels are exceeded.

For traffic-related air pollution, the age of the car fleet – the average age is around 14 years – remains a major challenge. The problem has not yet been solved and may require the introduction of environmental taxation. The use of biofuels has been suggested to ease pollution problems. The current proportion of biofuels or other alternatives, however, is very low and is not considered an effective short-term solution.

In the industrial sector, energy consumption is being changed from liquid to gaseous fuels, to reduce sulfur dioxide (SO₂) emissions and to prepare for European Commission emission ceilings.

In the area of indoor air quality, the Ministry of Health is the responsible ministry.

Still another Ministry of Environment division, the *Climate Change Division*, is responsible for implementing a national strategy on climate change. This strategy was adopted by the government for a period that lasts until 2012 and is based on United Nations Framework Convention on Climate Change processes. Also, strategy measures can be mitigated to adapt to the needs of the health sector and specific vulnerable groups. A climate change law is currently being drafted to establish a national climate change management strategy beyond 2012; the new version of the law will clarify procedures, targets and responsible actors. According to EU discussions, Lithuania may be expected to produce 23% of national energy needs from renewable sources by 2020. Under the leadership of the Ministry of Environment, a national climate change committee has been established as an advisory body to the government.

Reducing greenhouse gases is an integral part of ameliorating climate change. Greenhouse gas reduction projects have been shown to be effective. Since 1990, the emission of greenhouse gases has been reduced by 53%, with the ultimate goal being 80%. A major challenge, from a climate change and energy perspective, is the future of the Ignalina Nuclear Power Plant which, as a part of the agreements with the EU, is to be closed down in 2009, even though it accounts for 70% of national energy production. The termination of this national energy source will have a large impact on the production of greenhouse gases, as hydrocarbon-based fuels will have to be used to compensate for the loss of energy production from this nuclear power plant.

For Lithuania, the long-term adverse effects of ongoing climate change will be connected mostly with rising sea levels, leading to flooding in the northern areas of the country and increased coastal erosion. A short-term effect will be an increase in heat waves (and other extreme climate events), for which no national heat wave action plan has been established, but for which an alert system (that covers, for example, ozone and particulate matter) for the public is available through the Environmental Protection Agency.

To a large extent, the *Division on Chemicals* works on implementing the European Community REACH Regulation, which deals with the registration, evaluation, authorization and restriction of chemical substances. Although this work is led by the Ministry of Environment, there are strong linkages to other ministries and, especially, the health sector. This collaboration has also been expressed through the establishment of an interinstitutional working group on REACH that includes actors with backgrounds in health, environment, economy and industry. Individual responsibilities have been clarified by a resolution of the government, but the technical work is done by industrial actors, as there are no special funds for this work within the Ministry of Environment. This leaves the Ministry of Environment to focus on administering the group – for example, setting up a national database on managing chemicals. A REACH help desk in the Environmental Protection Agency provides information services. Still, international collaboration with EU bodies is carried out by both the Ministry of Environment and the Ministry of Health. Further work performed by the Division on Chemicals includes the national follow-up to the Stockholm Convention on persistent organic pollutants.

Because there is no national list of priorities on chemical substances within Lithuania, the country's work priorities in this area are provided by international and EU conventions. For pesticides, the Division on Chemicals cooperates with the State Plant Protection

Service. Management of chemicals is carried out by the State Environmental Protection Inspectorate, which has five specialists that visit industrial and chemical plants to control and inspect the management of chemical substances. Also, a chemical division within the Environmental Protection Agency holds the national database on chemicals and their properties. This database will further evolve under REACH.

The Ministry of Environment has responsibility for *waste and contamination* (Division of Contaminated Territories and Waste). National action in this field is based on the 1998 Basel Convention and is enforced accordingly. A national law on waste management has delegated responsibilities to various actors. However, in general terms, the focus of the work is now on prevention of waste as a key strategy. Although some successes have been achieved in reducing the production of industrial waste and its illegal dumping, there are still challenges ahead – especially, to ensure that such waste is located only in official and adequate sites. Also, the unfortunate, but still popular, illegal dumping of waste in the countryside is being tackled, for example, by improved collection schemes.

The planning of waste dumping sites or incineration plants is within the mandate of local authorities. However, potential locations have to be indicated in regional plans already, and the regional environmental protection departments are involved in their development. Starting in 2009, the Ministry of Environment expects to be able to store all hazardous waste in specific, new sites that protect environmental media, such as soil and groundwater, which is not the case with many of the older and currently used sites. Groundwater protection, therefore, is a major environmental problem for many of the older sites, but according to the Ministry of Environment it has yet to turn into a health problem.

Currently, incineration is used for hospital waste only and not for other hazardous wastes or for household waste. But there are plans to build incinerators to destroy hazardous waste as well. This will help Lithuania rid itself of the additional waste and recyclable material it imports from other countries to process or dump in the country; this import also includes hazardous wastes.

In another area, the *Division on Water Quality* is responsible for protecting water sources and for wastewater management. The main task of this division is to implement international regulations, such as the EU Water Framework Directive, the Urban Waste Water Treatment Directive, and the Integrated Pollution Prevention and Control Directive.

According to the data available, the situation on wastewater management is improving due to new and more effective wastewater treatment plants. These plants were built with financial support from the EU and are required for all agglomerations with more than 100 000 inhabitants. However, there are still some agglomerations in which new plants are needed, and in smaller agglomerations and rural areas wastewater treatment is not yet highly developed. Nationally, the main method of treatment is mechanical and biological, but for treating nitrates and phosphates, chemical treatment is applied in some plants.

Core responsibility for environmental protection in Lithuania lies with the *Environmental Protection Agency*, which functions as the executive arm of the Ministry of Environment, but it also has additional policy mandates. Moreover, the infrastructure of eight regional environmental protection departments does not follow the administrative division of Lithuania's 10 counties, but is instead directly subordinated to the Ministry of Environment.

The Environmental Protection Agency also monitors the determinants of air and water quality and reports on the quality of these media to the European Environment Agency. Within the mandate of the EU Water Framework Directive, the Environmental Protection Agency observes closely the physicochemical parameters of and priority substances in water bodies, to ascertain their general status. In 2007, the monitoring network was revised, and the Agency is implementing the classification “high–good–moderate–poor–bad”. With respect to coastal marine water resources, the Environmental Protection Agency works together with the seven regional environmental protection departments, the Hydrometeorological Service, and the Institute of Botany and Ecology of Klaipėda University. With respect to river and lake water management, a draft report has been presented to the public and will be developed further by 2010 to include a cost–benefit analysis and an economic evaluation. For freshwater resources, the main parameters are water extraction, availability and water emissions, and the process of introducing the river basin approach to water management has started. Some analyses have already been completed, and currently the objectives are being set in a draft plan to implement them by 2009 or early 2010.

The Institute of Hygiene (under the Ministry of Health) coordinates the task of monitoring bathing water quality, while the municipalities are responsible for the actual monitoring. The public is informed at bathing sites of monitoring results through legally required panels that contain the information on bathing water quality. In certain cases, the information on bathing water quality is published in the media, but it is not a legal requirement. In case of inadequate water quality, however, there are no legal requirements to close beaches. Also, there is no special information hotline on bathing water quality, but the Institute of Hygiene and the State Public Health Service have dedicated phone lines where the public can ask for information.

Also, an early warning system has been set up with Belarus. It is based on agreed upon criteria for information exchange. In case of an emergency, information will be exchanged between institutions in Poland and Latvia and (unidirectionally) in Kaliningrad.

The air quality monitoring network comprises 13 automatic monitoring stations. Four of these stations are in Vilnius, three are in rural areas, one is for the European Monitoring and Evaluation Programme (which measures transboundary pollution), and one new station was introduced in Kaunas to monitor the main pollutants: PM₁₀, nitrogen oxides and ozone. In 2007, three automatic monitors for PM_{2.5} were introduced.

The EU Directive on Ambient Air Quality and Cleaner Air for Europe (referred to as the CAFE Directive) is a novel approach to health-relevant air quality management and will be transposed into Lithuanian regulations by 2010. Information on air quality monitoring is available at the Environmental Protection Agency web site (41) in almost real time (one hour later).

The EU Integrated Pollution Prevention and Control Directive for water and air has been introduced through PHARE (pre-accession to EU) projects. Also, capacity building for the regional environmental departments is underway, so that they can implement the European Pollutant Emission Register.

With support from the EU Structural Fund, the Environmental Protection Agency has built an integrated computerized information system for environmental management that has complete water emission, radiation, and air pollution data – all georeferenced. It has a web portal (41).

Another division of the Environmental Protection Agency, the *Environmental Impact Assessment Division*, operates under the legal framework on environmental impact assessments: the first law came out in 1995 and a newer law – fully comparable with the EU directives – came out in 2005. Currently 40 national-scale cases a year undergo the environmental impact assessment procedure, while about 600 cases a year are screened. The number of cases will increase with more intensive economic activities, as a result of EU funds and also as a result of screening results requiring more frequent environmental impact assessments due to raised public awareness. Several cases have gone to court, which demonstrates the effectiveness of environmental impact assessment legal instruments. The environmental impact assessment is strong at the municipal level, which has some veto rights to protect environmental goods. Public health centres in the region and cultural heritage organizations are also involved. The final environmental impact assessment decision is binding with the regional environmental protection departments (eight of them) and is based on reports from all stakeholders. The Ministry of Environment deals with the larger, more controversial environmental impact assessment issues, as well with transboundary issues.

The environmental impact assessment does not require licensing experts or consultants, and the scope of the assessment determines the experts that can be selected. If an impact assessment is indicated, it requires the involvement and coordination of all institutions and stakeholders. When an environmental impact assessment is carried out, a health impact assessment is an integral part of it. However, if an environmental impact assessment is considered to be not obligatory, a separate health impact assessment screening is carried out. If this screening indicates that a health impact assessment is obligatory, a specific health impact assessment report is prepared.

The *Spatial Planning Department*, under the Ministry of Environment, coordinates all territorial planning processes within the country. It is made up of four divisions that indicate the main work tasks, as follows:

- Territorial Planning Division: implements national and coordinates subnational planning processes;
- Urban Development and Architecture Division: provides guidance on methods for planning and construction;
- Norms and Regulations Division: maintains, develops and enforces planning laws, among other things; and
- Landscape Division: provides a natural and environmental perspective on protection and preservation.

The planning process is, based on the 2004 Law on Territorial Planning (see Annex 3, Section 6), a cross-sectional approach that brings together a number of aspects and actors and merges spatial, infrastructural and environmental planning in one process. While the planning process indicates functional priorities and excluded functions on the national scale only, there are a number of thematic plans on the regional scale that are more

specific, such as a nature protection plan, a water protection plan, and a transport and urban development plan. From an environmental perspective, the Ministry of Environment has a number of tools available to maintain *ecological equilibrium* on a national level, concerning mostly the protection of nature and the environment. From a health perspective, the main issues are found more often on the local scale and are therefore dealt with by the municipalities. A procedure for reviewing spatial planning documents involves regional public health centres and their divisions being asked to provide comments and suggestions, with municipal councils making the final decision.

For larger projects, the party planning it has to provide a *strategic environmental assessment*, as required by the EU. This assessment includes an evaluation of the environmental, social and health impacts of the project. Depending on the size of the project, the administrative responsibility may be either with the Ministry of Environment or the local or regional environmental actors, which can approve the project or reject it with comments. The implementation of a specific environmental impact assessment, however, is not the mandate of the Spatial Planning Department and is handled by the Environmental Impact Assessment Division of the Ministry of Environment. Only after all possible impacts are evaluated does the planning solution go for further consideration – that is, the party planning the project has to send it for comment to different institutions. For example, if the project involves health issues on a nationwide scale, the planning solution goes to the Ministry of Health; on the local scale, it goes to the public health centres.

To summarize, after the project plan undergoes a strategic environmental assessment, it becomes more concrete and can be considered while applying public participation. For example, all the programmes in the framework of Natura 2000 – a state service for protected areas and reserves under the Ministry of Environment – are subject to strategic environmental assessment. If the interests of Natura 2000 are not sufficiently considered, a project can be rejected, based on its environmental impact assessment, and changes can be requested. Big chemical plants, dumps and landfills all qualify for environmental impact assessments. Transport developments, however, are in the competency of the Ministry of Transport and Communications. It should be noted that the assessment process becomes more specific when it goes down the scale from the national level to the local level. In the case of local planning by municipalities, the decision-making on the siting of infrastructures usually lies with the local authority in charge, which has to include health protection as a major consideration.

The *Construction and Housing Department* is comprised of three divisions: the Construction Products and Process Standardization Division; the Design Standardization Division, and the Housing Division. The main tasks of the Department are to:

- coordinate, prepare, develop and renew national construction regulations, and make them compatible with the corresponding EU laws;
- organize and realize the certification of specialists and enterprises in the main construction technical fields of activity, and also of companies designing and building special buildings or employing building project expertise or building expertise;
- develop housing strategies and programmes to accommodate EU requirements;
- improve and coordinate the financial systems of housing stock management and construction by coordinating state support for accommodations, developing and

implementing housing rehabilitation and energy saving programmes, supporting household property management and providing a legal framework for housing stock maintenance;

- prepare appropriate legislation based on EU guidance, such as the EU Construction Products Directive;
- improve the quality of construction products and develop a building material assessment system;
- coordinate national real-estate repartition and the transfer of real estate to municipalities; and
- examine housing problems of inhabitants upon request.

The Construction Products and Process Standardization Division is responsible for transposing EU Construction Products Directive 89/106/EEC and EU Energy Performance of Buildings Directive 2002/92/EC into national law. With regard to construction products, the Ministry of Environment has put the essential requirements into the 1996 Law on Construction (last updated in 2007), requiring producers of building materials to apply specific testing procedures and quality criteria to their products. The Ministry of Environment is the lead government entity on this subject, from a regulatory perspective, and it owns the Certification Centre of Building Products, which was established in 1996 as an independent state enterprise by the Ministry of Construction and Urban Development (currently the Ministry of Environment)). In 2004, the Ministry of Environment authorized the Certification Centre to pursue certification of conformity of building products according to the EU Directive on Construction Products. The Certification Centre of Building Products itself performs functions as a certification and inspection body, but at the moment it does not have its own testing laboratories. Therefore, necessary tests are performed in independent laboratories. Additional state control functions in this field are carried out by the State Non-food Products Inspectorate, which is under the Ministry of Economy.

The work of the Certification Centre, however, is restricted mostly to a random review and check of documents submitted to it, and more detailed controls are exerted only when public complaints are received (which means after a particular product is in the marketplace). Even if the Ministry of Environment does have suspicions about specific products or producers, it cannot influence the random selection and testing procedures done by the State Non-food Products Inspectorate, and therefore there is no opportunity for public authorities to target and screen specific products before they are put on the market. Moreover, there is no mechanism for exchanging information between the Ministry of Environment and the Inspectorate on problem products to be removed from the market: in general, product bans would be handled by the Ministry of Economy, with no information being sent to the Construction Products and Process Standardization Division. Therefore, the overall mandate for the practical management of construction products is outside the Ministry of Environment.

One hazardous building material, asbestos, is fully banned as a construction product in Lithuania and is not produced in the country. The removal of asbestos is a task handled by the Environmental Quality Department of the Ministry of Environment. In 2008, the government adopted its Asbestos Removal Programme (2008–2013), which is coordinated by the Ministry of Environment.

Other than the CE label, there is no product labelling system in Lithuania that informs consumers or building companies about the environmental or health characteristics of building or domestic products.

In the area of energy performance, the Ministry of Environment has also transposed EU directives into national legislation, but the inspection and control of heating and air-conditioning devices is (again) with the Ministry of Economy. The energy certificates required directives be issued by energy inspectors who have to have three years of experience as a construction engineer and take special training and an exam offered by the State Enterprise Certification Centre on Construction Products.

The *Housing Division* has, based on the recently developed Lithuanian Housing Strategy (2004), three main objectives:

- improvement of housing quality
- energy efficiency
- adaption and accessibility of the housing stock for all groups in society.

The programme on social housing (representing about 3% of the total housing stock) is led by the Ministry of Environment, but is implemented by local authorities using state budget funds accessed through the Ministry of Finance. Eligible groups for social housing are determined by income level, housing situation, household size or by number of children, health status and disabilities. However, the Housing Division estimates that only half of all eligible households can be moved into social housing, which creates pressure on the housing market to increase the proportion of public and social housing offers. Households that cannot access social housing usually live under crowded conditions with other family members. To support these households and improve their living conditions, a new law was established to enable them to request state support for renting a dwelling outside the social housing market. For specific cases of poverty (such as households unable to pay their energy bill), the Ministry of Social Security and Labour is responsible for them and can subsidize, for example, heating and water expenses – in severe cases, up to 100% for three months. The responsibility of the Ministry of Social Security and Labour, however, is related mostly to financial and social support, while responsibility for the social housing stock and its management is with the Ministry of Environment.

One programme, on rehabilitation and energy modernization of multifamily buildings, deals with design features and overall building quality. It aims to enable adequate use and living conditions for all groups in Lithuanian society. The programme's major objective is to reduce energy consumption and carbon dioxide (CO₂) emissions, which is achieved by major rehabilitation work and is financially supported by the government. Next to specific bank loans for renovation work, up to 50% of the total renovation cost can be covered by the state when specific energy saving measures are applied. The Housing Division is responsible for the financial management and the overall project management, while the technical implementation has been delegated to the Housing and Urban Development Agency (see next paragraph). However, beyond their standard involvement, through standards for hygiene, health actors are not involved with potential health impacts of such large-scale renovation work.

The *Housing and Urban Development Agency* was established by the Ministry of Environment. The Agency seeks to ensure the proper implementation of programmes and measures defined in the 2004 Lithuanian Housing Strategy to: create and develop urban planning concepts, effective housing management and maintenance systems; promote effective use of energy; and enhance energy-efficient modernization of private and public buildings in Lithuania. It was established in 2001 as a Housing Agency and in May 2007 was given more functions to develop urban concepts and rehabilitation guidelines for residential quarters, thereby becoming the Housing and Urban Development Agency.

The Agency provides support to municipalities, to building administrations and maintenance companies, and to home owners. The challenge of saving energy and providing an adequate housing supply is among the Agency's key tasks. In line with these tasks, the Agency implements a national programme on rehabilitation and energy efficiency for multifamily buildings, largely supported by the government through the state budget – up to 50% of total rehabilitation costs, depending on type of measures. The goal of the programme is to rehabilitate 50% of all multifamily buildings built before 1993. Due to the programme's large success and high demand, the funds foreseen per year were not sufficient and, as a result, applying housing managers or building owners now have to wait for approval and funding. Programme funding covers a variety of insulation measures, but not ventilation systems that may be necessary for highly insulated buildings. However, although the Housing Agency is guided by building and energy benefits, rather than health benefits, residents in renovated buildings are being informed about the need to increase the ventilation of their dwelling after renovation work is done.

In addition to implementing the national energy efficiency programme, the Agency will soon also be coordinating the asbestos removal activities for old multifamily buildings with asbestos in the roofing material.

Transport

The *Ministry of Transport and Communications* is responsible for developing, coordinating and implementing State policies and programmes in the areas of transport, post and electronic communications. The Ministry is in charge of national road and railway networks and oversees state management of civil aviation and airport development.

The Ministry also takes part in the development of the traffic safety policy for all modes of transport; and it participates in the development of the policy on reducing the negative environmental impacts of transport areas. Finally, the Ministry is engaged in integrating EU standards and requirements into national regulations and strategies in the areas of the transport, post and electronic communications.

The issue of road safety is directly addressed by the Ministry of Transport and Communications and was initiated in 2002, with the establishment of the Traffic Safety Department. The Department formulates and implements road traffic safety policies, transport policies for dangerous goods, policies on reducing negative environmental impacts caused by transportation means and processes, and policies for preventing crises.

To secure traffic safety, the Ministry of Transport and Communications works with the Ministry of the Interior, the Ministry of Education and Science, the Ministry of Health,

municipalities, other state authorities, nongovernmental organizations and scientific institutions. In the field of traffic safety, the permanently operating *Road Safety Commission* monitors the implementation of the state policy. The Commission, approved by the government, consists of state administration and municipal administration bodies, as well as representatives of nongovernmental organizations. It is chaired by the Prime Minister; the Deputy Chairperson is the Minister of Transport and Communications; and the members are the Minister of the Interior, the Chairperson of the Lithuanian Association of Municipalities, the Undersecretary of State of the Ministry of Education and Science, the Undersecretary of State of the Ministry of Health, and the Undersecretary of State of the Ministry of Finance. Reflecting the high priority the government gives road safety, the Prime Minister chaired the Commission in 2008, and several ministries are represented by their ministers or high-level delegates.

The 2000 Law on Road Traffic Safety exerts great influence on traffic safety in Lithuania. The main objective of the Law is to coordinate the work of all institutions responsible for road traffic, as well as to regulate and enhance traffic safety on the roads. To implement the Law, the Government of Lithuania approved Resolution No. 759 on 8 July 2005, the State Programme for Safe Automobile Traffic 2005–2010, which is based on multisectoral collaboration between the Ministry of Transport and Communications, the Ministry of Education and Research, the Ministry of Health and the Ministry of the Interior. The Programme provides the foundations for long-term improvement of road safety and reduced road accident rates. It is a comprehensive programme with actions on several means of: changing behaviour; improving infrastructure, road and vehicle safety installations; strengthening the legal framework; providing educational measures that target different road traffic groups; carrying out promotional campaigns. It is expected that the investments in the coming years will bring significant health benefits.

The State Programme for Safe Automobile Traffic 2005–2010 ultimately aims at achieving the target set by the EU: to halve the number of road accident casualties by the year 2010. The national targets are to reduce the number of casualties by 25% and the number of people injured in road accidents by 10% by the year 2008 (and by 20% by 2010). Progress towards these objectives is clearly visible: for 2008, the Ministry of Transport and Communications expects a reduction of 37% in fatalities, 25% in injuries and 22% in road accidents, compared with the figures for 2005. The number of accidents that include children has almost been halved already.

To reach these reductions, the State Programme includes a number of educational activities (such as promoting the use of safety belts, helmets, reflectors and child seats, or drunk driving prevention campaigns) together with more strict regulations and controls (such as speed limits and speed control, and control of safety belt use). Although it is not possible to assess the effect of individual measures, the whole package is proving to be effective.

The State Programme also provides for improvements in driver training and examination, pedestrian and cyclist safety, traffic culture, education of traffic participants, and the work of traffic-control, medical-aid and rescue services. Additional measures include the establishment of a specific traffic police force to increase the often weak implementation and enforcement of legal acts, such as speed limits, the ban on drunk driving and the use of safety belts. In specific cases, police will, for example, be allowed to impound the car of drunk drivers and fine the driver significantly. To institute action down to the lowest level, each municipality is to set up a local road safety commission.

The national transport policy in the field of environmental safety is investigating the negative environmental impacts of transport and, especially, of air and noise emissions. During the period 1998–2004, in line with EU requirements, Lithuania carried out obligations to reduce the proportion of sulfur and lead in fuels – since 1 January 1998, only unleaded gasoline has been produced, imported and used. Also, the sulfur content of diesel fuel and gasoline meets the requirements of EU standards. In 1997, during the United Nations Regional Conference on Transport and Environment held in Vienna, Lithuania signed the declaration that recognizes the importance of transport for public life and for economic and social development; however, at the same time, the declaration stresses that it is the main source of air pollution. The undersigned countries of the declaration assumed obligations to cooperate, aiming to reduce the negative impact of transport on human health and the environment and to make efforts to develop a sustainable transport sector.

Various means and actions to reduce transport pollution have been foreseen in national programmes, strategies of relevant sectors of the economy, resolutions of the Government of Lithuania on measures to reduce air pollution caused by gas emissions from road vehicles, and the State Transport and Environmental Protection programme. The means being implemented relate to improving fuel production and quality, inducing the use of alternative and cleaner fuel, providing stricter regulation of pollution standards, reinforcing technical supervision of transport, optimizing urban traffic and improving the quality of roads – all these means meet the objectives of reducing the negative impact on the environment and human health.

Renewing the car fleet (average age about 14 years, 75% older than 11 years) is a specific measure with a high potential to reduce emissions, as the number of cars has been increasing dramatically: from 300 000 in 1990 to more than 2 million in 2008. Although a working group of various ministries was established and made suggestions to promote and support the purchase of new and less pollution-emitting cars, their suggestions have not been implemented and the only, rather weak incentive is the taxation of cars. As a result of this unsolved challenge, pollution hot spots exist in areas of intense road traffic, particularly in major towns and especially in Vilnius, while on national roads and highways the limit values set by the EU have not been obtained. Therefore, air pollution, is much more of a problem for local authorities than it is for the Ministry of Transport and Communications; exposure to noise, however, does play a role on the national roads.

The Road Administration (under the Ministry of Transport and Communications) is responsible for managing noise on state roads, except road sections falling under the jurisdiction of certain municipalities. Municipalities are responsible for managing noise on roads, regular streets and major roads within their boundaries. Under the implementation of Environmental Noise Directive 2002/49/EC (44) in 2007–2008, strategic noise maps for road traffic noise were prepared. The noise assessment was made by using the Nordic prediction model for road traffic noise (TemaNord 1996:525), adapted to Lithuanian circumstances.

In the first stage of implementing Environmental Noise Directive 2002/49/EC, strategic noise mapping was carried out for about 114 km of the major roads (road sections that carry more than six million vehicle trips a year) and for major roads and regular streets in the Vilnius and Kaunas agglomerations. As a result of the strategic noise mapping, five-year action plans were prepared. The noise prevention action plan, prepared by the Road Administration, is based on hot spots identified within areas with $L_{den} > 65$ dB(A) and the

number of residents in these areas. Noise abatement measures for national roads and highways are carried out together with an environmental impact assessment of the reconstruction of roads (Road Administration) and infrastructure development (municipalities and Ministry of Environment), through EU funds.

Agglomerations are responsible for strategic noise mapping and action planning within their administrative borders. For the first stage of implementing Environmental Noise Directive 2002/49/EC, the Vilnius and Kaunas agglomerations prepared strategic noise maps and action plans. The second stage of implementing the Directive will also include the Klaipėda, Šiauliai and Panevėžys agglomerations. Noise mapping was introduced in 2006 and faced challenges related to the lack of noise mapping input data, issues about definitions, and sharing responsibility for major transport infrastructures. The Noise Action Plan of Vilnius Agglomeration for 2009–2013 aims to reduce the population suffering from road traffic and railroad noise by 20%. The Action Plan comprises a set of noise prevention and reduction measures that involve the Road Administration, the Civil Aviation Administration, the State Railway Inspectorate, the Environmental Protection Agency and regional public health centres. Due to the diverse mandates of the actors, the responsibilities of the different stakeholders – in particular, the Road Administration – need to be clearly defined and their active involvement in planning of action programmes strengthened.

With regard to aircraft noise management, Vilnius International Airport is not a major airport, according to the requirements of Environmental Noise Directive 2002/49/EC, but it falls within administrative borders of the Vilnius agglomeration, so strategic noise maps were prepared and the Noise Action Plan of Vilnius Agglomeration for 2009–2013 consequently includes measures against aircraft noise. In the second stage of implementing Environmental Noise Directive 2002/49/EC, the civilian–military airport of the Šiauliai agglomeration will also be covered by strategic noise mapping and action planning.

For public transport, the Ministry of Transport and Communications provides only the legal context while the municipalities are in charge of implementing and running the public transport network. The Ministry of Transport and Communications, therefore, is not directly involved in promoting campaigns that aim to strengthen the use of public transport. However, the Ministry of Transport and Communications does – together with the Ministry of Environment – work towards replacing the current public transport fleet with new vehicles that use cleaner fuels. As in all larger municipalities, the public transport system is mainly road-based, and trains play only a minor role, so replacing the current fleet with new vehicles could result in significant improvements, but will take many years to accomplish. Rail transport has been considered as an alternative means of public transport, but the current network is very small and would require major investments before becoming a realistic alternative. Therefore, the extension of the railway network is considered for intercity connections and not as a solution for inner-city transportation. The train lines, however, are not the most environmentally friendly transportation mode, because most tracks are not electrified, thus requiring the use of trains powered by diesel engines.

Unsafe transportation of chemical and other hazardous waste has been recognized as one of the prime causes of soil and underground water pollution, which endangers the environment and human health. To avoid this pollution in the future, the best available technical means and economic instruments will need to be applied.

With regard to promoting physically active mobility – such as walking or biking – the Ministry of Transport and Communications is not the responsible actor, as it mostly administers the traffic infrastructure. Local authorities, however, are in charge of the local transportation systems, including bike lanes and pedestrian areas. In promoting physically active mobility, the Ministry of Transport and Communications is not directly involved in campaigns or collaborations with the municipalities.

The Ministry of Transport and Communications, however, participates in implementing crisis prevention and crisis management policies and maintains relations with relevant institutions of foreign countries. Transport and Communications Minister Order No. 3-350 of 28 May 2003 approved the Plan of Civil Safety Readiness, wherein the Ministry of Transport and Communications has the task of managing extreme situations. The Plan defines the general system needed to prepare, organize and coordinate the actions of administrative units of the Ministry of Transport and Communications, the security services, and the state enterprises under the Ministry of Transport and Communications and its agencies. The Plan also defines the role of entities with shareholder rights in arranging actions for organizing rescue, localizing extreme situations and mitigating their adverse effects.

Social security and labour

The Ministry of Social Security and Labour is responsible for working conditions and social protection. It aims to implement effective social security and labour policy, seeking to create opportunities for employment and to ensure social safety within society, family welfare and social cohesion. Together with subordinate institutions, municipalities, social partners, nongovernmental organizations and other concerned institutions, the Ministry of Social Security and Labour implements labour and social protection policy. The Commission on Safety and Health at Work (consisting of five government, five employer and five employee representatives) was established to coordinate the safety and health interests in the workplace of the state, workers and employers. A similar commission was established on both the district and local level, while professional unions further advocate employee rights.

The Ministry of Social Security and Labour runs three departments relevant to environmental health: the Labour Department (with divisions for, for example, the work environment and technical safety); the Social Insurance and Pensions Department; and the Financial Social Assistance Children and Youth Department. A major institution subordinate to the Ministry is the State Labour Inspectorate, which monitors and controls working conditions and the enforcement of regulations.

Key problems of occupational health in Lithuania are exposure to noise (leading to tinnitus and hearing loss, mostly as a result of the old machines used in the past) and back pain, which is an increasing so-called modern occupational health complaint. In addition, for a number of years about 200 serious and 100 fatal accidents have occurred yearly in the workplace, but the numbers have decreased since 2006. However, about half of all registered occupational diseases are assessed to be long-term problems, resulting from chronic exposure over a longer-term working period.

The State Labour Inspectorate is divided into ten territorial centres on the district level. Labour inspectors try to: stop violations of standards that regulate safety and health at work; handle labour relations; and prevent accidents at work and occupational diseases in enterprises, by controlling the compliance with these standards (6–7% of registered enterprises in the country are inspected yearly) and by providing consultations with employees, their representatives, trade unions, employers, services for safety and health at work, and committees in enterprises.

Companies with employees are required to have a safety and health at work passport, which needs to be submitted to the State Labour Inspectorate and becomes the basis for the inspection (and selection for inspection). The choice of which workplace to inspect is based on the passport and the type of business and number of people it employs. Unannounced inspections can be carried out in case of complaints or accidents. Inspectors can fine a company when it violates a regulation or does not observe risk evaluation procedures.

To ensure safety and health in the workplace, an employer designates one or more specialists in safety and health at work, establishes a safety and health service, or contracts a person or agency to provide such services. The employer can provide additional medical services, but needs to be certified to do so.

Education

A number of cross-institutional healthy lifestyle programmes have been approved by the Government of Lithuania and are to be introduced in the activities on education in healthy lifestyle promoted by the Ministry of Education. Some of these programmes cover: control of alcohol and tobacco, prevention and control of sexually transmitted diseases in 2006–2009, mental health in 1999–2010, prevention and control of cancer, maternal and child health, and strategies for food and nutrition. The role of health care in schools, established by the 2006 Law on Education (52), is to support students to take care of and strengthen their health, to monitor health in schools, and to provide teachers, students, and parents with methods to assist health promotion. With regard to health education, the Ministry of Education and Science has prepared general curricula and education standards, adopted a programme for preventing the use of alcohol, tobacco and other drugs, and approved recommendations on physical education. The scope of activities that promote health education covers lifestyle, nutrition, physical activity, sleep and bad habits. Several programmes, projects and campaigns have been organized, such as children's and young people's Olympic education in schools, the competition for pupils and teachers called the Healthiest of the Healthiest, and sport competitions in general education and in vocational training in schools. A new curriculum that covers environmental and transport safety begins this year. In need of improvement are education on such cross-cutting issues as coordination and involvement of the health sector (public health specialists) and environmental protection.

Agriculture

The *State Plant Protection Service* (under the Ministry of Agriculture) is the official plant protection organization. The Service makes the state plant health policy that protects

Lithuania from the introduction and spread of harmful organisms, diseases and weeds and that implements the measures prescribed to control plant diseases, pests and weeds. The Service authorizes plant protection products and also conducts their post-registration control. The State Plant Protection Service is responsible for drafting legislation on plant protection and quarantine, in compliance with EU directives and other international agreements in the field of plant health.

The Service consists of six divisions at its headquarters, 10 regional quarantine and plant protection posts (which carry out national surveys of crops and are involved in forecasting and warning system) and 8 border posts (which carry out border control of imported and exported plants and plant products).

Local governments and municipalities

The current administrative division was created in 1994 and modified in 2000. The administrative structure of Lithuania is based on 10 counties – Alytus, Kaunas, Klaipėda, Marijampolė, Panevėžys, Siauliai, Tauragė, Telšiai, Utena, and Vilnius – that are further subdivided into 60 municipalities.

Each municipality has to deal independently with a wide range of activities and institutions that have direct or indirect impacts on environment and health. These activities and institutions include: the local health care services and health programmes; social services; educational tasks and schools; the promotion of health and physical activity; crime prevention and police services; developments in urban planning, construction and infrastructure; social housing; protection of the environment, landscape and nature; public services (such as energy, water, waste disposal and public transport); and employment services.

Only for larger municipalities, such as Vilnius and Kaunas, are specific health-related action plans and projects being implemented. Many of action plans and projects relate to the implementation of EU directives, such as the CAFE Directive and the Environmental Noise Directive.

Each municipality usually has a health division and an environment division. Municipalities also run two major environment and health related programmes: the Municipality Public Health Support Special Programme and the Municipality Environmental Protection Support Special Programme. Each year municipalities accept applications for local programmes and projects to be financed from these programmes. Health-oriented (including environmental health) activities usually apply to the public health programme. Local projects often address injuries to children, environmental and/or health issues that relate to pregnant women and babies, and the quality of dug well water.

However, with the ongoing reform of health service provision, the Ministry of Health increases its presence in the municipalities by establishing a number of independent municipal public health bureaus (at present 29 of them), which are able to provide more local services than the ten regional public health centres (one located in each county).

To expand the capacity of municipalities to address local health challenges, there is a plan to staff each municipal public health bureau with at least four health experts. Mandatory

staff positions include a director and three public health specialists. These specialists usually cover the areas of: public health monitoring; public health promotion; and children's and young people's health care. The overall size of the staff is planned to correspond to the population size of the municipalities, which also have the opportunity to establish additional staff for important activities. The municipal public health bureaus will collaborate intensely with the municipalities and therefore will also enable local governments to be more active. The main challenges for the municipalities are, however, that they need to provide parts of the funding needed for the bureaus and that funds for the local work on prevention campaigns must be partially raised by the local bureaus. Still, municipalities can gain from the presence of the bureaus, as the bureau provides them with new and more precise data and health trends, which are helpful for redrafting local policies. As the municipal bureaus are an extension of the national health system structure, they can increase the local feedback to government health policy development.

A key challenge for municipalities is the tight network of primary health care centres and hospitals: these need to be funded at the local level and could be structured in a more effective way to save budget resources. However, due to the history of the country and the public's expectation to have a range of health services located at the local level, a consolidation of the health service facilities and services offered is difficult to realize.

Based on the experience of Kėdainiai Municipality, the public health bureaus sometimes face resistance from the local population: when the public health bureaus focus on environmental issues, the public wants to see their tax money spent on services that benefit them directly. Naturally, such visible and instant benefits are easier for municipalities to provide through extended health services and improvements in the infrastructure, while the individual benefit of health promotion and environmental projects may not be as apparent. To gain the support of the public for work on preventive measures, the bureaus will therefore have to promote and inform the public about the benefits of such projects and work to change the public's attitude about such measures.

Based on the initiative of the Fire and Rescue Department (under the Ministry of the Interior), a project called Safe Communities is about to be implemented in Lithuanian municipalities, starting in 2010. The project concept is based on integrating the participation of existing national campaigns and programmes related to health and safety, such as the National Injuries Prevention Programme, the Children Health Promotion Programme, the Programme on Swimming Training for Children in Secondary Schools and the National Safe Road Traffic Programme. The objectives of the Safe Communities project are to have municipalities instil the basic principles of safe lifestyles in the population, to improve community involvement in safe environment initiatives, and to educate the public about the culture of self-preservation. Similar projects are already being implemented in selected municipalities, and all municipalities are to fully implement the principles of Safe Communities by 2015.

Nongovernmental organizations

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

factors. One of the main goals of the Lithuanian health care policy is to strengthen the ability of public organizations to cooperate at all levels and to take part in a dialogue with different partners – government institutions and representatives from the private sector – in a way that contributes to the improvement of public health quality.

Many Lithuanian NGOs actively participate in the development of an open, just and civil society. Still, statistics show that in Lithuania only every tenth citizen is involved somehow in NGO activities, which is rather low in comparison to other EU countries.

According to State Centre of Registers' data, about a thousand NGOs are registered in Lithuania. The activities of nearly half of them are related to health and individual well-being. They represent important stakeholders in forming public opinion, presenting interests and ideas, providing expert opinion and assessing policy measures.

Very recently, the government approved an incentive programme for NGOs involved in health promotion activities that aim: to encourage public organizations to actively participate in forming and implementing health policies; to raise public awareness; and to disseminate information on healthy lifestyles, preventive programmes and other fields related to health promotion. In Lithuania, there are many NGOs across the country; however, only some of them focus on environment and health – for example, the Lithuanian Union of Hygienists and Epidemiologists, the Lithuanian Green Movement, the Lithuanian Public Health Association and the Young Naturalists Centre.

Nationally, the role of NGOs is seen mostly in raising awareness. To some extent, however, they may also be active in trying to affect the development and implementation of environment-and-health-related regulations.

One of the country's most active environmental NGOs is the *Lithuanian Green Movement* (53). National environmental clubs, groups and activists established it in 1988. The Lithuanian Green Movement coordinates the activities of and exchanges information among some 500 members all over Lithuania. As the first post-Soviet era environmental NGO in Lithuania, it played a significant role in the democratization process and in raising public awareness of and participation in environmental issues in Lithuania. Today, the thrust of its, main strategies is to influence public policy, increase public participation and raise public awareness about environment protection and sustainable development.

Its main interest is to protect green spaces and increase the integration of parks and green spaces in urban settings. Next to this, the NGO takes up a variety of environmental issues relevant to health; among them are decisions on environmental impact assessment procedures, policy developments on environmental issues, and local problems with, for example, industrial and farming activities, incineration, and energy production.

The NGO participated in the environment and health performance review as a representative of the other NGOs in Lithuania. Reflecting the Lithuanian Green Movement's work priorities, the discussion identified a few of the NGO's key requests to the Lithuanian government, which are presented in Box 1, as an example of the advocacy work carried out by NGOs. The Green Movement's priorities also reflect the public's concern about specific environmental health issues. Similar requests could be provided by other NGOs on other environment and health issues.

Box 1. Examples of requests by the NGO Green Movement in the field of environment and health

1. There is a potential conflict as, currently, enterprises are in charge of planning and funding the legally required environmental impact assessment projects. Therefore, an environmental impact assessment fund should be installed in the Ministry of Environment to independently pay for the implementation of environmental impact assessment projects. The funds for environmental impact assessments would then be paid by the enterprises to this Ministry fund, which would contract and coordinate the environmental impact assessment work.
2. Legal acts mention a “public good” to be protected. A clearer definition should be developed of what this public good actually means.
3. Legal acts should reintroduce the former requirement of a minimum *sanitary protection zone* for projects that had to undergo environmental impact assessment.
4. Sanitary protection zones for new objects of economic activities (enterprises) should take into account ongoing activities of surrounding (neighbouring) enterprises that have an influence on environmental quality – possibly leading to fewer, but larger protection zones when several activities are located close to each other.
5. The current lack of secondary legal acts to maintain (or require municipalities to establish) a minimum standard of green spaces in urban settings should be rectified.
6. Fiscal and financial measures should be implemented to decrease individual transport and promote or expand infrastructural capacity and the use of public and human-powered transport (in parallel with terminating projects for extending road networks).

The Lithuanian Union of Hygienists and Epidemiologists is an NGO with a long-standing tradition of uniting people working within the public health infrastructure, as well as outside it. The Union is organized in five divisions, according to geographical distribution of the members. It is a member of the International Federation on Environment and Health and the European Federation of Environmental Health. In 2012, it will host the World Congress on Environmental Health in Vilnius.

The main objectives of the organization are: to promote hygiene, epidemiology and public health education; to disseminate findings and health information; and to take actions that ensure the training of Lithuanian hygienists, epidemiologists and public health specialists and to improve their qualifications, skills and certification. Currently, the increased interest in environment and health issues is reflected in the increasing role played by the organization; the media constantly invites it to air its views, and it is constantly invited to participate in discussions of drafts of legal acts and to participate in international events.

The Lithuanian Union of Hygienists and Epidemiologists participates in the work of the Public Health Care Commission, which is under the Ministry of Health. The Chairman of the Union is a member of the Noise Prevention Council, which is accountable to the Government of Lithuania. The Union participated in the round-table discussions in the Ministry of Health on the harmful effects of smoking and on banning smoking in public places. It agreed with the proposals of the National Tobacco and Alcohol Control Coalition appeal to the Seimas to initiate the revision of the Law on Tobacco Control to reduce the harmful effects of smoking on human health. Together with the State Environmental Health Centre, it organized a national workshop on the preparation and publication of scientific articles.

In addition to these NGOs that focus to a large extent on the interface between environment and health, there are a number of NGOs that are more health than

environment oriented, but still provide contributions and campaigns in the environmental health context. Selected examples for such NGOs appear in the following three paragraphs.

The *Lithuanian Public Health Association* is an independent non-profit-making public organization. It unites legally registered public organizations that work to promote and strengthen health. It also trains public health specialists and supports the programmes that promote and strengthen health.

The *Young Naturalists Centre* offers out-of-school activities for children. It was founded in 1966. The Centre consists of various clubs that address different activities, such as fishing, collecting herbs, keeping horses, and ecology. The members of the Centre have initiated various projects, such as the Green Class for Studying Ecology, have organized holidays and field trips, and have developed various educational brochures.

The *National Tobacco and Alcohol Control Coalition* – established in 2006 – was created by expanding the scope of the former National Tobacco Control Coalition. Basically, it unites organizations and people interested in healthy lifestyles.

As indicated by the example of the Lithuanian Union of Hygienists and Epidemiologists, NGOs can sometimes be integrated into the official procedures of governmental work, such as the drafting process of regulations or as participants in committees and working groups. However, in most cases, NGOs tend to act outside official ministerial and institutional frameworks and tend to focus their work on providing information to the public, collecting data, and making requests and submitting comments to governmental actors.

V. Setting policy and the legal framework

Environment and health policy in Lithuania is implemented under the umbrella of several national acts and policy programmes and, in many areas, has adopted EU norms, standards and procedures. A list of laws, regulations and programmes related to environment and health is attached as Annex 3. A list of regulations and other policy measures with specific focus on children's health and the environment – as reported to the Intergovernmental Mid-term Review meeting, in Vienna in 2007, as a follow-up to the implementation of the Budapest Conference Declaration – is presented in Annex 4.

As most EU norms and standards have been ratified and transposed already, this section will address mostly selected national legislation, regulations and decrees associated with environmental health issues and concerns. Also, in almost all of the areas for which European Commission regulations and guidance exist, transposition of the European framework into national law has been performed.

Public health laws and policies

Conclusions

- Although environment and health are considered to be an integral part of public health in Lithuania, they currently have no clear official programme, despite public health law requirements.
- Health policies and strategies need to be more focused on preventing risks and environment-related health problems.
- A variety of adequate policy instruments have been put in place, and a number of policy measures to reduce environment-related risks and to create opportunities for healthy lives in Lithuania have been identified and improved. Currently, the main environmental health challenge is to create integrated policy action that is implemented across sectors.
- Due to the lack of reliable information, the health costs of environmental pollution are not integrated sufficiently into policy-making. Equally, the public health benefits of effective environmental interventions should guide decision-making at the local, regional and national levels.

Recommendations

- Re-initiation of a NEHAP with clear mandates and responsibilities for the actors involved will enable integrating health into an official intersectoral programme.
- The Ministry of Health and the government, in general, need to equip regions and municipalities, as well as the executing institutions and agencies involved, with adequate resources to implement, monitor and evaluate the appropriate regulations and orders. New policies and regulations should be evaluated after a specified period of time to assess their performance.
- Adequate and effective enforcement of environment-and-health-related policies and regulations needs to be considered a key component of future actions. This can be done through regular monitoring and a system of mandatory follow-up of their effects on health.

- Increased and more active collaboration and involvement of health officials with the environmental, construction, urban planning and transport planning sectors are needed to develop laws and regulations that enhance the preventive potential of healthy environments.
- All available measures need to be applied to reduce the problem of excessive alcohol consumption. These measures need to be closely associated with campaigns on public information about the adverse effects on society of alcohol misuse.
- Increased attention should be paid to urban and regional development projects – including those for transportation networks – and the integration of climate change aspects into all government policy-making.

In Lithuania, the main law on public health is the Law on Public Health Care – passed by the Seimas in 2002 and last amended in 2007 – and it is implemented through a number of by-laws. The Law on Public Health Care (see Annex 3, Section 6) has three strands of action in the field of public health: the Public Health Strategy, the National Environment and Health Programme and the Children’s Health Promotion Programme. Also, important strategic documents are the Lithuanian National Public Health Strategy 2006–2013 and its implementation plans for 2006–2008 and 2009–2013, which also define concrete measures on environmental health.

According to the Law on Public Health Care, activities on public health monitoring, children’s and young people’s public health care, and health promotion on the community level are mandated to the public health bureaus. The Lithuanian Health Information Centre and the State Environmental Health Centre support the bureaus, provide guidance and prepare the relevant administrative framework. In mid-2008, the government adopted the National Public Health Monitoring Programme for 2008–2009, together with an action plan. The Programme comprises a number of activities on environment and health and focuses on information preparation, analysis and reporting, and epidemiological research. The State Environmental Health Centre has been made responsible for these activities.

The *National Environment and Health Action Programme* was developed and adopted according to Article 20 of the Law on Public Health Care. Adopted by the government in 2003, the NEHAP for 2003–2006 set the key framework policy for protecting and promoting Lithuania’s population, by improving environmental health management and the state of public health and by ensuring a safe environmental quality. The objectives of the NEHAP are defined as follows:

- strengthen public health surveillance and environmental protection institutions and promote their cooperation;
- integrate health and environment aspects into the main economic development programmes and strategies;
- create awareness and understanding among politicians, specialists and the general population of environmental health problems and their solutions; and
- inform the public about the relationship between environment and health and promote their participation in decision-making.

Due to financial planning considerations, it was decided to develop NEHAP implementation plans each year and to adopt them by government decisions. NEHAP implementation plans were developed and adopted for the years 2003 and 2004. Implementation plans for the years 2005 and 2006 were developed, but were not adopted by the government. The NEHAP was discontinued after 2006, despite the legal requirements of the Law on Public Health Care.

In August 2008, the Government of Lithuania adopted the Decision on the Child Health Promotion Programme and its implementation plan for 2008–2012. This Programme includes environmental health aspects. For example, there are activities to carry out investigations of Lithuanian children's environment and health indicators, based on a WHO ENHIS project, and to develop a procedure for information collection for monitoring the implementation of the Children's Environment and Health Action Plan for Europe in Lithuania.

With regard to *food safety and consumer protection*, the main laws in Lithuania are the 2000 Law on Food (last amended 2005) and the 1994 Law on Consumer Protection (last amended 2007). Although water is considered under the Law on Food, there is also a separate Law on Drinking-water (adopted in 2001) to ensure the safety and quality of drinking-water. In addition to that, the Ministry of Health issued food safety and hygiene norms that set guidelines for food handling, among other things.

In the area of *traffic safety and injuries*, which is one of the top priorities in Lithuania, a number of regulations and policies have been instituted in recent years to respond to the challenge. The basic law is the Law on Road Traffic Safety (adopted in 2000). The main objective of this law is to coordinate the work of all institutions responsible for road traffic, as well as to regulate and enhance traffic safety on roads.

Established to implement the road traffic safety aspects of the National Injury Prevention Programme (2000–2010), the National Programme on Road Traffic Safety (2005–2010) aims to halve the number of accidents in the period 2005–2010. All national programme activities are handled and coordinated by the Road Safety Commission, which brings together high-level ministerial officials. As one of the main causes of road accidents and premature death is drunk driving, the government has in recent years installed a variety of acts on *alcohol use* (that include increased fines for drunk drivers, restrictions on selling alcohol and restrictions on having alcohol in a car), with the objective of reducing alcohol consumption in general, as well as reducing the frequency of drunk driving. As the ongoing alcohol programme will end in 2010, the new version currently being drafted will, in particular, address these problems in relation to road safety.

Lithuania adopted an advertising ban for *tobacco products* in 2000, followed by a complete smoking ban in public places in 2007. Before this (in 1996), the Seimas had already banned smoking from all educational and health care institutions through the Law on Tobacco Control. For smoking at home, no regulations or campaigns are in place. On 22 September 2003, Lithuania signed the WHO Framework Convention on Tobacco Control and ratified it on 16 December 2004.

Regarding *emergency situations*, the 1998 Law on Civil Protection (last amended in 2006) indicates the functions and responsibilities of every ministry in case of national-level

disasters and crises. National work is underway to adopt the International Health Regulations and other international guidance documents on pandemics.

In the area of *occupational health*, the 2003 Law on Safety and Health at Work (last amended in 2008) is the main policy document on safeguarding health in the workforce. In this area, there are several laws and legal acts, many of which have international or European Commission roots. In technical terms, the 2002 Labour Codex (last amended in 2008; see Annex 3, Section 6) is the main national legal document. It describes the responsibility of and mandate for the various actors involved in occupational health work. Control of work conditions is carried out through the Act on Labour Inspection – last updated in 2003 to reflect European Commission requirements.

Environmental laws and policies

Conclusions

- In recent years, in response to EU requirements, the legal status of environmental protection has been increasingly strengthened. Also, several EU directives relevant to environmental conditions (such as water, noise and chemicals) are being implemented and enforced.
- The monitoring of and reporting on environmental quality and conditions – especially the effective integration of this information and its use for policy-making in environmental health – are not yet fully developed.
- Current regulatory frameworks for climate change, energy supply and energy consumption in the country are in need of upgrading, to address related health aspects

Recommendations

- More EU funds are needed to improve national infrastructures and activities in the field of environmental protection. Also, the transposition of European Commission requirements into national law needs to continue effectively.
- Collaboration of the various actors in charge of environmental conditions needs to be improved, to provide more effective services. This collaboration needs to be developed further, both on the national level and between national actors (such as ministries and agencies). It also needs to be developed within specific subjects on the national, regional and local levels.
- One common and consistently applied environmental monitoring programme, supported by all stakeholders, should be developed. Equally, the so-called health argument should be more effectively used in environmental protection. The experiences of other countries in the cost–benefit analysis of interventions in environmental policies and economic instruments should be used and evaluated.
- Rising challenges, such as climate change and an uncertain energy supply, need to be tackled through adequate policies and programmes.

In 1992, Lithuania adopted the national *Law on Environmental Protection*, which was intended to protect the environment and to maintain environmental quality for its citizens. It is noteworthy that the first objective of the Law was “the right of the population of the

Republic of Lithuania to [a] healthy and safe environment”. The Law was last amended in 2008. Also, the 2005 Programme for Ensuring Ecological Safety, adopted by the Seimas, is dedicated to ensure a healthy and clean environment, a minimum negative impact of the environment on human health, and the prevention of damage to the environment and population.

In the area of *outdoor air quality* control, which is the full responsibility of the Ministry of Environment, the 1999 Law on Ambient Air Protection (last amended in 2009) is the main legislation. Also, a 2005 ministerial order on information exchange and public information on air pollution ensure the collaboration of the main actors (the Ministry of Environment, the Environmental Protection Agency, the Ministry of Health, regional public health institutions, environmental centres, and municipalities) on information exchange on levels of ambient air pollution. In parallel, the implementation of the WHO Charter on Transport, Environment and Health (54) is ensured by a 2005 ministerial order of the three ministers of health, environment, and transport and communications. The overall strategy being followed corresponds to the EU Environmental Quality Standards, which are part of Integrated Pollution Prevention and Control Directive 96/61/EC (replaced by Directive 2008/1/EC), adopted in 1996 and phased in from 1999 to 2007. Limit values for air pollution are taken from European Commission directives. However, in line with Agenda 21, the 1992 Rio Declaration on Environment and Development, Lithuania has obligations to implement international agreements and conventions on long-range air pollution and the reduction of sulfur, nitrogen oxide and volatile organic compound emissions in the transport sector.

For the specific case of *transport*, Lithuania is developing a transport strategy for 2013, which will include a requirement that all transport planning will have to incorporate the guiding principles of the Charter on Transport, Environment and Health. However, all larger transport infrastructure projects now need to undergo an environmental impact assessment due to the requirements of the national Law on Environmental Impact Assessment of Planned Activities (which transposes the respective European Commission directive). Also, the Charter on Transport, Environment and Health and its objectives are currently not included in Public Health Strategy 2006–2013.

For *climate change*, Lithuania has obligations to implement international agreements and conventions on the reduction of greenhouse gas emissions, based on Agenda 21, the 1992 Rio Declaration on Environment and Development. The national strategy is related to recommendations by the United Nations Framework Convention on Climate Change and has been adopted by the government until 2012. Currently, a climate change law is being drafted for the years after 2012, which will come together with a national climate change management strategy. The finalization of the national law will draw from the climate change package discussed at the EU, which is expected to cover the time frame up to 2020.

The main regulation used for *chemical substances and products* is the European Community REACH Regulation (EC 1907/2006) (43), which is being implemented, based on a resolution of the government giving mandates for action to specific actors. On a national scale, both the Ministry of Environment and the Ministry of Health were strongly involved in developing a law on chemical substances and preparations. The national Law on Construction, which transposes the main aspects of the European Council 1988 Construction Products Directive (89/106/EEC), provides requirements and guidelines for producers of construction materials on the health impact characteristics of such materials.

The 1998 Basel Convention is the basis for national action on *contamination and waste* and is being implemented through a national Law on Waste Management that provides the responsibility for such management to the relevant actors.

The basic foundation for regulation and control of *waste and wastewater* stems from European Commission directives on urban wastewater management and hazardous substances and the Water Framework Directive (2000/60/EC)

With regard to *environmental noise pollution*, Environmental Noise Directive 2002/49/EC (44) was transposed into the Law on Noise Management in 2004. To ensure the implementation of strategic noise mapping, action planning and application of preventive measures, government decisions on the adoption of the National Strategic Noise Mapping Programme and the National Noise Prevention Programme for 2007–2013 were put in place in 2006 and 2007, respectively.

With regard to *electromagnetic fields*, regulations such as Hygiene Regulation on Mobile Radio Connection Systems (see Annex 3, Section 6) were updated in 2005. The Hygiene Regulation on Electromagnetic Fields in Working and Residential Environments (see Annex 3, Section 6) was adopted by the Ministry of Health in 2000.

To assure that environmental conditions are protected and maintained, the new national law on *environmental impact assessment* was passed in 2005. It implemented European Commission requirements.

With regard to *housing and built environments*, Lithuania adopted a housing strategy in 2004 that focuses on quality, energy efficiency and housing provision to vulnerable population groups. In addition, the EU Energy Performance of Buildings Directive (2002/91/EC) was transposed to reduce the amount of energy used in housing stock. Still, the provision of affordable energy will – especially with the closing of the Ignalina Nuclear Power Plant in 2009 – become one of the major challenges for housing and health for a large part of the Lithuanian population.

The 1996 Law on Construction (last updated in 2007) lays down building and construction standards and technical requirements, such as construction technical regulations and different construction rules.

With regard to *spatial planning*, the responsibility and planning process for environmental and environmental health issues are documented in the 2004 Law on Territorial Planning, which also includes the implementation of a strategic environmental assessment carried out by the planning party, as required by the European Commission. In addition, the planning process can be split up into thematic plans, such as nature protection or water conservation plans.

Economics and funding

Conclusions

- The weak collaboration between environment and health actors and the Ministry of Economy and the Ministry of Finance prevent using the potential savings realized by effective environmental and health regulations as an adequate economic argument.
- Economic and taxing strategies and incentives are rarely used to promote or discourage certain healthy or unhealthy lifestyles and behavioural choices. Also, funding mechanisms do not tackle the consumption patterns of the population.
- Tax authorities (Ministry of Finance) require detailed health information and data – which is currently unavailable – to develop economic instruments that help monitor and forecast the impact of industrial activity on health.
- Lack of funds is one of Lithuania's greatest challenges in the area of environment and health.

Recommendations

- Research and knowledge transfer on the economic consequences of environmental risks and the cost–effectiveness of policy choices need to be increased, to support national policy-making and ensure long-term sustainability of the decisions made.
- Increased strategic and prospective collaboration with the ministries of the interior, finance and economy is recommended, to identify environment and health work areas in which – next to health benefits – financial benefits are expected that could justify the use of government funds.
- Strengthening the collaboration of environment and health sectors with clear mandates and responsibilities and a budget allocated from the onset of their work will ensure appropriate monitoring for future use of economic instruments targeted at industry and consumers.
- The use of EU funds for structural and other types of development should be based on a clear strategy that prioritizes projects that help to protect the natural and environmental resources of Lithuania and – to the extent possible – apply healthy and clean technologies.

Policies and strategies designed to address environment and health conditions should always be supported by the necessary resources or through a formal mechanism to ensure they can be raised. As in many other countries of the WHO European Region, lack of funds impedes progress in the environment and health sector in Lithuania.

Lack of funds is also reflected at the local level. Many public health programmes and activities and their financing mechanisms are the responsibility of the municipalities. Local authorities have been given more and more responsibility to implement national and international agreements and regulations. Nevertheless, the budget available has not been systematically raised, which increases the fiscal burden carried by local governments.

Support for preventive environment and health activities is required also at a broader public level. Positive developments, however, were observed in the use of European funds

for the improvement of environmental health conditions and necessary infrastructural capacities. EU funds have been used, for example, to improve the effectiveness of water treatment plants and the road infrastructure.

Economic instruments are an important tool for improving environmental management. Taxation and fines are increasingly used for preventive activities, as in the cases of decreasing drunk driving and the emission level of pollutants from cars. Also, incentives and state support have been used to promote the rehabilitation of the largely privatized housing stock and to improve the energy performance of multifamily buildings.

However, despite some successful examples, the economic instruments for environmental policies are not yet used to their fullest extent in Lithuania. Despite the existing taxation policy on fuel and the consumption and emission profiles of cars, there is no comprehensive policy related to transport emissions, the age of the car fleet and public transport.

The integration of environmentally related economic instruments into economic development policies in Lithuania has to be strengthened. The health costs of environmental pollution should be at the heart of policy-making and be used to strengthen the preventive approach to the environmental burden of disease. Also, estimates of health costs due to environmental hazards are not used in setting priorities and taking preventive measures at the government level.

VI. Tools for policy-making in environment and health

Intersectoral collaboration

Conclusions

- Currently, there is no official national programme or policy framework on environment and health designed to bring together activities from different sectors. Intersectoral collaboration, therefore, often takes place in applied and project-related terms only – at a less official level and with a reduced mandate.
- There is no common view of ownership of environmental health issues within the non-health sectors, such as environment, housing and transport. The sectors consider the environmental health issues to be mostly related to the provision of care and, therefore, exclusively the mandate of the Ministry of Health.
- The final responsibility and commitment for action usually lies with the Ministry of Health, although the regulations that affect environmental health-related conditions are beyond its jurisdiction. Other actors are generally committed on a regulatory level and through integration in cross-sectoral working groups. These actors do not necessarily have their priorities on collaboration with health actors, nor do they evaluate the situations against their health-relevant need for action.
- Although all sectors are open to collaboration and working intersectorally, most targets that relate to environmental health are kept within the health sector despite its limitations to influence environmental conditions. Targets within other ministries – often those reflecting obligatory tasks – are getting much more attention than intersectoral environmental health tasks, which are not considered to be the core business and for which no evaluation of performance indicators takes place, as with other tasks that are obligatory.
- Still, in some environmental health areas, good examples of collaboration can be found when well-functioning intersectoral committees have been set up to manage ongoing policy processes, such as road safety.
- Intersectoral cooperation appears to be more efficient at the county level, where practical implementation takes place and responsible actors are closer together.
- Cooperation with NGOs – or the involvement of the public in more general terms – is not taking place systematically in the environmental health sector.

Recommendations

- Re-initiation of the NEHAP and/or active implementation of the Children's Environment and Health Action Plan for Europe with clear mandates and responsibilities for the actors involved will stimulate the re-establishment and reinforcement of the national programme on environment and health cooperation.
- Collaboration among ministries needs to be strengthened by: (a) common recognition that health is a target and a deliverable for all ministries; (b) clear identification of contributions and responsibilities of the ministries and agencies involved (beyond the legal dimension); (c) evaluation of health-related performance against these criteria; and (d) involvement of high-level officials, in addition to technical collaboration.

- Contributions to environmental health-related collaborative projects should be established as an obligatory duty of each ministry and dealt with accordingly. Also, national priorities for action need to be further reflected by budget allocations for interministerial working groups and staff time, so that collaboration is not affected by inadequate budgets and made an additional burden on the ministries, to be funded through their normal budget.
- Collaboration between ministries – and all underlying documents, agreements and working groups – should focus on preventing disease and/or creating healthy environments, to optimize the benefits that each sector involved receives from such collaboration. Options for implementing this type of collaboration are, for example: the development of common projects with common funding and commonly shared objectives; the establishment of capacity-building courses on health in all policies and the impact of non-health sector policies on health outcomes; and the installation of high-level focal points on environmental health in each ministry to regularly discuss collaborative projects and needs.
- The responsibility, accountability and representation of the sectors in environment and health policy-making need to be better streamlined. Task-specific intersectoral working groups with clear mandates and representation of high-level ministry representatives are one suggested way to increase effective collaboration.
- Creating common objectives in environmental health (win–win situations), so as to strengthen the intersectoral collaboration and commitment of the non-health sector to health prevention through environmental conditions, requires the use of multidisciplinary approaches and innovative methods and the use of information and knowledge transfer. This longer-term process would start with making the best use of the information reported to the European Commission, in the framework of the different directives, which is currently far from being exploited sufficiently.
- NGOs should be systematically and regularly included in the process of developing policy, to consider the public's concerns.

Lithuania has a rather comprehensive set of legislation, regulations and policies to govern environmental health issues. Transposition of European Commission directives into national law has been almost completed, and a number of interministerial working groups have been established. Cooperation between different sectors for health protection – in particular, the responsibilities and commitments for action – is difficult. In most cases, the final responsibility for practical improvement is with the Ministry of Health, although it is not in charge of the regulations that affect environmental health-related conditions.

The main mechanism to enable intersectoral collaboration on the national level is the NEHAP. The Lithuanian NEHAP subsequently was based on a common working group that included members from the Ministry of Health, Ministry of Environment, Ministry of Transport and Communications, Ministry of Social Security and Labour and other ministries (more than 15 institutions, over 80 experts; with about 10 topic-specific sub-groups). The objectives of the NEHAP were to preserve the health of the population from the effects of hazardous environmental factors. The NEHAP followed set a key policy framework for intersectoral collaboration for the period 2003–2006. The preparation and implementation of the NEHAP for the years 2003 and 2004 was evaluated in 2008. The Ministry of Health appointed the State Public Health Service to conduct the evaluation, which in turn commissioned the Institute of Hygiene to perform this task. However,

evaluation results were not used for streamlining the process and, instead, the NEHAP implementation was discontinued.

Since 2009, there is also no longer an official Children's Environment and Health Action Plan for Europe process, and child environmental health issues have now been integrated into government programmes on Child Well-being and Children Health Promotion for the period 2008–2012, as well as into the work of the State Environmental Health Centre.

Intersectoral collaboration in Lithuania has challenges. To start with, all actors involved acknowledge that the agreements for collaboration are good, which seems especially true of high-level agreements between ministries. However, in most cases of collaboration, the final responsibility for reaching targets and making progress is with one ministry only, which in times of stretched budgets and inadequate staffing does not promote and facilitate the active support of the other actors involved. The establishment of a common commission with a clear mandate and responsibility – making specific issues a common responsibility and official task of various actors to report on – is only done in specific cases, such as in the cases of the Road Safety Commission, the Noise Prevention Council, and the Commission on Sustainable Development. In other cases, there is agreement on the relevance of and shared responsibility for specific issues, but no clear or short-term targets and deliverables have been set, and progress therefore remains thwarted.

An additional challenge is the lack of funds, as it is often unclear which funds are to be used in situations of intergovernmental collaboration. Depending on the specific case, funds could come from the EU (such as the European Cohesion Fund or the European Structural Fund, used for example to renew the public transport system), the government (such as national investment funds can be used for programmes and action on environmental quality issues or state sickness funds can be used for health promotion activities in schools) or ministry budgets.

Seen from a strategic perspective, the collaboration with the regional environmental protection departments under Ministry of Environment is mostly project-based and has not yet evolved in a more strategic or institutionalized collaboration. Mainly, the projects implemented jointly are projects for which the involvement of both actors is legally required, such as environmental impact assessments or the implementation of specific environmental health tasks on the regional scale (such as building approvals and air pollution management). Nevertheless, the Ministry of Health has established an annual health policy conference (led by Ministry of Health) with other ministries to discuss common priorities and interrelationships.

Large benefits can be expected from the increased collaboration of sectors. Success, however, can only be achieved if all actors have specific responsibilities, and also specific benefits. An example is the exchange of information by inspection services (such as occupational and environmental inspections), through which they notify each other in case of problems or violations that involve the other sector.

In summary, there are a number of more or less formalized collaborations and collaborative agreements in environmental health areas, but often progress is rather slow and not all objectives are met. Next to the various priorities given to the projects by the various ministries, the frequent lack of resources plays a major role, and in most cases intersectoral programmes have to be funded through the budgets of the actors involved. A

further reason for slow progress is that most ministries have a large work burden related to the implementation and management of obligatory and binding commitments and regulations (especially the implementation of European Commission directives), which leaves little room and motivation to address other (often less formally committing) objectives that may not be perceived as a priority for the ministry or institution.

Also, the idea of preventive action is not very familiar in Lithuania, and therefore there seems to be a tendency to define all health challenges as health care issues and thus assign them to the Ministry of Health. From a public health perspective, this is very problematic, as many health determinants are mainly shaped or affected by non-health actors (such as occupational conditions, housing conditions, traffic emissions, urban planning and educational curricula). For environmental health, in particular, the direct and constructive collaboration between the Ministry of Health and the Ministry of Environment (as well as the Ministry of Transport and Communications) is a major prerequisite.

On a practical level, collaborations mainly happen between the Ministry of Health, the Ministry of Environment, and the Ministry of Transport and Communications; however, the level of institutionalization or official relevance of collaboration in these projects is diverse. In many cases, collaboration does occur on a project level only and is often restricted to an exchange of information. Also, frequently, there is no common leadership or ownership of interdisciplinary issues.

The Ministry of Health and its subordinate institutions do collaborate closely with the Ministry of Environment and its agencies. Information exchange between environmental actors and health actors is ensured by a specific ministerial order. The implementation of the WHO Charter on Transport, Environment and Health is also based on a ministerial order. Moreover, collaboration between various ministries does occur on a high political level in the case of road safety, which has been recognized as one of the country's largest health problems and therefore has led to the establishment of the Road Safety Commission chaired by the Prime Minister. Furthermore, work on REACH is discussed at an interinstitutional working group that includes environmental and industrial actors.

On the issue of noise, the Ministry of Health is the lead entity but responsibilities are shared with the Ministry of Transport and Communications, the Ministry of the Interior, the Ministry of Environment, municipalities and others. Also, researchers and NGOs are involved through the work of the Noise Prevention Council. On the issue of construction materials, the Ministry of Health has been involved through the Law on Construction, and it supports the Ministry of Environment upon request.

Unfortunately, no direct collaboration seems to exist yet with the Ministry of Social Security and Labour, although a variety of health services is provided by occupational health experts, and maximized effectiveness could result from collaboration.

In addition to the collaborations mentioned above, the Ministry of Environment collaborates with the regional public health centres, either directly or through its regional environment centres; and it collaborates with larger local authorities (in Vilnius and/or Kaunas) on traffic issues. The Chemicals Division of the Ministry of Environment has several cooperative arrangements on managing chemicals, which include the Ministry of Health, the Ministry of Agriculture, and several subordinate environmental institutions,

such as the Environmental Protection Agency and the State Environmental Protection Inspectorate.

There are several examples of good practice in intersectoral programmes in Lithuania; these programmes involve relevant stakeholders and deal with specific risk factors or a specific environment and health issue of concern. In the field of public health, a number of strategic documents and programmes have been prepared – in particular, by the health sector – that imply involvement with other sectors. However, sustainable intersectoral cooperation based on a systematic approach to health integration that sets the frame for working across sectors at all levels (national <=> regional <=> local) needs considerable strengthening.

Sustainable intersectoral cooperation in a country should be seen from the perspective of healthy public policies. A healthy public policy is characterized by an explicit concern for health, by equity in all areas and by accountability for health impacts. The main aim of a healthy public policy is to create a supportive environment that enables people to lead healthy lives. Such a policy makes healthy choices possible or easier for citizens. In the pursuit of healthy public policies, government sectors concerned with environment, transport, agriculture, trade, education, industry, economy, labour and communications need to take into account health as an essential factor when formulating policies. These sectors should be accountable for the health consequences of their policies (55). The strong and weak points of intersectoral cooperation will be discussed below with respect to their key aspects.

With regard to collaboration with non-ministerial or official bodies, there is a lack of recognition of the capacities of NGOs and the potential benefits of collaborating with them. On one hand, increased participation of those groups, often representing the perceptions and priorities of a large part of the population, could provide a useful tool for integrating the voice of the public into policy-making. On the other hand, the networks of NGOs could be more effectively used to spread relevant information and advice on environment and health issues and priorities.

Within the health sector, the Public Health Department of the Ministry of Health is responsible for organizing the development and implementation of health-related intersectoral activities. It should be observed that the public health infrastructure of the public health bureaus creates excellent opportunities for enhanced collaboration on environment and health at the local level.

Many different sectors – for example, agriculture, building and construction, consumer protection, economy, education, energy, environment, industry and transport – are involved in health-related intersectoral activities, but the mechanisms of involvement are mostly informal. Furthermore, there is no budget allocated to ensure sustainable intersectoral collaboration and coordination of joint activities.

Creating sustainable organizational mechanisms – such as working groups and steering or advisory groups, both on a technical level and on a more strategic level – and involving high-level officials are goals that need to be pursued. An example of a successful intersectoral mechanism is the Road Safety Commission chaired by the President of Lithuania. Also, potential organizational mechanisms within the National Health Board should be utilized to strengthen the coordination of the intersectoral actions for health.

The role of the health sector

The health sector in Lithuania is involved in other sector policies, primarily through support and comments during *policy formulation* and the dissemination of information on environment and health. Also, a number of the strategies and action programmes that were being developed met several challenges before being put in place. As reported in the background documents for the environment and health performance review mission – prepared by the staff of the State Environmental Health Centre, based on experience with NEHAP 2003–2006 (NEHAP evaluation report) – the decomposition of the strategy into operational programmes of actions with clearly defined strands of activities, objectives and targets (see Box 2) needs to be strengthened, and country capacity needs to be developed. In addition, there are environmental health issues that have no clear institutional mandate – for example, the concern about the health risks of electromagnetic fields – and would need to be considered as a common challenge tackled through intersectoral collaboration.

Box 2. Lessons from the NEHAP

1. During the planning process, it is necessary to ensure formulation of goals, objectives and activities in a specific, measurable, practically implementable (feasible) manner in a defined period of time.
2. More attention should be paid to organizing and managing programme implementation. It is not enough to adopt the annual implementation plans and plan annual budgets and delegate coordination to someone. It is necessary to ensure that activities will be financed and implemented. Without a clear monitoring and evaluation system, without management groups or institutions having all necessary empowerment to make operational decisions, it is impossible to implement the Plan.
3. Vague formulation of programme activities – such as *prepare information and conclusions...*, *carry out monitoring of foodborne diseases...*, *participate in ensuring* – may guarantee a high level of implementation, but it is doubtful if these activities are modern, new and effective environmental health activities.
4. The Ministry of Health should not assume the burden of practical implementation of the majority of NEHAP activities by itself. It should rather actively participate in environmental health management – for example, developing regulations, standards, methodical guidance and surveillance.
5. According to information collected, and reports and comments from agencies executing the NEHAP, there is an impression that, in 2003–2004, balanced and targeted action between all social partners in making the environment healthier was not achieved, in comparison to the situation and activities that were carried out before the NEHAP was adopted.
6. Some potential programme partners felt they were not sufficiently involved and others were happy to say that funding was not provided. However, the argument about lack of funding shows that there was no willingness (or lack of know-how) to use the programme adopted by the government for targeted reorientation of their activities.

Source: *EH preliminary assessment in Lithuania as a background for the EHPR review mission. Part 2. National EH information and monitoring system* (unpublished).

Operationalizing a strategy is a complex task and has to be done through a process that involves the stakeholders agreeing on tasks and roles, based on the mandates and responsibilities. Also, possibilities should be sought in creating win–win situations. Strategic scenarios of policy action should be formed, based on the recognition of common health targets for all sectors, together with a clear definition of contributions and responsibilities of the ministries and agencies involved beyond their legally obligatory

requirements. In addition, *transverse* actions, such as establishing environment and health indicators and establishing an environment and health information network, should be sought.

Potential resumption of activities within the NEHAP under the Law on Public Health Care would reinforce the policy framework for intersectoral collaboration, enabling the creation of dedicated financial mechanisms. This will avoid collaboration becoming an additional burden on the budgets of different administrative bodies. Also, the National Health Board could provide an organizational framework for setting collaborative structures.

In multisectoral action on health, the health sector should play a leading role in establishing *accountability mechanisms* for adverse health effects of policies and regulations beyond its jurisdiction and in *monitoring* and *evaluating* these effects.

Policy accountability for population health is a relatively young area of environment and health policy: most policies and regulations are held accountable and their potential effects measured based on the state of the environment, without their potential effects on health being analysed or assessed. For example, the national report on sustainable development is generally limited to a few very basic health indicators (56). In most cases this leads to only the health sector being held accountable for the population health, and this is partly associated with too many responsibilities for this sector, which represent a challenge to the reorganized health system and, in particular, the public health infrastructure.

Environment and health monitoring and information

Conclusions

- Lithuania has extensive environmental monitoring, mostly in the framework of reporting obligations, but the data collected are not reviewed for health relevance and, subsequently, are not used to regularly assess the environmental health status within the country.
- Lithuania has made progress in introducing a set of environment and health indicators to monitor the progress and potential adverse health effects of environmental policy actions and had been actively involved in ENHIS. However there is no integrated environment and health information system in place and there is no regulatory framework for its development and implementation for policy evaluation.
- Current surveillance of health injuries and of foodborne and waterborne diseases needs to be upgraded for use in environment and health monitoring and indicator-based assessments in Lithuania. Surveillance of priority environmental health problems – for example, exposure to environmental tobacco smoke, mould and damp, and asthma and allergies – should be further developed, with a specific focus on including indoor and built-environment issues not yet considered.
- The information provided to the public through different communication channels and the targeting of different population groups should be strengthened, to raise public interest in adverse environment and health effects and to ensure their involvement in public initiatives for health promotion.

Recommendations

- Monitoring of a national list of priority public health and environment conditions should be put in place with the collaboration and involvement of all stakeholders and data-providing agencies. Also adequate regulatory mechanisms should be set – for example, in the context of the Law on Public Health Care – to ensure development and implementation of an environment and health information system that follows the ENHIS approach as an integral part of monitoring public health.
- Due to the lack of a central registry for injuries in Lithuania, injury surveillance should be further developed to better define the burden, causes and effects of injuries, for advocacy, monitoring and evaluation. A web site and database on injuries should be created. Also, surveillance of asthma and allergies and indoor air quality has to be further developed within the country, using the EU Core Health Interview Survey approach as a model.
- Efforts should be made for better partnerships between institutions related to environment and health and journalists and other mass-media employees. Knowledge and understanding on environmental health among general journalists should be improved, so that they can communicate reliably to the general population.

Lithuania has extensive environmental monitoring and accessible environment and health information. The country effectively complies with all reporting obligations and is joining international activities on information gathering. However, the information has not been used effectively for assessing potential adverse health effects. Also, there is insufficient exchange of information, and data flow and accessibility need to be improved.

While EU legislation requires advanced monitoring and reporting on environmental hazards, there is no national requirement to monitor and report on environment and health indicators and there is no regulation on its establishment. There is, however, a Minister of Health order – adopted in 2002 and renewed in 2006 – on environment and health indicators and procedures for collecting them. Work on environment and health indicators is part of the National Public Health Monitoring Programme for 2008-2009, adopted by the Government of Lithuania (see Annex 3, Section 6) and will be part of municipal public health monitoring programmes, as foreseen in the 2002 Law on Public Health Monitoring (amended in 2007).

Despite the monitoring and reporting activities in Lithuania, mainly within existing legislation (see Annexes 4 and 5), regulations are still lacking on an *integrated information system for monitoring and evaluation of potential adverse health effects*. For example, the NEHAP was evaluated mostly for administrative aspects, investment project implementation, and the use of dedicated funding. Some lessons learned from the evaluation appear in Box 3.

Box 3. Lessons from the NEHAP evaluation

1. In 2003, NEHAP implementation activities were included in the annual plans of the five main institutions responsible for implementation. Three of them had specific implementation plans for each activity. In 2004, three main institutions addressed this issue and two of them had specific implementation plans developed.
2. Implementation of the activities for 2003 was discussed by three executing institutions, and for 2004 it was just one institution.
3. Annual reports for NEHAP implementation for the year 2003 were prepared by three institutions, and for 2004 it was two institutions.
4. There were no data that implementation of the whole programme was analysed and discussed and that there was any cooperation between the main executing institutions, other implementation partners and the public. The whole approach was evaluated as being passive. Lack of financing was the reason given by executing institutions to justify their passivity.
5. Only the Ministry of Health organized planned implementation of activities, appointed responsible executing bodies, approved annual working plans, discussed the course of implementation and demanded reporting from executing bodies.
6. In 2003, 11 municipalities contributed (planned activities and financed them) to implementing the NEHAP; in 2004, 6 municipalities contributed. Regional administrations did not participate in implementing the NEHAP.
7. In two years, the main executing institutions fulfilled 96 of 113 (85%) activities planned for 2003–2004. Of these activities, 83 (73.5%) were fulfilled in due time, according to schedule or were delayed by not more than two months; 13 activities (11.5%) were delayed for 2–12 months.
8. Executing bodies under the Ministry of Health had fulfilled 71 of 81 (87.7%) activities planned for 2003–2004: out of them 60 (74.1%) were fulfilled in due time and 11 (13.6%) were delayed for 2–12 months.
9. Incautious planning of activities – including formulation of objectives, selection of activities, and neglect of possibilities to implement activities and assess expression of expected results – contributed to results not being achieved in due time
10. According to the data available, €868 600 (7.5% of planned financing needs) were spent for implementing NEHAP activities in 2003–2004. Institutions that were able to identify targeted finances were the Ministry of Health, the Ministry of National Defence, the Ministry of the Interior (Fire Prevention Department) and the Ministry of Transport and Communications (Lithuanian Directorate of Automobile Roads).
11. From collected and available data, it is unclear whether the mechanism for implementing the programme, which involves more than half the country's ministries, was created, including a mechanism for financing it.

Source: EH preliminary assessment in Lithuania as a background for the EHPR mission. Part 2. National EH information and monitoring system (unpublished).

Dedicated resource investment is needed to establish a policy-oriented monitoring and reporting system that uses indicators and other information tools and that enables cross-country comparisons to support environment and health decision-making. An environment and health network that fosters information exchange will require all data holders to provide input to information preparation and reporting, to establish and maintain the system operational. The government decision on the National Public Health Monitoring Programme sets the policy framework for initiating the process. Experience exists and country capacity can be built with the support of the WHO Regional Office for Europe. With respect to system outcomes and products, examples of high-level reporting on environmental public health appear in the annual reports of the National Health Board – an example of good practice in health reporting in Lithuania (57).

Environmental impact assessment and health impact assessment

Conclusions

- Environmental impact assessment projects are increasingly required and also reflect the awareness of the public and authorities of environmental impacts.
- There is concern about a conflict of interest in the funding mechanism for environmental impact assessments, as the interested party (the party planning to build something) is the one to contract the consultant that carries out the assessment.
- Offers to implement an environmental impact assessment can come from a range of professionals, without clear advice on what background and/or experience is necessary as a minimum standard.
- A health impact assessment can be done as an independent assessment if an environmental impact assessment is not considered necessary. There are some standard criteria for the selection of health impact assessment consultants.

Recommendations

- Clear requirements for the necessary expertise and qualification level of environmental impact assessment consultants have to be set; and a national roster of experts should be developed to help identify adequate and/or interested experts for conducting such assessments.
- Funding mechanisms of environmental impact assessment projects have to be reconsidered to reduce potential conflicts of interest for the assessment consultant.
- Health impact assessments in all sectors and all major policy initiatives should be encouraged and streamlined, and regulatory mechanisms should be developed for its routine use as a powerful health policy accountability tool.
- Analysis and assessment of real-life health effects of environmental policy and regulation should become a part of the environmental public health professional practice in Lithuania.

An environmental impact assessment is carried out by the Ministry of Environment, which has set up a division for the implementation of such assessments. The legal basis for an environmental impact assessment has been introduced in Lithuania through the 2005 Law on Environmental Impact Assessment of Planned Economic Activities (58), which transposed European Commission requirements into national law. The environmental impact assessment procedures relate to the analysis and assessment of direct and indirect influences of infrastructural projects on the environment, as well as on human health and living conditions.

The technical part of the environmental impact assessment is carried out by experts outside the Ministry of Environment, and the final and legally binding decisions are made by the regional environment centres. For the larger projects, the Ministry of Environment is the party directly responsible.

Per year, 600–700 cases are suggested and screened, for an environmental impact assessment, with only about 40 assessments being implemented per year. Along with the

increase in public awareness, the number of suggested environmental impact assessments has also increased in recent years. This has also led to some problems in finding adequate external experts and consultants to carry out the assessment, even though it can be carried out by any expert and does not have to be contracted out to consultants with specific expertise or license.

A health impact assessment is considered an integral part of the environmental impact assessment, and the consultation and involvement of public health agencies within the environmental impact assessment are part of the established mechanism. However, public health authorities (regional public health centres and, in some cases, the State Public Health Service) have the right to require a screening. If the screening recommendation favours the need for a health impact assessment, an independent health impact assessment is carried out irrespective of the decision regarding the necessity of an environmental impact assessment. The number of annual health impact assessments investigated by the regional public health centres in 2007 was 146, and in 2008 it was 119. It is noteworthy that an independent health impact assessment is required to have the technical assessment work done only by licensed contractors that have a minimum level of expertise and/or educational background. Health actors thereby have a powerful tool to guarantee that projects and infrastructural developments do not lead to health impacts. More detailed information about environmental impact assessments in Lithuania can be found in Annex 5.

There is a need to further develop health impact assessments in Lithuania so that they are in line with the health in all policies movement, thus creating sustainable mechanisms to make the policies of the environment sector and other sectors accountable for their health consequences. Accountability implies the use of innovative methods, such as analysis and assessment of health impacts, as well as targeted studies of different risk factors in particular locations. Also, accountability offers important opportunities to create win-win situations, which are of particular importance in ensuring coordinated cross-sectoral work, so that it benefits both people's health and the environment.

The State Environmental Health Centre has implemented the APSIS (Information System for Environmental Impact on Health) project. It was presented to the Ministry of Health as an investment project, to seek funding. There are plans to seek funding for it from the EU Structural Fund. The main objective of the project is to create links between existing databases on environment and health and to make the information available to decision-makers, the public and businesses. Implementation of EU INSPIRE Directive 2007/2/EC (59) and e-health developments will help support the APSIS project.

Capacity building, research and development of public health professionals

Conclusions

- Environment and health linkages are almost exclusively covered by public health courses and are irrelevant in medical studies.
- Continued training for public health professionals takes place to some extent, but does not reach medical doctors.

- Research on environment and health is clearly inadequate. Environmental health research and education is not strongly developed and is not considered a relevant task for many non-health actors.

Recommendations

- Given the increasing importance of primary health care, family doctors and nurses should be trained in environment and health linkages to support preventive actions. Curricula for medical studies – and, in particular, the design and content of the continued training offered – need to be reconsidered. Collaboration with environmental studies could be an additional option to explore.
- Education in environment and health issues, and the promotion of research and development in environment and health, should be made a mandatory part of the training of health professionals.
- Continued education of medical experts on the linkages between environment and health is necessary in both the national and Baltic context.
- A commonly supported national environmental health research programme, reflecting the interests of health and non-health sectors, should be established.
- Participation of Lithuanian universities and agencies in international and EU projects should be supported and used in a more strategic way to address the main priorities.

Environment and health in the medical curriculum is mainly covered through a fixed number of hours (ECTS) on environment and health (12 ECTS) and on public health (6 ECTS). Hygiene, which can be considered the medical area closest to environment and health, is being taught as a basic element of hygiene curricula. Child health makes up for 6–8 ECTS during medical studies. Also, it is not possible to specialize in environmental health or environmental medicine in the later part of the studies, which is a possible choice in many other countries. In total, environmental health concerns do not play a major role in medical studies, and public health aspects are mostly dealt with in the area of occupational health and, partly, in the field of social medicine. Although medical universities do see the need for increased coverage of environmental health determinants, medical students show little interest in this field. However, the experience of Kaunas University of Medicine shows that after doctors leave their university and start practising, their interest in public health approaches and prevention of illness does increase, and many come back to the University to acquire skills in public health.

Looking at the public health courses offered in Lithuania, a number of universities provide various public health-related courses (Kaunas University of Medicine and Vilnius University offer a Master of Public Health and a PhD course on public health; Klaipėda University and Siauliai University offer Master of Public Health courses). A course in environmental health is mandatory for a Master of Public Health degree. Many of these studies are taken up by medical doctors to compensate for their lack of knowledge. Environmental health aspects, as well as research activities, are integrated into public health courses and covered mostly through master's and PhD theses, but are not fully developed as an independent profile within public health sciences.

Research on environmental health issues is restricted mainly to student master degree and PhD theses and relates mostly to occupational risks (such as heavy metals), environmental

triggers of cancer, and social determinants. Nationally, there is no environmental health research programme and no consensus on national priorities, and projects undertaken by agencies and universities depend mostly on successful fund raising. These individual agencies, however, are not linked strategically, and the priority needs of Lithuania for participation in larger or international projects have not been discussed. Research activities therefore remain isolated fragments, and often results are not applied or implemented. As there is a lack of a consistent research strategy, results of such projects are not used or applied nationally and, in many cases, may not even address national needs. Also, an inventory of national environment and health research has been made only within the NEHAP process and needs to be updated.

Nationally, research and laboratory capacities – for example, for human biomonitoring – need to be improved and used with consistent strategies, to provide nationally representative results on, for example, exposure to lead or the concentrations of persistent organic pollutants, for which few data are available currently. Some good examples show that it can be done: research on breastfeeding is underway; Lithuania participates (since 1993) in the Health Behaviour in School-aged Children surveys; and a monitoring system for child growth and development is being set up. Still, the use of the data and results of these projects for national policy-making needs to be improved. More research using routinely collected data has to be sought, and academia has to be actively involved in the network and in data exchange.

The development of a national environment and health research agenda and a more strategic involvement of national research and academic institutions in EU research and environmental health projects (possibly coordinated by the government, to reflect national priorities and gain from international collaboration in areas where national capacities are less developed) would provide further support to national work towards healthier environments.

The National Health Board can also play the role of catalyst, by targeting research and reinforcing its ability to effectively support policy-making in environmental public health in Lithuania.

References

1. *Environment and health: the European Charter and commentary*. Copenhagen, WHO Regional Office for Europe, 1990 (WHO Regional Publications, European Series, No. 35; <http://www.euro.who.int/document/WA3095.pdf>, accessed 13 August 2009).
2. *The Tallinn Charter: health systems for health and wealth*. Copenhagen, WHO Regional Office for Europe, 2008 (<http://www.euro.who.int/document/E91438.pdf>, accessed 13 August 2009).
3. Prüss Üstün A, Corvalán C. *Preventing disease through healthy environments: towards an estimate of the environmental burden of disease*. Geneva, World Health Organization, 2006 (http://whqlibdoc.who.int/publications/2006/9241593822_eng.pdf, accessed 13 August 2009).
4. *Country profiles of the environmental burden of disease*. Copenhagen, WHO Regional Office for Europe, 2007 (http://www.euro.who.int/envhealth/data/20070831_4, accessed 6 March 2009).
5. *Children's Environment and Health Action Plan for Europe*. Copenhagen, WHO Regional Office for Europe, 2004 (EUR/04/5046267/7; <http://www.euro.who.int/document/e83338.pdf>, accessed 13 August 2009).
6. *Declaration of the Fourth Ministerial Conference on Environment and Health*. Copenhagen, WHO Regional Office for Europe, 2004 (EUR/04/5046267/6; <http://www.euro.who.int/document/e83335.pdf>, accessed 13 August 2009).
7. Second Ministerial Conference on Environment and Health, Helsinki, 1994 [web site]. Copenhagen, WHO Regional Office for Europe, 2009 (http://www.euro.who.int/eehc/conferences/20021107_1, accessed 14 August 2009).
8. Third Ministerial Conference on Environment and Health, London, 1999 [web site]. Copenhagen, WHO Regional Office for Europe, 2009 (http://www.euro.who.int/eehc/conferences/20021010_2, accessed 15 August 2009).
9. *Final conference report: Fourth Ministerial Conference on Environment and Health, Budapest, Hungary, 23–25 June 2004*. Copenhagen, WHO Regional Office for Europe, 2005 (EUR/04/5046267; <http://www.euro.who.int/document/e86313.pdf>, accessed 4 September 2009).
10. Environment Performance Review Programme: 2nd cycle of reviews [web site]. Geneva, United Nations Economic Commission for Europe, 2009 (<http://www.unece.org/env/epr/>, accessed 14 August 2009).
11. Environment country reviews [web site]. Paris, Organization for Economic Co-operation and Development, 2009 (http://www.oecd.org/topic/0,3373,en_2649_34307_1_1_1_1_37465,00.html, accessed 14 August 2009).
12. MacArthur I, Bonnefoy X. *Environmental health services in Europe 2: policy options*. Copenhagen, WHO Regional Office for Europe, 1998 (WHO Regional Publications, European Series, No. 77).
13. MacArthur I, Bonnefoy X. *Environmental health services in Europe 1: an overview of practice in the 1990s*. Copenhagen, WHO Regional Office for Europe, 1997 (WHO Regional Publications, European Series, No. 76).

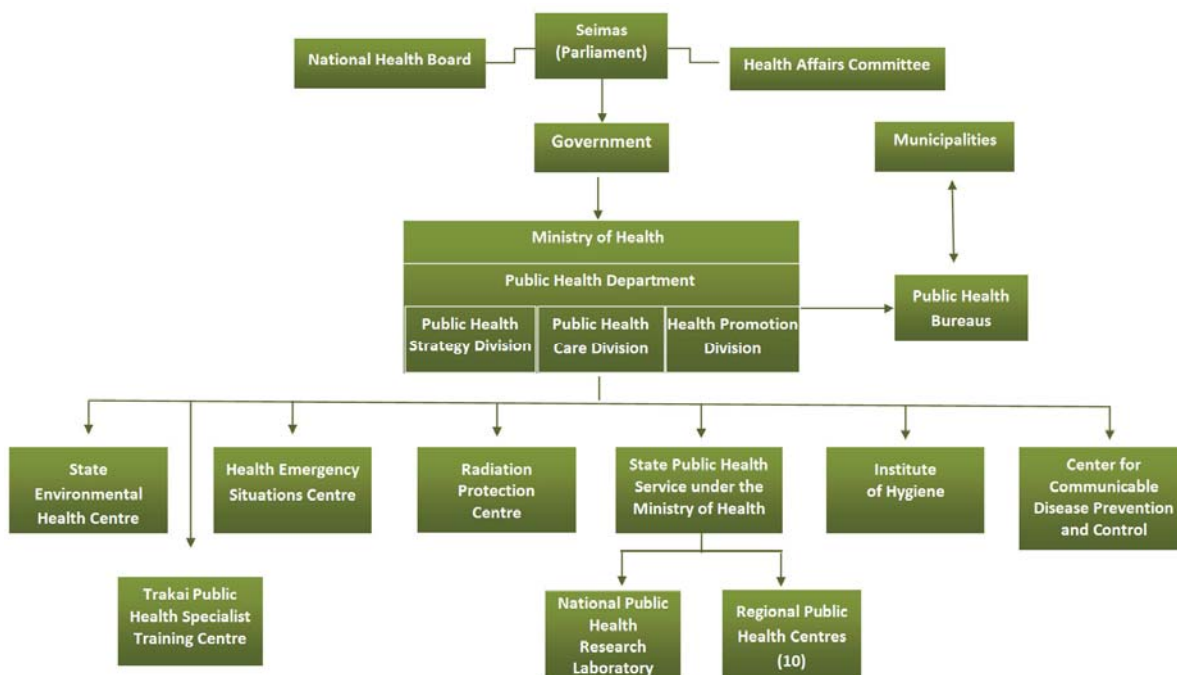
14. Corvalan C, Briggs D, Zielhuis G. *Decision-making in environmental health: from evidence to action*. London, Routledge, 2000.
15. *National profiles on children's health and environment: assessing readiness for improving environmental health protection systems for children*. Geneva, World Health Organization, 2005
(<http://www.who.int/ceh/profiles/natprofilesfeb05.pdf>, accessed 1 September 2009).
16. The European Environment and Health Information System (ENHIS) [web site]. Copenhagen, WHO Regional Office for Europe, 2009
(http://www.enhis.org/object_class/enhis_home_tab.html, accessed 14 August 2009).
17. Health Statistics of Lithuania 2007 [web site]. Vilnius, Lithuanian Health Information Centre, 2009
(<http://www.lsic.lt/html/en/lhic.htm>, accessed 12 January 2009).
18. *Nacionalinės sveikatos tarybos metinis pranešimas 2007 [Tenth National Health Board Annual Report 2007]*. Vilnius, National Health Board, 2008
(http://www3.lrs.lt/pls/inter/w5_show?p_r=697&p_k=1, accessed 18 May 2009; in Lithuanian).
19. WHO country profiles of environmental burden of disease, Lithuania [web site]. Geneva, World Health Organization, 2007
(http://www.who.int/quantifying_ehimpacts/national/countryprofile/lithuania.pdf, accessed 1 September 2009).
20. Water Information System for Europe (WISE) [web site]. Copenhagen, European Environmental Agency, 2009
(<http://water.europa.eu/en/welcome>, accessed 16 August 2009).
21. Country information [web site]. Bilthoven, European Environment and Health Information System, 2009
(http://www.enhis.org/object_class/enhis_enhis2_country_profiles.html, accessed 16 August 2009).
22. Public water supply and access to improved water sources [web site]. Bilthoven, European Environment and Health Information System, 2008 (ENHIS Fact Sheet No. 1.2; http://www.enhis.org/object_document/o4726n27386.html, accessed 16 August 2009).
23. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation [web site]. Geneva, World Health Organization and New York, United Nations Children's Fund, 2006
(<http://www.wssinfo.org/en/welcome.html>, accessed 4 September 2009).
24. EUROSTAT [web site]. Brussels, Statistical Office of the European Communities, 2009
(<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>, accessed 1 August 2009).
25. *Support for the Development of a framework for the implementation of water safety plans in the European Union*. Copenhagen, WHO Regional Office for Europe, 2007
(http://circa.europa.eu/Public/irc/env/drinking_water_rev/library?l=/water_safety_plans/dwd_2007_reportpdf/_EN_1.0_&a=d, accessed 16 September 2009).
26. *Bathing water results 2007 – Lithuania*. Luxembourg, European Commission, 2008
(http://ec.europa.eu/environment/water/water-bathing/report2008/lt_comments.pdf, accessed 16 August 2009).

27. Water Information System for Europe. Quality of bathing water, 2007 bathing season. Luxembourg, Office for Official Publications of the European Union, 2008 (http://ec.europa.eu/environment/water/water-bathing/report_2008.html, accessed 2 August 2009).
28. European mortality database [online database]. Copenhagen, WHO Regional Office for Europe, 2007 (http://www.euro.who.int/InformationSources/Data/20011017_1, accessed 27 June 2007).
29. *Home accidents in children and home safety regulations in Lithuania: status quo report*. Vilnius, State Environmental Health Centre, 2007.
30. Policies to reduce and prevent selected unintentional injuries (falls, drowning, poisoning, fires and choking) in children and adolescents [web site]. Bilthoven, European Environment and Health Information System, 2007 (ENHIS Fact Sheet No. 2.6; http://www.enhis.org/object_document/o4728n27384.html, accessed 17 August 2009).
31. Finbalt Health Monitor [web site]. Helsinki, National Institute of Health and Welfare, 2009 (http://www.ktl.fi/portal/english/research__people__programs/health_promotion_and_chronic_disease_prevention/projects/finbalt/, accessed 17 August 2009).
32. Currie C et al. *Inequalities in young people's health: HBSC international report from the 2005/2006 survey*. Copenhagen, WHO Regional Office for Europe, 2008 (http://www.euro.who.int/datapublications/Publications/Catalogue/20080616_1, accessed 17 August 2009).
33. Percentage of physically active children and adolescents [web site]. Bilthoven, European Environment and Health Information System, 2007 (ENHIS Fact Sheet No. 2.4; http://www.enhis.org/object_document/o4722n27385.html, accessed 17 August 2009).
34. *Law on Physical Education and Sports*. Vilnius, Seimas, 2008 (http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=339730, accessed 17 August 2009).
35. Tobacco control database [online database]. Copenhagen, WHO Regional Office for Europe, 2009 (<http://data.euro.who.int/tobacco/?TabID=2404>, accessed 17 August 2009).
36. *Policies to reduce the exposure of children to environmental tobacco smoke*. Copenhagen, WHO Regional Office for Europe, 2007 (ENHIS Fact Sheet 3.7; http://www.euro.who.int/Document/EHI/ENHIS_Factsheet_3_7.pdf, accessed 17 August 2009).
37. *Exposure of children to environmental tobacco smoke*. Copenhagen, WHO Regional Office for Europe, 2007 (ENHIS Fact Sheet No. 3.4; http://www.euro.who.int/Document/EHI/ENHIS_Factsheet_3_4.pdf, accessed 17 August 2009).
38. Eurostat *Statistics on living conditions and welfare* [online database]. EUROSTAT - The Statistical Office of the European Communities, 2009, http://epp.eurostat.ec.europa.eu/portal/page/portal/living_conditions_and_social_protection/data/database - Indicator ilc_mdho, accessed 5 September 2009).
39. *Large Analysis and Review of European housing and health Status (LARES) project* [web site]. Copenhagen, WHO Regional Office for Europe, 2009 (http://www.euro.who.int/Housing/lares/20080403_1, accessed 17 August 2009).

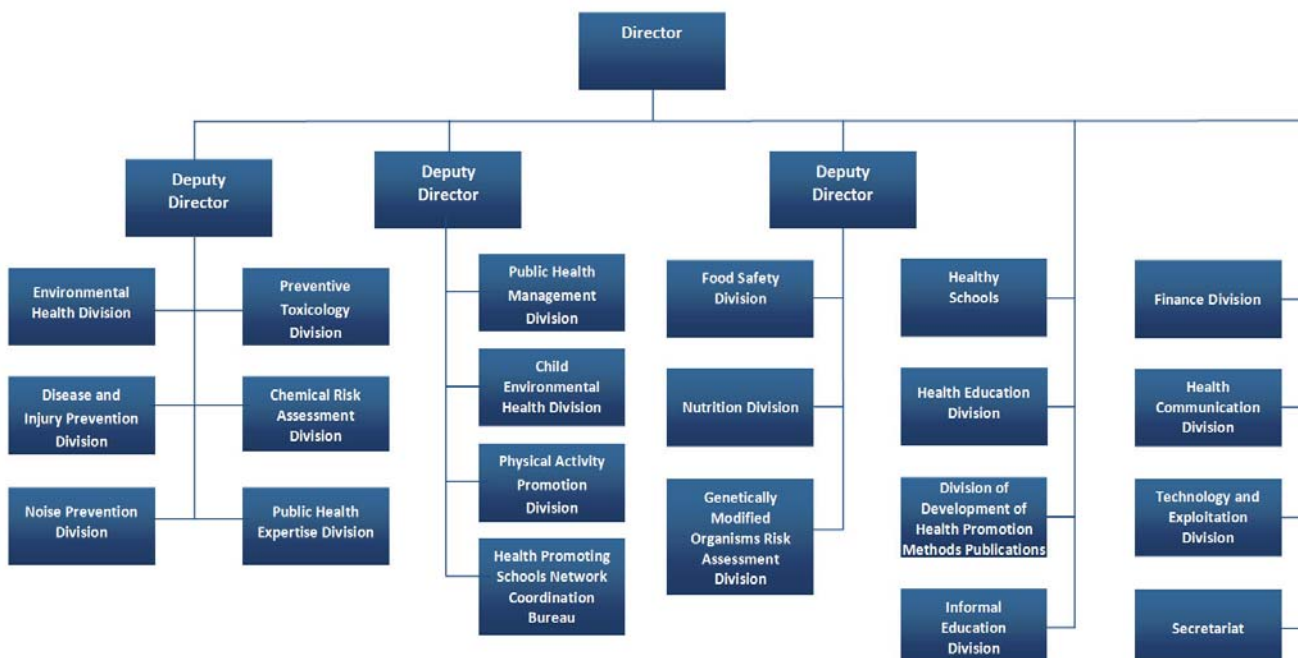
40. Lietuvos valstybinio oro monitoringo matavimų duomenys [Lithuanian state air monitoring measurements]. Vilnius, Environmental Protection Agency, 2009 (<http://212.59.17.238/>, accessed 17 August 2009; in Lithuanian).
41. Environmental Protection Agency [online database]. Vilnius, Environmental Protection Agency, 2009 (<http://gamta.lt/cms/index?lang=en>, accessed 17 August 2009).
42. *AirBase* – the European air quality database [database]. Copenhagen, European Environment Agency, <http://air-climate.eionet.europa.eu/databases/airbase/>, accessed 17 August 2009).
43. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. *Official Journal of the European Union*, L390:1–849.
44. 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. *Official Journal of the European Communities*, 2002, L189:12–25.
45. *Policies to reduce the excessive exposure of children to ultraviolet radiation*. Copenhagen, WHO Regional Office for Europe, 2007 (ENHIS Fact Sheet No. 4.8; http://www.euro.who.int/Document/EHI/ENHIS_Factsheet_4_8.pdf, accessed 18 August 2009).
46. Basic economic data: Lithuanian economy at a glance [web site]. Vilnius, Lithuanian Development Agency, 2009 (<http://www.lida.lt/en/BasicEconomicData.html>, accessed 18 August 2009).
47. SHE network [web site]. Woerden, Schools for Health in Europe, 2009 (<http://www.schoolsforhealth.eu/index.cfm>, accessed 19 August 2009).
48. Lithuanian Health Information Centre [online database]. Vilnius, Lithuanian Health Information Centre, 2009 (<http://www.lsic.lt/html/en/lhic.htm>, accessed 19 August 2009).
49. European health for all database (HFA-DB) [online database]. Copenhagen, WHO Regional Office for Europe, 2009 (<http://www.euro.who.int/hfad>, accessed 16 August 2009).
50. Sveikatos Apsaugos Ministerijos Extremaliu Sveikatai Situacijų Centras [Health Emergency Situations Centre of the Ministry of Health [web site]. Vilnius, Health Emergency Situations Centre of the Ministry of Health, 2009 (<http://www.essc.sam.lt/lt/naujienos.html>, accessed 6 September 2009; in Lithuanian).
51. State Food and Veterinary Service [web site]. Vilnius, State Food and Veterinary Service, 2009 (<http://vmvt.lt/en/>, accessed 20 August 2009).
52. *Law on the Amendment of the Law on Education*. Vilnius, Seimas, 2006 (http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_1?p_id=281043, accessed 7 September 2009).

53. Lithuanian Green Movement. About us [web site]. Kaunas, Lithuanian Green Movement, 2009
(<http://www.zalieji.lt/english/about>, accessed 23 August 2009).
54. *Charter on Transport, Environment and Health*. Copenhagen, WHO Regional Office for Europe, 1999
(http://www.euro.who.int/document/peh-ehp/charter_transporte.pdf, accessed 7 September 2009).
55. *Adelaide Recommendations on Healthy Public Policy. Second International Conference on Health Promotion, Adelaide, South Australia, 5–9 April 1988*. Geneva, World Health Organization, 1988
(<http://www.who.int/healthpromotion/conferences/previous/adelaide/en/>, accessed 25 August 2009).
56. *National report on sustainable development: from Rio to Johannesburg, from transition to sustainable development*. Vilnius, Ministry of Environment, 2002
(<http://www.am.lt/LSP/files/NAT-REP-ON-SUS-DEV.pdf>, accessed 25 August 2009).
57. NST metiniai pranešimai [National Board of Health annual reports] [web site]. Vilnius, Seimas of the Republic of Lithuania, 2009
(http://www3.lrs.lt/pls/inter/w5_show?p_r=697&p_k=1, accessed 25 August 2009; reports in Lithuanian, English summary at the end of the reports).
58. Law on the Environmental Impact Assessment of Planned Economic Activities. *Official Gazette*, No. 82-1965, 1996; No. 84-3105, 2005.
59. Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). *Official Journal of the European Union*, 2007, L108:1–14.

Annex 1. Lithuania's health system involvement in environment and health issues



Annex 2. Structure of the State Environmental Health Centre



Annex 3. Laws relevant to environment and health

Section 1. Water quality

Policy title and web reference (in Lithuanian)	Year		Authority in charge	
	Established	Last update	National level	Other implementing bodies
1.1 Drinking-water quality				
Law on Drinking-water (<i>Official Gazette</i> , 2001, No. 64-2327) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=145521&p_query=&p_tr2=	2001	None	Government of Lithuania, Ministry of Environment, Ministry of Health, State Food and Veterinary Service	State Consumer Rights Protection Authority, municipalities, water suppliers and consumers
Lithuanian Standard (Hygiene Norm of Lithuania) HN 24:2003: Safety and quality requirements of drinking-water (<i>Official Gazette</i> , 2003, No. 79-3606; 2007, No. 127-5194) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=216309&p_query=&p_tr2=	2003	2007	Ministry of Health	State Food and Veterinary Service, water suppliers
Lithuanian Standard (Hygiene Norm of Lithuania) HN 43:2005: Dug wells and sources: equipment and supervising safety requirements (<i>Official Gazette</i> , 2005, No. 90-3376) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=260058&p_query=&p_tr2=	2005	None	Ministry of Health	Municipalities
Order of the Minister of Health on Diagnostics and prophylaxis for water pollution with nitrites and nitrates (<i>Official Gazette</i> , 2002, No. 58-2361) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=168701&p_query=&p_tr2=	2002	None	Ministry of Health	None
Order of the Director of the State Food and Veterinary Service on State Order on drinking-water quality control (<i>Official Gazette</i> , 2003, No. 3-99) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=198359&p_query=&p_tr2=	2003	None	State Food and Veterinary Service	None

Order of the Minister of Health and Director of the State Food and Veterinary Service on Exchanging of information about drinking-water safety (<i>Official Gazette</i> , 2002, No. 98-4379) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=188236&p_query=&p_tr2=	2002	None	Ministry of Health, State Food and Veterinary Service	None
Programme for the evaluation and use of groundwater resources for drinking-water supply for 2007–2025 (<i>Official Gazette</i> , 2006, No. 66-2436) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=277712&p_query=&p_tr2=	2006	None	Ministry of Environment	Lithuanian Geology Survey under the Ministry of Environment
1.2 Sanitation and sewage				
Law on Supply of Drinking-water and Wastewater Management X-764 (<i>Official Gazette</i> , No. 82-3260, 2006) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=280587&p_query=&p_tr2=	2006	None	Government of Lithuania, Ministry of Environment, Ministry of Health, State Food and Veterinary Service	State Consumer Rights Protection Authority, National Control Commission for Prices and Energy, municipalities
Strategy of development on supply of drinking-water and wastewater management 2008–2015 (<i>Official Gazette</i> , 2008, No. 104-3975) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=326649&p_query=&p_tr2=	2008	None	Government of Lithuania, Ministry of Environment	State Food and Veterinary Service
Regulation on wastewater management, approved by Order D1-515 of the Minister of Environment (<i>Official Gazette</i> , 2007, No. 110-4522) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=307075&p_query=&p_tr2=	2007	None	Ministry of Environment	Wastewater treatment providers
Environmental rules of the installation of domestic wastewater treatment systems under natural conditions (LAND 21-01), approved by Order No. 252 of the Minister of Environment (<i>Official Gazette</i> , 2001, No. 41-1438) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=132871&p_query=&p_tr2=	2001	None	Ministry of Environment	Wastewater treatment providers

<p>Procedure of primary accounting and control of pollutants contained in discharged wastewater and exploitation of water resources, approved by Order No. 171 of the Minister of Environment (<i>Official Gazette</i>, 2001, No. 29-941)</p> <p>http://www3.lrs.lt/pls/inter3/dokpaieska.rezult_1?p_nr=&p_nuo=&p_iki=&p_org=&p_drus=&p_kalb_id=1&p_title=&p_text=&p_pub=1&p_met=2005&p_lnr=24&p_denr=785&p_es=0&p_rus=1&p_tid=&p_tkid=&p_t=0&p_tr1=2&p_tr2=2&p_gal=</p>	2001	2005	Ministry of Environment	Environmental Protection Agency, enterprises
1.3.1 Bathing water quality				
<p>Lithuanian Hygiene Standard HN 92:2007: Beaches and their bathing water quality (<i>Official Gazette</i>, 2007, No. 139-5716)</p> <p>http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=311976&p_query=&p_tr2=</p>	2007	2008	Ministry of Health (Institute of Hygiene)	Municipalities
<p>National Programme on the Monitoring of Bathing Water Quality 2006–2008 (<i>Official Gazette</i>, 2006, No. 88-3459)</p> <p>http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=281184&p_query=&p_tr2=</p>	2006	None	Government of Lithuania, Ministry of Health	Institute of Hygiene (Ministry of Health), municipalities
<p>National Programme on the Monitoring of Bathing Water Quality 2009–2011 (<i>Official Gazette</i>, 2009, No. 80-3344)</p> <p>http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=347809&p_query=&p_tr2=</p>	2009	None	Government of Lithuania, Ministry of Health	Institute of Hygiene (Ministry of Health), municipalities
1.3.2 Swimming pool water quality				
<p>Swimming pools. Installation, surveillance, requirements of health and safety; Order No. V-572 of the Ministry of Health of 12 July 2005 on Approval of Lithuanian Hygiene Standard HN 109:2005 (<i>Official Gazette</i>, 2005, No. 87–3277)</p> <p>http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=259868&p_query=&p_tr2=</p> <p>Amendment on Approval of Lithuanian Hygiene Standard HN 109:2005 Order of the Ministry of Health of 12 May 2006 (<i>Official Gazette</i>, 2006, No. 60–2153)</p>	2005	2006	Ministry of Health	State Public Health Service (Ministry of Health)

http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=219781&p_query=&p_tr2=				
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Section 2. Injuries and promotion of physical activity

Policy title and web reference (in Lithuanian)	Year		Authority in Charge	
	Established	Last update	National level	Other implementing bodies
2.1 Road transport injuries				
Law on Road Traffic Safety (<i>Official Gazette</i> , 2000, No. 92-2883) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=210388	2000	2008	Government of Lithuania, State Road Safety Commission, Ministry of Transport and Communications	Other state institutions, municipalities
State Programme for Road Safety for 2005–2010 (<i>Official Gazette</i> , 2005, No. 84-3117) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=259383&p_query=&p_tr2=	2005	2007	Government of Lithuania, Ministry of Transport and Communications	Ministry of Health, Ministry of Education and Science, Ministry of the Interior, Ministry of Finance
Joint order of the minister of transport and communications, minister of environment and minister of health: On implementation of the World Health Organization Charter on Transport, Environment and Health in Lithuania (<i>Official Gazette</i> , 2005, No.87-3276) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=259867&p_query=&p_tr2=	2005	None	Ministry of Health, Ministry of Environment, Ministry of Transport and Communications	Ministry of the Interior, municipalities
Resolution of the Government: On Road traffic rules approval (<i>Official Gazette</i> , 2003, No. 7-263) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=325597	2002	2008	Government of Lithuania, Ministry of Transport and Communications	Ministry of the Interior
2.2 Unintentional injuries excluding road traffic				
The Lithuanian Health Programme adopted by the Seimas (Parliament) (<i>Official Gazette</i> , 1998, No. 64-1842) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=60036&p_query=&p_tr2=	1998	None	Ministry of Health	None

State Programme for Trauma Prevention for 2000–2010 (<i>Official Gazette</i> , 2008, No. 58-2174) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=320094&p_query=&p_tr2=	2000	2008	Government of Lithuania, Ministry of Health	Ministry of Education and Science, Ministry of Agriculture
2.3 Physical activity				
Law on Physical Culture and Sport (<i>Official Gazette</i> , 1996, No. 9-215) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_e?p_id=40173	1995	2008	Government of Lithuania	Ministry of Education and Science, Government Department of Physical Education and Sports
Law on Education (<i>Official Gazette</i> , 1991, No. 23-593) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_e?p_id=21110	1991	2007	Government of Lithuania	Ministry of Education and Science, Ministry of Health, municipalities
Law on Tourism (<i>Official Gazette</i> , 1998, No. 32-852) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_e?p_id=75353	1998	2003	Government of Lithuania	Ministry of Economy, State Department of Tourism (Ministry of Economy), municipalities
National Public Health Care Strategy 2006–2013 (<i>Official Gazette</i> , 2001, No. 66-2418; 2006, No. 70-2574) http://www3.lrs.lt/pls/inter3/dokpaieska.susije_e?p_id=146046&p_rys_id=15	2001	2006	Government of Lithuania, Ministry of Health	Ministry of Education and Science, municipalities
State Programme on Non-communicable Chronic Disease Prevention 2008–2010 (<i>Official Gazette</i> , 2006, No. 70-2574) http://www3.lrs.lt/pls/inter3/dokpaieska.susije_e?p_id=146046	2008	None	Ministry of Health	Ministry of Education and Science, Government Department of Physical Education and Sports, municipalities

Section 3. Air quality

Policy title and web reference (in Lithuanian)	Year		Authority in charge	
	Established	Last update	National level	Other implementing bodies
3.1 Outdoor air quality				
Law on Ambient Air Protection (<i>Official Gazette</i> , 1999, No. 98-2813) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=336191&p_query=&p_tr2=	1999	2009	Government of Lithuania, Ministry of Environment	Ministry of Health, Ministry of Transport and Communications, Ministry of Energy, municipalities
Order of the Minister of Environment and of the Minister of Health on limit values of ambient air pollutants (European Commission regulated and national list) (<i>Official Gazette</i> , 2000, No. 100-3185; 2008, 70-2688) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=322735&p_query=&p_tr2=	2000	2008	Ministry of Environment, Ministry of Health	Municipalities, enterprises
Order of the Minister of Environment and of the Minister of Health on ambient air pollution norms (<i>Official Gazette</i> , 2001, No. 106-3827) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=156726&p_query=&p_tr2=	2001	None	Ministry of Environment, Ministry of Health	Municipalities, enterprises
Order of the Minister of Environment and of the Minister of Health on ozone norms in ambient air and assessment rules (<i>Official Gazette</i> , 2002, No. 105-4731) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=192451&p_query=&p_tr2=	2002	None`	Ministry of Environment, Ministry of Health	Municipalities, enterprises
Order of the Minister of Environment and of the Minister of Health on ambient air pollution with arsenic, cadmium, nickel and benzo[a]pyrene (<i>Official Gazette</i> , 2006, No. 71-2647) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=279240&p_query=&p_tr2=	2006	None	Ministry of Environment, Ministry of Health	Municipalities, enterprises
Order of the Minister of Environment and of the Minister of Health on information for the public and institutions on ambient air pollution levels exceeding threat or information thresholds	2005	None	Ministry of Environment, Ministry of Health	Municipalities, institutions subordinated to the Ministry of Environment, institutions subordinated to the

(<i>Official Gazette</i> , 2005, No. 74-2688) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=257700&p_query=&p_tr2=				Ministry of Health, Fire Prevention Department
Order of the Minister of Environment on the Adoption of the National Programme on Management of Pollutants Emitted to Ambient Air up to 2010 (<i>Official Gazette</i> , 2008, No. 17-613) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=314374&p_query=&p_tr2=	2008	None	Ministry of Environment	Ministry of Transport and Communications, Ministry of Agriculture, Ministry of Economy, Environmental Protection Agency
3.2 Dampness and mould in indoor air				
Law on Construction (<i>Official Gazette</i> , 1996, No. 32-788) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=297903&p_query=&p_tr2=	1996	2007	Ministry of Environment	State Territorial Planning and Construction Inspectorate (Ministry of Environment), State Environmental Protection Inspectorate, Housing and Urban Development Agency, municipalities
Construction Technical Regulation for One Resident House (STR 2.02.09:2005) (<i>Official Gazette</i> , 2005, No. 93-3464) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=260205&p_query=&p_tr2=	2005	None	Ministry of Environment	State Territorial Planning and Construction Inspectorate (Ministry of Environment), State Environmental Protection Inspectorate, Housing and Urban Development Agency, municipalities
Construction Technical Regulation for Residential Buildings (STR 2.02.01:2004) (<i>Official Gazette</i> , 2004, No. 23-721; 2007, No. 16-597) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=226882	2004	2007	Ministry of Environment	State Territorial Planning and Construction Inspectorate (Ministry of Environment, State Environmental Protection Inspectorate, Housing And Urban

				Development Agency, municipalities
Construction Technical Regulation for Heating, Ventilation and Air-conditioning (STR 2.09.02:2005) (<i>Official Gazette</i> , 2005, No. 75-2729) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=257930&p_query=&p_tr2=	2005	2006	Ministry of Environment	State Environmental Protection Inspectorate, Housing and Urban Development Agency, municipalities,
Lithuanian Hygiene Standard HN 42:2004 on Residential and Public Buildings Microclimate (<i>Official Gazette</i> , 2004, No. 105-3911) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=236900&p_query=&p_tr2=	2004	None	Ministry of Health	State Public Health Service (Ministry of Health), persons and businesses designing and using technologies that have an influence on the thermal environment
Construction Technical Regulation for the essential requirements of the building: hygiene, health, environment security (STR 2.01.01 (3): 1999) (<i>Official Gazette</i> , 2000, No. 8-215) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=94609&p_query=&p_tr2=	1999	2002	Ministry of Environment	Municipalities, all participants of construction process, institutions supervising special requirements
Regulations on Authorization and Registration of Biocidal Products (<i>Official Gazette</i> , 2002, No. 87-3760) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=181634&p_query=&p_tr2=	2002	2008	Ministry of Health (State Environmental Health Centre)	State Public Health Service (Ministry of Health), State Labour Inspectorate, State Non-food Products Inspectorate (Ministry of Economy), State Food and Veterinary Service
3.3 Environmental tobacco smoke				
Law on Tobacco Control (<i>Official Gazette</i> , 1996, No. 11-281; 2003, No. 117-5317) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=324089&p_query=&p_tr2=	1995	2008	Government of Lithuania, Ministry of Economy	Other ministries
State Tobacco Control Programme (<i>Official Gazette</i> , 1998, No. 69-2010) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=241547&p_query=&p_tr2=	1998	2007	Ministry of Health	Other ministries

Lithuanian Hygiene Standard HN 112:2006: Regulation on requirements for fitting out and operating separate premises (places) for smoking (<i>Official Gazette</i> , 2006, No. 124-4707) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=287054&p_query=&p_tr2=	2004	2006	Ministry of Health	State Tobacco and Alcohol Control Service
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Section 4. Noise, chemicals, radiation and environmental exposures

Policy title and web reference (in Lithuanian)	Year		Authority in charge	
	Established	Last update	National level	Other implementing bodies
Noise				
The Law on Noise Management (<i>Official Gazette</i> , 2004, No. 164-5971) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=279462	2004	2006	Government of Lithuania, Ministry of Health	Ministry of Transport and Communications, Ministry of Environment, Ministry of the Interior, Ministry of Agriculture, county governors, municipal institutions; noise source holders
Governmental Decision on the adoption of the National Noise Prevention Programme for 2007–2013 (<i>Official Gazette</i> , 2007, No. 67-2614) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=299788	2007	None	Government of Lithuania, Ministry of Health	Ministry of Transport and Communications, Ministry of Environment, Ministry of the Interior, Ministry of Agriculture, county governors, municipal institutions; science and education institutions
Government Decision on the adoption of the National Strategic Noise Mapping Programme (<i>Official Gazette</i> , 2006, No. 68-2508) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=278272	2006	2008	Government of Lithuania, Ministry of Health	Ministry of Transport and Communications, Ministry of Environment, municipal institutions, Government Department of Statistics, National Land Service

				(Ministry of Agriculture), Ministry of National Defence, Lithuanian Hydrometeorological Service (Ministry of Environment), The Residents' Register Service (Ministry of Interior)
Government Decision on adoption of the regulation on the presentation of the primary and summary noise management information to the Noise Prevention Council, government institutions, county governors and public (<i>Official Gazette</i> , 2007, No. 132-5380) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=310968	2007	None	Government of Lithuania, Ministry of Health	Ministry of Transport and Communications, Ministry of Environment, Ministry of the Interior, Ministry of Agriculture, municipalities, county governors, enterprises
Government Decision on adoption of the national noise control order and on authorization (<i>Official Gazette</i> , 2006, No. 29-986) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=271699	2006	None	Government of Lithuania, Ministry of Health	Ministry of Transport and Communications, Ministry of Environment
Order of the Minister of Health on adoption of Lithuanian Hygiene Regulation HN 33:2007: Acoustical noise: noise limit values in residential and public building and in their environment (<i>Official Gazette</i> , 2007, No. 75-2990) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=301455	2007	None	Ministry of Health	Institutions implementing control of acoustical noise, planners, designers, noise source holders
Order of the Minister of Social Security and Labour and the Minister of Health on adoption of the Regulation on the protection of workers from the risks of noise (<i>Official Gazette</i> , 2005, No. 53-1804) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=254877	1999	2005	Ministry of Social Security and Labour, Ministry of Health	Institutions implementing control of occupational noise, enterprises
Food safety				
Law on Food (<i>Official Gazette</i> , 2000, No. 32-893) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=266822&p_query=&p_tr2=	2000	2005	Government of Lithuania, Ministry of Health	State Food and Veterinary Service

Law on Genetically Modified Organisms (<i>Official Gazette</i> , 2001, No. 56-1976) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=280509&p_query=&p_tr2=	2001	2006	Government of Lithuania, Ministry of Environment	Ministry of Health, Ministry of Agriculture, State Food and Veterinary Service
Lithuanian Hygiene Standard 54:2008: Food products: maximum permitted contaminants and pesticide residue limits (<i>Official Gazette</i> , 2008, No. 109-4175) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=327408&p_query=&p_tr2=	2004	2008	Ministry of Health	State Food and Veterinary Service
Lithuanian Hygiene Standard 53:2003: Permitted to use food additives (<i>Official Gazette</i> , 2003, No. 91(1)-4135) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=218331&p_query=&p_tr2=	2003	2008	Ministry of Health	State Food and Veterinary Service
Chemical safety: pesticides				
Plant protection products authorization (<i>Official Gazette</i> , 2004, No. 70-2451) http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_l?p_id=232402	2004	None	State Plant Protection Service	None
Post-registration control of plant protection products (<i>Official Gazette</i> , 2004, No. 15-480) http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_l?p_id=226159	2004	None	State Plant Protection Service	None
Order on banned pesticides (<i>Official Gazette</i> , 2004, No. 111-4973) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=221969&p_query=&p_tr2=	2000	2004	State Plant Protection Service	None
Order on maximal allowable environmental concentrations of active substances of pesticides (<i>Official Gazette</i> , 2004, No. 94-3442) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=235263&p_query=&p_tr2=	2004	None	Ministry of Health	Institutions inspecting environmental pollution
Maximum permitted concentrations of contaminants and pesticide residues in food products (<i>Official Gazette</i> , 2008, No. 109-4175) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=327408&p_query=&p_tr2=	2001	2007	Ministry of Health	State Food and Veterinary Service

State Strategic Waste Handling Plan (<i>Official Gazette</i> , 2002, No. 40-1499; 2007, No. 122-5003) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=309698&p_query=&p_tr2=	2002	2007	Ministry of Environment	Municipalities
Food Contamination Monitoring programme http://www.vet.lt/lt/pages/view/?id=278	2005	2008	State Food and Veterinary Service	None
Chemical safety: heavy metals				
State Programme on Environmental Monitoring in 2005–2010 (<i>Official Gazette</i> , 2005, No. 19-608) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=326805	2005	None	Ministry of Environment	Municipalities
State Strategic Waste Handling Plan (<i>Official Gazette</i> , 2002, No. 40-1499; 2007, No. 122-5003) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=309698&p_query=&p_tr2=	2002	2007	Ministry of Environment	Municipalities
Order on banned and restricted substances (<i>Official Gazette</i> , 2002, No. 59-2404) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=169012&p_query=&p_tr2=	2002	2008	Ministry of Health	Persons and businesses placing on the market, produce and use those substances
Order on occupation limits of chemical substances and general requirements for measurements and impact assessment (<i>Official Gazette</i> , 2007, No. 108-4434) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=306641&p_query=&p_tr2=	2001	2007	Ministry of Health, Ministry of Social Security and Labour	Designers, employers, institutions inspecting environmental pollution
Law on Waste Handling (<i>Official Gazette</i> , 1998, No. 61-1726) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=324830&p_query=&p_tr2=	1998	2008	Ministry of Environment	Municipalities
Order on regulation of waste handling (<i>Official Gazette</i> , 1999, No. 63-2065) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=84302&p_query=&p_tr2=	1999	2003	Ministry of Environment	Municipalities
Law on Taxes for Environmental Pollution (<i>Official Gazette</i> , 1999, No. 47-1469)	1999	2008	Ministry of Environment	State Environmental Protection Inspectorate

http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=344656				
Radon in dwellings				
Law on Radiation Protection (<i>Official Gazette</i> , 1999, No. 11-239) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=83537	1999	2004	Ministry of Health	Radiation Protection Centre (Ministry of Health)
Lithuanian Hygiene Standard HN 85:2003: Natural exposure: standards of radiation protection (<i>Official Gazette</i> , 2004, No. 30-997) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=227651&p_query=&p_tr2=	2003	2008	Ministry of Health	Radiation Protection Centre (Ministry of Health)
Ultraviolet radiation				
Order of the Minister of Health on approval of the list of Environmental Health Indicators and rules of information flow and data presentation for calculation of indicators (<i>Official Gazette</i> , 2006, No. 23-763) (concerning solar UV index; morbidity by cutaneous malignant melanoma) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=271055&p_query=&p_tr2=	2003	2006	Ministry of Health, State Environmental Health Centre	Lithuanian Hydrometeorological Service (Ministry of Environmental), Lithuanian Cancer Register of the Cancer Registration Department of the Institute of Oncology, Vilnius University Statistical Department
Order of the Minister of Health concerning the approval of Lithuanian Hygiene Standard HN 75:2002: Pre-school education institutions. hygiene standards and regulations (<i>Official Gazette</i> , 2008, No. 54-2005) (Concerning binding installation of summerhouse protection from direct solar UV rays) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=319742&p_query=&p_tr2=	2002	2008	Ministry of Health, State Environmental Health Centre	State Public Health Service (Ministry of Health), Ministry of Education and Science
Order of the Minister of Health concerning the approval of Lithuanian Hygiene Standard HN 21:2005: General school: general requirements of health safety (<i>Official Gazette</i> , 2005, No. 76-2770) (concerning measures protecting from direct solar UV rays) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=271055&p_query=&p_tr2=	2005	2008	Ministry of Health, State Environmental Health Centre, State Public Health Service	Ministry of Education and Science

kpaieska.showdoc_1?p_id=258017&p_query=&p_tr2=				
Order of the Minister of Health concerning the approval of Lithuanian Hygiene Regulation HN 20:2006: Non-formal education school: general requirements of health safety (<i>Official Gazette</i> , 2006, No. 5-180) (concerning measures for protecting from direct solar UV radiation) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=269301&p_query=&p_tr2=	2006	None	Ministry of Health, State Environmental Health Centre	State Public Health Service, Ministry of Education and Science
Order of the Minister of Health concerning the approval of Lithuanian Hygiene Regulation HN 79:2004: Summer camps for children. general health safety requirements (<i>Official Gazette</i> , 2004, No. 82-2956) (concerning regulation of natural sunbed regimen) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=233684&p_query=&p_tr2=	2004	2004	Ministry of Health, State Environmental Health Centre	State Public Health Service, Ministry of Education and Science
Law on Product Safety (<i>Official Gazette</i> , 1999, No. 52-1673) (concerning the service safety regulation) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=227358&p_query=&p_tr2=	1999	2004	Government of Lithuania, Ministry of Health	State Consumer Rights Protection Agency, Ministry of Economy
Order of the Minister of Health concerning the approval of Lithuanian Hygiene Regulation HN 71:2003: Sunbeds: equipment and exploitation (<i>Official Gazette</i> , 2003, No. 21-918) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_1?p_id=205910&p_query=&p_tr2=	2003	2003	Ministry of Health, State Public Health Service, State Environmental Health Centre	Enterprises

Section 5. Civil protection

Policy title and web reference (in Lithuanian)	Year		Authority in charge	
	Established	Last update	National level	Other implementing bodies
Civil protection				

Law on Civil Safety (<i>Official Gazette</i> , 1998, No. 115-3230) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=279192&p_query=&p_tr2=	1998	2006	Government of Lithuania, Fire and Rescue Department (Ministry of the Interior)	Government Commission on Extreme Situations, ministries, state and municipal institutions, municipal fire and civil protection services, economic actors, all entities, environmental monitoring and laboratory control network
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Section 6. General policies and regulations

Policy title and web reference (in Lithuanian)	Year		Authority in charge	
	Established	Last update	National level	Other implementing bodies
General policies and regulations				
Law on Public Health Care (<i>Official Gazette</i> , 2002, No 56-2225) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=299388&p_query=&p_tr2=	2002	2007	Government of Lithuania, Ministry of Health	Ministry of Environment and municipal institutions (public health bureaus), public health institutions, enterprises
Law on Tobacco Control (<i>Official Gazette</i> , 1996, No. 11-281; 2003, No. 117-5317) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=324089&p_query=&p_tr2=	1996	2008	Government of Lithuania, Ministry of Economy	Ministry of Health, Ministry of the Interior, police, State Public Health Service, State Tobacco and Alcohol Control Service, State Consumer Rights Protection Service, State Tax Inspection, Customs Department (Ministry of Finance), municipalities, enterprises, agencies, organizations
Law on Territorial Planning (<i>Official Gazette</i> , 1995, No 107-2391; 2004, No 21-617) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=343407	1995	2004	Government of Lithuania, Ministry of Environment	Ministry of Transport and Communications, Ministry of Culture, Ministry of Health, Ministry

				of the Interior, Ministry of Economy, Ministry of Agriculture, State Territorial Planning and Construction Inspectorate, regional and municipal authorities
Labour Code (<i>Official Gazette</i> , 2002, No 64-2569) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=191770 (in English)	2002	2008	Government of Lithuania, Ministry of Social Security and Labour	State and municipal institutions, enterprises, agencies, organizations
Lithuanian Hygiene Standard HN 81:2005: Basic stations for mobile radio connection systems (<i>Official Gazette</i> , 2005, No 153-5654) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=268647&p_query=&p_tr2=	2005	None	Ministry of Health, State Environmental Health Centre	Institutions and companies designing, constructing and using basic stations; institutions responsible for microwave EMF control despite their subordination (State Public Health Service)
The Hygiene Regulation on Electromagnetic Fields in Working and Residential Environments (Lithuanian Hygiene Standard HN 80:2000: Electromagnetic field in working places and residential environment. Normative values for parameters and requirements for measurements in 10 kHz – 300 GHz frequency bands (<i>Official Gazette</i> , 2000, No 53-1548) http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=104132&p_query=&p_tr2=	2000	None	Ministry of Health, State Environmental Health Centre	Institutions and companies designing, constructing and using radio technology products; institutions responsible for EMF control despite their subordination (State Labour Inspectorate, State Public Health Service)
National Public Health Monitoring Programme for 2008-2009, <i>Official Gazette</i> , 2008, No 83-3295; http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=324851&p_query=&p_tr2=	2008	None	Government of Lithuania, Ministry of Health	Statistical Department (under the Government), Ministry of Environment, Ministry of Social Security and Labour, Ministry of the Interior, Kaunas University of Medicine, Vilnius University Hospital

				“Santariskiu klinikos”, national public health institutions
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Annex 4. Policy measures with a specific focus on children's health and the environment

This report was prepared by the State Environmental Health Centre and submitted to the European Environment and Health Committee Secretariat for reporting to the Intergovernmental Mid-term Review Meeting, in Vienna in 2007, on implementation of the Budapest Declaration commitments.

Implementation of the Children's Environment and Health Action Plan for Europe in Lithuania (2004–2006)

Regional priority goal 1

This goal covers preventing any significant morbidity and mortality arising from gastrointestinal disorders and other health effects by ensuring that adequate measures are taken to improve access to safe water and adequate sanitation for all children.

Action: Passing and enforcing legislation and regulations and implementing national and international conventions and programmes to reduce exposure of children and pregnant women to hazardous chemical, physical and biological agents to levels that do not produce harmful effects on children's health

- Investments in nine water management projects – in Druskininkai, Jonava, Vilnius, Kėdainiai, Plungė, Mažeikiai, Radviliškis, Kaunas and Neringa – had a total value of LTA 449 million and were implemented in 2004, with the support of the EU Pre-accession Structural Instrument Fund and the Cohesion Fund.
- Implementation of the water and health protocol of the United Nations Economic Commission for Europe Convention on the protection and use of transboundary water ways and international lakes was approved (Minister of Health and Minister of Environment Order No. V-14/D1-22; *Official Gazette*, 2005, No. 11-348).
- A set of ordinances on the requirements for the use and marketing of natural mineral water and source water and the regulations for the official recognition of natural mineral water were approved (Minister of Health; *Official Gazette*, 2004, No. 65-2295, No. 65-2296).
- The Strategy for the Development of Water Economy (water supply and wastewater treatment) has been approved by the Minister of Environment (*Official Gazette*, 2005, No. 8-245).
- Lithuanian Hygiene Standard HN 43:2005: Wells and sources: requirements for installation and health safety surveillance were approved by the Minister of Health (*Official Gazette*, 2005, No. 90-3376).
- The Law on Drinking-water Supply and Wastewater Treatment (No. X-764) was approved by the Seimas (*Official Gazette*, 2006, No. 82-3261), creating conditions to modernize and develop the infrastructure of water supply and wastewater, to improve the quality of services by providing them for optimal prices.
- Lithuanian Hygiene Standard HN 109:2005 – Swimming pools: requirements for installation and health safety surveillance – established requirements for children's swimming pools and was approved by the Minister of Health Order (*Official Gazette*, 2005, No. 87-3277).
- A resolution of the Government of Lithuania approved the Monitoring Programme for Water Quality in Swimming Pools 2006–2008 (*Official Gazette*, 2006, No. 88-3459). The monitoring programme was implemented and a report on water quality in swimming pools was submitted to the European Commission.
- Monitoring of shaft well water used for food purposes by pregnant women or infants under 6 months of age was conducted and the information on the quality of that water was provided to the users of the water from the wells tested, along with information on its possible health hazards and its water preparation methods (Minister of Health Order; *Official Gazette*, 2002, No. 58-2361).

- The programme on ecological safety – which ensures a healthy and clean environment, reduces negative impacts on the environment and human health, and prevents damage to the environment and population – was adopted by the Seimas (*Official Gazette*, 2005, No. 117-4226).
- Minister of Health orders approved the methods for the public health impact assessment (*Official Gazette*, 2004, No. 106-3947) and the rules for the assessment of contingent cases of the impact on human health not covered by the Law on the Environmental Impact of the Planned Economic Activities (*Official Gazette*, 2004, No. 109-4091).
- Minister of Health Order No. V-109 (*Official Gazette*, 2006, No. 23-763) approved the list of the environment and health indicators and the rules for submission of data and information flow intended for the calculation of these indicators.
- The Government of Lithuania approved the National Food and Nutrition Strategy and the Plan of Implementation Measures for this Strategy in 2003–2010 (Resolution No. 1325, 2003).
- The Programme for the Development of Public Knowledge on Nutrition was developed and approved by Minister of Health Order No. 454 (2004). Its main objective was to ensure adequate public education in nutrition among all the groups of the Lithuanian population, according to the recommendations on healthy nutrition, to strengthen public health and to reduce the burden of disease related to unhealthy nutrition.
- Research: Lithuania participated in the four-year innovation Project of the 6th Framework Programme for Science and Technologies of the European Commission, HiWATE, to identify the effects of side products from drinking-water disinfectants on human health and to create safe standards for the implementation of the water disinfection policy in the European Community.

Regional priority goal 2

This goal covers preventing and substantially reducing health consequences from accidents and injuries and pursuing a decrease in morbidity from lack of adequate physical activity, by promoting safe, secure and supportive human settlements for all children.

Action: Developing, implementing and enforcing strict child-specific measures that will better protect children and adolescents from injuries at and around their homes, playgrounds, schools and workplaces

- The Minister of Environment approved the Technical Regulation for Construction of Multi-apartment Houses, covering the requirements for playgrounds, according to the Lithuanian Standard on playground equipment (*Official Gazette*, 2004, No. 23-721).
- The Government of Lithuania approved annual action plans for the implementation of the National Trauma Prevention Programme for 2000–2010, with specific educational and training measures in the field of trauma prevention among children (*Official Gazette*, 2006, No. 31-1091).

Action: Advocating the strengthened implementation of road safety measures, including adequate speed limits, education for drivers and children, and enforcement of the corresponding legislation – in particular, the recommendations of the WHO world and European reports on road traffic injury prevention

- The Seimas adopted the Law on the Maintenance of Roads and the Financing of the Development Programme (*Official Gazette*, 2004, No. 171-6302), which is targeted at collecting and using the funds for the development and modernization of automobile routes and for ensuring the functioning of this network.
- The Government of Lithuania Resolution on the Long-term (until 2025) Strategy for the Development of the Lithuanian Transport System (*Official Gazette*, 2005, No. 79-2860) covers the improvement of the road safety system, following the Verona Declaration.
- The ministers of health, environment, transport Order No. V-564/D1-339/3-312, 2005 – to approve the implementation procedure of the WHO Charter on Transport, Environment and Health – makes it mandatory to follow the principles and directions of the Charter and to use the European Regional Development Fund and the Cohesion Fund.

- Implementing the National Programme for Safe Automobile Traffic 2005–2010, the Minister of Education and Science approved Order No. ISAK-1030 on the road safety programme for forms I–VIII in comprehensive schools (*Official Gazette*, 2006, No. 61-2235).
- To increase the accessibility of education and support to schoolchildren and their families, the transportation of schoolchildren by school buses is being organized successfully. The Programme for the Provision of Schools with Yellow Buses 2006–2008 was approved by the Government of Lithuania.
- In 2006, the Traffic Safety Commission (of the Ministry of Communication) approved the Project of the National Association for Road Traffic Victim Support on the Development of Safe Traffic Culture in Preschool Establishments and Schools.

Action: Advocating, supporting and implementing child-friendly urban planning and development as well as sustainable transport planning and mobility management, by promoting cycling, walking and public transport, in order to provide safer and healthier mobility within the community

- The Government of Lithuania approved the Long-term (until 2025) Strategy for the Development of the Lithuanian Transport System by Resolution No. 629 (*Official Gazette*, 2005, No. 79-2860) on road safety measures.
- The Description of the Procedure for the Control of Road Traffic Conditions – which establishes the procedure for the control of designing, building, maintaining and acceptance for use of the streets adjacent to schools – was approved by Order No. 5-V-671 of the Police Commissioner General of Lithuania (*Official Gazette*, 2005, No. 130-4700).

Action: Providing and advocating safe and accessible facilities (including green areas, nature and playgrounds) for social interaction, play and sports for children and adolescents; and reducing the prevalence of overweight and obesity by: (a) implementing health promotion activities in accordance with the WHO Global Strategy on Diet, Physical Activity and Health and the WHO Food and Nutrition Action Plan for the WHO European Region for 2000–2005; (b) promoting the benefits of physical activity in children’s daily life by providing information and education, as well as pursuing opportunities for partnerships and synergies with other sectors with the aim of ensuring a child-friendly infrastructure

- Government Resolution No. 600 approved the Lithuanian National Public Health Strategy for 2006–2013 and the Action Plan 2006–2008, to implement the Strategy, which also contains measures for the protection and improvement of children’s and young people’s health (*Official Gazette*, 2006, No. 70-2574).
- Lithuanian Hygiene Standard HN 79:2004 – Children’s summer camps: general health care requirements – was approved by Minister of Health Order No. V-275 (*Official Gazette*, 2004, No. 82-2956), which defines the main health safety requirements for the organization of children’s summer camps to be mandatory for those providing services related to the children’s summer camps, non-formal extra education and purposeful occupation services for children and young people.
- The Programme for Children’s and Young People’s Socialization was approved by Resolution No. 209 of the Government of Lithuania (2004).
- Several programmes on education and promotion of physical activity were implemented, such as To Go for Better, The Best School Sports Club, Occupation of Children and Young People in Summer and Teaching to Swim. In 2006, the Department of Physical Education and Sports under the Government of Lithuania organized the first Olympic Festival of Lithuanian Schoolchildren, in which 202 000 schoolchildren from 1435 schools took part.
- The Department of Physical Education and Sports released methods for testing the physical capacity of the Lithuanian population and assessing their physical condition, for different age groups – including preschool children.
- A new version of the Law on Physical Education and Sports was prepared. It sets at least three academic hours per week of physical education as mandatory in the establishment of formal education, except for higher education.

Regional priority goal 3

This goal covers preventing and reducing diseases due to outdoor and indoor air pollution, as well as contributing to a reduction in the frequency of asthmatic attacks, to ensure that children can live in an environment with clean air.

Action: Developing indoor air quality strategies that take into account the specific needs of children

- Government Resolution No. 1213, 2004, approved by the Financing Programme for Modernization of Multi-apartment Houses, aimed at creating favourable conditions for the owners to modernize apartment houses, to augment the efficacy of energy use and to ensure support for low-income families in renovating multi-apartment houses.
- The Housing Agency prepared a dwelling monitoring model, which includes the following dwelling and health indicators: (a) the impact of economic activities on the residential environment and public health; (b) radon in residential buildings; (c) indoor electromagnetic radiation; (d) indoor biological pollution; (e) home accidents, trauma and poisonings; (f) crimes, cases of violence, break-ins, thefts in residential buildings and their impact of health; (g) household waste management; (h) homelessness; and (i) adaption of residential buildings to people with disabilities in movement.
- Government Resolution No. 759 approved School Development (*Official Gazette*, 2002, No. 54-2130). During its implementation, in 2003–2006, renovations (which allow a reduction in energy use by 35% and an improvement in hygienic conditions) were performed in 62 comprehensive schools (one in each municipality).
- Government Resolution No. 1230 approved the Reconstruction Programme of Comprehensive and Vocational Schools and Their Supply with Training Aids for 2006–2008 (*Official Gazette*, 2005, No. 137-4919).

Action: Improving access of households to healthier and safer heating and cooking systems and to cleaner fuel

- Technical Regulation for Construction of Indoor Gas Systems was amended by Minister of Environment Order No. D1-63 of 2005 on tightening the requirements for the installation and maintenance of gas systems inside buildings.
- Rules for Maintenance of the District Heating Network and Heating Appliances were approved by Minister of Economy Order No. 4-291 of 2005 on establishing the mode of use of the district heating network and heating appliances, as well as their maintenance.

Action: Applying and enforcing regulations to improve indoor air quality, especially in housing, child-care centres and schools, with particular reference to construction and furnishing materials

- The technical regulations for construction of residential buildings, one family houses and heating, ventilation and air-conditioning were approved by Minister of Environment Order No. 705 of 2003, ensuring air quality in residential buildings by limiting the use of construction materials that emit typical pollutants thus, for example, banning construction materials containing asbestos and setting ventilation system standards.
- Lithuanian Hygiene Standard HN 42:2004 (Microclimate in residential and public buildings), on sufficient thermal environments and thermal comfort in residential and public buildings, was approved by Minister of Health Order No. V-479 (*Official Gazette*, 2004, No. 105-3911).
- The hygiene standards on child care institutions: general health care requirements; children's summer camps: general health care requirements; comprehensive school: general health care requirements; and non-formal children's education school: general health care requirements were approved by orders of the Minister of Health (*Official Gazette*, 2004, No. 45-1492; *Official Gazette*, 2004, No. 82-2956; *Official Gazette*, 2004, No. 92-3364; *Official Gazette*, 2005, No. 76-2770; *Official Gazette*, 2006, No. 5-180, respectively) and define the microclimate and ventilation in schools.
- The government resolution on the approval of the list of statistical indicators relevant to children was enacted in 2004 (*Official Gazette*, 2004, No. 92-3364).

Action: Implementing the Framework Convention on Tobacco Control, by legislative measures, through the drafting and enforcement of the necessary regulations and by setting up health promotion programmes that will reduce the prevalence of smoking and the exposure of pregnant women and children to environmental tobacco smoke

- A government resolution adopted the Action Plan for the Implementation of the State Tobacco Control Programme 2004–2006 (*Official Gazette*, 2004, No. 140-5115).
- Inspector of Journalist Ethics Decision No. SPR-14 of 2005 approved the classification criteria of the media, which gives the right to find the organ of public opinion infringing on the public interest when it propagates drugs, alcohol, smoking and an insane desire for intoxicating or poisonous drugs of other types.
- The Seimas amended Articles 19 and 26 of the Law on Tobacco Control, establishing the prohibition of smoking in restaurants, cafés, bars, clubs, discotheques and other premises intended for serving people. (*Official Gazette*, 2006, No. 61-2175).
- Minister of Education Order No. ISAK-494 of 2006 approved the Programme for the Prevention of Alcohol, Tobacco and Other Psychotropic Matter Use (*Official Gazette*, 2006, No. 33-1197) in preschool, primary, comprehensive and secondary educational institutions.
- Lithuania participates in the implementation of the European School Survey Project on Alcohol and Other Drugs (ESPAD).

Action: Reducing emissions of outdoor air pollutants from transport-related, industrial and other sources through appropriate legislation and regulatory measures which ensure that air quality standards, such as those developed under EU legislation, take into account the values set by the WHO air quality guidelines for Europe. In particular, we call upon car manufacturers to equip new diesel motor vehicles with particle filters or other appropriate technologies, to drastically reduce emissions of particles, and to that end we will continue to develop legislative and regulatory measures, as well as economic incentives.

- The long-term (until 2025) Strategy for the Development of the Lithuanian Transport System gives priority to transport that has a lower negative impact on the environment, that boosts the efficiency of the energy transport sector and that promotes the use of clean fuel and the use of electric vehicles and hybrid vehicles for city travels – especially in the field of city services. The Strategy includes the production of biodiesel and bioethanol, satisfying about 15% of transport fuel demand.
- The Traffic Safety Commission at the Ministry of Communication Order No. 2B-214 approved the technical requirements for the national type of transport means, which tightened the requirements for pollutants from engines (*Official Gazette*, 2006, No. 77-3052).
- Seeking to protect the ambient air from transport pollution, people in Lithuania are highly encouraged to travel by so-called green means of transport. The efforts of the local authorities to provide as many bicycle lanes as possible are optimistic, and the public approves of it highly.

Action: Involve children, schools and communities in advocating and disseminating information on clean-air policies

- The description of the procedure for informing the public and interested institutions about pollution levels of ambient air exceeding danger or reporting thresholds was prepared and approved by Order No. D1-265/V-436 of the ministers of environment and health (*Official Gazette*, 2005, No. 74-2688).
- The Government Resolution of 1999 on the procedure of provision of information on the environment in the Republic of Lithuania to the public was amended (*Official Gazette*, 2005, No. 26-831). Minister of Environment Order No. D1-381 approved the description of the procedure of informing and involving the public in the development of plans and programmes intended to protect ambient air and water, as well as to foster waste treatment (*Official Gazette*, 2005, No. 102-3789).
- The Ministry of Environment and the Lithuanian Confederation of Industrialists (the largest companies in the chemical industry, such as Achema, Lifosa AB and Mažeikių Nafta) signed a memorandum on cooperating for the improvement of legal acts to enable prompter modernization of companies and reduced pollution. The memorandum provides that businessmen and environmental protection specialists will: design and implement joint programmes of public environmental education; promote environmental protection projects for children and youth; and hold competitions and other measures designed to develop civilized attitudes towards the environment and to create concern about the environment. This cooperation contributes to the development of new environmental quality standards and will help to deal with environmental issues.
- The Environmental Information Centre with the objective of educating the Vilnius City population in environmental issues and encouraging their participation in environmental protection provides up-to-date information on its web site: <http://aplinka.vilnius.lt>. The web site contains environmental indicators of conditions in Vilnius City; the data (water quality, air quality, soil quality, noise) is updated on an ongoing basis. The Administration of the Vilnius City Municipality sponsors the project.

- In 2005/2006, the public company Vandens Namai and the Centre for Environmental Policy implemented a project, Preservation of Water Resources for Future Generations. In the course of implementing the project, the Water Club was founded; the activities of the Club are supported by the Global Water Partnership. The project was implemented in eight Lithuanian rural schools that are territorially isolated from the Centre. A separate Internet web site was developed and linked to the web site of the Water Club.

Regional Priority Goal 4

This goal covers implementation: reducing the risk of disease and disability arising from exposure to hazardous chemicals (such as heavy metals), physical agents (such as excessive noise) and biological agents and exposure to hazardous working environments during pregnancy, childhood and adolescence.

Action: Passing and enforcing legislation and regulations and implementing national and international conventions and programmes to reduce exposure of children and pregnant women to levels of hazardous chemical, physical and biological agents that produce harmful effects on their health

- Minister of Environment Order D1-154 of 2004 developed and approved the procedure for exporting and importing dangerous chemical substances that sets forth the objectives and functions of public authorities and the obligations of Lithuanian exporters and importers.
- Orders of the Minister of Health approved methods of investigating the toxicity and other adverse effects on health of chemical substances and preparations. These orders include: Lithuanian Hygiene Standard HN 60:2004, Permissible concentrations of hazardous chemical substances in soil; Lithuanian Hygiene Standard HN 97:2004, Maximum permissible concentrations of active substances of pesticides (plant protection products) in the environment; joint order of the ministers of environment, health and economy on the procedure of notification of new chemical substances placed on the market, and the procedure for assessing the adverse effect of chemical substances on the health of human beings and on the environment (*Official Gazette*, 2004, No. 70-2472; *Official Gazette*, 2004, No. 94-3442; *Official Gazette*, 2004, No. 36-1199, respectively).
- To transpose EU legislation (*acquis communautaire*) into the laws of Lithuania, the following legal acts were approved in 2004 through orders of the Minister of Health: (a) Lithuanian Hygiene Standard HN 60:2004, Maximum permissible concentrations of hazardous chemical substances in soil, (*Official Gazette*, 2004, No. 41-1357); (b) Lithuanian Hygiene Standard HN 54-2003 on Food Products: maximum permissible concentrations of pollutants and pesticide residues (*Official Gazette*, 2004, No. 74-2562); (c) Lithuanian Hygiene Standard HN 63:2004, Banned active substances for plant protection products (*Official Gazette*, 2004, No. 178-6600); (d) the prohibition of jelly packed in small cups – and having in its composition at least one of the following food additives: E400, E401, E402, E403, E404, E405, E406, E407, E407a, E410, E412, E413, E414, E415, E417 and E418 – from placement on the market and import (*Official Gazette*, 2004, No. 105-3912); (e) amendments of Lithuanian Hygiene Standard HN 53:2003: Food additives permissible for consumption (*Official Gazette*, 2004, No. 65-2298, No 134-4880, No 176-6526); (f) an order on studies of the biological impact of lead on the population (*Official Gazette*, 2004, No. 70-2466); (g) an order on methods of investigating the toxicity and other adverse effects on health of chemical substances and preparations (*Official Gazette*, 2004, No. 70-2472); (h) an order on methods of investigating the physical and chemical properties of chemical substances and preparations (*Official Gazette*, 2004, No. 86-3153); (i) an order on methods of investigating the physical and chemical properties of chemical substances and preparations (*Official Gazette*, 2004, No. 126-4547); (j) an order on methods of investigating mutagenicity of chemical substances and preparations (*Official Gazette*, 2004, No. 120-4445); (k) an order on methods and alternative investigation methods of measuring acute, repeated dose taking, and chronic and specific toxicity of chemical substances and preparations (*Official Gazette*, 2004, No. 122-4472); (l) Lithuanian Hygiene Standard HN 62:2003: Cosmetic products: general requirements, banned and limited substances (*Official Gazette*, 2004, No. 129-4641); and (m) amendments of Lithuanian Hygiene Standard HN 36:2002: Prohibited or restricted substances (*Official Gazette*, 2004, No. 74-2567; No. 182-6742); (n) an order on the approval of regulations for the import, export, transit and in-country transportation of radioactive substances and radioactive waste (*Official Gazette*, 2004, No. 176-6527).

- Ensuring the protection of human health against the harmful impact of the environment, the following orders of the Minister of Health were enacted: (a) on the approval of methodical guidelines on public health impact assessments (*Official Gazette*, 2004, No. 106-3947); and (b) on the assessment instances of public health impact not covered by the Law on Environmental Impact Assessment of Planned Economic Activities and approval of assessment regulations (*Official Gazette*, 2004, No. 109-4091).
- Director of the Communications Regulatory Authority Order No. IV-604 of 2005 approved the Technical regulation for electromagnetic compatibility, which sets conditions for the application of the electromagnetic compatibility requirements, as well as the procedure and conditions for using and placing the equipment on the market.
- Minister of Economy Order No. 4-117/D3-196 approved the requirements for placing batteries and other energy accumulators containing dangerous chemical substances on the market (*Official Gazette*, 2004, No. 59-2097). This legal act regulates the marketing and installation into devices of batteries and accumulators that contain mercury and other dangerous chemical substances placed on the market in Lithuania.
- Director of the State Food and Veterinary Service Order No. B1-219 approved the Monitoring programme for dioxin and dioxin-like polychlorinated biphenyls in Baltic Sea fish (*Official Gazette*, 2005, No. 47-1578) that was used as a basis to conduct the assessment of risks posed to human health by dioxins in Baltic Sea fish. Also, provisional national maximum permissible concentrations of active substances of 29 plant protection products in food products were assessed and set.
- In 2001–2006, the Institute for Biomedical Research of Kaunas University of Medicine assessed the public health impact of long-term, low-level mixed element exposure in susceptible population strata under the integrated project FOOD-CT-2006-016253 PHIME (public health impact of low-level mixed element exposure in susceptible population strata) of Food Quality and Safety of the EU 6th Framework Programme. The assessment aimed at studying and assessing the impact of certain mixed elements on the health of susceptible population strata.
- Scientists from the Laboratory for Environmental and Health Research of the Institute for Biomedical Research will take part in one of the working groups of the project – Exposure sources, geographical models and time trends: impact of elements upon the health of children and women. The task of this research is to assess the concentration of lead, cadmium and mercury in children's bodies and to study the accumulated amount of catalytic elements in the body of susceptible population groups – children and women.
- The Institute of Hygiene carried out a public health assessment by means of a biological indicator of lead pollution – blood lead level. Screening was conducted by implementing Council Directive 77/312/EEC on biological screening of the population for lead. In accordance with Order No. V-285 of the Minister of Health of 2004, the procedure for biological screening of the population was approved and the Institute of Hygiene prepared and implemented the Action Plan for biological screening of the population for lead. The first screening phase took place in November 2005 and January 2006.

Action: Monitor reproductive health indicators, including birth weight, congenital malformations and time to pregnancy, to detect potential hazards to reproductive health

- The Government of Lithuania approved the list of statistical information indicators on children (including health indicators of neonates) and the National Programme of the Mother and the Child by its Resolutions in 2004. One of the objectives of this Programme is to ensure the monitoring of high risk neonates.
- Government Resolution No. 754 approved the National Programme of the Mother and the Child 2004–2006 (*Official Gazette*, 2004, No. 96-3354). The major objectives of the Programme were to: ensure perinatal care; aim at better health of pregnant women and infants; ensure the continued monitoring of high-risk neonates; and coordinate the professional development of specialists working in the field of perinatal care.
- Minister of Health Order V-522 approved the list of human genetics services reimbursed from the budget of the Compulsory Health Insurance Fund and the indications for provision thereof, as well as the description of the procedure of referrals for congenital diseases or malformations (with extensive laboratory tests) and the identification of biochemical markers of the chromosomal disease risks of the fetus during the first trimester of pregnancy (*Official Gazette*, 2005, No. 90-3380).
- The requirements for health checks of pregnant women were approved by Minister of Health Order No. V-1137 on health checks of pregnant women (*Official Gazette*, 2007, No. 2-103).
- Under Governmental Resolution No. 695 on the approval of the list of statistical information indicators on children (*Official Gazette*, 2004, No. 92-3364), software was developed to select information on children from the database SVEIDRA.

Action: Use of alternatives to phthalates (such as di(2-ethylhexyl)phthalate) in medical equipment, such as catheters and endotracheal tubes, particularly for long-term use in children

- Using phthalates as substances or components of preparations in concentrations exceeding 0.1% of the mass of the plasticized material in toys and child-care articles is prohibited from 2007.
- The placement of toys and child-care articles wherein the concentration of phthalates exceeds the concentration specified in Lithuanian Hygiene Standard HN 36:2002 on prohibited or restricted substances on the market is prohibited from 2007.
- Using phthalates as substances or components of preparations in concentrations exceeding 0.1% of the mass of the plasticized material in toys and child-care articles intended to be placed in the mouth by children is prohibited from 2007.
- The placement of toys and child-care articles intended to be placed in the mouth of children and containing the concentration of phthalates exceeding the concentration specified in Lithuanian Hygiene Standard HN 36:2002 on prohibited or restricted substances on the market is prohibited from 2007.
- The aforementioned requirements came into force after the Minister of Health amended Lithuanian Hygiene Standard HN 36:2002 on prohibited or restricted substances by his order amending the previous order of 2002 on the approval of Lithuanian Hygiene Standard HN 36:2002 on prohibited and restricted substances and repealing a 2004 order on the restriction of the use of phthalates in child-care goods.

Action: Enact and/or enforce legislation to protect children from exposure to hazardous chemicals in toys and other products

- Minister of Economy Order No. 450 of 2003 approved the Technical Regulation of the Safety of Toys, which is binding to all manufacturers and suppliers of toys or their authorized representatives and distributors in the EU or Lithuania that supply toys to the Lithuanian market. This technical regulation transposes Council Directive 88/378/EEC on the approximation of the laws of the Member States on the safety of toys and Council Directive 93/68/EEC, which partly amends the provisions of Directive 88/378/EEC and other directives, and lays down the principle requirements for the safety of toys. The State Non-food Products Inspectorate (Ministry of Economy) oversees whether the toys supplied to and existing on the market meet the requirements of the regulation.
- Minister of Health Order No. V-877 (*Official Gazette*, 2006, No. 118-4517) approved Lithuanian Hygiene Standard HN 96:2006 on textile articles for children: general health safety requirements. This Hygiene Standard sets the health safety requirements for textile articles for children and also major health safety indicators.
- Minister of Health Order No. V-960 approved Lithuanian Hygiene Standard HN 22:2003 on school textbooks (*Official Gazette*, 2005, No. 3-40), which sets the standards and the principle requirements for the dye, paper, font, text layout, binding and weight of textbooks.
- In accordance with Commission Decision 2006/502/EC of 11 May 2006, which requires Member States to take measures to ensure that only child-resistant lighters are placed on the market and which prohibits placing novelty lighters on the market, Minister of Economy Order No. 4-390 approved the regulation of the distribution of lighters (*Official Gazette*, 2006, No. 115-4385).
- Lighters of any type that are on sale or otherwise distributed in Lithuania must meet the requirements laid down in the Regulations on the Distribution of Lighters. Manufacturers will be obliged to provide a report on child-resistance tests, which will be required for each model of lighter. The monitoring of the market for lighters will be carried out by the State Non-food Products Inspectorate (Ministry of Economy).

Action: Educate caregivers, teachers and children on the prevention of accidents, including acute poisoning

- Training on the management of chemical substances in laboratories of schools is provided to teachers of Lithuanian educational institutions.

Action: Passing and enforcing legislation and regulations to protect children from exposure to harmful noise (such as aircraft noise) at home and at school

- The Seimas passed Law No. IX-2499 on Noise Management (*Official Gazette*, 2004, No. 164-5971). Under this Law, the National Strategic Noise Mapping Programme was drafted and approved in 2005 (*Official Gazette*, 2006, No. 68-2508).

- Under the National Action Programme for Environmental Health Promotion for 2003–2006 (*Official Gazette*, 2003, No. 8-288), approved by Resolution No. 66 of the Government of Lithuania, and the Programme Implementation Action Plan for 2005, approved by Resolution No. 321 of the Government of Lithuania (*Official Gazette*, 2004, No. 46-1516), considerable attention was paid to the prevention and control of noise.
- A draft law amends Articles 4, 5, 8, 11, 13, 14 and 25 and invalidates Article 12 of the Law on Noise Management.
- A government resolution approves the composition and regulations of the Noise Prevention Council (*Official Gazette*, 2005, No. 135-4850).
- A draft government resolution approves the inventory of state noise control.
- A government draft resolution approves the description of the procedure for providing information on noise by state, municipal and other public legal entities.
- To protect the public from the harmful effect of noise on health and to tackle the issues of noise prevention and control, the National Strategic Noise Mapping Programme was approved by Government Resolution No. 581; the description of the procedure for state noise control was approved by Government Resolution No. 222 (*Official Gazette*, 2006, No. 29-986); and the National Action Programme for Noise Prevention for 2007–2013 was drafted.
- With a view to carrying out the enforcement of the requirements laid down in the Law on Noise Management, the description of enforcement procedure of requirements of noise prevention and reduction measures was approved by Minister of Health Order No. V-641 (*Official Gazette*, 2006, No. 82-3285).
- The inventory of the procedure for the impact assessment of noise on public health was prepared and approved by Minister of Health Order V-569 (*Official Gazette*, 2005, No. 93-3484); the description of the reporting procedure for the owners of noise sources to whom a permit (hygiene passport) was issued was approved by Minister of Health Order No. V-791 (*Official Gazette*, 2005, No. 128-4622); and the personnel composition of the Noise Prevention Council was approved by Minister of Health Order No. V-35 of 9 January 2006 (*Official Gazette*, 2006, No. 8-296).
- The regulations for reporting to the European Commission on the implementation of legal provisions within the EU Sector for Noise Management were worked out and approved by Order No. V-787/D1-5 of the Minister of Health, the Minister of Environment, and the Minister of Transport and Communications (*Official Gazette*, 2005, No. 128-4621).
- To ensure noise monitoring and management, Government Resolution No. 222, on the approval of the description of the state noise control and the granting of powers, was approved (*Official Gazette*, 2006, No. 29-986). Also, institutional noise management capacities have been enhanced by establishing the Noise Prevention Division within the State Environmental Health Centre to conduct noise assessment and to prepare and provide information on the methods to be used.
- In accordance with Commission Recommendation 2003/613/EC, on the guidelines on the revised interim computation methods for industrial noise, aircraft noise, road traffic noise and railway noise, and related emission data, methodological guidelines on the application of revised computation methods for industrial noise, aircraft noise, road traffic noise and railway noise, and related emission data were developed and released, and a seminar on Implementation of the Law on Noise Management in Municipalities was held.
- With a view to reducing the noise from rolling stock, AB Lietuvos geležinkeliai signed a study agreement under which the measurements of noise and vibration from rail transport will be carried out. Once this data becomes available, appropriate measures for noise reduction will be implemented.

Action: Ensure the safe collection, storage, transportation, recovery, disposal and destruction of hazardous waste, with particular attention to toxic waste

- Minister of Economy Order No. 4-435 of 2004 approved the business strategy of the State Enterprise Radioactive Waste Management Agency. The mission of this Agency is to provide quality radioactive waste management services to enterprises and organizations that use radioactive waste in their operations and to protect people and the environment from the harmful effect of ionizing radiation.
- Minister of Health Order No. V-834 of 2004 approved the regulation of import, export and transit of radioactive materials and radioactive waste.
- The Programme of Reducing the Pollution of Waters with Dangerous Substances was approved by Minister of Environment Order No. D1-71 of 13 February 2004.
- Minister of Environment Order No. D1-481 of 2004 approved regulations for the management of electric and electronic equipment and its waste. The regulations set forth the procedure for collection, storage and treatment of waste from electric and electronic equipment. Minister of Environment Order No. D1-210 of 2004 approved the framework of drafting the management plan of waste oils; the plan aimed at

identifying the measures and actions needed to reduce and limit possible pollution with waste oils and to implement the requirements of Council Directive 75/439/EEC on the disposal of waste oils.

- Minister of Environment Order No. D1-435 of 2005 approved regulations for collecting and disposing of non-inventoried equipment that contains less than 5 dm³ of polychlorinated biphenyls and polychlorinated terphenyls (*Official Gazette*, 2005, No. 111-4067), laying down the requirements for managing electric and electronic equipment waste, end-of-life vehicles and other waste containing constituents

Action: Promoting programmes, including those for the adequate dissemination of information to the public, that will prevent and minimize the consequences of natural disasters and major industrial and nuclear accidents, such as Chernobyl, and that take into consideration the needs of children and people of reproductive age.

- Government Resolution No. 966 of 2004 approved regulations on the prevention, liquidation and investigation of industrial accidents. This has actually completed the implementation of provisions of Council Directive 96/82/EC (SEVESO II) on the control of major-accident hazards that involve dangerous substances (as amended by Directive 2003/105/EC) in the country. An institution was appointed to organize general inspections of dangerous objects falling within the scope of the Directive (26 in total nationwide) and to provide reports on these objects to the European Commission.
- An effective emergency, accident and other event response system has been implemented within the Ministry of Environment. National environmental control of potentially dangerous objects that do not fall within the scope of the SEVESO II Directive is well organized. Checks of required regularity are made, reasonable requirements for the safe operation of the objects are set, and their performance is monitored.
- Director of the Fire and Rescue Department (Ministry of the Interior) Order No. 1-528 of 29 December 2006 approved the programme of checks of dangerous objects (*Official Gazette*, 2007, No. 3-143).
- Minister of Education and Science Order No. ISAK-2117 approved the curriculum of civil safety for comprehensive schools (*Official Gazette*, 2006, No. 5-169).

Action: Elimination of the worst forms of child labour by applying International Labour Organization Convention 182

- The Law on the Ratification of the Worst Forms of Child Labour Convention and the 1952 Maternity Protection Convention (with amendments) was passed in 2003.
- Article 13 of the Labour Code provides that a person shall acquire full legal capacity in labour relations and ability to acquire labour rights and undertake labour duties when he reaches the age of 16 years. Government Resolution No. 138 approved the procedure for employment, health checks and possibilities of being employed for a specific job by people younger than 18 years of age, their working hours, and the list of prohibited jobs and hazardous factors harmful to their health (*Official Gazette*, 2003, No. 13-502). It should be noted that pursuant to the laws of Lithuania, a young person is considered to be a person younger than 18 years of age, a teenager is considered to be a young person of not less than 16 and not more than 18 years of age, and a child is considered to be a young person of up to 16 years.
- Labour involving young people is also regulated by the Law on Health and Safety at Work of 2003 (*Official Gazette*, 2003, No. 70-3170).

Annex 5. Regulations and information on environmental impact assessments in Lithuania

Environmental impact assessment of planned economic activities: decisions made, screenings performed⁷

One of the goals of the environmental impact assessment shall be to optimize the planning and designing process, to avoid environmentally unfriendly screening, technical, technological, construction and exploitation decisions in the process of siting infrastructure projects. The environmental impact assessment identified, describes and assesses the potential direct and indirect impact on the environment.

The competent authority (the Ministry of Environment, the Environmental Protection Agency and regional environment protection departments) shall make a decision about the admissibility of the activity in the selected site: where it has information about the planned activity and the site and establishes whether it is necessary to perform the environmental impact assessment of the specific planned economic activity; where it has information about the planned activity, the potential significant environmental impact of that activity and opportunities to reduce this impact; and where it is familiar with the public opinion.

The completed environmental impact assessments of planned economic activities demonstrate the regional distribution of investment projects. The number of major planned economic activities that may have a significant environmental impact and that are subject to environmental impact assessment procedures is increasing in all regions every year. At the same time the likelihood of an anthropogenic impact on the environment also increases.

The screening procedure ensures that the environmental impact assessment shall be unnecessary where the activity cannot cause any significant environmental impact. The number of screenings for the environmental impact assessment of planned economic activities grows each year. The number of performed screenings has been growing annually since 2001. In 2001, 150 screenings were performed; 209 screenings were performed in 2002; 224 screenings were performed in 2003, and 422 screenings were performed in 2004. The year 2005 saw an especially significant growth in the number of screenings – that is, 713 screenings. In 2006, 624 screenings were performed, and in 2007, 666 screenings were performed. Over the last year, the majority of large-scale activities were planned in Klaipėda, Kaunas, Vilnius, Šiauliai, Panevėžys and Alytus counties.

The number of major activities subject to mandatory environmental impact assessment has also increased significantly. In 2001, 23 decisions on the admissibility of activities were made; in 2002, 26 decisions were made; in 2003, 34 decisions were made; in 2004, 33 decisions were made; in 2005, 38 decisions were made; in 2006, 45 decisions were made; and in 2007, 54 decisions were made. It should be noted that the majority of decisions were made in the counties of Šiauliai (12 decisions) and Vilnius (10 decisions).

The Ministry of Environment performed screening procedures when planned economic activities needed to be carried out in territories of several counties of Lithuania, in

⁷ This annex was adopted from the following Ministry of Environment of the Republic of Lithuania web page, from 5 February 2008: <http://www.am.lt/VI/en/VI/index.php#r/149>, accessed 1 September 2009.

territories under the control of several regional environment protection departments, or activities may have had an impact on the environment of several Lithuanian counties – the performance of the transboundary environmental impact assessment. The Ministry of Environment adopted six conclusions from the screenings and also three decisions. The implementation of the provisions of the Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo Convention) involves transboundary consultations with environmental authorities of the Republic of Latvia and the Republic of Belarus on the possibility: of constructing the planned near-surface repository for low- and intermediate-level radioactive waste from the Ignalina Nuclear Power Plant; and of constructing a temporary storage lot for spent nuclear fuel and the new solid waste management and storage facility. The Ministry of Environment also participates in transboundary consultations on the environmental impact assessment on the construction of the North European Gas Pipeline under the Baltic Sea.

Territories under the control of regional environmental protection departments differ not only according to their natural conditions and size, but differ also according to the distribution of investment projects. Activities are usually concentrated in major cities and on the sea coast.

Figures A1–A4 show the number and national distribution of major planned economic activities subject to environmental impact assessment procedures over the last three years (2005–2007).

Environmental impact assessment (hereinafter referred to as the EIA) shall be the process of identifying, describing and assessing the potential environmental impact of the planned economic activity. The principal goal of the EIA shall be to ensure that the competent authority (the Ministry of Environment, the Environmental Protection Agency and regional environmental protection departments), adopting the decision on the admissibility of the activity in the selected site, has information about the potential significant environmental impact of that activity and has opportunities to reduce this impact and become familiar with public opinion.

Besides the organizer of the planned economic activity (contracting authority) and the person preparing EIA documents, the EIA process also involves EIA entities (public authorities responsible for health care, fire protection, protection of cultural valuables, economic development and agricultural development, and also local municipal authorities) and society.

The EIA has been performed in Lithuania since 1996, pursuant to the Law on the Environmental Impact Assessment of Planned Economic Activities (*Official Gazette*, 1996, No. 82-1965; 2005, No. 84-3105), which regulates the EIA process and mutual relations of the participants.

Annexes of this law contain two lists: the List of Types of Planned Economic Activities Subject to the Environmental Impact Assessment (Annex 1) and the List of Types of Planned Economic Activities Subject to Selection Related to the Mandatory Environmental Impact Assessment (Annex 2). Table A1 shows the principal procedures of the EIA of the planned economic activity.

An environmental impact assessment shall be performed:

- when the planned economic activity is entered into the List of Types of Planned Economic Activities Subject to the Environmental Impact Assessment;
- when it is established during the selection process that the planned economic activity has to be subject to the EIA;
- when the implementation of the planned economic activity may have an impact on the areas of the European Ecological Network Natura 2000 and when the authority in charge of the organization of the security and management of protected areas (the State Service for Protected Areas) establishes that such impact may be significant, following the procedure prescribed by the Ministry of Environment.

The principal goals of the selection of planned economic activities shall be to establish whether it is necessary to perform the EIA of the specific planned economic activity and to ensure that environmental aspects will be considered during further stages of the activity planning – not only by applying technical measures that reduce the impact, but also by providing complex measures for the prevention of adverse impacts.

The selection shall be performed by the competent authority, with due consideration given to information provided by the organizer of the planned economic activity about the site where the planned economic activity is intended to be carried out and due consideration given to information that describes the planned economic activity.

Another procedure of the EIA shall be the preparation and approval of the programme. The scope of the EIA shall be established during this stage. The EIA programme (prepared according to the provisions set for the preparation of the EIA programme and report) shall be submitted to EIA entities for drawing conclusions. The EIA programme and the conclusions drawn by EIA entities shall be submitted together to the competent authority for approval. Having analysed the EIA programme and the conclusions drawn by EIA entities, the competent authority shall approve the programme. Based on the approved programme, an EIA report shall be prepared, which shall provide a thorough analysis of the impact on biota, measures to reduce or compensate the impact, and the alternatives. The report prepared shall be presented to EIA entities, to present the conclusions on the opportunities of the planned economic activity, and to the public during the public hearing.

The EIA report, the conclusions of EIA entities and the reasoned assessment of the proposals of the public shall be presented to the competent authority for decision-making. Having received EIA documents, the competent authority must promptly issue the announcement on the web site of the Ministry of Environment. Having analysed the EIA report and the conclusions of EIA entities and proposals of the public, the competent authority shall decide whether the planned economic activity is admissible in the selected site, with due consideration to its nature and environmental impact.

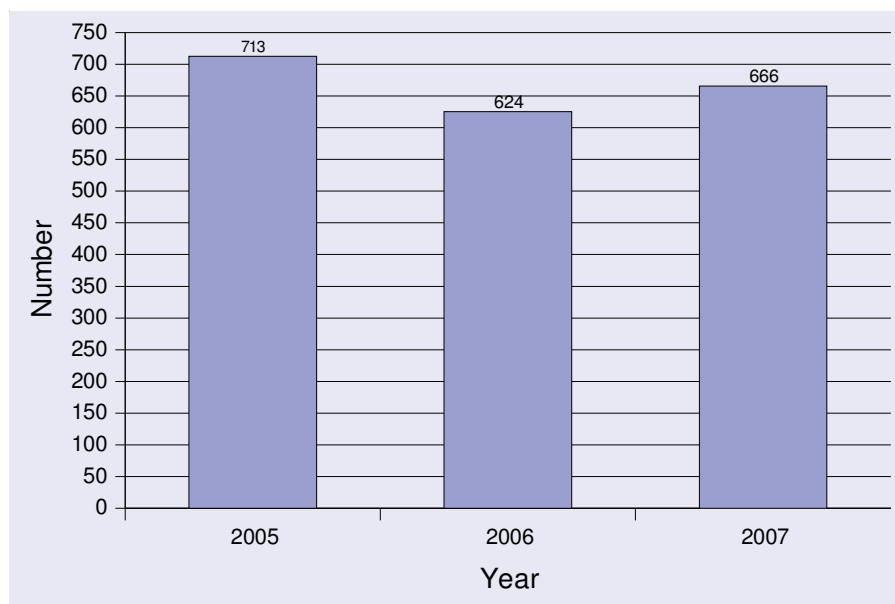
Public information and involvement procedures shall be as follows:

- reports on the EIA of the planned economic activity: the conclusion of the site selection and the prepared EIA programme;
- public introduction of the EIA report on the planned economic activity to society; and
- information about the decision made in reference to the planned economic activity.

Table A1. Principal procedures of the EIA of the planned economic activity

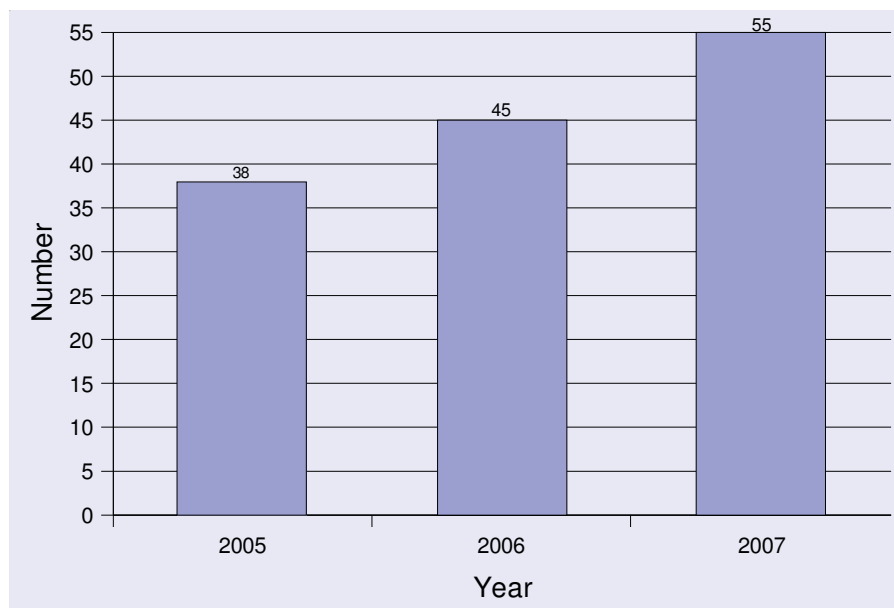
Annex 1	Annex 2
↓	↓
	Screening
	↓
	Screening conclusions drawn by the competent authority
	↓
	Informing the public about the conclusions of the screening
	↓
EIA programme	
↓	
Informing the public about the prepared EIA programme	
↓	
Conclusions drawn by EIA entities about the EIA programme	
↓	
Approval of the EIA Programme by the competent authority	
↓	
EIA report	
↓	
Introduction of the EIA report to the public; proposals of the public	
↓	
Conclusions drawn by EIA entities about the report (opportunities of the planned economic activity)	
↓	
Decision of the competent authority on the opportunities of the planned economic activity	
↓	
Informing the public about the decision made	

1. Fig. A1. Number of screenings performed for the EIA of planned economic activities, 2005–2007



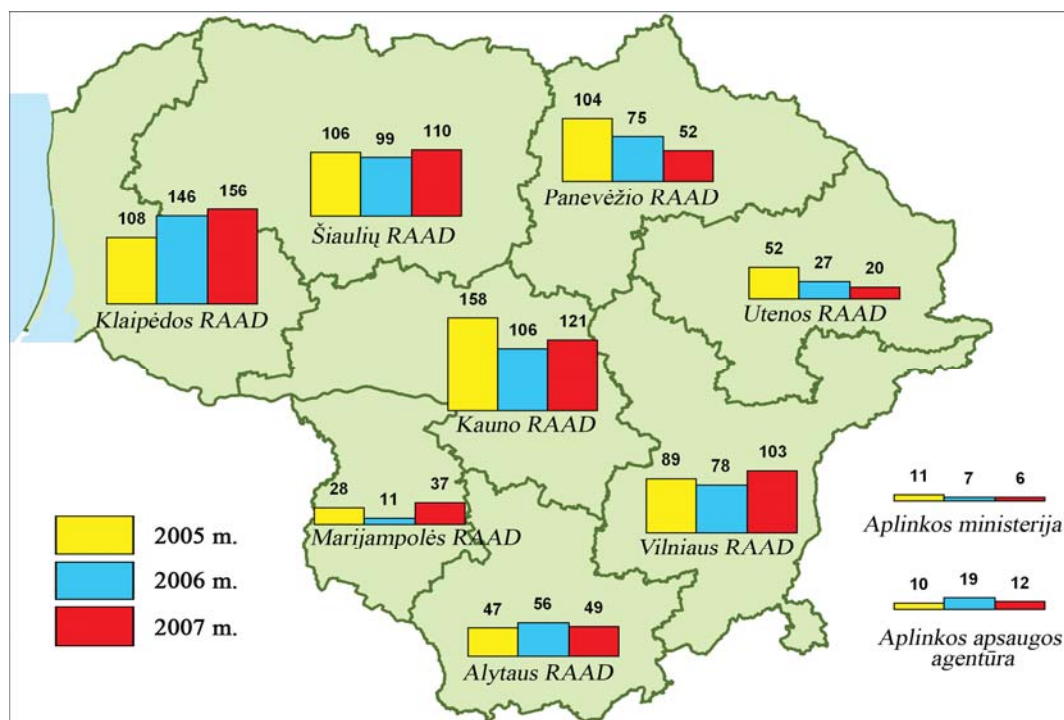
Sources: Databases of the Ministry of Environment, the Environmental Protection Agency and the regional environmental protection departments for 2005–2007.

Fig. A2. Number of decisions made on the admissibility of economic activities, 2005–2007



Sources: Databases of the Ministry of Environment, the Environmental Protection Agency and the regional environmental protection departments for 2005–2007.

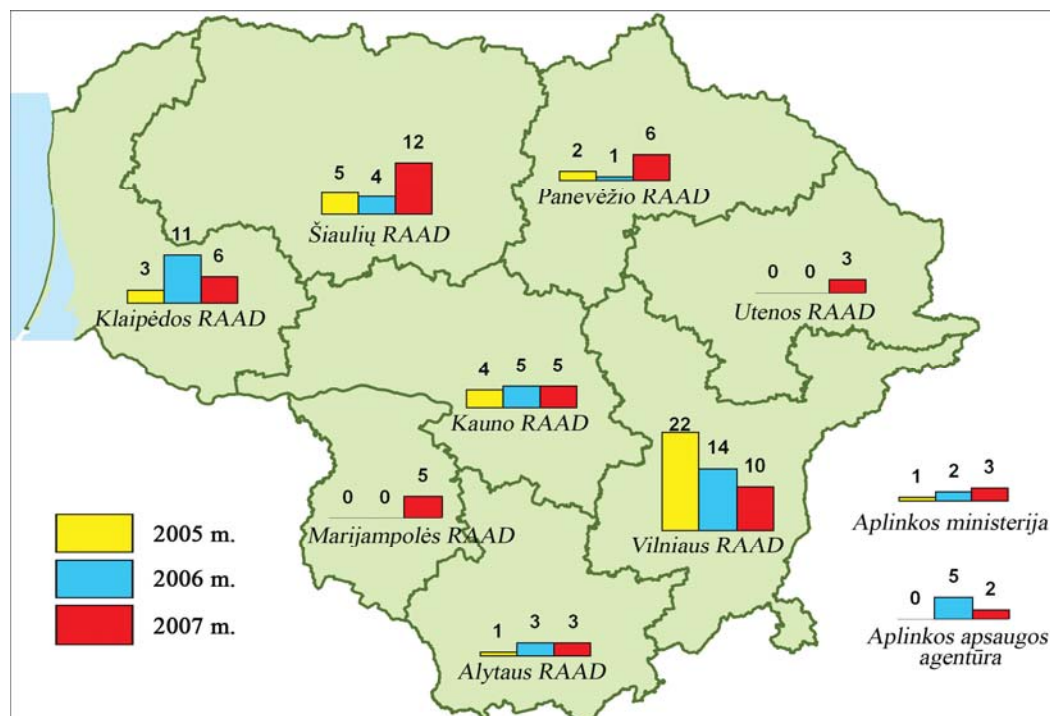
Fig. A3. Number of screenings performed by competent authorities, 2005–2007



Note. RAAD = Region; Aplinkos ministerija = Ministry of Environment; Aplinkos apsaugos agentūra = Environmental Protection Agency.

Source: Databases of the Ministry of Environment, the Environmental Protection Agency and the regional environmental protection departments for 2005–2007.

Fig. A4. Number of decisions adopted by competent authorities, 2005–2007



Note. RAAD = Region; Aplinkos ministerija = Ministry of Environment; Aplinkos apsaugos agentūra = Environmental Protection Agency.

Source: Databases of the Ministry of Environment, the Environmental Protection Agency and the regional environmental protection departments for 2005–2007.

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/Euro 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/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 Lithuania. It evaluates strong and weak points of environmental and health status in Lithuania and brings recommendations from independent experts.

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