

Environment and health performance review

Poland



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ABSTRACT

This report describes and evaluates the current environment and health situation in Poland. 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 the 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. This project was developed by the WHO Regional Office for Europe 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 actions. 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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Abbreviations

APHEA	Air Pollution and Health – A European Approach
APHEIS	Air Pollution and Health: A European Information System
CEHAPE	Children’s Environment and Health Action Plan for Europe
COPHES	Consortium to Perform Human Biomonitoring on a European Scale
ECNIS	Environmental Cancer Risk, Nutrition and Individual Susceptibility
EHPR	environment and health performance review
ENHIS	European Environment and Health Information System
ESBIO	Expert Team to Support Biomonitoring in Europe
GDP	gross domestic product
INCHES	International Network on Children’s Health, Environment and Safety
LEHAP	local environment and health action plan
NEHAP	national environment and health action plan
NGO	nongovernmental organization
NIPH-NIH	National Institute of Public Health – National Institute of Hygiene
OECD	Organisation for Economic Co-operation and Development
PM	particulate matter
PPP	purchasing power parity
SCOEL	Scientific Committee on Occupational Exposure Limits
UNECE	United Nations Economic Commission for Europe
UNICEF	United Nations Children’s Fund
WHO	World Health Organization

Map of Poland



Source: United Nations Map, No. 3784 Rev. 4, January 2004.

Foreword

The purpose of this report is to convey a clear picture of the current environment and health situation in Poland. It evaluates the strong and weak points of environmental and health status in Poland. It also brings recommendations from independent experts.

The process of preparing the environment and health performance review began in March 2007. A Children's Environment and Health Action Plan for Europe (CEHAPE) workshop took place with the aim of supporting the national counterparts in the development of a national children's environment and health action plan.

The evaluation mission took place from 2 to 6 July 2007 in Warsaw. During this field visit, the WHO team met 54 representatives from 21 institutions from various sectors involved in environment and health. The national contributors are acknowledged at the beginning of this report.

The information included in this report is valid until the time of the EHPR mission was completed, ie 6 July 2007. Since then, changes have occurred in the structure of the various institutions. New staff members now fill various positions.

The environment and health performance review for Poland was carried out thanks to the efforts and support of Poland's Ministry of Health, under the supervision of the Undersecretary of State, Marek Grabowski. Special thanks are due to Zbigniew Rudkowski, National CEHAPE Programme Coordinator and Robert Jeszke, Department of Public Health of the Ministry of Health, who organized the visit, contacted all relevant sectors, provided background information and shared their valuable time.

We are also grateful to the WHO Country Office for Poland and especially the Head of the Country Office, Paulina Miskiewicz, for all her assistance and support in the preparation and implementation of the mission.

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Executive summary: main conclusions and recommendations

Main conclusions

- The quality of the environment has improved.
- The use of data is not sufficiently organized and institutionalized.
- Environment and health are dealt with by two parallel systems: the environment and sanitary inspectorates.
- Intersectoral collaboration functions better at the level of institutes and at the local level and with the private sector than at the government level.
- The responsibilities need to be clarified in health impact assessment, environmental impact assessment and environmental health impact assessment.
- Children are well recognized as special target groups of policies and programmes. Prevention is well focused on children.
- Capacity-building, training in environment and health and environment and health in the medical curriculum are not sufficiently developed.
- Environment and health are tackled predominantly from a research perspective, but the translation of the research results into the policy advisory function for the institutions is not clearly defined.
- Many prevention activities focus on behaviour and less on structural elements.
- Related ministries (such as the Ministry of Finance) do not provide any financial contributions.
- Economic arguments and health costs are not used for setting priorities or for informing or convincing policy-makers to take preventive measures.

Recommendations

- Research results need to be better translated into policy decisions.
- Basic and supplementary training on environment and health for general practitioners and paediatricians needs to be further institutionalized.

- A more concrete programme on health and environment should be prepared as an integral part of the new National Health Programme. Clear synergies need to be established between the environment and health policy programmes.
- Integrated economic analysis (such as cost–benefit analysis) should be used more systematically in environment and health policy-making.
- A statutory framework should be developed for including the European Environment and Health Information System (ENHIS) and health impact assessment in planning, monitoring and evaluating environment and health policy and action programmes.
- An institutional entity should be designated as a formal body to coordinate the implementation of environmental health impact assessment in Poland.

The quality of the environment has steadily improved in Poland in the past 15 years. However, there are still many environmental risk factors to health. The main environment and health issues in Poland include water and sanitation, exposure to environmental tobacco smoke and urban outdoor air pollution, road traffic injuries and unintentional injuries among children. Overall, transport is one of the major problems at the urban level, resulting in high air pollution and increased risk of road traffic injuries.

The National Health Programme reflects these priorities and also emphasizes the need for protecting children and for giving priority to socioeconomic inequality. Nevertheless, the priorities set by environment and health activities and programmes do not often explicitly reflect socioeconomic inequality.

Besides specific environment and health risks, there are concerns regarding structural aspects of environment and health policy-making. From an institutional perspective, many sectors and institutions are tackling different aspects of environment and health and do not seem to coordinate sufficiently. The Chief Sanitary Inspectorate is responsible for environment and health from a sanitary-epidemiological perspective, while the National Institute of Public

Health – National Institute of Hygiene is responsible for advising on setting legal provisions but also for monitoring and risk assessment. Environment and health is delegated to two institutes, which are also in charge of monitoring, risk assessment and project implementation. Although environment and health are tackled predominantly from a research perspective, the policy advisory function for the institutions involved is not very clearly defined.

Different administrative levels increase the difficulty in developing and implementing adequate environment and health activities.

The role of physicians in the environment and health process needs to be strengthened, thereby strengthening their role in disease prevention. Adequate training and continuing education in environment and health are required. Initial steps have been made by establishing an Environmental Health Training Centre at the Institute of Occupational Medicine and Environmental Health in Sosnowiec in 2001. However, basic and supplementary training on environment and health for general practitioners and paediatricians needs to be institutionalized further.

Environmental health threats are clearly addressed and recognized in political principles (the Constitution) and are acknowledged by both the national health and environment policy programmes. However, the two programmes need to be linked better. The Long-Term Governmental Programme “Environment and Health” jointly developed by the Ministry of Health and the Ministry of Environment as an implementation programme of the national environment and health action plan (NEHAP) was carried out between 2000 and 2004 and has not been renewed since.

The NEHAP has supported the establishment of synergies between environment and health activities and the children’s environment and health action plan (CEHAP), which is being prepared and is considered to be an essential tool in guiding the national environment and health process. It is recommended that the CEHAP be an integral part of the National Health Programme. This Programme functions through an interministerial coordination group. Poland has made significant progress in developing an intersectoral approach in environment and health policy-making. The National Road Safety

Programme is a good example. Nevertheless, the intersectoral collaboration in Poland is very different at different operational levels. Generally speaking, it seems that the collaboration functions better at the local or voivodship level, where common activities and decisions are often initiated and taken on a more personal basis than at the national level.

An intersectoral approach is to be strengthened also from financial and economic perspectives. Economic arguments and health costs are not used enough for setting priorities or for informing or convincing policy-makers to take preventive action when drafting regulations that are relevant for preventing health risks due to environment.

Poland has made progress on compiling and providing access to environmental information. The Act on 'Information on the Environment and its Protection and on Environmental Impact Assessment' stipulates the right of access to information. A great variety of institutions identify and monitor environmental hazards, from both the health and the environment sides, resulting in a scattered monitoring approach. There is considerable information but not a uniform approach to preparing, analysing and reporting to support health and environment policy action. The data are scarcely shared between institutions. The National Institute of Public Health – National Institute of Hygiene routinely collects health indicators. But monitoring focuses on either health or environment, and integrated health and environment information is lacking.

This is also true for health impact assessment and for environmental health impact assessment. The health component within environmental impact assessment reports is still insufficient and inappropriate. The national report prepared in 2002 on the impact of the national environment and health action plan and the WHO European environmental policy stressed the importance of upgrading environmental health impact assessment and risk assessment procedures. Although the national collaborating centre has implemented activities in this regard, a national accreditation system still needs to be established for experts on environmental health impact assessment, and the methods of health impact assessment and environmental impact assessment need to be developed further.

Priority-setting in environment and health should be supported by the use of standardized tools. The European Environment and Health Information System (ENHIS) is a recommendable tool to be implemented as a national environment and health information system at both the national and regional levels.

Although access to information about environmental conditions and the health status of the population is a basic right in Poland, society still seems to be little aware of environmental risk factors. The existing information is not systematically communicated to the public, and the mass-media presence seems to be more present in specific environment and health fields (nutrition and physical activity) than in others. Disease prevention campaigns in the mass media are not disseminated for free, adding to the difficulties of public or nongovernmental institutions of disseminating information on environment and health risks.

Introduction

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

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

Background

Preventing disease and injury is at the heart of public health and health systems. The environment is responsible for as much as 24% of the total burden of disease (1).

Environmental health comprises the aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. According to the definition used by the WHO Regional Office for Europe, environmental health includes both the direct pathological effects of chemicals, radiation and some biological agents and the effects (often indirect) on health and well-being of the broad physical, psychological, social and aesthetic environment (2). In this report, the relationship between environment and health is denoted as "environment and health". This covers all human health issues that are related to environmental factors and all environmental factors that may (possibly) affect health (either negatively or positively).

In 1989, the WHO Regional Office for Europe launched the European Environment and Health Process through a series of ministerial

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

Environment and health issues are essentially cross-sectoral, and human health can only be protected from the risks posed by a hazardous or contaminated environment through the coordinated input of different sectors and greater capacity on the part of the health sector to enlist the support of these actors to develop a high level of targeted activities and to ensure consistency and synergy with other relevant commitments made by Member States (3,4).¹ The importance of coordinated input from different sectors was recognized by the ministers attending the Second Ministerial Conference on Environment and Health in Helsinki (5) and endorsed in the commitments of the framework action plan the 'Environment and Health Action Plan for Europe' (EHAPE). This plan called for the development of national environment and health action plans (NEHAPs). The theme of the Third Ministerial Conference on Environment and Health held in London in 1999, 'Action in Partnership' (6) continued to promote this key message and relevant commitments. Following the Fourth Ministerial Conference on Environment and Health in Budapest in June 2004, the Member States refined their action plans to addressing vulnerable populations, most especially children and committed to reducing children's exposure to environmental hazards, countries are now seeking support for

¹ The Budapest Declaration (4):

- 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).

implementation work. To provide assistance to member states, the WHO Regional Office for Europe ensured implementation of a DG Sanco funded project that would 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 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

The EHPRs are based on a programme of Environmental Performance Reviews (EPRs) launched in 1991 by the Organisation for Economic Co-operation and Development (OECD) to help OECD member countries improve their individual and collective performance in environmental management. The programme was mandated to the United Nations Economic Commission for Europe (UNECE) in 1993 to ensure coverage of the whole region of Europe (7,8). In the period 1997–2004, the WHO Regional Office for Europe contributed to the

EPRs, providing a review of the health aspects related to the environment.

Since the EPRs focus on environmental management, WHO Regional Office for Europe recognized the benefits of using this existing tool and developing its analysis to cover the relationship between human health and the environment and between the environment and health policy management (9–11).

The EHPRs are in line with and draw on the national profiles of children's health and environment developed by WHO headquarters (12) and are strongly linked to ongoing Regional Office environment and health programmes. The ENHIS records information about the national approach to linking environmental conditions and public health, its importance for healthy environmental policy and measurement of the countries' progress towards the targets set in the Europe-wide action programmes (13). 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 make a situation analysis from a WHO European (Region-wide) perspective. The analysis is then further complemented with the information gathered in the review process.

As in the case of ENHIS, the EHPRs 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 give priority to four regional priority goals for Europe (3):

- 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 health consequences from accidents and injuries and pursue a decrease in morbidity from lack of adequate physical activity, by

promoting safe, secure and supportive human settlements for all children;

- 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 asthma attacks, 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 Consumers. In support of the European environment and health process, the European Commission has identified the need to develop and strengthen policy actions to reduce the risk of disease and disability arising from agents in the environment in Europe and is co-funding this activity of the WHO Regional Office for Europe.

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. Two series of reviews are conducted; one is part of the project funded by the European Commission, and the second results from the bilateral Biennial Collaborative Agreements (BCA) between WHO and the various health ministries. Poland's EHPR is part of the former.

The EHPR 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 back to the counterpart, the head of the WHO 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 Parma, Italy in 2010.

Structure of the report

The status of the environment and health situation in Poland 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 made at the Fourth Ministerial Conference on Environment and Health in Budapest in 2004. The information and data summarized in this reported is valid till its final collection and collation ie 6 July 2007, which is the last day of the EHPR in Warsaw.

The report is made up of six chapters. The first two chapters describe the health characteristics of Poland's population and the major environment and health risks in Poland. The following chapters describe the institutional set-up in environment and health, the legal framework under which environment and health policy is implemented, the degree and functioning of intersectoral collaboration mechanisms and the tools available for the operation of environment and health services (such as: monitoring, environmental health impact assessment and health impact assessment, capacity-building and communication). Recommendations are formulated depending on the background situation and are clearly set out at the beginning of each chapter.

1 Health characteristics of Poland's population

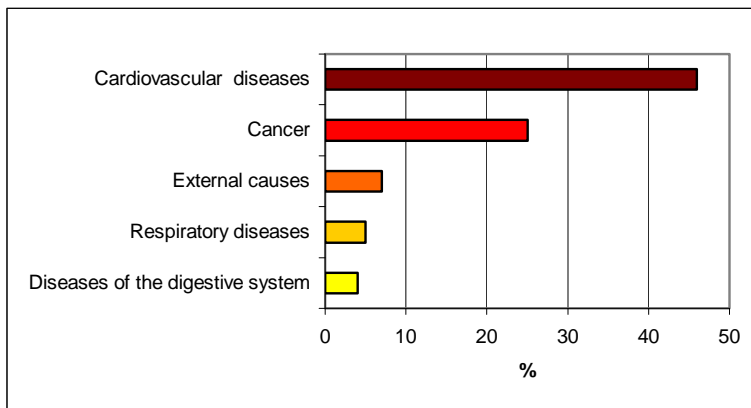
Conclusions

- Main causes of death: cardiovascular diseases and cancer
- High mortality rate for road traffic injuries in children and young people
- WHO estimate of the environmental burden of disease for Poland: 17%

Life expectancy at birth in Poland in 2005 was 71 years for men and 79 years for women (14). In comparison to the other new European Union (EU) members, Poland is in the middle of the range. The life expectancy is above the average for the WHO European Region, particularly for women.

In 2004, cardiovascular diseases accounted for 46% of all deaths and cancer for 25%. They were followed by external causes, respiratory diseases and diseases of the digestive system (7%, 5% and 4%) (15). Cardiovascular diseases and cancer are the leading causes of death in most countries in the WHO European Region, although the percentage vary between the countries.

Fig. 1. Leading causes of death in Poland, 2004



Source: *Concise statistical yearbook of Poland* (15).

WHO estimates on the burden of disease in Poland show that environmental risk factors accounted for 17% of the total burden of disease in 2004 (16).

Children's health overview according to the regional priority goals

The standardized mortality rate for road traffic injuries among people aged 0–24 years is 9.3 deaths per 100 000 population and is above the average for the European Region. Road traffic injuries contribute significantly to the overall burden of mortality among people younger than 25 years in Poland. Mortality among children (1–19 years old) due to unintentional injuries (drowning and submersion, poisoning, falls and exposure to smoke, fire and flames) is also slightly above the median range compared with other countries in the European Region (17).

The rate of postneonatal deaths from respiratory diseases is 0.20 per 1000 live births (17); Poland is in the middle group of countries. Nevertheless, the European Region still differs between the western and eastern countries. Asthma and allergies are the most common

chronic diseases in children reported by Poland to the International Study of Asthma and Allergies in Childhood study, but the prevalence of asthma (10%) is relatively low among children aged 13–14 years. Poland reported a high and rising rate of allergic rhino-conjunctivitis symptoms among children 6–7 years old and 13–14 years old.

2 Environment and health priorities

Conclusions

Environment and health risks and major determinants of health

- The environment and health situation has improved overall.
- Health risks arise from water and sanitation.
- Exposure to environmental tobacco smoke and particulate matter (PM₁₀) are high.
- The rates of road traffic injuries and unintentional injuries among children are high.
- There is little awareness of health risks deriving from climate change, both in civil society and government institutions.

Public health

- Children are well-recognized as a key priority of the public health system.
- Preventing environment and health risks is often not explicitly considered a public health priority.
- Socioeconomic inequality is reflected in the objectives of the National Health Programme but is not often explicitly reflected in the priorities set by environment and health activities and programmes.

Structural concerns

- The role of the built environment in public health is mostly acknowledged from a pollutant perspective and not from an integrated health-centred perspective.
- Actions and programmes are fragmented amongst different stakeholders, resulting in lower efficiency.
- Priority-setting in environment and health should be supported by the use of standardized tools. ENHIS is a recommendable tool to be implemented at both the national and sub-national levels.

Recommendations

- Policy measures on preventing exposure to harmful environmental risk factors have to be strengthened both by actions reducing the level of pollutants and risk factors and behavioural changes within the population.
- The identification of environment and health priorities should be strengthened at the national and sub-national levels.
- Efforts should be directed towards identifying all data sources according to the methods underlying the ENHIS.

With the support of the European Commission and in collaboration with partners from 18 Member States, including Poland, the WHO Regional Office for Europe developed the ENHIS (13), 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 CEHAPE as priorities for pan-European action, particularly its four regional priority goals. The information covers health issues related to environment, environmental issues affecting children's health and actions aimed at reducing or preventing health risks (13).²

² For all information and data quoted in this section, unless not specified differently, see the country profile of Poland (17) and the ENHIS fact sheets (18).

Access to safe and affordable water and adequate sanitation

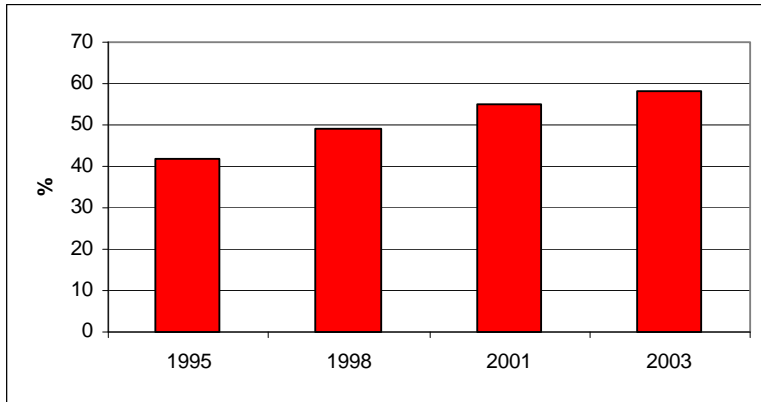
Access to a regular, clean and safe drinking-water supply, improved wastewater and sanitation and safe bathing water are essential factors in public health. The ENHIS analysis shows that water management is one of the greatest challenges in Poland.

According to the official data reported by Poland to the WHO/UNICEF (United Nations Children's Fund) joint monitoring programme and used in an ENHIS fact sheet, 96% of the population in rural areas had access to an improved water supply in the home, and 85% of the population was connected to a public water supply (19).

The percentage of the population served by a sewerage system connected to a wastewater treatment facility and a safe wastewater disposal system assesses the potential level of pollution from domestic point sources entering the aquatic environment, which may adversely affect the health of the inhabitants. Although significant progress has been made since 1995, only 58% of the population is connected to wastewater treatment facilities and only 14% of the population is connected to sanitation facilities in the home in rural areas (20). This, in turn, affects the quality of recreational waters.

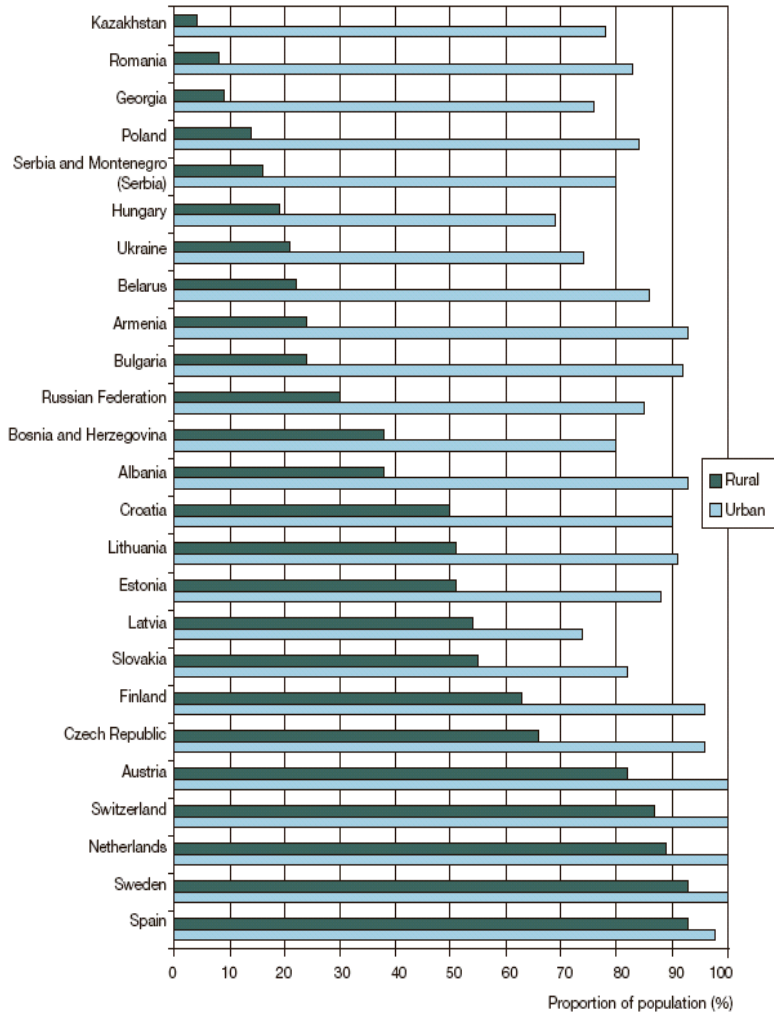
Compliance with the mandatory requirements for water quality were fulfilled in only 11.9% of the bathing areas in freshwater zones and 35.3% of the bathing areas in coastal zones. In 2005, Poland had one of the lowest compliance rates in the framework of the European Commission bathing water quality directive both in terms of compliance with standards and insufficient sampling (21). The non-compliance most likely reflects the initial difficulties of new EU countries in implementing the monitoring schemes. Given the developments in the implementation of directive 76/160/EEC until 2006, when it was repealed by the new directive 2006/7/EC, progressive implementation and enforcement can be expected resulting in improved water quality in European recreational water environments.

Fig. 2. Percentage of the population connected to wastewater-treatment facilities in Poland, 1995–2003



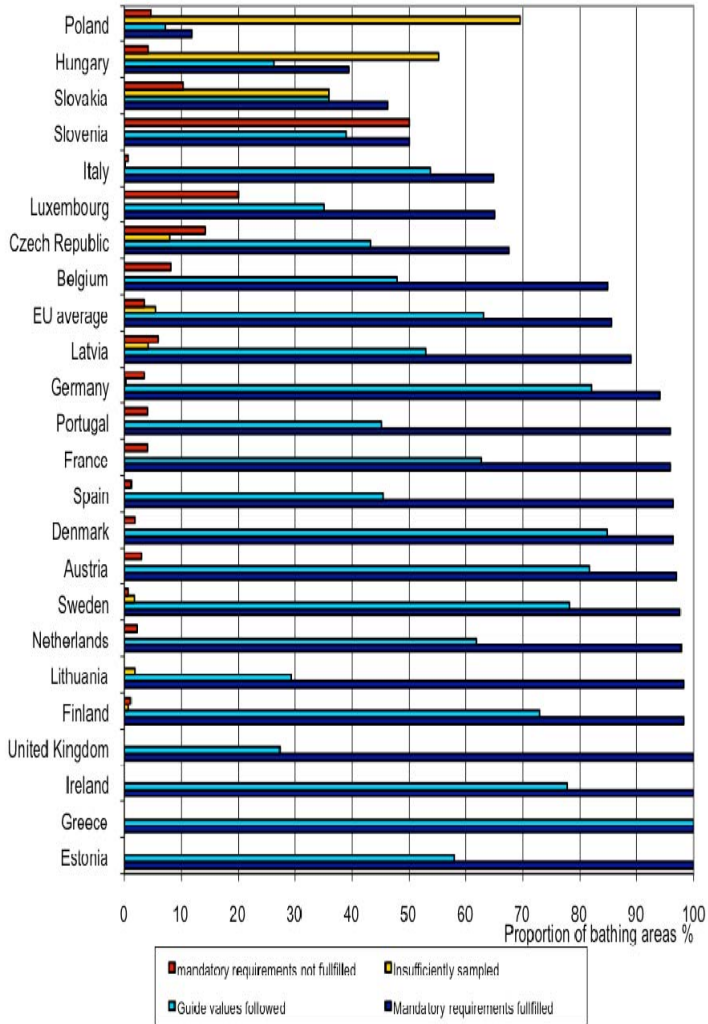
Source: *Wastewater treatment and access to improved sanitation (20)*.

Fig. 3. Percentage of the population connected to sanitation facilities in urban and rural areas in selected countries in the WHO European Region, 2004



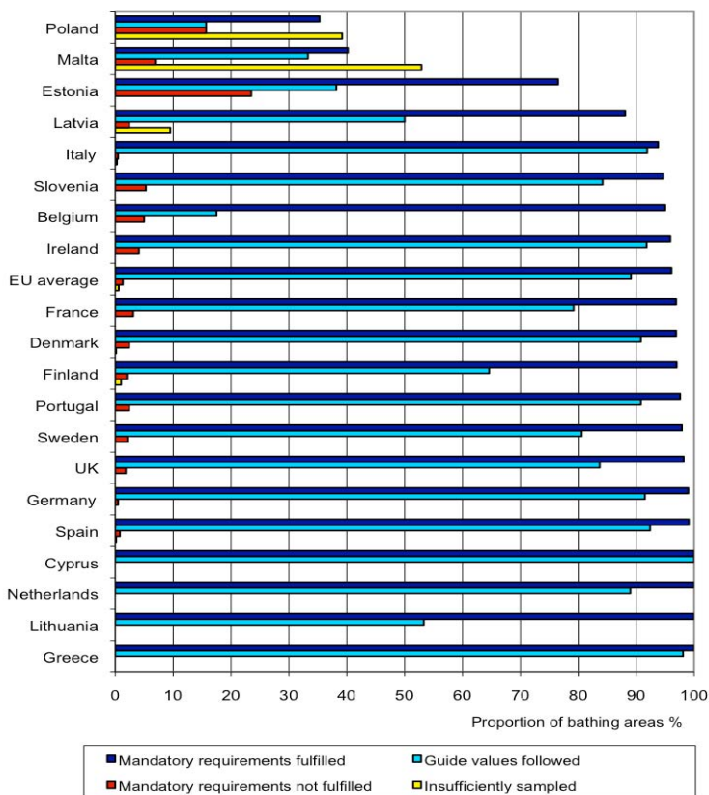
Source: *Wastewater treatment and access to improved sanitation (20)*.

Fig. 4. Bathing water quality in freshwater zones in the EU, 2005



Source: *Bathing water quality (21)*.

Fig. 5. Bathing water quality in coastal zones in the EU, 2005



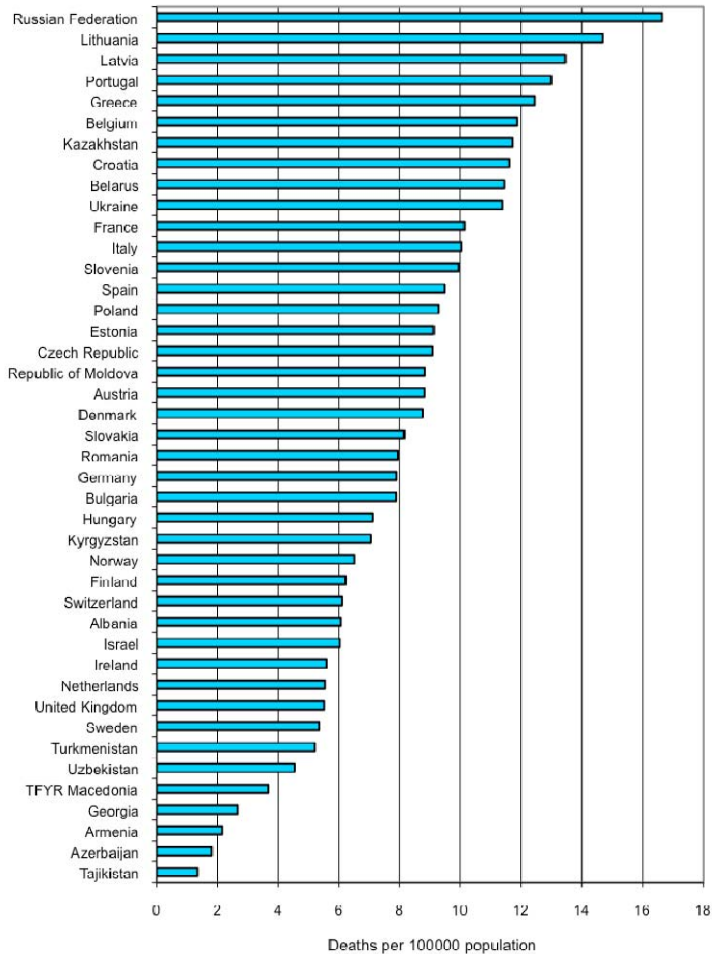
Source: *Quality of bathing water, 2005 bathing season (22)*.

Reduce health consequences from accidents and injuries and enhance physical activity

As mentioned in the previous chapter, unintentional injuries are a leading cause of morbidity and mortality among children and adolescents in the WHO European Region. In Poland, the mortality rates due to road traffic injuries among people aged 0–24 years (9.28

per 100 000 population) and the mortality rates due to unintentional injuries among children 1–19 years old (3.38 per 100 000 population) are only slightly above the European average but still unacceptably high.

Fig. 6. Standardized mortality rates for road traffic injuries among people aged 0–24 years in the WHO European Region, averages for 2002–2004 or the most recent three years



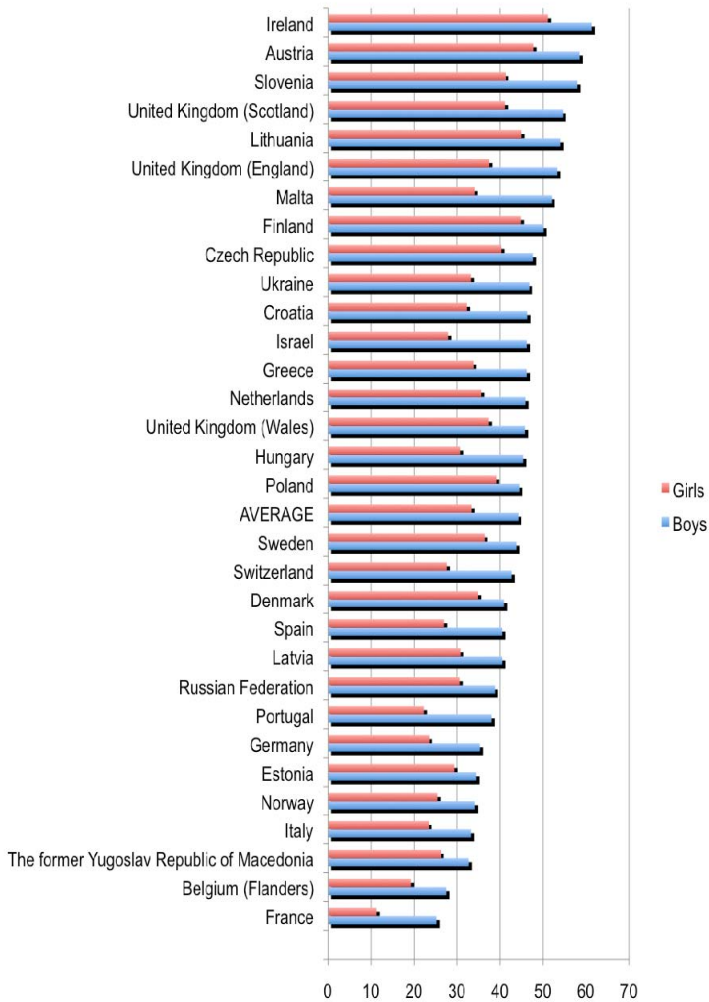
Source: *Mortality from road traffic injuries in children and young people* (23).

The ENHIS analysis shows that the high prevalence of unintentional injuries and road traffic injuries has increasingly been recognized as a

priority at the European level, and country efforts should be further strengthened and improved. The indicator summarizing the implementation of 12 policies towards injury prevention (excluding road traffic injuries) based on the information from 23 WHO European Member States shows that Poland is within the range of moderate to low commitment towards injury prevention.

A safe environment that encourages personal mobility and physical exercise is important for health and preventing obesity and excess body weight. Although the prevention of injuries does not seem to be commonly promoted in Poland, policies to reduce and prevent excess body weight and obesity in children and adolescents have been steadily improved. With a score of 19, Poland is above the mid-point of the scoring scale, which is 12. Self-reported data from the countries participating in the Health Behaviour in School-Aged Children survey show that Poland ranges in the average of countries with 11-year-old boys who were physically active at the level recommended by the moderate-to-vigorous physical activity guidelines. Further, the prevalence of excess body weight (including obesity) among 13-year-old boys in Poland is lower than the average in the European Region.

Fig. 7. Percentage of children and adolescents undertaking sufficient physical activity in selected European countries, 2001/2002



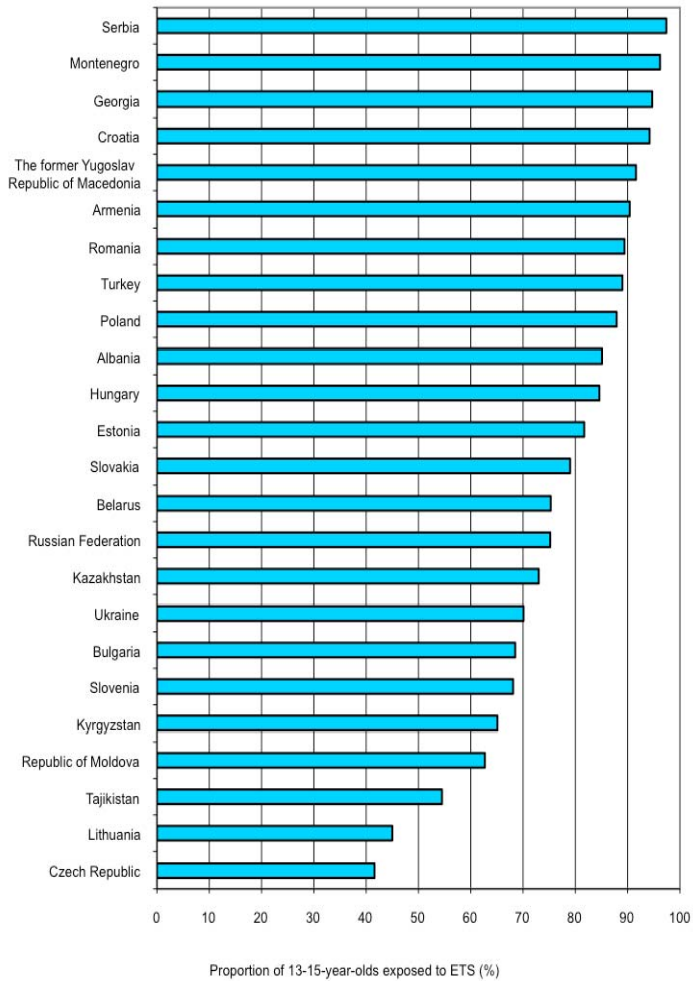
Source: *Percentage of physically active children and adolescents (24).*

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 of 0.20 postneonatal deaths per 1000 live births due to respiratory diseases, Poland is in the overall range of countries with low levels of mortality but still greater than those in western European countries. The asthma prevalence in Poland is below or at the average of countries most affected by these types of health risks, although asthma symptoms are increasing among children 6–7 and 13–14 years of age. For allergic rhino-conjunctivitis, Poland has the highest prevalence of the countries participating in the International Study of Asthma and Allergies in Childhood, and the prevalence is rising.

About 88% of children 13–15 years old are exposed to environmental tobacco smoke at home and 90% outside the home. Environmental tobacco smoke is by far the most important indoor air quality issue in health terms, and Poland is strengthening its policies to reduce children's exposure. The WHO tobacco control database (25) and the information summarized in an ENHIS fact sheet (26) show that smoking is prohibited in every means of public transport, educational facilities, workplaces and public places (with special smoking areas). The high level of environmental tobacco smoke exposure at home shows the need for further strengthening health promotion and raising awareness centred on activities and programmes aiming at behavioural changes among the population.

Fig. 8. Proportion of children 13–15 years old exposed to environmental tobacco smoke in their homes, 2002–2005



Source: *Exposure of children to environmental tobacco smoke (27)*.

The mean concentration of particulate matter with an aerodynamic diameter of less than 10 μm (PM_{10}) calculated for cities in Poland is 30.6 $\mu\text{g}/\text{m}^3$; Poland thus has a relatively high level of outdoor air pollution in urban areas among the countries of the European Region for which data are available. However, outdoor air pollution is declining in Poland, and urban air quality monitoring and reporting has improved significantly (28).

Poland has low radon gas concentrations in dwellings.

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 industrialized countries. It is a subject of considerable public concern, especially in the areas perceived as having excessively high incidence and in relation to putative environmental causes such as radiation and chemicals. In Poland, the standardized incidence is 32.3 per million population per year, one of the lowest in the European Region.

Lead concentrations in the blood of children, which constitute a credible biomarker of exposure to lead, have declined since unleaded fuel was introduced. Nevertheless, exposure of children remains higher near industrial emitters of lead than in other areas. Geometric mean concentrations of lead in the blood of children living near copper and zinc smelters in 2002–2007 ranged between 5.5 and 7.7 $\mu\text{g}/\text{dl}$. The geometric mean concentrations of lead in the blood of children living in control group areas in 2004–2007 were about 3.0 $\mu\text{g}/\text{dl}$.

Children are particularly vulnerable to damage related to ultraviolet radiation. Much exposure to ultraviolet radiation occurs in childhood and thus determines the risk 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 sun beds by young people. The age-standardized rates of melanoma among

people younger than 55 years in Poland are lower than in many other countries, especially the northern part of the European region. Poland is showing a low degree of implementation of action to reduce the exposure of the population to ultraviolet radiation.

Summary

Summarizing the results obtained from the overview provided by the ENHIS indicators according to the four regional priority goals defined in the CEHAPE, water and sanitation, exposure to environmental tobacco smoke and urban outdoor air pollution, road traffic injuries and unintentional injuries among children are the main health and environment concerns in Poland.

The National Health Programme reflects these priorities. They are also very much in accordance with the priorities and concerns expressed by public health professionals during the review. Water and air quality are perceived as being major risk factors for the health of Poland's population. The review shows that water contamination occurred more often in small water supplies and more rarely in the medium-sized ones. About 10% of the samples taken did not comply with the standards. The non-compliance mainly referred to the levels of iron, manganese, turbidity, less often to the level of ammonia, and in 2% to other analysed water parameters.

Closing many industrial plants has steadily improved air quality. In consequence, the quality of the environment has improved in the past 15 years, and the concentration of total suspended airborne particles (industrial dust) declined by two orders of magnitude. Air quality is still considered to be a major environmental risk factor to health. Transport is seen as a major problem at the urban level, resulting in high air pollution and noise and an increased risk of road traffic injuries.

In addition to the results of the ENHIS, according to the opinion of the public health professionals the review underlines additional environment and health risks relevant for Poland. The most frequent

food outbreaks were *Salmonella* and *Campylobacter*, with general patterns changing to more noroviruses and rotaviruses.

Besides specific environmental health risks, concerns focus on structural aspects. The new National Health Programme specifically declares children to be a national priority and at the core of several activities initiated in the health sector. The National Health Programme stresses the need for giving priority to reducing socioeconomic inequality, but the priorities set by environment and health activities and programmes often do not explicitly reflect this. Socioeconomic inequality is still a major determinant of exposure to environmental health risks in Poland.

Distributed EU funds mostly support the structural development of the country (European Investment Bank, EU revitalization programmes etc.) with a specific focus on revitalizing the urban and built environment. Nevertheless, the review has shown that the effect of the built environment on public health has been recognized only in the context of emission risks arising from construction materials. The role of home safety measures in injury prevention still needs to be developed further.

The identification of environment and health priorities should be strengthened at the national and sub-national levels. Most of the information used by the ENHIS is available within Poland. Efforts should be directed towards identifying all data sources according to the methods underlying the ENHIS. The establishment of a framework for accessing and exchanging 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 very high.

3 Institutional set-up

Conclusions

- Different levels of administration create difficulty in developing and implementing adequate environment and health activities.
- At the government level, the environment as an explicit determinant of public health is covered through the Department of Environmental Hygiene of the Chief Sanitary Inspectorate. Nevertheless several governments, quasi-governmental and research-oriented institutions are responsible for managing environment and health risk factors, actions and programmes.
- Environment and health are tackled predominantly from a research perspective. The policy advisory function of the institutions involved in environment and health is not very clearly defined.
- Environment and health are predominantly covered through an occupational health approach.
- Many different institutions tackle different aspects of environment and health and do not seem to coordinate sufficiently.
- Many institutions dealing with environment and health issues do not seem to be involved in the work of the public health institutions.
- Local governments are given the responsibility to implement environment and health measures, but insufficient resources (capacity and expertise as well as financial resources) are allocated to them.
- No nongovernmental organizations (NGOs) focus on environment and health; single NGOs tackle environment and health relevant issues individually.
- The role of physicians in the environment and health process is not well defined; they are mainly seen as the interface with civil society but have no specific involvement in or awareness of environmental health.

- There is considerable high-quality expertise in environment and health, and it effectively contributes to implementing European programmes and projects. However, the expertise is not sufficiently used in national programmes. The collaboration and transfer of the good practice within the country is rather limited.

Recommendations

- Physicians should be more actively involved in preventive action – better information generated by government authorities dealing with environment and health and direct collaboration with medical societies would help in this task.
- Improved and stable employment opportunities should be created for environment and health professionals.
- Environment and health NGOs representing public and professional interests in environment and health policy- and decision-making should be strengthened.
- Efficiently allocating the available financial resources requires coordinating the responsibilities among all the institutions involved.
- Setting up an operational mechanism integrating the existing health and environment information and ensuring involvement of different stakeholders dealing with public health and environmental monitoring will facilitate sharing information and experience, using the national expertise and evaluating ongoing programmes and projects. For the integrated information mechanism, an infrastructure of distributed data systems and a network of institutions with mandates for environmental and health monitoring and assessment should be established.

This chapter gives an overview of the political system and infrastructure of Poland. It outlines the institutions involved in environment and health policy-making, both in the health sector and in all other relevant sectors. The environment is especially emphasized. The following list is not exhaustive, as not all sectors

could be reached or approached during the review. Little information is available on the Ministry of Agriculture and Rural Development. In addition, Poland has a variety of small institutes and local or regional research centres that might have some activities in environment and health. For the scope of this review, the only institutions mentioned and described are those outlining environment and health activities as specific objectives of the institution.

Socio-political situation, political system and infrastructure

Poland is the largest country in central and eastern Europe in both population (38.1 million) and area (312 685 km²) (29–31). Poland entered the EU in May 2004. It is a social democracy, with a president as a head of state, and the current constitution dates from 1997. The government structure centres on the Council of Ministers, led by a prime minister. The president appoints the cabinet according to the proposals of the prime minister, typically from the majority coalition in the Sejm (parliament). The president is elected by popular vote every five years.

The country is divided into 16 provincial administrative units called voivodships. The central government appoints the voivod, the administrator of each voivodship. At a third level of public administration, since 1990, local government councils are set up as independent legal entities. A gmina (commune) is an elected council representing the district population. There are now 2478 gminas of varying sizes. An intermediate fourth level, the powiat (county), was added in the elections in October 1998. Since 2008 there have been 378 powiats (including 65 cities with powiat status) covering several gminas.

Poles make up 98% of the population, with Belarusian, German, Lithuanian and Ukrainian minorities accounting for the remainder. Ninety-five per cent of the population is Roman Catholic. In terms of

ethnicity, language and religion, Poland is more homogeneous than most countries in the European Region.

Economic problems through the 1980s led to the rise of a strong independent trade union, Solidarnosc, which forced elections in 1989. After democratic rule was re-established in 1989, Lech Walesa was elected President in 1990 and the first full parliamentary election was held in October 1991.

By 2004, the gross domestic product (GDP) per capita of US\$ 12 974 (adjusted for purchasing power parity (PPP)) had more than doubled in real terms compared with 1991 (14,19).

Table 1. Macroeconomic indicators, 1991–2005

Indicators	1991	1995	2000	2001	2004	2005
Unemployment rate (%)	11.8	15.2	15.1	17.4	19	17.7
Annual rate of inflation (%)	70.3	27.3	10.1	5.5	3.5	2.1
GDP per capita in US dollars	2 184	3 611	4 475	4 981	6 607	7 932
Real GDP per capita in US dollars (purchasing power parity)	4 500	7 703	9 529	9 450	12 974	

Source: *European Health for All database (HFA-DB) (14)*.

Health expenditure comprised 6.2% of GDP in 2005 (14).

Health sector

The main health institutions in Poland responsible for health risks related to environmental factors are the Department of Public Health of the Ministry of Health, the Chief Sanitary Inspectorate with its Department of Environmental Hygiene, the National Institute of Public Health – National Institute of Hygiene (NIPH-NIH), the Nofer Institute of Occupational Medicine and the Institute of Occupational Medicine and Environmental Health.

Chief Sanitary Inspectorate

The Chief Sanitary Inspectorate (32) is a body of the central administration appointed by the Prime Minister and subordinate to the Minister of Health and it manages the State Sanitary Inspection. There are 334 sanitary epidemiological stations (318 at the county level, 10 at the borders and 16 at the voivodship level). The responsibilities of the Inspectorate are established by the Act on State Sanitary Inspection from 1985. The Inspectorate performs sanitary controls and is organized in the following departments:

- environmental hygiene (municipal, occupational, etc.);
- communicable disease control (epidemiology);
- public health and health promotion; and
- nutrition and food safety.

The Inspectorate has laboratories belonging to sanitary-epidemiological stations that perform analyses in the following areas:

- municipal hygiene;
- food, nutrition and consumer articles' hygiene;
- epidemiology;
- work hygiene; and
- radiation protection.

Through a network of institutions at the voivodship and poviats levels and their own laboratories, the State Sanitary Inspection implements the above tasks within the framework of:

- infectious disease prevention and control;
- preventive surveillance – licensing permits on project documentation in relation to sanitary and health requirements, including conditions concerning construction or change in the use of buildings; and
- running surveillance – control of compliance with regulations concerning environmental health (including water intended for human consumption, air quality, soil, water, control of maintaining proper sanitation in buildings, workplaces, educational facilities and public places, means of transport, checking conditions of food production, transport, storage and sale and health conditions of the working environment).

The State Sanitary Inspection is mainly responsible for monitoring the quality of drinking-water and bathing water. It is in charge of creating an electronic database on water quality and prepares the annual report on the state of the country. The Chief Sanitary Inspectorate is participating in several international projects aiming at strengthening the monitoring of water quality (such as the PHARE Programme of the EU). In addition, it informs the population about the quality of the environment, organizes and carries out educational activity aimed at health promotion and developing desired attitudes and behaviour concerning health.

National Institute of Public Health – National Institute of Hygiene

The NIPH-NIH (33) is an applied research institution implementing a wide range of activities concerning public health, including above all the evaluation of population health (routinely collected health indicators). The NIPH-NIH has also a policy advisory function in the process of preparing laws.

It assesses threats to health arising from the exposure to harmful biological, chemical and physical agents in food, drinking-water and indoor and outdoor air. The NIPH-NIH provides health risk assessment and management expertise and elaborates preventive environmental measures. Particular attention is paid in this respect to pesticides, polychlorinated biphenyls and mercury.

The NIPH-NIH supports the Chief Sanitary Inspectorate through specialized training for employees and postgraduate training for specialists on epidemiology and public health. Training can be expanded to representatives of industry.

In environment and health, the NIPH-NIH is responsible for supervising the laboratories in charge of environmental health monitoring (water quality and air quality laboratories managed by the Chief Sanitary Inspectorate). It has two accredited laboratories – for physical-chemical and for microbiological parameters.

The NIPH-NIH has four types of environment and health activities. It has been responsible for setting up all legal provisions for drinking-water quality and has been involved in collecting data on air quality.³ It tests and assesses the quality of construction materials and deals with urban noise.

The monitoring and risk assessment of chemicals is a major priority of the NIPH-NIH.⁴ Toxicological activities focus on risk assessment mainly of pesticides (risk assessments for occupational health risks of pesticides and biocides started recently by using a standardized computerized program, the same procedures as used in Germany and the United Kingdom). Besides having the national reference laboratory for pesticides residues, the NIPH-NIH Department of Toxicology evaluates the toxicological dossiers for pesticides, food contaminants, food additives and monitoring of chemical hazards in

³ The Department of Medical Statistics of the NIPH-NIH participated in implementing European multicentre research on how air pollution affects human health.

⁴ The NIPH-NIH is taking part in the EU programmes (within research Framework Programmes 5 and 6) on human biomonitoring of persistent organic pollutants in blood, milk and semen.

drinking-water and outdoor air in the context of the state monitoring such as heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening and prepares an annual report for drinking-water.

Finally, it conducts risk assessment mainly for food safety risks, such as *Salmonella* for the rapid alert system of the Ministry of Health.

The NIPH-NIH provides significant expertise in health monitoring and information systems, health risk assessment and health impact assessment of air quality and health and contributes to several European programmes.

Two other institutions deal with environment and health, predominantly from an occupational health perspective.

Occupational medicine and environmental health

The Institute of Occupational Medicine and Environmental Health (34) focuses on research. It is in charge of health promotion at the workplace through educational activities and for treating diseases caused by exposure to biological, chemical and physical factors.

Besides the occupational setting, the Institute also analyses environmental health hazards. It focuses on indoor air quality, noise levels, electromagnetic fields and ionizing radiation. It is involved in health impact assessment of industrial plants, sewage-treatment plants, highways and landfill sites.

Since 1990, the Institute has collaborated with WHO in the process of developing and implementing the NEHAP, several collaborative projects between the European Commission and WHO (such as ENHIS) and has actively participated in the implementing the EU Strategy on Environment and Health.

Nofer Institute of Occupational Medicine

The Nofer Institute of Occupational Medicine (35) is one of the leading centres in occupational medicine. It has been a WHO Collaborating Centre for Occupational Health since 1975. Since 2008 it has also been a WHO Collaborating Centre for Environmental Health. Its activities focus on scientific research and education as well as international cooperation in occupational medicine, environmental medicine, public health and epidemiology. It assesses exposure to and treatment of harmful chemical, physical, psychosomatic and biological agents in the work environments. The tasks of the Institute include aspects of occupational physiology, psychology and sociology, ergonomics, diagnostics and treating acute poisoning. The Institute measures noise levels at work, vibration, electromagnetic fields and ionizing radiation and evaluates the harmfulness of chemical substances and preparations, including the development of safety cards.

The accredited laboratory of the Chemical Hazards Unit of the Institute monitors biological exposure to heavy metals (lead, mercury, arsenic and cadmium), volatile organic compounds, long-lasting organic contamination and environmental tobacco smoke. Staff members took part in the process of drafting WHO documents on long-range transboundary transport of metals and persistent organic pollutants in the context of the Convention on Long-Range Transboundary Air Pollution.

The Institute is involved in WHO air quality activities and is a partner in several large EU projects, such as the Environmental Cancer Risk, Nutrition and Individual Susceptibility (ECNIS) project (36), and participates actively in the Consortium to Perform Human Biomonitoring on a European Scale (COPHES) project as part of the ES BIO (Expert Team to Support Biomonitoring in Europe) project under the EU European Environment and Health Action Plan. This project aims at implementing a system for monitoring the biological exposure of women and children to chemical factors in EU countries. The project will probably start being implemented in 2009. The Minister of Health supported the national participation in the project.

In the context of a twinning project co-funded by the EU, the Institute undertook actions aimed at establishing three national centres focusing on health and the environment and on environmental health impact assessment in Poland.

The Institute is cooperating with a large variety of partners: NGOs (Foundation for Children of the Copper Basin and hosting the International Network on Children's Health, Environment and Safety (INCHES) secretariat), industry (performing training for representatives of the industry on two systems for registering and evaluating hazardous substances: derived no-effect level and Scientific Committee on Occupational Exposure Limits (SCOEL)).

Several other health institutions cover activities aiming at preventing environmental health risks as defined by the WHO environment and health process and the four regional priority goals despite not having a specific mandate in environment and health.

Department of Public Health of the Ministry of Health

Within the Ministry of Health (37), the Department of Public Health covers disease prevention activities related to environment and health. In relation to the priorities set by the WHO regional priority goals for the CEHAPE, the most noteworthy activities are in physical activity and nutrition, road safety, anti-tobacco campaigns and respiratory diseases (asthma). Prevention activities mainly focus on children's health and are often implemented in cooperation with other institutions (including "Keep Fit" (38), Road Safety Week and "Freedom to Breathe"). However, the Department of Public Health is mainly responsible for drafting legislation and policy-making, while the Chief Sanitary Inspectorate is responsible for implementing prevention activities.

Institute of Mother and Child

The Institute of Mother and Child (39) provides health services and carries out scientific work and research related to protecting children and youth from environmental health risks. Research carried out focuses on the impact of endogenous and exogenous factors on the development and state of health of children and youth including: biological (newly developing infectious diseases), chemical, including exposure of children to environmental tobacco smoke, and physical, including factors contributing to road crashes and accidents occurring at home and in school. Children's health is tackled from a social inequality perspective. The Institute is a partner of the Health Behaviour in School-Aged Children study, a large multinational, multi-centre study conducted regularly involving more than 43 countries in the WHO European Region. The study gathers information on a range of aspects of health among children and adolescents such as overweight and obesity, physical activity, smoking and injuries. The Institute has coordinated the information collected on injuries.

Mazovian Public Health Centre

Institutions acting at the subnational level monitor and promote public health. The Mazovian Public Health Centre (40) is funded by the Voivodian Government of Mazowieckie and collects and processes data on the health status of the population and evaluates the effectiveness of health care system performance at the regional level. The Mazovian Public Health Centre is responsible for determining health promotion priorities and implementing health promotion programmes. Action for health promotion includes tackling educational, living and working environments. The overview of the major projects carried out in the past years shows that priority is given to health promotion in the school environment targeting children (such as noise at school and musculoskeletal disorders at school through the "Lighten the Load" programme).

Children's Memorial Health Institute

The Children's Memorial Health Institute (41) covers the food and environmental situation of schools in Poland. The Institute primarily focuses on research and provides the highest standard of scientific evidence. It is actively involved in the Polish Society of Paediatrics. A Public Health Department was established within the Institute with the specific task of communicating to the mass media. Next to food-related priorities in collaboration with the National Food and Nutrition Institute, the Children's Memorial Health Institute is currently developing a registry of children's injuries. The Institute collaborates with the Public Health Institute of the Jagellonian University in Cracow, a partner of the EU Child Safety Action Plan activities.

National Food and Nutrition Institute

The National Food and Nutrition Institute (42) is a leading scientific and research institute in preventing non-communicable diseases related to inappropriate diet and insufficient quality of food and nutrition. The most important achievement in the 45 years of the Institute is the dissemination of the nutrition rules and tables of the nutrition composition of food. The Institute performs research on food and nutrition for the population and takes part in the activities preparing Poland for transposing EU regulations and directives on food management and control into national legislation. It participates in international projects, in particular EU framework programmes.

A reference laboratory of the Institute conducts research on nutrition and selected parameters of food safety. In addition, it carries out educational activities by publishing a bimonthly magazine on human nutrition and metabolism and a series on works of the Institute as well as guidelines for physicians, dieticians and patients in the framework of a series of recommendations from the Institute. It organizes courses, training, scientific conferences, post-graduate training on food and nutrition safety as well as dietary counselling.

The Minister of Health has nominated the Institute as the responsible institution for implementing the WHO Global Strategy on Diet, Physical Activity and Health at the national level. The Global Strategy is implemented through the national programme for preventing overweight, obesity and non-communicable diseases through diet and improved physical activity (2007–2011).

Other institutes

Finally, two additional institutes cover environment and health. The Institute of Agricultural Medicine has the main goal of comprehensively assessing the health status of Poland's rural population in the context of environmental conditions. Its particular aim is to analyse the occurrence and harmfulness of factors that may become a hazard for the health of the population and are specific to the rural environment.

The Interdepartmental Institute of Maritime and Tropical Medicine (43) analyses how the environment affects the safety of life and work at sea. The Institute focuses on the environment of marine waters, inshore and inland waters, assesses the emission of volatile organic compounds produced by synthetic materials, particularly furnishings, and analyses the toxicity of heavy metals. Nevertheless, due to the very specific nature of their mandate, the major actors involved in environment and health have not mentioned these institutions as collaborators in any specific project.

Health care workforce

The professional profiles on environment and health are not sufficiently developed. The role of physicians in the environment and health process is not adequately defined; they are mainly seen as the interface to the society but with no specific environment and health responsibility. Such a view is largely sustained through a lack of continuing professional development on environment and health, enabling them to function effectively in the constantly changing world of environmental threats. This results in little awareness about environmental health risks.

Environment sector

Ministry of Environment and Chief Environmental Inspectorate

The Ministry of Environment has core responsibility for protecting the environment in Poland (44). The Chief Environmental Inspectorate under the Minister of Environment is responsible for monitoring compliance with environmental protection requirements, assessing the state of the environment and preventing severe accidents (45). The Chief Environmental Inspectorate is headed by the Chief Environmental Protection Inspector and 16 voivodship (provincial) inspectors operating within the combined central and sub-national government administrations headed by voivods. Several regulations specify the tasks in this respect, including: the Environment Protection Act, the Water Act and the Act on Environmental Protection Inspection. The main responsibilities of the Inspectorate are monitoring the implementation and enforcement of regulations respecting environmental protection and the use of natural resources and assessing the impact of the adopted environmental protection policies, plans and programmes. The Inspectorate also monitors the state of the environment and prepares reports focusing predominantly on air quality, inland surface water and groundwater, soil and land, noise, hazardous waste, electromagnetic fields and ionizing radiation. The monitoring process is in accordance with EU regulations. The Inspectorate reports to the European Environment Agency and the European Commission's Directorate-General for Environment. It is in charge of assessing the environmental effects of policies, plans and programmes.

Cooperation takes place with the sanitary inspectorates. The cooperation seems to be functioning better at the regional level than at the national level. Despite a written agreement between the Chief Sanitary Inspector and the Chief Environmental Inspector, cooperation

is not always straightforward. Collation of health data and environment data and integration of information is not sufficient.

Institute for Ecology of Industrial Areas

The Institute for Ecology of Industrial Areas conducts research on appropriate measures for environmental protection (46). The Institute performs environmental health risk assessment with special emphasis on how investment, products and waste affect the environment.

Moreover, the Institute's activities cover research on environmental pollutants and developing technologies for rehabilitating degraded areas. A priority area of the Institute is waste management, including municipal waste management.

Institute of Environmental Protection

The Institute of Environmental Protection appointed by the Minister of Environment conducts research on environmental protection (47). The Institute is mainly in charge of developing principles and strategies for environmental protection and for performing integrated environmental studies, air quality protection, climate protection, abatement of noise and vibration and the protection of water resources and waste management. The Institute covers a wide range of activities including setting standards, environmental monitoring, environmental education, design of management plans for protected areas and environmental impact assessment of substances, products and installations. The Institute of Environmental Protection disseminates information on the state of the environment.

As the responsibilities in environmental protection are spread among different institutions, international experts in the pre-accession phase recommended establishing a national environmental agency to overcome the organizational difficulties. The agency is currently being established. In July 2007 a draft was prepared and comments

made on the structure based on the water management system organized across seven regions.

The new institution should not add to the list of existing stakeholders involved in environmental management but should rather guarantee the overall coordination in environmental protection activities.

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 different sectors. The following section analyses the responsibilities and tasks of ministries and stakeholders relevant for environment and health policy-making and covering the risk factors emphasized by the regional priority goals.

Building and infrastructure

Since 2003, the Ministry of Infrastructure (formerly Ministry of Transport and Construction) has been responsible for regulating the quality of buildings and urban planning (48). Since 2007, the Ministry has been organized in three departments: Transport, Construction and Marine Economy. A specialized Department of Construction and Architecture mostly implements EU directives.

The Polish Building Research Institute (49), through a specialized department, prepares expert opinions and provides training on the quality of the environment, buildings and building products with the aim of ensuring adequate hygienic and health conditions for the users. It is in charge of testing the emission of harmful substances from building products and their influence on the indoor living environment, workplaces, industrial protection zones and the natural environment.

Transport

The Ministry of Infrastructure takes action to prevent road crashes. The National Road Safety Council (50) was established in 2002 under the Ministry. Based on the National Road Safety Council, 16 regional road safety councils were set up in each region. The Council is an interdisciplinary body comprising representatives of government departments and central bodies, voluntary organizations and scientific experts that meets twice a year.⁵

Experience shows that, although the Council is meant to be an interdisciplinary body, not all sectors are equally involved. The educational sector has dropped out from the process, mainly due to financial reasons, while the health sector seems to carry out independent preventive actions on road safety measures. The Ministry of Infrastructure has a coordinating function but has no legal authority over the other sectors involved.

The Council nevertheless shows strong cooperation with the private sector. The automobile industry has been involved in numerous campaigns, as have the police (which provide the data used by the Council on morbidity and mortality due to road traffic injuries), NGOs and religious institutions. Campaigns have been carried out through the support of churches.

The National Road Safety Council guides and coordinates activities taken by the central government in road safety: developing road safety programmes and guidelines and initiating and providing opinions on legislative acts and regulations. It promotes safe behaviour in road traffic: cycling licences, producing safety kits for cyclists and preparing advertisements on road traffic injuries.

⁵ The members are representatives of regional government authorities (voivodes) designated by the Prime Minister, the Minister of National Defence, Justice, Interior and Administration, State Treasury, Finance, Economy, Regional Development, National Education, Environment, Infrastructure and Labour and Social Policy as well as the Police Commander-in-Chief, the Fire Brigade Commander-in-Chief and the General Director for National Roads and Motorways.

Activities are carried out at both the national and local levels. The local governments are responsible for campaigns focusing on infrastructural activities. The European Investment Bank is supporting these initiatives. The estimated budget of the Council for 2007 was Zl 6 million (about €1.6 million) to be used to assist in infrastructure development and to develop information material (brochures, leaflets etc.).

Road safety and the environmental impact of road traffic are at the core of the activities of the Road Traffic Safety Centre and the Environmental Protection Centre under the national Motor Transport Institute. Both centres are technologically oriented as they carry out research on equipment, methods and systems for reducing vehicle emissions and testing vehicles' fuel consumption.

The activities of these two centres include conducting and coordinating scientific research and disseminating results on optimal technical, organizational and economic solutions for enhancing the safety of road users. The centres collect data on vehicle emissions and on data on road crashes, which have been recorded here since 1990. Nevertheless, stakeholders in other sectors do not seem to use or know these data.

Labour

The Central Institute for Labour Protection (51) is the main scientific and research institution in Poland comprehensively dealing with issues related to adjusting working conditions to human mental and physical abilities.

The Institute's activity covers research and development work leading to new technical and organizational solutions in labour protection related to health and safety at work and ergonomics. The Institute is formulating educational curricula and delivers training and postgraduate education courses in health and safety at work and ergonomics.

The Institute is also involved in policy-making by preparing and providing expert opinions on standard-setting in labour protection and for setting norms for complying with these standards.

Education

The Ministry of National Education (52) develops projects on environmental and health education (physical, mental and social health). The main focus is developing and funding projects aimed at environmental protection or health promotion campaigns at the school level. Sustainable development and the role of schools in promoting sustainable development are anchored in the Constitution and in the Educational Act. The health effects of environmental hazards and environmental developments are not addressed explicitly.

However, the Ministry of National Education is indirectly involved in numerous activities that cover the regional priority goals set at the WHO Fourth Ministerial Conference on Environment and Health. In injury prevention, the Ministry of National Education has initiated programmes on safe cycling (cycling licence). Violence prevention at school is a priority of the educational sector. A government programme for the improvement of security in schools and educational institutions (zero tolerance for violence at school) has been set up for this purpose.

To support the implementation of nutritional policies and physical activity in schools, beside separate subjects such as physical activity, cross-curricular themes have been introduced:

- primary school (grades 4–6): health education, ecological education, education for society and education for family life;
- gymnasium (lower secondary school): health education and ecological education; and
- upper secondary school: health education, ecological education and preparation for family life.

The school principal is responsible for including these themes in the school curriculum; teachers are responsible for implementation (in the

framework of their subjects or during separate lessons). Although efforts are being made to increase the level of physical activity in school and to promote healthy lifestyles, the sale of food and beverages in schools is still not well controlled.

Local governments

The municipalities primarily fund their activities by their own funds and by national subsidies. Municipalities do not own all their revenue sources and must therefore fulfil specific expenditure obligations decided by the central government. For example, drinking-water supply has been delegated to the local level. The local governments have to implement the basic requirements stipulated by the law and have to respond to the Ministry of Health on the improvement of drinking-water (in the framework of the new National Health Programme).

Alert systems for pollution incidents (gas, chemicals and fire) are organized at the level of the city of Warsaw and the districts.

At the municipal level, work mainly focuses on environmental considerations, such as creating or retaining green spaces in urban areas, construction of cycling lanes and waste management.

Municipalities support energy-saving insulation activities (households can apply to the municipality for receiving funds); the same applies for funding changes in the heating system or the rehabilitation of panel block buildings.

Local governments are nevertheless very much involved in the local implementation of prevention programmes, such as the road safety week or the implementation of the National Road Safety Programme. They cooperate with NGOs.

From a communication perspective, local governments are raising the awareness of the population on environment and health, most specifically on the state of the environment. The Warsaw communal

gazette, for example, reports on the air quality in the different districts. Some have real-time information about air quality (28).

Two pilot local environment and health action plans were set up within the implementation programme of the NEHAP: Lodz and Olkusz. To implement the local activities, a Local Environment and Health Action Plan (LEHAP) Task Force was established for the area of Lodz comprising representatives of local health and environmental administration, sanitary and environmental protection inspection as well as representatives of ongoing programmes related to environment and health, such as Agenda 21, Healthy Cities and others. One key objective was to develop an integrated approach to environment and health issues and capacity needed for developing and planning a pilot LEHAP. The Ministry of Environment supervised the activities and the Environmental Protection Department of the Regional Government in Lodz coordinated them on a daily basis.

Nongovernmental organizations

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

Poland has many NGOs across the country. Nevertheless, no NGO focuses directly on environment and health. Nationally, the role of NGOs is mostly seen in raising awareness rather than influencing the change of regulations related to environment and health. Generally this is felt to be the responsibility of other associations or institutions.

One major NGO in Poland is the Foundation for the Children of the Copper Basin (53). They strongly cooperate with the Nofer Institute of Occupational Medicine. This NGO is supported by local authorities, enterprises and environmental funds and has the main objective of monitoring the concentration of heavy metals in children and curing the results of chronic metal toxicity. It carries out various forms of preventive, treatment and therapeutic work with children, young people and their families to reduce the consequences of broadly understood harmful environmental effects, especially the consequences of industrial contamination and socio-psychological harm. The “Miasteczko Śląskie” Foundation for Children plays a similar role.

The Health Promotion Foundation (54) has the objective of reducing the incidence of cancer primarily by promoting favourable changes in lifestyle. Special emphasis is put on reducing and eliminating tobacco smoking and exposure to environmental tobacco smoke. The Foundation’s activities focus on the annual campaign “Quit smoking with us”, as a result of which 2.5 million people in Poland have quit smoking.

Finally, Alter Ego is another NGO whose main focus is preventing road crashes. They are cooperating in the framework of the National

Road Safety Programme and are particularly interested and engaged in supporting victims of road crashes.

Although the NGOs mentioned are highly recognized and cooperating with national institutions, ministries do not fund NGOs, and collaboration clearly depends on the type of project.

4 Tools for management: policy setting and legal framework

Conclusions

- The country's basic policy act (the Constitution) acknowledges the necessity of preventing ill health arising from environmental factors.
- The authority to tackle environment and health is legally ensured only at the municipal level.
- The most comprehensive and targeted policy on environment and health has been the long-term programme on health and environment.
- The National Health Programme covers many priorities defined by the regional priority goals.
- The environment policy programme tackles the relationship between environment and health. Nevertheless, there is no link to the National Health Programme.
- The existing health prevention and promotion programmes focus mainly on behavioural changes, such as the National Road Safety Programme.
- The National Health Programme acknowledges the role of NGOs in public health.
- The NEHAP has enabled synergies to be established in environment and health activities and defines clearly the roles and responsibilities of the actors involved.
- As a government act, all ministries have approved the NEHAP. In practical terms, not all relevant sectors are represented.
- Policy actions in environment and health are not regularly funded.
- Only the NEHAP and the National Road Safety Programme have had clear sources of funding. When the government adopts an environment and health programme it does not automatically allocate a budget.

- Related ministries (such as the Ministry of Finance) do not provide any money.
- Health outcome priorities (such as injury prevention) are not automatically distributed in budget allocation.
- Structural funds from the EU are mainly allocated to the built environment sector.
- Financial support for public awareness is not foreseen.
- Economic arguments and health costs are not used for setting priorities or for informing or convincing policy-makers to take preventive measures.
- Economics at the personal level is used as an argument, whereas the public health economic arguments are not.
- There is no comprehensive policy related to transport emissions.
- Health cost arguments are not used in setting local priorities.

Recommendations

- A more concrete programme on health and environment should be prepared as an integral part of the new National Health Programme.
- Active involvement in the relevant international conventions is recommended by, for example, ratifying the UNECE/WHO Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes.
- Clear synergies need to be established between the environment and health policy programmes.
- Funding mechanisms and institutionalized mechanisms for supporting partnerships in public health should be created.
- A national children's environment and health action plan, with its regional priority goals, is a tool to support and help guide national processes. It should be prepared as an integral part of the National Health Programme.

- Institutional and human resources should be allocated to implementation of Poland's NEHAP and CEHAP, both in the relevant sectors and institutions and to ensure coordination in the health sector.
- Extend the use of economic instruments.
- Make more systematic use of integrated economic analysis (such as cost-benefit analysis) in environment and health policy-making.
- Review existing environmentally related taxes from the perspective of health expenses.
- The protection of public health should figure more prominently in legislation related to both the environment and economic development.
- Economic instruments should be applied to encourage enterprises to observe health and safety standards and to report all occupational disease.

Environment and health policy in Poland is implemented under the umbrella of several national acts and policy programmes. The new Constitution, introduced on 2 April 1997, covers environment and health issues under Article 68. Under this article, the Constitution sets the obligation for public authorities to combat epidemic diseases and to prevent negative health effects from environmental degradation. The same article emphasizes the right to health protection, access to equal health care services and the relevance of giving special health care to children, pregnant women disabled people and older people.

The new Constitution also stresses the need to protect the natural environment and to ensure sustainable development (Article 5), requires public policies ensuring ecological security and provides the right for all citizens to be informed about the quality of the environment and its protection (Article 74) (55).

Health policies related to environment and health

Poland has no public health act that could be considered a legally binding document controlling the effect of the environment on health. The legal capacity to tackle environment and health is legally ensured through specific legislation at the government level and controlled and enforced at the municipal level. Laws drafted at the parliamentary level can be commented on at the municipal level. The municipal commentary is nevertheless mainly channelled through the political representatives at the government level.

Municipalities control construction projects by issuing permits to builders and developers. Municipalities are in charge of implementing sanctions if limit values (noise, etc.) are exceeded. The municipal level is also in charge of implementing concrete pollution abatement measures and other projects (such as noise barriers).

National Health Programme

The key national policy for settings the priorities and the agenda for public health in Poland is the National Health Programme. The government adopted the current Programme for 2007–2015 on 15 May 2007. The Programme is based on the previous National Health Programme, which was in force between 1996 and 2005 and is shaped in accordance with the Health for All policy framework for the WHO European Region. The National Health Programme functions through an interministerial coordination group. The previous Programme emphasized health promotion and the development of healthy lifestyles.

The general principles set for the National Health Programme 2007–2015 are:

- reducing territorial and social inequality in health; and
- activating local governments and NGOs for health promotion.

Children are the main target group of the Programme. The targets set are that premature births will drop from 6.4% to 5.5% and that infant mortality will decrease to 4 per 1000 live births by 2015. Among the

19 priorities set, the Programme commitments relevant to environment and health are:

- promoting physical activity for preventing cardiovascular diseases and shaping desirable health behaviour (regional priority goal 2);
- improving the eating habits of the population and food health quality and reducing the number of obesity cases (regional priority goal 2);
- reducing tobacco smoking and exposure of children and pregnant women to environmental tobacco smoke (regional priority goal 3);
- reducing exposure to harmful factors in the living and working environments (regional priority goal 4);
- improving the national sanitary conditions, especially at the local level and using the EU Structural Funds, and establishing EU-compliant systems for monitoring environmental sanitary conditions;
- reducing the number of accidents and injuries, especially among children and adolescents (regional priority goal 2); and
- creating healthy and safe living conditions for older people.

The National Environment and Health Action Plan

In 1997–1999, the NEHAP for Poland was developed according to the Helsinki Declaration (5) as a joint action of the Ministry of Health and the Ministry of Environment based on analysis and evaluation of the environment and health situation in the country. The Institute of Occupational Medicine and Environmental Health, the Institute of Occupational Health and the Institute for Ecology of Industrial Areas under the Ministry of Health revised and updated the NEHAP in 2000. The Institute of Occupational Medicine and Environmental Health was appointed as the leading institution in implementing, supervising and managing the NEHAP.

The major areas of the NEHAP for 2000–2005 were:

- improving the development and implementation of the state policy on environment and health;
- improving the planning and management of environmental health;

- preventing and improving actions aiming at reducing specific environmental risks;
- involving the economic sector in prevention activities;
- improving international cooperation;
- implementing environmental health action plans; and
- monitoring the efficiency of environment and health activities.

During the review, several of the national public health professionals consulted emphasized that the NEHAP has been an important tool for mobilizing national resources for implementing environment and health action.

After the NEHAP for 2000–2005 was finalized and in following up the commitments taken through the adoption of the Budapest Declaration, Poland is now in the process of developing a CEHAP. The Institute of Occupational Medicine and Environmental Health is coordinating the preparation of the CEHAP. No concrete plan has been presented yet. The responsibility for the national CEHAP process was transferred to the Nofer Institute of Occupational Medicine after this review ended in July 2007.

Long-Term Governmental Programme “Environment and Health”

The main instrument relevant to environment and health is the Long-Term Governmental Programme “Environment and Health” (56). The Programme sets the most urgent priority tasks for environment and health and is the implementation programme of the NEHAP. The Programme was the first programme jointly developed and implemented by the Minister of Health and the Minister of Environment in Poland, with the participation of the Ministry of Education and Science (succeeded by the current Ministry of National Education and the Ministry of Science and Higher Education). The Programme was launched in 2000 following the decision of the Economic Committee of the Cabinet and was formally commenced by the Council of Ministers on 5 June 2001.

The Programme was implemented between 2000 and 2004, and the main participants of the project from Poland included the Institute of Occupational Medicine and Environmental Health and the Institute for Ecology of Industrial Areas. Since 2004, the Programme has not been renewed.

The Programme had its own budget and implementation plan, and the Ministry of Health and the Ministry of Environment funded action and the Ministry of Education and Science funded research projects.

The main tasks to achieve within the Programme were:

- developing and implementing an environmental health indicator system in Poland;
- evaluating environmental monitoring data for assessing environmental health risks;
- preparing and piloting guidelines for integrating health components within the framework of environmental impact assessment;
- preparing and piloting activities to prevent asthma and allergic diseases among children exposed to adverse environmental factors;
- implementing postgraduate education on environmental health and occupational medicine;
- developing and implementing an educational programme for environmental health for children;
- creating and implementing a system for transferring information about the state of environment and health to the European Commission;
- including environmental health issues in the national sustainable development strategy;
- implementing health risk analysis to establish and control compliance with the environmental quality principles;
- promoting environmental protection activities among central and local administrations, business, academic circles and environmental and consumer organizations;
- implementing tasks laid down by the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes;

- developing appropriate measures to ensure the rational use of degraded areas; and
- implementing commitments under the Charter on Transport, Environment and Health.

Environmental policies

Environment and health are covered by environmental legislation and regulations, and there are three major acts.

Environmental Protection Act

In 2001, the Environmental Protection Act (Act No. 62/2001/627) entered into force. This Act is the cornerstone of Poland's environmental legislation, establishing a comprehensive regulatory framework in this field and introducing general policy guidelines. The basic policies underlying the enforcement of environmental law by competent authorities, include:

- the principle of sustainable development;
- an integrated approach towards solving environmental problems;
- priority of preventive and precautionary principles; and
- the polluter-pays principle.

The Act sets the requirements for planning documents (particularly at the local level) to manage land-use development. It settles the proportion between the built environment and green spaces necessary for preserving a balance with nature.

Special emphasis is put on health aspects in procedures of environmental impact assessment. Article 3 of this Act states: "In the Act, environmental impact is understood also as the impact on human health". Article 47 informs that environmental impact assessment procedures relate to analysis and assessment of direct and indirect influence of the particular undertaking on the environment as well as on the human health and conditions of life.

The Environmental Protection Act is harmonized with the existing EU legislation.

Act on Access to Information on the Environment and its Protection and on Environmental Impact Assessments

Poland's parliament adopted the Act on Access to Information on the Environment and its Protection and on Environmental Impact Assessments (57) on 9 November 2000, and it entered into force on 1 January 2001. The Act comprises the following main parts:

- access to (environmental) information;
- public participation in procedures related to environmental protection;
- the environmental impact assessment procedure relating to the implementation of plans and programmes;
- the environmental impact assessment procedure for proposed projects;
- the environmental impact assessment procedure relating to the transboundary impact on the environment; and
- the environmental impact assessment commissions.

The environmental impact assessment legislation is strictly connected to a number of other environmental acts, especially with: Land-use Planning Act, Building Act, Environmental Protection Act, Nature Conservation Act, Geological and Mining Act and Motorways Construction Act. The Act defines “effects on the environment” as effects both concerning the environment and human health (Article 2).

Following the Act, environmental impact assessment is required for two types of projects. Group 1 projects require environmental impact assessment in all cases, and group 2 projects may require environmental impact assessment. The former are linked to the permit requirements of other acts, and include mineral extraction, groundwater abstraction and flood control, restructuring of rural land holdings and constructing motorways. The latter are assessed on, for example, whether the project requires the establishment of a

restricted-use area, whether it is likely to cause transboundary effects and whether relevant environmental bodies feel that it should require environmental impact assessment. Environmental impact assessment is mandatory for major development projects (such as road infrastructure) and hazardous undertakings.

The Act was drafted in close collaboration with civil society and especially NGOs. Although many NGOs still consider the legislation not fully satisfactory, the participation of NGOs in drafting the Act can overall be considered a national success.

National Environmental Policy Programme

The National Environmental Policy Programme 2007–2015 is an implementation component of the Environmental Protection Act. The current Programme was preceded by the Programme for 2003–2006. The implementation of the Programme requires close collaboration among different sectors and has been reviewed and commented on by the Chief Sanitary Inspectorate.

This extensive document includes objectives, principles and directions for environmental protection in Poland. The basic task for the state is to ensure the environmental safety of the country (inhabitants, natural resources and social infrastructure) and to create the basis for balanced social development.

These objectives will be ensured by strengthening the environmental protection management system, by protecting the natural heritage and rationalizing the use of natural resources, by improving environmental quality and safety for the health protection of Poland's population and by protecting the climate.

Chapter 6 of the Programme targets environmental health and human health protection. It mainly focuses on water, air, noise, electromagnetic fields and ionizing radiation. The following have been envisioned for ensuring the protection of human health:

- modernizing the existing water treatment plants and constructing new ones;

- constructing sewerage systems and water treatment plants in urban areas exceeding 15 000 population;
- constructing water treatment plants at food-processing plants;
- optimizing transport systems and limiting transport-related emission;
- limiting exhaust emissions from industrial and municipal sources;
- limiting emissions from large combustion sources;
- supporting actions for environmentally safe recycling;
- increasing municipal waste recycling to 10% by 2010;
- limiting threats to human health and environmental conditions caused by the use of chemicals;
- forbidding substances destructive to the ozone layer;
- strengthening the control of industrial installations to reduce the risk of industrial breakdowns;
- supporting measures limiting adverse noise effects;
- protecting the population and environment from electromagnetic fields; and
- supervising sources of ionizing radiation.

Transport policies

The National Road Safety Programme

The Council of Ministers adopted the National Road Safety Programme in 2001. It sets the priorities for 2001–2010 for road safety in Poland. The programme's strategic goal is reducing the annual number of deaths due to road traffic injuries to 4000 in 2010. When Poland joined the EU in May 2004, the Council of Ministers adopted the new National Road Safety Programme for 2005–2013. The Programme comprises five objectives to be achieved by 2013 divided into 15 priorities with respective actions.

The objectives are:

- building a basis for an effective and long-term road safety policy;
- developing safe road user behaviour;

- protecting pedestrians, children and cyclists;
- building and maintaining safe road infrastructure; and
- reducing the severity of crashes.

Activities should be implemented at different levels: national, regional and local. The funds for road safety in Poland come from different sources: central, regional and local budgets (bank loans and EU funds), the budgets of ministries involved in road safety,⁶ specific EU funds (the Transport Sectoral Operational Programme 2004–2006 and the Road Infrastructure Sectoral Operational Programme 2007–2013), NGOs, insurance companies, business and the National Road Fund.

Economics and funding

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 that they can be raised. Similar to many other countries in the WHO European Region, the lack of funds is a challenge in the environment and health sector in Poland. For the National Health Programme 2007–2015, the required budget was determined only after the objectives and activities had been set. This approach makes implementation rather difficult. The available sources of funding are unclear. Only the NEHAP and the National Road Safety Programmes show clear sources of funding, with budgets allocated for the activities at the level of ministries and institutions. NEHAPs and LEHAPs were to be funded by state and local budgets from the Ministries of Health, the Environment and Science and Higher Education. For the National Road Safety Programme, a multisectoral funding scheme (comprising a variety of involved institutions) was set up. The NEHAP has also been seen as a helpful mechanism for mobilizing funds for priorities set by the Long-Term Governmental Programme “Environment and Health”.

⁶ Ministry of Infrastructure, Ministry of Interior and Administration, Ministry of Science and Higher Education, Ministry of Health, Ministry of Finance, Ministry of Justice, Ministry of Labour and Social Policy, Ministry of Economy, Ministry of Regional Development, Ministry of Defence and Ministry of Environment (as of 2005).

Nevertheless, funds for environment and health activities are rather small. Several examples can be provided. Unavailability of funds has been mentioned as the major impediment for carrying out important surveillance activities. The lack of systematic collection of injury data has been attributed to funding problems. There are no stable mechanisms for funding laboratories and for integrating NGOs into preventive environment and health activities. Funding problems do not uniquely affect environment and health development programmes but are also compromising environmental management activities. Expenses for environmental protection and water management activities as a proportion of the national income have increased slightly in recent years (1.2% in 2000–2003 to 1.8% in 2007–2008) but are still small. Finally, budget shortages seem to be the cause for some sectors dropping out from intersectoral collaboration structures, as the National Road Safety Programme example has shown.

The lack of funds is especially reflected at the local level. Public health programmes and activities and their funding mechanisms fall under the responsibility of various levels – national, regional and local. Local authorities have been given more and more responsibility in implementing national and international agreements and regulations.⁷ Nevertheless, the available budget has not been systematically raised, increasing the fiscal burden carried by the local governments. In recent years, the fiscal autonomy of county sanitary inspectorates changed. Funds for county inspectorates are not pre-set anymore but are allocated at the local level through the voivodship.

Support for preventive environment and health activities is required also at a broader public level. Television stations require payment to broadcast disease prevention campaigns, such as road safety campaigns, which the institutions involved have to pay. Public and private television channels should support the broadcasting of disease prevention campaigns free of charge.

⁷ Examples are the Mazovian Public Health Centre and the environmental monitoring funded by the voivodship.

Nevertheless, positive developments were observed in the private-sector support for disease prevention activities in environment and health. Many activities, especially in preventing road traffic injury, have been carried out through the support of the private sector. Nevertheless, this improvement has to be acknowledged with caution, as the interest of automobile companies in injury prevention is highly driven by economics.

Further, a positive development is the use of EU funds for improving environmental health conditions. Funds from the European Investment Bank have been used for improving the infrastructure at the local level (with local communities having applied for it). EU funds have also been used for revitalization programmes, mainly panel block renovation programmes, and EU structural funds are supporting institutions in achieving environmental standards. Some additional efforts have to be made to guarantee transparent allocation of the funds. During the review, a multisectoral self-governed committee or jury was mentioned as being responsible for allocating the available budget. Clarification on the allocation mechanisms and responsibilities is needed. Marshals (voivodship authorities) also seem to be responsible for regional development.

At the local level, municipalities increasingly support households that are planning to improve their thermal insulation⁸ or to install a more energy-efficient heating system.

Economic instruments are an important tool for improving environmental management. Taxation money and income from fines are increasingly being used for disease prevention activities in Poland. For instance, fines collected from drunken driving are processed for road safety measures, and fees from industry for high emissions are collected into a fund for environmental protection. In some other cases, however, similar approaches have been stopped. A 1999 tobacco control act stipulated that 0.5% of the tobacco excise tax

⁸ A special loan system with municipal support has been established for improving insulation. In reality, the availability of these loans is rather small and households have to wait for a long time before benefiting from them.

would be allocated for tobacco control measures. This was repealed in 2007.

In summary, the lack of funds for environment and health activities results in an increasing number of programmes for which institutions have to apply for money, which is increasing the unequal access to activities and services by institutions, stakeholders and target groups.

Given the increasing prevalence of obesity and the need to enhance physical activity, the Ministry of National Education has set up a programme for supporting children to participate in after-school sports activities (memberships, access to sports grounds etc.). Families have to apply for benefits. Although this a good approach, efforts should be made to have access to safe playgrounds and sports facilities for children as an implicit right.

Economic instruments for environmental policies are not sufficiently developed in Poland. Despite the existing taxation policy on fuel, there is no comprehensive policy related to transport emissions (for example, no higher taxes for polluting cars and no sustainable taxation policies for sustainable or alternative energy sources),⁹ and there are no tax benefits for energy-related investments affecting air pollution emissions.

The integration of environmentally related economic instruments into economic development policies in Poland 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 towards the environmental burden of disease. The example of chemical safety shows that chemical risk assessment is mainly undertaken from a hazard analysis viewpoint and no cost–benefit analysis is undertaken.

Estimates of health costs due to environmental hazards are not used in setting priorities and for taking preventive measures at the government level.

⁹ On a research level, however, the Road Traffic Safety Centre is making efforts to analyse the fuel consumption of different vehicles.

5 Intersectoral collaboration

Conclusions

- There is strong cooperation with the private sector.
- Intersectoral collaboration in Poland is very different at various administration levels.
- Actions and priorities are highly fragmented.
- At the local level, establishing a master plan entails collaboration between all sectors.
- Intersectoral collaboration in the area of transport (the National Road Safety Programme and NGOs) is well developed.

Recommendations

- International cooperation on environmental health needs to be strengthened.
- Clear responsibilities have to be defined for each sector involved as well as funding schemes attached to the activities.
- Dialogue between different sectors at regional level should be strengthened.

Cooperation between different sectors is an essential prerequisite for protecting health. The review has shown that intersectoral collaboration in Poland differs greatly at different operational levels. The collaboration seems to function better at the local or voivodship level, where common activities and decisions are often initiated and taken on a more personal basis than at the national level.

At the national level, intersectoral collaboration is formally institutionalized through several legislative and consultation processes. The Long-Term Governmental Programme “Environment and Health”, as the implementation programme of the NEHAP, was the first intersectoral programme on environment and health jointly

developed and implemented by different ministries. The Programme had its own budget and implementation plan co-funded by the Ministry of Health, the Ministry of Environment and the Ministry of Education and Science.

Many efforts to ensure multisectoral collaboration have been made in promoting road safety. The National Road Safety Programme and the National Road Safety Council are examples of an institutionalized cooperation mechanism. They rely on the involvement of ministries and institutions meeting regularly and setting common objectives under the leadership of the Ministry of Infrastructure. Despite the institutionalized setting, not all sectors have been equally involved in the process. The Ministry of National Education, originally part of the council, has dropped out from the process mainly due to financial constraints. This example shows that intersectoral collaboration fundamentally relies not only on a well-defined definition of responsibilities for each involved sector or institution but also on the funding schemes attached to each of the activities for which the involved institutions are responsible. In addition to the activities of the Council, the Ministry of Health has also taken road safety promotion initiatives not involving the transport sector.

Intersectoral working groups have also been set up for nutrition and physical activity at the national and local levels. For example, the National Food and Nutrition Institute has been closely collaborating with the Ministry of National Education.

Although intersectoral committees have been set up, a gap still seems to exist between theory and practice. Actions and priorities are often fragmented. Information gathered by one sector is not shared with other stakeholders. In air quality monitoring, for example, the Ministry of Health does not seem to have access to all data collected by the Chief Environmental Inspectorate. Data from the Chief Sanitary Inspectorate, in contrast, are transferred to the environment sector. Cooperation in managing sewerage systems is also difficult. For many years, the cooperation was only on paper and based on an agreement between the Ministry of Environment and the Chief Sanitary Inspectorate that was not implemented. Conflicting responsibilities in the maintenance of the road infrastructure seem to

affect its quality. The quality of the road infrastructure is perceived as inadequate and enhancing the risks of road crashes.

Despite these difficulties, other examples of intersectoral collaboration function well. Research institutions in health interact and closely collaborate with national policy institutions (such as the Institute of Mother and Child). The same positive experience arises in the collaboration with the private sector and churches, especially in road safety. Some caution is nevertheless appropriate, as the private sector involved mostly comprised interested parties.¹⁰

NGOs are increasingly being recognized as essential partners in disease prevention activities. Road safety activities and smoking prevention activities have been implemented through the support of NGOs such as Alter Ego for road safety and the Foundation for Children of the Copper Basin in environmental tobacco smoke and smoking prevention. The National Health Programme officially acknowledges this collaboration. Unfortunately, no funds are attached to it, so collaboration is difficult to implement.

Cooperation is increasingly being initiated at the international level. Several projects are being implemented in partnership with other countries or in the framework of large-scale European projects (such as a breastfeeding project, the PHARE Programme, an EU persistent organic pollutants project, ECNIS and ESBIO). Although individual experts are actively involved and make outstanding contributions, the engagement of institutions and networking within the country is lagging behind.

In summary, the review has shown that intersectoral collaboration in Poland functions better at the local level and between research institutes and with private partners. Specific areas such as physical

¹⁰ Cooperation with Toyota in the framework of the European Transport Safety Council and the cooperation with the association of Polish breweries; the Polish breweries had initiated a programme providing special night buses for young people going out. The focus was later put on information. The “designated” driver of the night (not drinking) got tested and got a gadget.

activity, nutrition and road safety also seem to benefit from better collaboration between sectors than other areas.

The need for strengthening the collaboration between sectors is increasingly being recognized in Poland. Efforts are currently being made to create an environmental protection agency with the aim of coordinating all activities within environment management. The terms of reference of the agency have not been defined yet. In addition, national plans are underway to better consolidate and integrate the work of the veterinary, environmental and health inspectorates, possibly by merging the three.

6 Tools for action

Conclusions

- Many agencies and institutions perform public health monitoring at different levels (national, municipal, etc.).
- Monitoring concerns either health or environment; there is a lack of integrated health and environment information.
- Chemicals seem to be the risk factors mostly monitored. Many different institutions are involved in this.
- There is no reliable countrywide surveillance of injuries and other environmentally related diseases.
- There is considerable information but not a uniform approach to preparing, analysing and reporting it to support health and environment policy action.
- There is little data sharing between the different institutions or sectors.
- Reports from one sector are not always made available to other sectors.
- The health sector seems to inadequately cover health impact assessment.
- The existing procedures for health impact assessment do not seem to be well developed.
- Environment and health and disease prevention in the current medical curriculum are scattered and not taught uniformly.
- There are not enough experts with strong environment and health knowledge.
- There is no specialized or supplementary training for paediatricians in environmental health issues.
- In both secondary and primary schools, environment is dealt with as a cross-sectional subject, and the health effects of environmental factors (both positive and negative) are not explicitly emphasized.

- There is little awareness of environmental risk factors in society (such as environmental tobacco smoke and noise).
- Existing information is not systematically communicated to the public.
- The Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters stipulates that all data on environmental conditions should be accessible, but access to data is not always ensured.
- The mass media seem to focus more on specific fields: nutrition and physical activity.

Recommendations

- Tools for integrating health and environment data should be improved.
- The surveillance for injuries, water and foodborne diseases needs to be strengthened.
- The further development and implementation of the ENHIS needs to be given higher priority, building on the work already done, and further expanding current work on environmental health impact assessment.
- A uniform approach to preparing, analysing and reporting information needs to be developed to facilitate its sharing and use in environment and health.
- A statutory framework should be developed for including the ENHIS and health impact assessment in planning, monitoring and evaluating environment and health policy and action programmes.
- The responsibilities need to be clarified in health impact assessment, environmental impact assessment and environmental health impact assessment.
- The methods of health impact assessment and environmental impact assessment need to be developed further.

- A national accreditation system for experts in environmental health impact assessment should be established.
- Continued efforts are needed in capacity-building, follow-up of the training and establishment of annual programmes for knowledge dissemination and updating and development of needed skills in environmental impact assessment and health impact assessment.
- An institutional entity should be designated as a formal body to coordinate the implementation of environmental health impact assessment in Poland.
- Country capacity in using the ENHIS and environmental health impact assessment as a standard public health tools should be strengthened further.
- Environment and health education should be strengthened in the university curricula.
- Intensify the training of environmental health specialists, including international training for a limited number of specialists and participation in international technical cooperation projects.
- Country capacity in using the ENHIS and environmental health impact assessment as a standard public health tools should be strengthened further.
- Provide more public information about the right to health information, environmental information and the burden of health attributable to environment.
- Encourage public participation in decision-making.
- Other sectors should also support and fund structures for communication concerning the status of environmental risk factors.
- Public information and awareness-raising should be promoted.
- The Ministry of Health should increase the resources available for assessing and investigating health effects and for developing a communication structure for feedback to the reporting regions and districts.
- The role of the mass media in communicating health risks deriving from the environment to the public should be strengthened.

Monitoring

Environmental quality can be monitored to indicate the level of compliance with a standard but also to assess trends over time. Although EU legislation requires advanced monitoring and reporting on environmental hazards, there is no national requirement on monitoring and reporting on environment and health indicators and no regulation on its establishment.

Many institutions and sectors monitor environmental hazards to health in Poland, resulting in a scattered monitoring approach and in some areas in duplicate efforts. Monitoring is mainly performed by the national and respective local, sanitary and environmental inspectorates, but also by the NIPH-NIH and specialized institutes or agencies.

In the health sector, the NIPH-NIH is mainly involved in toxicological and microbiological analysis and is in charge of monitoring the database on water quality and of supervising the water laboratories.

The NIPH-NIH routinely collects health indicators. The Mazovian Public Health Centre collects health data at the regional level and forwards them to the Ministry of Health. The Chief Sanitary Inspectorate manages a registry on data on communicable diseases provided by general practitioners and laboratories according to 78 disease entities.

The involvement of many different institutes requires close collaboration. The review has shown, however, that the parties concerned do not always systematically transfer and share data. Thus, data on water collected by the Chief Sanitary Inspectorate are transmitted to the Ministry of Environment before being sent to the European Commission, whereas the Ministry of Health does not seem to have access to data on air quality collected by the environment sector. Nevertheless, the review has shown that, at the voivodship level, bilateral cooperation agreement between the sanitary and the environmental inspectorate ensures collaboration in air quality management.

The Ministry of Environment is responsible for preparing an overall report on the state of the environment.

The following overview of monitoring responsibilities, standards and management is organized along the four regional priority goals.

Water and sanitation

The Chief Sanitary Inspectorate monitors drinking-water and bathing water following the requirements established by EU directives. The monitoring is performed in 1500 bathing places and the results are forwarded to the Ministry of Environment. The county sanitary inspectorate collects data on the quality of the water along the chain of distribution by assessing the quality of the transport equipment. Through 118 laboratories for monitoring and control at the national and at voivodship level, the Chief Sanitary Inspectorate analyses predominantly arsenic, manganese, chromium, nickel, cadmium, iron, lead, *Escherichia coli* and Enterococci. The NIPH-NIH analyses chemical hazards in drinking-water (heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening). The Chief Environmental Inspectorate monitors inland surface water and groundwater. A total of 300 surface water sources and 10 000 groundwater sources are tested. No information about who is responsible for irrigation water could be found. Waterborne diseases in Poland are not registered separately, but for 10 years there has been a registry on Legionellosis and water. A system for registering waterborne diseases is being created.

Injuries

A central registry for children's accidents seems to be lacking, and the various services seem to have little or no coordination. Police departments register information on road crashes. The development of a central registry on injuries has been mentioned as a priority in the framework of the activities of the Children's Memorial Health Institute. Due to lack of funding, however, this will be difficult to implement. Injury surveillance needs to be developed and

strengthened and an injury database established within the health sector.

Air quality

Both the Chief Environmental Inspectorate and Chief Sanitary Inspectorate carry out monitoring at 550 stations at the national level (excluding passive measurement stations). The Chief Environmental Inspectorate collects the data, and the Chief Sanitary Inspectorate analyses them. The voivodship environmental inspectorates collect data, and the Chief Environmental Inspectorate is responsible for the overall air quality assessment system. Data are collected in a central database and forwarded to the European Environment Agency Airbase database. This database is currently under reconstruction.

The Chief Sanitary Inspectorate is also in charge of monitoring air quality. In 2004, PM₁₀ was being monitored at 155 stations covering about 50% of the population. In 2007, 252 stations were operating. PM_{2.5} is monitored in two cities covering 15% of the population.

The NIPH-NIH analyses chemical hazards in outdoor air (heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening).

The Nofer Institute of Occupational Medicine monitors heavy metals and persistent organic pollutants in the outdoor air in the framework of the UNECE Convention on Long-Range Transboundary Air Pollution. The Institute is also involved in the WHO activities on air quality and health. There is a vast array of air quality data, but it is not effectively used for assessing population exposure and related health aspects.

The Chief Sanitary Inspectorate is responsible for indoor air quality, especially regulating indoor air quality in public places. The Nofer Institute of Occupational Medicine is also involved in monitoring indoor air quality. A Ministry of Health order regulates 30 chemicals and physical elements in building construction. A new construction law being developed will supersede this order. Ten laboratories in 10

sanitary inspections are dealing with indoor air quality, and plans were made to carry out permanent monitoring of indoor air quality. Finally, the NIPH-NIH certifies microbiological analysis and chemical analysis of mould presence in indoor environments.

Chemical and biological risks

In food contamination, the NIPH-NIH assesses microbiological risk (such as *Salmonella*). The health sector is responsible for all processed food products. The NIPH-NIH has its own laboratories for food safety assessment. It also performs human biomonitoring of persistent organic pollutants in blood, milk and semen and virological assessments of food products. The Institute of Food and Nutrition is the national reference laboratory for food quality (macro- and micronutrients) and safety. The General Veterinary Inspectorate under the Ministry of Agriculture and Rural Development is responsible for all products of animal origin. It cooperates with the National Veterinary Institute.

As outlined in the section on water quality monitoring, chemical hazards are mainly analysed and monitored by the NIPH-NIH. The NIPH-NIH evaluates toxicological dossiers for pesticides, food contaminants and food additives. It monitors chemical hazards in drinking-water and outdoor air. It is also in charge of assessing the occupational health risks of pesticides and biocides. The Nofer Institute of Occupational Medicine and the Institute of Agricultural Medicine monitor exposure to pesticides and to heavy metals and related health hazards of the working environment (methylmercury, phthalates, arsenic, cotinine and persistent organic pollutants). The Nofer Institute is in charge of monitoring and assessing the occupational exposure to physical, chemical and biological agents.

Summary

In conclusion, Poland has considerable statistics on health trends and on specific environmental parameters, but the information needs to be processed for assessing the state of environment and health within the country. In addition, the available data are not systematically

communicated to the public, resulting in a lack of the public awareness on environmental threats to health.

The ENHIS is considered to be a driving force for analysis of the environment and health situation in the country. However, this is mainly done at the national level. As noted in Chapter 2, most of the data used in the ENHIS exist within the country. The data sources should be clearly identified and an extension of the regular indicator-based analysis and reporting following ENHIS methods should be progressively adopted. This, in turn, will further advance the implementation of the indicator system in Poland.

Environmental impact assessment and health impact assessment

Environmental impact assessment was introduced in Poland through the Environmental Protection Act (Act No. 62/2001/627) adopted on 27 April 2001.

Articles 3 and 47 stipulate that environmental impact assessment procedures relate to the analysis and assessment of direct and indirect influence on the environment as well as on human health and conditions of life.

Environmental impact assessment is mandatory for: 1) the draft concept of the national land-use policy, draft land-use plans and draft regional development strategies and 2) draft policies, strategies, plans or programmes in industry, energy, transport, telecommunication, water management, waste management, forestry, agriculture, fisheries, tourism and land use, where their preparation by the national or voivodship public administration authorities is provided for by law. Public administration authorities preparing draft documents that normally require environmental impact assessment can decide not to carry this out if they determine that the policies are not likely to have significant effects on the environment. Environmental impact assessment is always required for major investment (motorways and roads etc. and hazardous undertakings).

The Ministry of Environment, the Chief Environmental Inspectorate and the National Commission for Environmental Impact Assessment are responsible for environmental impact assessment. The Chief Environmental Inspectorate takes part in decisions related to the location of investment projects (Section 2, subsection 1, point 3 of the Act on Environmental Protection Inspection of 20 July 1991) and in the processes of commissioning buildings or installations completed as projects that may significantly affect the environment (Section 2, subsection 1, point 4 of the Act on Environmental Protection Inspection). An advisory and supervisory role concerning human health issues is delegated to the Ministry of Health and specifically to the Chief Sanitary Inspection (and its local agencies).

Although environmental impact assessment falls under the responsibility of the environmental sector, external environmental impact assessment experts carry it out. Before the market liberalization it was conducted by certified experts (on a list), but now many companies can perform environmental impact assessment. The review did not clarify whether the Ministry of Environment certifies or accredits these companies. Investors must pay for two assessments; the responsible ministries have to double-check it.

The extended responsibility of including health in environmental impact assessment is still not sufficiently covered in the enforcement of the law. There is not enough expertise to implement the legislative regulations reliably and efficiently based on recognized methods of health risk assessment or health impact assessment. The health part of the environmental impact assessment has been reviewed by the health sector more according to “good practice standards”.

Under the government programme on environment and health for 2003–2006, a project was started on strengthening environmental impact assessment and integration of health concerns. The scope was mainly to address the regional or local health and environment administration involved in environmental impact assessment procedures, receiving unprecedented response and showing substantial demand for knowledge and methods on incorporating health aspects

into environmental impact assessment and strategic environmental assessment.¹¹

As a main conclusion, it was felt that there is no need for change in legislation but for strengthening this procedure according to the good practice standards such as using quantitative risk assessment to strengthen environmental impact assessment. The first phase of such advancement requires “scoping” and is ongoing in some countries (not in Poland) with public participation. The review has shown that the health component within environmental impact assessment reports is still insufficient and inappropriate. The methods for including health impact assessment in environmental impact assessment reports need to be strengthened. The number of specialists in health impact assessment is still insufficient. Training and education in this field need to be developed further.

The Chief Sanitary Inspectorate is responsible for health impact assessment. The NIPH-NIH mainly performs health impact assessment of air quality. The most advanced projects include the multinational APHEA (Air Pollution and Health – A European Approach) and APHEIS (Air Pollution and Health: A European Information System) projects. The Ministry of Environment does not accept health impact assessment. The major criticism is that the data used come from research and that the population exposure based on monitoring data is not considered.

The Institute of Food and Nutrition conducts risk assessment of health hazards and assesses food.

¹¹ WHO launched this project in 2004, and the Institute of Occupational Medicine and Environmental Health was in charge of strengthening the health impact assessment component of environmental impact assessment.

Capacity-building

Environment and health in the medical curriculum are covered through a course on hygiene that students have to take during their fourth or fifth year of training. The name of the course can vary from one university to the other, from Hygiene and the Ecology of Humans to Hygiene and Epidemiology. These courses have the aim of training students on how environmental determinants affect health. The course generally takes about 30 to 45 hours and is taught through lectures, seminars and practical work. Students are also required to take a number of electives courses in the last years of their education, with the option to choose environmental medicine or epidemiological concepts.

Environmental health is part of the curriculum of the first year of the public health studies. The medical training is inconsistent across the institutions in the number of hours required. The required training hours range between 30 and 60 hours.

There are additional upper-level courses in some public health institutions on protecting the environment and how this benefits individuals' health. However, these classes are rare.

Communication

Anyone in Poland has the right to ask for and obtain information on the environment and on the health status of the population. Generally, the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (58) provides the right to access to information on the environment. In Poland, more specifically, basic provisions concerning environmental information are contained in the Act on Access to Information on the Environment and its Protection and on Environmental Impact Assessments (57). The Act lays down the principle of public participation in procedures relating to environmental protection. Under Article 4, citizens have the right to obtain full information on the state of the environment. The Act specifies the role of public

administration authorities, which are obliged to make information on the environment available to all people available to all people.

The review has shown, however, that the data are not always easily accessible and that there is no clear agency under the Ministry of Environment in charge of providing data and information on the state of the environment.

The Ministry of Environment provides reports and data online. Moreover, the Chief Environmental Inspectorate and the voivodship environmental inspectorates post on their respective web sites their own reports, communiqués and numerous information materials that describe the state and condition of the natural environment in Poland and in its respective regions. The voivodship environment protection inspectorates make air quality measurements generated by automatic monitoring stations accessible online.

The Chief Environmental Inspector has to transfer the results of the air quality monitoring to the Chief Sanitary Inspector annually. However, in practical terms, reports on the state of the environment and health and monitoring results do not seem to be transmitted regularly from one sector to the other. For a long time, the information was restricted, such as data on air quality etc. The introduction of the EU environmental information directive (2003/4/EC) has nevertheless improved the exchange of information between the Chief Sanitary Inspectorate and the General Veterinary Inspectorate.

In Poland, professionals have a wealth of knowledge and experience in environmental health. Strong scientific research programmes complement this. However, on the public level, although the public interest in environment and health status has increased in the recent years, knowledge is still lacking on many major environmental hazards. Public information and education on environment and health risks is essential for ensuring the successful implementation of environment and health policies. Proper communication strategies and journalists and mass media as important partners are essential. In general, no funding mechanism has been developed for communication activities at the ministry or institute level. There are seldom specialized units or staff for communicating with the press.

One exception is the Children's Memorial Health Institute, which recently has established a specific division for communication purposes. The presence of some institutions in the press (such as the Institute of Food and Nutrition) shows the need to strengthen the media capacity of relevant institutions.

Efforts are being made at the local level. The example of Warsaw shows that citizens are informed on emerging environmental health hazards through the Warsaw communal gazette. Alarming air quality data were published and the community informed. Promotional activities need to be intensified. This relates both to the health and environment sectors but also to other sectors and institutions that are not directly involved in environmental health problems, such as economic sectors and agencies, businesses and NGOs. Some prevention campaigns have been going through churches (such as road safety), but disease prevention information activities still need to be strengthened at the community level.

The experience shows that raising awareness through television campaigns is costly. Disease prevention campaigns, be it national campaigns or campaigns organized by NGOs, are not broadcast for free on television. The approach of the mass media towards environment and health topics needs to be changed. The interest of the mass media in supporting health-promoting activities is very limited. Problem-oriented training courses for mass media aimed at enhancing knowledge on basic environmental health issues at the national and local levels should be developed. The example of road traffic injuries shows that the mass media are often interested in the topic only in cases of dramatic events and are not supporting preventive action. An advertisement showing high-speed driving could not be stopped although the National Road Safety Council opposed it. This approach needs to be changed.

However, many institutions have made efforts to increase health promotion programmes and campaigns. Personal basic hygienic behaviour of children has been promoted through the campaign "Bright Smile – Bright Future" under the patronage of the Health Promotion Department of the Ministry of Health and the Institute of Mother and Child together with Colgate. The campaign is organized

as a game, and 13 500 schools with 400 000 students take part annually. Pupils practice dental cleaning at schools and at home with the parents. According to the Institute of Mother and Child, 90% of the children have dental caries. Sometimes the Colgate toothbrush is the first one the child receives. The campaign gives financial incentives but also provides data and information enabling the evaluation of intervention programmes.

Prevention of asthmatic diseases has been promoted through “Freedom to Breathe”. This initiative is a multi-partner campaign under the responsibility of the Chief Sanitary Inspectorate in cooperation with the Polish Society for Health Education. The campaign involves 708 000 children and more than 1.5 million adults, sensitizing them through such means as films for teachers and parents on how to deal with asthma attacks.

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Annex 1. Additional information by regional priority goal

Regional priority goal 1: Water and sanitation

Summary

Water and sanitation are main environment and health issues in Poland. Significant progress has been made in providing the population in rural areas with an improved water supply in homes and in connecting households to the public water supply. However, only 58% of the population is connected to wastewater-treatment facilities and only 14% of the population is connected to sanitation facilities in the home in rural areas.

Only 11.9% of the bathing areas in freshwater zones and 35.3% of the bathing areas in coastal zones complied with the mandatory requirements for water quality. In 2005, Poland had one of the lowest compliance rates in the framework of the European Commission bathing water quality directive in terms of compliance with standards and insufficient sampling.

Many institutions conduct surveillance as an essential tool in controlling waterborne diseases, depending on the type of water and the parameters analysed. The procedures need to be harmonized and access to data centralized.

Water contamination occurs more often in small water supplies and more rarely in medium-sized ones. About 10% of the samples taken did not comply with the standards. The non-compliance mainly referred to the levels of iron, manganese, turbidity, less often to the level of ammonia and in 2% to other water parameters analysed.

One of the major problems is increasing water prices.

Institutional set-up

- The Chief Sanitary Inspectorate is responsible for drinking-water and bathing water and for collecting data on the quality of water along the chain of distribution.
- The NIPH-NIH analyses chemical hazards in drinking-water.
- The Chief Environmental Inspectorate monitors inland surface water and groundwater.
- The Ministry of Environment is responsible for source water protection.
- Local governments have to ensure that insufficient water quality is remedied.
- Local governments have to respond to the Ministry of Health on the improvement of drinking-water (in the framework of the new National Health Programme).
- The local governments are responsible for the water supply for the population.
- The NIPH-NIH is responsible for setting up all legal provisions for drinking-water.
- Poland has 17 000 public distribution networks.

Tools for management

Main laws and policies recently established in this field

International

- European Council Directive 2006/7/CE.
- No ratification of the UNECE/WHO Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes.
- Water framework directive.
- Directive 98/83/EC of 3 November 1998 on water quality intended for human consumption.
- Poland implemented Council Directive 76/160/EEC in a decree of the Ministry of Health on requirements about bathing water quality (Dz. U. Nr 183 poz. 1530 / 2002) of 16 October 2002. The Decree is to be replaced by the Decree implementing Council Directive 2006/7/CE.

National

- Act on requirements for water for human consumption.
- Water safety plans.
- Order of the Council of Ministers of 6 May 1997 on defining the safety conditions for people in mountains and those who are swimming, bathing and doing water sports.
- Act of 7 June 2001 on collective water supply and collective sewage disposal.
- Water-law Act (Dz.U. Nr 115 poz 1229 / 2001) of 18 July 2001.
- Order of the Minister of Health of 16 October 2002 on the requirements for water in bathing resorts.
- Decree of the Ministry of Health on the requirements about drinking-water quality (Dz. U. Nr 203 poz. 1718 / 2002) of 11 November 2002.
- Amendment of the Act on collective water supply and collective sewage disposal of 22 April 2005.
- Regulation of the Minister of Health of 19 November 2002 on requirements for water quality intended for human consumption.
- Decree of Ministry of Environment on the requirements about surface water used as a source of drinking-water (Dz.U. 204 Nr 1728 / 2002) of 27 November 2002.
- Order of the Minister of Environment of 27 November 2002 on requirements for surface water used for supplying public with drinking-water.
- Order of the Minister of Environment of 10 November 2005 on substances particularly dangerous to the aquatic environment and the licence for a specified use of inland waters that is required before placing them in sewerage systems.
- Order of the Minister of Environment of 10 November 2005 on the index of priority substances in water policy.
- Order of the Minister of Environment of 24 July 2006 on requirements necessary to fulfil when placing sewage into water or soil and on substances particularly dangerous for the aquatic environment.
- Order of the Minister of Health of 29 March 2007 on the quality of drinking-water intended for consumption.

Tools for action

Monitoring and reporting

Chief Sanitary Inspectorate

- The chemical parameters monitored by the Chief Sanitary Inspectorate are: arsenic, manganese, chromium, nickel, cadmium, iron and lead. From a microbiological perspective, the Inspectorate monitors *Escherichia coli* and enterococci.
- There are 118 laboratories for monitoring and control at the national and voivodship levels under the Chief Sanitary Inspectorate.
- Monitoring is performed in 1500 bathing places.
- The data have been available in an electronic database since 2004.
- The Chief Sanitary Inspectorate prepares a report on the state of the country on water quality. The annual report and short-term reporting are available on the web.
- Participation in the PHARE Programme with the aim of implementing the *acquis communautaire* and strengthening water quality monitoring in Poland.
- The county sanitary inspector assesses the quality of materials for water transport.

NIPH-NIH

- Chemical hazards in drinking-water analysed by the NIPH-NIH are: heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine.
- The Institute of Hygiene is responsible for supervising the laboratories in charge of environmental health monitoring (managed by the Chief Sanitary Inspectorate). It has two accredited laboratories – for physical-chemical and for microbiological parameters.
- There is no separate registration on waterborne diseases in Poland, but for 10 years there has been a registry on *Legionella* in water.
- No information about who is responsible for irrigation water could be found.

Intersectoral collaboration

- The sanitary inspectorates forwards the results of the monitoring performed in the bathing places to the Ministry of Environment.
- There seems to be no regular information flow from the environment sector to the health sector. Cooperation on a daily basis is lacking.
- Cooperation between the sectors was on paper only for many years and based on an agreement between the Ministry of Environment and the Chief Sanitary Inspectorate; in practice, the willingness to cooperate can be improved.

Regional priority goal 2a: Injury prevention

Summary

In Poland, the mortality rates due to road traffic injuries among people aged 0–24 years and the mortality rates due to unintentional injuries among those 1–19 years old are only slightly above the European average but still unacceptably high. Poland is within the range of countries with moderate to low commitment in implementing policies to prevent injury. The risk of children’s injuries seems to be a concern specifically in rural areas.

The Ministry of Infrastructure has the main responsibility for preventing road traffic injuries, but efforts have been made to involve other sectors. The National Road Safety Programme follows a multisectoral approach. Despite the institutionalized setting, however, not all sectors have been equally involved in the process. The Ministry of National Education, originally part of the National Road Safety Council, has dropped out from the process mainly due to financial constraints.

Cooperation with the private sector and with NGOs seems to be effective.

Although efforts have been made to prevent unintentional injuries, there is no reliable registry for children's accidents. Many institutions are involved in collecting data but they all use different methods.

Beside information and prevention campaigns, safety needs to be improved from an urban planning perspective (such as constructing safe bike lanes).

Institutional set-up

- The Institute of Mother and Child has coordinated the information collected on injuries.
- The Children's Memorial Health Institute is currently developing a registry for children's injuries.
- The National Road Safety Council established in 2002 under the Ministry of Infrastructure guides and coordinates activities taken by the central government in road safety: developing road safety programmes and guidelines, and initiating and providing opinions on legislative acts and regulations. It promotes safe behaviour in road traffic: cycling licences, producing safety kits for cyclists and preparing advertisements on traffic injuries.
- The Ministry of National Education has initiated programmes on safe cycling (cycling licence).
- The main focus of Alter Ego (an NGO) is preventing road crashes. They are cooperating within the framework of the National Road Safety Programme and are particularly interested and engaged in supporting the victims of road crashes.
- The Medical University in Cracow will be implementing the Child Safety Action Plan.

Tools for management

Main laws and policies recently established in this field

National

- Objective number 10 of the National Health Programme 2006–2020 aims at reducing injuries among children.
- Reducing the number of road crashes was an objective of the National Health Plan 1996–2005.
- The National Road Safety Programme the Council of Ministers adopted in 2001 sets the priorities for 2001–2010 for road safety in Poland. The programme's strategic goal is reducing the annual number of deaths due to road traffic injuries to 4000 in 2010. When Poland joined the EU in May 2004, the Council of Ministers adopted the new National Road Safety Programme for 2005–2013.
- The national policy on road safety is covered by the Traffic Act (Dz. U. 1997 Nr 98 poz. 602). The Act includes regulations considering children's health and safety in following areas:
 - child safety seats;
 - safety belts;
 - as passengers in the back seat of the car;
 - wearing safety helmets while riding in motorcycles;
 - speed limitation system; and
 - pedestrians younger than 7 years old and younger than 15 years old.
- The Decree of the Ministry of National Education of 2002 (Dz. U. 51. poz 458) lays down regulations on road safety education as part of school education.
- The Act on Chemical Substances of 2001 regulates child-resistant packaging for non-pharmaceuticals.
- The Decree of the Ministry of Health of 2004 on dangerous substances requires child-resistant packaging and warnings.
- Child Safety Action Plan.

Funding and economics

- The budget of the National Road Safety Council estimated for 2007 was Z16 million (about €1.6 million) to be used for

cooperation in infrastructure development and developing information material (brochures, leaflets etc.).

- Prevention campaigns, whether national campaigns or campaigns organized by NGOs, are not broadcast for free on television.
- The lack of systematic collection of injury data has been attributed to funding problems.
- Funds from the European Investment Bank have been allocated to local authorities for infrastructure work and preventing road crashes.

Intersectoral collaboration

- The National Road Safety Council set up by the government and managed by the Ministry of Infrastructure is coordinating activities on road safety across sectors.¹²
- The Council meets twice a year, but not all involved sectors participate regularly; the Ministry of National Education, originally part of the Council, has dropped out from the process mainly due to financial constraints.
- Many projects are run only by the Ministry of Infrastructure, and the Council does not have any legislative power on the activities of the other sectors involved.
- The Ministry of Health seems to have independent activities on preventing road traffic injuries, which are not known to the Council.
- There is good cooperation with the private sector and NGOs: projects with Renault, Toyota and Alter Ego.
- International projects: Italy, Spain and Poland within the European Transport Safety Council.

¹² The members are representatives of regional government authorities (voivodes) designated by the Prime Minister, the Minister of National Defence, Justice, Interior and Administration, State Treasury, Finance, Economy, Regional Development, National Education, Environment, Infrastructure and Labour and Social Policy as well as the Police Commander-in-Chief, the Fire Brigade Commander-in-Chief and the General Director for National Roads and Motorways.

- There is cooperation with the National Agency for Alcohol Prevention of the Ministry of Health, which is responsible for setting blood alcohol limit values.
- The cooperation in road safety generally works better with the private sector than with the public sector.

Tools for action

Monitoring

- In Poland, police departments register information on road crashes.
- Research is being undertaken on the procedures to follow for monitoring children's injuries: the Ministry of Interior and Administration, Ministry of Health, Ministry of National Education and Ministry of Infrastructure all use different methods and different specifications.
- There is no system for collecting information on the causes of accidents.
- The development of a central registry on injuries is a priority in the activities of the Children's Memorial Health Institute.

Safety promotion

- The National Road Safety Council distributes safety kits for cyclists (reflective materials etc.) and issues cycling licences.
- The development of a magazine on road safety for teachers has been stopped due to lack of funds.
- A CD for children on road safety was sent to local authorities (also for adults).
- Global Road Safety Week.
- Many campaigns involve churches.
- In large cities, the use of public transport has been promoted for people who go out and drink alcohol.

Communication

- The mass media are only interested in dramatic accidents and do not systematically support preventive activities.
- Public television does not broadcast public campaigns prepared by the state.

- The National Road Safety Council tried to oppose an advertisement that indirectly showed high-speed driving but was not successful in stopping the campaign.

Regional priority goal 2b: Physical activity

Summary

Poland ranges in the average of countries, with 11-year-old boys who were physically active at the level recommended by the guidelines on moderate-to-vigorous physical activity. Further, the prevalence of excess body weight (including obesity) among 13-year-old boys in Poland is lower than the average in the European Region. Policies to reduce and prevent excess body weight and obesity among children and adolescents have steadily improved.

Although efforts are being made to increase the level of physical activity, particularly in schools, nutritional policies have not yet been applied to schools. The sale of food and drinks in schools is still not controlled, and all children do not have the explicit right of access to safe playgrounds and sporting facilities for children after school.

Institutional set-up

- The Department of Public Health of the Ministry of Health is in charge of prevention campaigns for enhancing physical activity (“Keep Fit” programme).
- The Institute of Mother and Child is a partner institution in the Health Behaviour in School-Aged Children project and is cooperating with the National Food and Nutrition Institute and with the school behaviour network.
- The Ministry of National Education has set up a programme for supporting children in participating in after-school sport activities.

Tools for management

Main laws and policies recently established in this field

International

- WHO Global Strategy on Diet, Physical Activity and Health through the National Programme on Prevention of Overweight, Obesity and Noncommunicable Diseases through Diet and Improved Physical Activity (2007–2016).

National

- One of the objectives of the National Health Programme focuses on promoting physical activity for preventing cardiovascular diseases and promoting healthy behaviour.
- Long-term national programme for preventing overweight (including physical activity),
- The number of compulsory hours of physical activity per week at school has been raised to five hours.

Funding and economics

- Given the increasing prevalence of obesity and the need to enhance physical activity, the Ministry of National Education has set up a programme for supporting children in participating in after-school sports activities (memberships, access to sports fields etc.). Families have to apply to benefit from this support. Although this is a good approach, efforts should be made for children to have access to safe playgrounds and sports facilities as an explicit right.

Intersectoral collaboration

- Intersectoral working groups have been set up for nutrition and physical activity at the national and local levels. The National Food and Nutrition Institute has been closely collaborating with the Ministry of National Education and universities of physical education.

Tools for action

Physical activity promotion

- “Keep Fit” is run by Department of Public Health of the Ministry of Health in cooperation with the Institute of Mother and Child; in September 2006, 5000 schools at the county level (throughout Poland) were participating in the project. The project will be evaluated within three years.

- The Ministry of Health has developed information brochures on how to prevent obesity through examples of diets.
- Activities are mainly carried out in primary school.
- Information desks at hypermarkets should support the right diet.
- A total of 7000 schools have used new handbooks with physical activity lessons.

Communication

- The mass media often focus on nutrition and physical activity.

Regional priority goal 3: Air quality

Summary

Air pollution and exposure to environmental tobacco smoke are major environment and health issues in Poland. Respiratory diseases are the fourth leading cause of death and particularly affect children. Environmental tobacco smoke is by far the most significant indoor air quality issue in health terms, and Poland is strengthening its policies to reduce children's exposure.

The mean concentration of PM₁₀ calculated for cities in Poland is relatively high among the countries of the European Region for which data are available. Overall, transport is one of the major problems at the urban level resulting in high air pollution.

Many efforts have been made to reduce environmental tobacco smoke by introducing smoking bans. Nevertheless, smoking at home is still a major concern. Despite many prevention campaigns, the priority recently seems to be treating tobacco-dependent people.

Air quality has improved steadily through the closure of many industrial plants, improving the quality of the environment in the past 15 years.

There is considerable air quality data, but it is not used effectively for assessing population exposure and the related health effects.

Environmental tobacco smoke

Institutional set-up

- The Department of Public Health of the Ministry of Health is responsible for campaigns to prevent smoking.
- The Labour Inspectorate is responsible for checking the situation at workplaces.
- The Chief Sanitary Inspectorate is responsible for checking the enforcement of the smoking ban.
- The Ministry of National Education is implementing smoking prevention activities, but they are not sufficiently disseminated; stronger involvement of the educational sector is required.
- The Institute of Mother and Child performs research on the effects of environmental tobacco smoke on health.
- The Health Promotion Foundation initiated the campaign “Quit Smoking with Us”.

Tools for management

Main laws and policies recently established in this field

International

- On 21 May 2003, Poland ratified the WHO Framework Convention on Tobacco Control.

National

- Act on health protection against the effects of using tobacco and tobacco products of 9 November 1995 (last amended on 5 November 1999). The Act has been complemented and updated by several decrees of the Ministry of Health and the Ministry of Interior and Administration.
- National tobacco control and action plan.
- One priority of the National Health Programme is reducing tobacco smoking and the exposure of children and pregnant women to environmental tobacco smoke.

Funding and economics

- Legislation on tobacco control in 1999 stipulated that 0.5% of the tobacco excise taxes were to be allocated for tobacco control measures. This was repealed in 2007.
- There are no funds available for advertising supporting environmental tobacco smoke control; 80% less is spent than what should be invested in antismoking campaigns.

Intersectoral collaboration

- The national tobacco control and action plan is enforced by an intergovernmental body built up by the Ministries of National Education and National Defence and the Chief Sanitary Inspectorate; at the time of the review, the cooperation between the different stakeholders did not seem to be working very well.

Tools for action

Health promotion activities

- Preventive actions and guidelines are developed targeting different age groups.
- Poland has two annual nonsmoking days.
- The prevention activities of the Ministry of National Education target three priority areas: schools, health care facilities and workplaces.
- Following the campaign “Quit Smoking with Us” initiated by the Health Promotion Foundation, an estimated 2.5 million people in Poland gave up smoking.

Indoor and outdoor air quality

Institutional set-up

- The sanitary inspectorates are in charge of surveillance and control of compliance with regulations concerning environmental health (including air quality).
- The NIPH-NIH assesses threats to health arising from exposure to indoor air and is responsible for supervising the laboratories in

charge of environmental health monitoring (air quality). It assesses the health impact of air quality.

- The Institute of Occupational Medicine and Environmental Health analyses environmental health hazards and focuses on indoor air quality.
- The toxicology laboratory of the Nofer Institute of Occupational Medicine performs human biomonitoring – biomarkers of exposure to heavy metals and related health effects (methylmercury, phthalates, arsenic, cotinine and persistent organic pollutants).
- Persistent organic pollutants and heavy metals in outdoor air are also monitored in the context of the UNECE Convention on Long-Range Transboundary Air Pollution.
- The Nofer Institute of Occupational Medicine is involved in the WHO air quality activities and is a partner in several large EU projects such as the ECNIS (36) project and also actively involved in the ESBIO (a project under the EU Environment and Health Action Plan) for the EU countries.
- Voivodship governments at the regional level are responsible for air quality plans.

Tools for management

Main laws and policies recently established in this field

International

- UNECE Convention on Long-Range Transboundary Air Pollution.
- Air quality framework directive (EC) 96/62 on ambient air quality assessment and management.
- From May 2004, Poland adopted the basic regulations and directives of the European Commission in ambient air protection.

National

- Decree of the Ministry of Environment on acceptable levels of some substances (including PM₁₀) in ambient air, hazardous levels of some substances in ambient air and the margins of tolerance of the acceptable levels of some substances (Dz. U. Nr 87 poz. 796 / 2002) of 6 June 2002 as the national transposition of the air quality framework directive (EC) 96/62.

- Decree of the Ministry of Environment on assessment of the substances in ambient air levels (Dz. U. Nr 87 poz. 798 / 2002) of 6 June 2002 as the national transposition of the air quality framework directive (EC) 96/62.
- The Act of Environmental Protection of 27 April 2001 defines the principles of air quality and air protection, followed by decrees on specific subjects by the Minister of Environment and the Minister of Health.
- Order of the Minister of Environment of 5 July 2002 on the detailed requirements for air quality protection programmes.
- Order of the Minister of Environment of 20 June 2005 on the evaluation of the levels of substances in the air.
- Order of the Minister of Health and Social Care of 12 March 1996 on the acceptable concentration and intensity of harmful elements emitted from building materials for health, as well as appliances and pieces of equipment on premises intended for people.
- Act of 20 April 2004 on substances that deplete the ozone layer.
- Order of the Minister of Economy and Work of 16 January 2007 on detailed requirements for limiting emission of organic compounds formed as a result of using organic solvents in some paints, varnishes and products used for car renovation.
- A new construction act being developed will contain basic requirements for construction materials.
- The environmental policy programme 2007–2015: Chapter 6 of the programme targets environmental health and human health protection. It mainly focuses on water, air, noise, electromagnetic fields and ionizing radiation.

Funding and economics

- Despite the existing taxation policy on fuel, there is no comprehensive policy related to transport emissions (for example, no higher taxes for polluting cars and no sustainable taxation policies for sustainable or alternative energy sources)¹³ and no tax benefits for energy-related investments affecting the emission of air pollutants.

¹³ On a research level, however, the Road Traffic Safety Centre is making efforts to analyse the fuel consumption of different vehicles.

Intersectoral collaboration

- At the voivodship level, a bilateral cooperation agreement between the sanitary and the environmental inspectorates ensures collaboration in the air quality management.

Tools for action

Monitoring

- The Chief Environmental Inspectorate and Chief Sanitary Inspectorate carry out monitoring at 550 stations at the national level. Data are collected in a central database and forwarded to the European Environment Agency AirBase database. This database is being reconstructed.
- The Chief Sanitary Inspectorate is also in charge of monitoring air quality. In 2004, PM₁₀ was monitored in 155 stations covering about 50% of the population. In 2007, 252 stations were operating. PM_{2.5} is monitored in two cities covering 15% of the population.
- Following the transposition of EU directives into national policies, the number of pollutants monitored has been reduced.
- The NIPH-NIH is analysing chemical hazards in outdoor air (heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening).
- The Nofer Institute of Occupational Medicine monitors heavy metals and persistent organic pollutants in the outdoor air in the framework of the UNECE Convention on Long-Range Transboundary Air Pollution.
- The Chief Sanitary Inspectorate is responsible for indoor air quality, especially regulating indoor air quality in public places.
- The NIPH-NIH certifies microbiological analysis and chemical analysis of mould presence in indoor environments.
- Thirty chemicals and physical elements in building construction are regulated by the order of the Ministry of Health.
- Ten laboratories in 10 sanitary inspections are dealing with indoor air quality, and plans are being made to create permanent indoor air quality monitoring.
- The Chief Sanitary Inspectorate is responsible for health impact assessment.

- For air quality, the NIPH-NIH performs most health impact assessment. The most advanced projects are APHEA (Air Pollution and Health – A European Approach) and APHEIS (Air Pollution and Health: A European Information System).

International collaboration

- The Nofer Institute of Occupational Medicine is also involved in the WHO activities on air quality and health.

Communication

- The Warsaw communal gazette reports on the air quality in the different districts.

Regional priority goal 4: Chemical (including food safety), biological and physical risk factors

Summary

Other environmental hazards to public health include chemicals, especially in food and working environments, and noise exposure. The review generally shows that environment and health is predominantly covered through an occupational health approach.

Children's exposure to lead in Poland has been of concern, especially in some regions like Silesia. The blood lead concentration in children has decreased with the introduction of unleaded fuels, but local industrial plants continue to be a risk factor.

Analysis of the policy response to food safety and chemicals shows a large variety of data collected under the responsibility of multiple sectors.

Institutional set-up

- The Chief Sanitary Inspectorate runs surveillance and control of compliance with regulations concerning environmental health conditions in workplaces and checks the conditions of food: production, transport, storage and sale.
- The NIPH-NIH deals with urban noise and is the national reference laboratory for pesticide residues.
- The Institute of Occupational Medicine and Environmental Health is in charge of health promotion at the workplace through educational activities and for treating diseases caused by exposure to biological, chemical and physical factors; it also researches and monitors noise levels, electromagnetic fields and ionizing radiation.
- The Nofer Institute of Occupational Medicine carries out measurements of noise levels at work, vibration, electromagnetic fields and ionizing radiation and evaluates the harmfulness of chemical substances and preparations, including the development of safety cards.
- The health promotion activities of the Mazovian Public Health Centre tackle the educational, living and working environments. The overview of the major projects carried out in recent years shows that priority is put on health promotion in the school environment targeting children (such as noise at school).
- The main responsibilities of the Chief Environmental Inspectorate are to monitor and report on the level of noise, hazardous waste, electromagnetic fields and ionizing radiation.
- The Institute of Environmental Protection appointed by the Minister of Environment is in charge of abatement of noise and vibrations.
- The Polish Building Research Institute, through a specialized department, prepares expert opinions and provides training on the quality of the environment, buildings and building products with the aim of ensuring adequate hygienic and health conditions for the users. It is in charge of testing the emission of harmful substances from building products and how they influence the indoor living environment, the workplace, industrial protection zones and the natural environment.

- Municipalities are in charge of implementing sanctions if limit values (noise, etc.) are exceeded.
- Alert systems for pollution incidents (gas, chemicals and fire) are organized at the level of the city of Warsaw and the districts.

Tools for management

Main laws and policies recently established in this field

International

Chemicals

- The Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- The Basel Convention on the Control of Transboundary Movements of Hazardous Waste

Food safety

- EU directives 178/2002/EC, 852/2004/EC, 853/2004/EC, 854/2004/EC and 882/2004/EC.

Occupational safety

- Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, 1999 (International Labour Organization)
- United Nations Convention on the Rights of the Child
- Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict

National

- The National Environmental Policy Programme 2007–2015 covers chemicals, noise, waste and radiation.

Noise

- Act on Environment Protection (Dz. U. Nr 62, poz. 627) of 27 April 2001 (includes noise).
- The Decree of the Ministry of Environment on threshold levels of noise (Dz. U. 02.8.81 / 2002) of 9 January 2002 stipulates special

limits for noise for areas of buildings related to long-lasting stay of children or teenagers.

- Order of the Minister of Environment of 29 July 2004 on acceptable noise levels in the environment.
- Order of the Minister of Economy of 21 December 2005 on essential requirements for outdoor equipment in terms of emitting noise to the environment.
- Order of the Minister of Transport of 30 January 2007 specifying the scope of information required to issue a decision on introducing limitations or bans on aviation operations in order to reduce noise emitted at the airport.
- Order of the Minister of the Economy and Work of 5 August 2005 on safety and hygiene measures related to noise or vibration exposure at work.

Radiation

- Council of Ministers Decree (Dziennik Ustaw Nr 220 poz. 1850) of 3 December 2002 on requirements regarding the content of natural radioactive isotopes in stocks and materials used in buildings intended for humans and livestock and in industrial wastes used in construction as well as control of the isotope content.

Chemicals

- Act of 11 January 2001 on chemical substances and preparations (and its implementing legislation).
- Order of the Minister of Economy of 5 July 2004 on limitations, bans or conditions of production, turnover or use of dangerous substances and preparations.
- Order of the Council Of Ministers of 16 October 2006 on contamination detection systems and competence of authorities concerning these matters.
- Order of the Minister of Economy of 20 December 2005 on essential requirements for aerosol products.
- Act of 28 July 2005 on waste electrical and electronic equipment.
- Act of 13 September 2002 on biocidal products (and its implementing legislation). The Act specifies conditions of introducing biocidal products on the market and using biocidal products and active substances they contain in Poland, taking into

account requirements concerning their efficiency and safety. The objective of the Act is to prevent from threats to human and animal health and threats to the environment resulting from the use of biocidal products.

Waste

- Act of 27 April 2001 on waste.
- Resolution of the Council of Ministers No. 233 of 29 December 2006 on the National Plan for Waste Management 2010.

Asbestos

- Resolution of the Sejm of 19 June 1997 on the withdrawal of asbestos from the economy.
- Act of 19 June 1997 on the prohibition of products containing asbestos. According to the Act, it is forbidden to import to Poland products containing asbestos and asbestos, produce products containing asbestos and market asbestos and products containing asbestos to eliminate the production, use and marketing of products containing asbestos.
- Order of the Minister of Economy, Work and Social Policy of 2 April 2004 on the conditions and ways of safe use and removal of products containing asbestos.
- Order of the Minister of Economy and Work of 14 April 2005 about health and safety during the protection and removal of products containing asbestos and the training programme dedicated to these issues.
- Order of the Minister of Environment of 20 December 2005 on emission standards from installations.

Food safety

- Act on health conditions of food and nourishment of 12 May 2001 (Dz. U. Nr 63 poz. 639 / 2001), last amended on 7 February 2005 (Dz. U. Nr 31 poz. 265 / 2005).
- Act on commercial quality of farm and food products (Dz. U. 5 Nr poz. 44 / 2001) of 1 January 2002
- Decree of the Ministry of Health on permissible additional substances and substances instrumental in processing of 23 April

2004 (dz. U. Nr 94 poz. 933 / 2004), last amended on 20 January 2005 – dz. U. Nr 79 poz 693 / 2005).

- Decree of the Ministry of Health on enriching substances added to food and conditions of their employment (Dz. U. Nr 27 poz. 237 / 2002) of 19 December 2002.
- Decree of Ministry of Health on dietary supplements (dz. U. Nr 27 poz. 236 / 2002) of 19 December 2002.
- Hazard analysis and critical control points (HACCP) system – obligatory in Poland since 1 May 2004, last amended on 1 January 2006.
- Act of 25 August 2006 on food safety.
- Order of 29 March 2007 – requirements intended for human consumption.

Funding and economics

The example of chemical safety shows that chemical risk is mainly assessed from a hazard analysis viewpoint, and no cost–benefit analysis is undertaken.

Tools for action

Monitoring

- The Chief Sanitary Inspectorate runs surveillance and control of compliance with regulations concerning environmental health conditions in workplaces and checks the conditions of food production, transport, storage and sale.
- The NIPH-NIH analyses chemical hazards in drinking-water: heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening.
- The NIPH-NIH also analyses chemical hazards in outdoor air: heavy metals, polycyclic aromatic hydrocarbons, trihalomethane, bromates and chlorine screening.
- It is also in charge of assessing the occupational health risks of pesticides and biocides. Particular attention is paid in this respect to pesticides, polychlorinated biphenyls and mercury.
- The Institute of Agricultural Medicine monitors exposure to pesticides and exposure to heavy metals and related health hazards in the working environment (methylmercury, phthalates, arsenic,

cotinine and persistent organic pollutants). The Institute is in charge of monitoring and assessing occupational exposure to physical, chemical and biological agents.

- The NIPH-NIH evaluates toxicological dossiers for pesticides, food contaminants and food additives.
- In food contamination, the NIPH-NIH assesses microbiological risk (*Salmonella* etc.).
- The health sector is responsible for all processed food products. The NIPH-NIH has its own laboratories for food safety assessment. It also performs human biomonitoring of persistent organic pollutants in blood, milk and semen and virological assessment of food products.
- The Institute of Food and Nutrition is the national reference laboratory for food quality (macro- and micronutrients) and safety.
- The General Veterinary Inspectorate is in the Ministry of Agriculture and Rural Development and is responsible for all products of animal origin. It cooperates with the National Veterinary Institute.

Capacity-building

- The NIPH-NIH supports the Chief Sanitary Inspectorate through specialized training for employees and postgraduate training for specialists on epidemiology and public health. Training can be expanded to representatives of industry.

Following the decisions of the Fourth Ministerial Conference on Environment and Health (Budapest, 2004), WHO Regional Office for Europe initiated a project to ensure that environment and health policy making was more focused on the real needs of the member states. This included providing country-specific advice in order to better plan preventive interventions, and to tailor service delivery and surveillance in the field of environment and health to those needs. Through detailed Environment and Health Performance Reviews (EHPRs), WHO Regional Office for Europe is continuing to provide a country-specific analytical description of the environment and health situation in Member States. The major areas assessed through this process include the country's institutional set-up, the methods applied when setting policy and the legal framework that is available to enforce environment and health action. Also the capacity of the many sectors, partners and stakeholders to establish national intersectoral collaboration and the related tools and resources ensuring action are assessed.

The present report conveys a clear picture of the current environment and health situation in Poland. It evaluates strong and weak points of environmental and health status and policy making in Poland and brings recommendations from independent experts.

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