



# Health Impact Assessment Toolkit for Cities

## Document 4.

### **Introducing health impact assessment in Trnava, Slovakia: a case study**



## ABSTRACT

This document explains the pilot project on health impact assessment (HIA) that took place in Trnava, Slovakia from March to September 2004 based on Promoting and Supporting Integrated Approaches for Health and Sustainable Development at the Local Level across Europe (PHASE Project). A literature search of the political and executive system at the national and local level in Slovakia was conducted followed by three HIA meetings in the City of Trnava. The first meeting raised awareness for a wide audience to gain political commitment for HIA. The second meeting provided in-depth training of HIA for the local officers in Trnava who were going to carry out the HIA. The third meeting evaluated the HIA process. Interviews were conducted with all participants (administrative officers, directors, Vice-Mayor, healthy city coordinator and the researchers), who also filled in a questionnaire to assess the application and introduction of HIA. An HIA steering group was created with the aim of conducting a pilot appraisal to identify the likely health effects of a selected proposal for building a new playground for children in the city. The work was carried out in multisectoral and intersectoral collaboration, including officers from different departments. The results of the evaluation showed barriers to and enablers for introducing HIA in Trnava. The introduction can be seen in two strands: the executive and administrative strand and the political strand. Regarding the executive and administrative strand, the advantage was that the officers were already collecting data to carry out risk appraisal. However, the risk appraisal reports were minimally disseminated between the departments because of a lack of intersectoral collaboration on health-related issues. The officers also related the somewhat contradictory sense that, although more time and training will be required to fully implement the HIA process, this process was a way of learning by doing. HIA needs to be performed to fully understand its benefits. Regarding the political aspects, the evaluation showed that political commitment and support are very valuable in introducing the HIA process. The participants stated that there was clear political commitment to HIA but not enough support for time and resources. A call for introducing a legal requirement for HIA was issued at all meetings during the pilot phase. In the absence of a legal framework stipulating HIA, there is a need to build on existing capacity, legislation and other resources such as environmental impact assessment.

This document results from work coordinated by the WHO Centre for Urban Health as part of the project “Promoting and Supporting Integrated approaches for Health and Sustainable Development at the Local Level across Europe” (PHASE, EC Contract SUB 02-344294) funded by the European Commission, Directorate-General for the Environment.

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Scherfigsvej 8  
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## The WHO health impact assessment toolkit

The project Promoting and Supporting Integrated Approaches for Health and Sustainable Development at the Local Level across Europe (PHASE Project) was funded by the European Commission, Directorate-General for the Environment, under the Community Framework for Cooperation to Promote Sustainable Development (2003–2005). The WHO Healthy Cities and Urban Governance Programme has coordinated the Project together with health impact assessment experts across Europe and the coordinators of the Italian Healthy Cities Network and Association of Healthy Cities of Slovakia. The PHASE Project aimed to promote the integration of health and social aspects into the sustainable development by focusing on and introducing the process of health impact assessment (HIA). The objective was to develop an HIA toolkit to be used for introducing and implementing HIA at the local level. The toolkit consists of five documents:

1. Health impact assessment – from vision to action (background paper)
2. Health impact assessment – a training module
3. Health impact assessment – how can it support decision-making? (brochure)
4. **Introducing health impact assessment in Trnava, Slovakia: a case study**
5. Introducing health impact assessment in Bologna, Italy: a case study

This document explains the HIA pilot that took place in Trnava, Slovakia from March to September 2004. However, the case study also includes political, social and economic background on Slovakia to fully explain the introduction of HIA in a city there.

## Acknowledgements

This document was written by Louise Nilunger, Project Manager, WHO Healthy Cities and Urban Governance, together with Gabriel Gulis, Institute of Public Health, Unit of Health Promotion Research University of Southern Denmark, Odense, Denmark and Jarmila Korcova, Trnava University, Slovakia. Ingrid Hunava, Healthy City Coordinator in Trnava, Slovakia also contributed to the document as well as Leah Janns Lafond, former Project Manager, and Shouka Pelaseyd, Project Officer, WHO Healthy Cities and Urban Governance. The work has been supervised by Agis Tsouros, Regional Adviser, WHO Healthy Cities and Urban Governance. David Breuer considerably improved the language and style of the document.

## 1. Introduction

Within Europe, health impact assessment (HIA) has predominantly been practised in northern European countries such as Finland, the Netherlands, Sweden and the United Kingdom. The PHASE Project aims to introduce HIA in countries where it is not already being practised. To this end, a country in the southern part of the European Union (EU) and a new EU country have been targeted for participation in the PHASE Project. The Project is producing an HIA toolkit, based on existing experience, which will be piloted by the Italian Healthy Cities Network and the

Association of Healthy Cities of Slovakia. These are longstanding networks that have shown innovation and the ability to introduce new ideas to local policy-makers.

For example, the Association of Healthy Cities of Slovakia has worked closely with Slovakia's Ministry of Environment to produce a guidebook on how to produce local environment and health action plans, and it has carried out a number of projects on urban mobility. The Italian Healthy Cities Network, which brings together some of the largest cities in the country (including Rome and Milan), is characterized by strong political leadership. The Italian Healthy Cities Network is currently focusing on developing city health profiles and plans. The Network is supporting local professionals and decision-makers by producing a practical manual.

This document presents the introduction of the HIA process in Trnava, Slovakia. The policy context in Slovakia is described and political, social and economic background is provided to better understand the HIA process. The HIA process has been evaluated to identify enablers for and barriers to HIA. A similar document has been prepared for the case study in Italy.

## **2. Slovakia**

Introducing the HIA process at the local level requires knowledge about the political, social and economic background in a country. The health and well-being of a population depend on many different environmental, individual, social and economic factors. To improve the health status of a population and decrease ill health, national and local governments face challenges by dealing with multisectoral decision-making. Public policy plays a vital role in shaping the social and physical environment in ways that are conducive to better health. The health of people living in towns and cities is strongly determined by their living and working conditions, the quality of their physical and socioeconomic environment and the quality and accessibility of care services. The facts and data in sections 2.1 to 2.5 have all been gathered from the Health Care Systems in Transition profile on Slovakia (1).

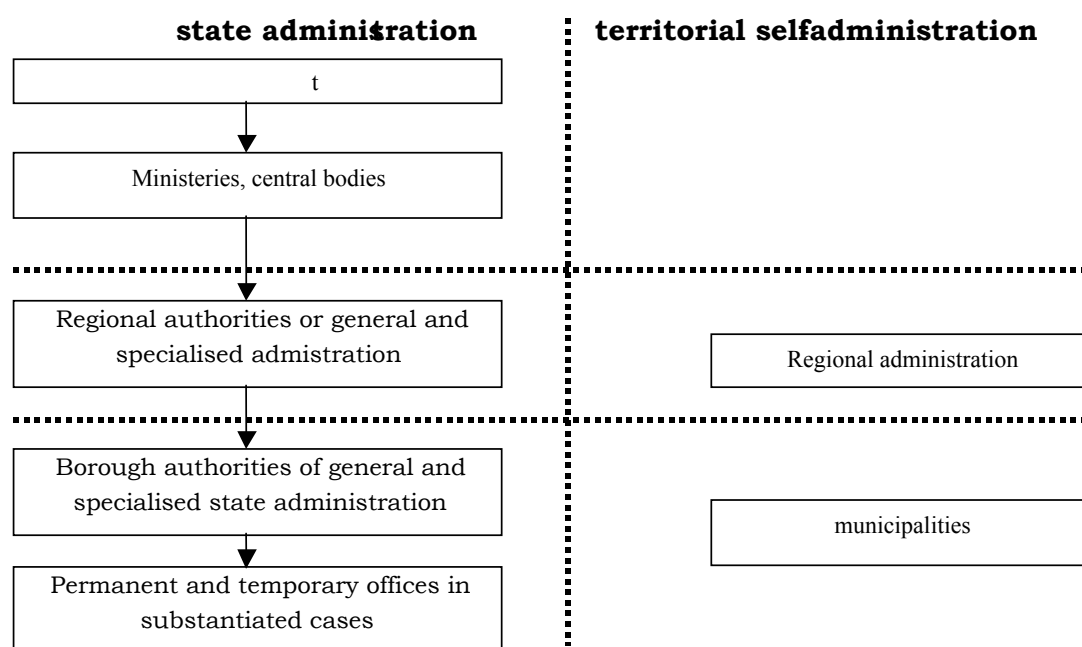
### **2.1 Political background**

Slovakia, as an independent state form, was established on 1 January 1993. According to its Constitution, it is a unitarian state with a one-chamber parliament (the National Council of the Slovak Republic) having 150 members elected on a pro rata basis within one electoral borough (2). Slovakia has been a member of the EU since 1 May 2004.

The Constitution divides power into legislative, executive and judicial power. From the very beginning, the Constitution guaranteed certain autonomous local self-administration (municipalities), and following the amendment in 2001, the autonomy of the second level of local administration was strengthened. In terms of territorial administration, Slovakia is divided into 8 regions and 2891 municipalities. The public administration is organized at three levels: state, region and municipality. Every level has its own elected officials, delegated duties and responsibilities. Some duties are divided between the state and self-administration at lower levels. The elected representatives of all three levels as well as mayors of municipalities and self-administration authorities in higher-level territorial units are elected based on general, equal and direct voting rights by secret ballot for four years.

State administration and territorial self-administration in Slovakia have been governed based on a separation model since 1990 (state administration – territorial self-administration). Since 1 January 2004, the state administration has mostly been reflected at the central level. The central bodies have created lower levels that are organized at the regional level. The number and borders of state administrative units (regions) are identical with the number and borders of higher-level self-administration territorial units (symmetric formation). If needed, the state regional authorities establish other authorities and offices in regions. The levels of local self-administration (municipality and higher-level territorial units) have no relations of superiority or subordination (3). Figure 1 shows the organization of public administration as of 1 January 2004.

Figure 1. Organization of public administration in Slovakia since 1 January 2004

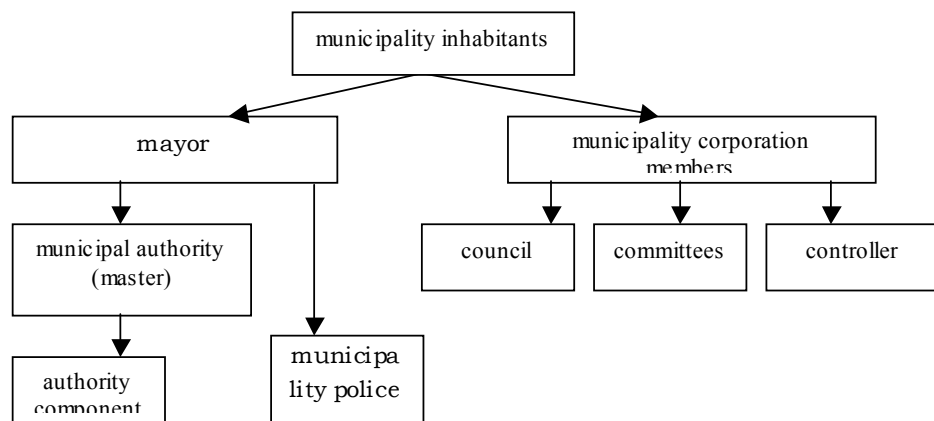


As of 1 January 2004, the organization of local state administration changed. The reason was the transfer of more than 400 competencies from the state administration to municipalities and higher-level territorial units and the intention to increase efficiency and improve the quality of the state administration. Integrated regional and district authorities have been abolished, and the network of authorities of specialized state administration subordinated directly to ministries have been extended. The model of decentralized authorities of specialized local state administration was in operation in Slovakia in 1990–1996. Except for the cities of Bratislava and Kosice, Slovakia has a single level of municipal self-administration. The cities of Bratislava and Kosice have two levels of self-administration: magistrate (city) and municipal wards. The distribution of duties, rights and responsibility is stipulated by the Act on the Capital City of the Slovak Republic, Bratislava, the Act on the City of Kosice and statutes of both cities (3). Figure 2 shows the organization of the local self-administration.

Municipalities are legal entities. They own assets, they have their own budget, personal and financial independence, they may conduct business and collect local taxes and fees. They may participate in international, cross-border and domestic cooperation.

Self-administration is performed by elected bodies, voting by citizens, local referendum and public gathering. The municipalities within their self-administration competencies may issue generally binding measures and statements. The municipalities ensure the operation of self-administration (original competencies), but in selected areas, where it is more advantageous for the state, also execute selected functions of the state administration. These are registrar offices, construction orders and some responsibilities in education. These duties are performed in the name of the state; the state is responsible for managing the quality of services and funding.

Figure 2. Organization of the local self-administration



Original competencies (self-administration operations) include: local roads, public transport, public areas, plants, cleaning public spaces, nature and environment protection, water supply, sewerage, waste management, spatial planning, local development, housing, preschool and school facilities, social facilities, health care facilities, some hospitals, culture, attestation of deeds, some criminal offences, local police, collecting local taxes and fees and participation in regional plans. Municipalities are allowed to conduct business or become owners of business entities. Municipalities perform their duties in various ways: independently, in cooperation with other municipalities (common municipal authority, cooperation among municipalities), cooperation with businesses and the private sector. Municipalities have established many joint municipal ventures (such as waste disposal, water supply and maintenance). To perform their duties, municipalities establish budgetary and contributory organizations and/or contribute by assets to not-for-profit organizations. They may establish partnerships. Duties have been delegated to municipalities in two stages (1990–1991 and 2002–2004) and will continue in the future.

## 2.2 Economic background

Since the Slovak Republic was established in January 1993, Slovakia has continued the difficult transformation from a centrally planned economy to a modern market-oriented economy. This reform slowed from 1994 to 1998. Although economic growth and other fundamentals improved steadily during that time, public and private debt and trade deficits soared, and privatization, often tarnished by corrupt insider deals, progressed only in fits and starts. Real annual growth in gross domestic product (GDP) peaked at 6.5% in 1995 but declined to 1.3% in 1999. Much of the growth, however, was attributable to high government spending and excessive borrowing rather than productive economic activity. For all of 2002, real GDP rose 4.4%.



Economic growth was expected to accelerate to 3.9% in 2003 and over 4% in 2004. Consumer price inflation declined from 26% in 1993 to an average rate of 3.3% in 2002 but rose again to an estimated 8.5% in 2003, driven by liberalization of subsidized prices of utilities. The inflation trend in 2002 was largely affected by the government's reluctance to continue its multi-year programme of price deregulation due to election-year pressures. Then in 2003, the government reduced subsidies by a larger than normal amount to offset its inaction in 2002. This trend will likely reverse itself by 2005, with inflation dropping to about 5% (4).

After economic stabilization in 1999 and 2000, Slovakia's current account balance recorded a deficit of 8.2% of GDP in 2002, the second largest number in the country's history (2001 was 8.8%), versus 3.7% in 2000. However, for the first 10 months of 2003, the country's trade deficit dropped by more than 80% compared with 2002 and recorded several monthly trade surpluses for the first time in years. Slovakia had a US\$ 2.1 million trade deficit in 2001, and gross foreign debt was about US\$ 13.2 billion at the end of 2002, about 53% of GDP. Foreign direct investment in Slovakia has increased dramatically. The government has opened doors for foreign investors and introduced competitive incentive schemes, including a flat income tax for corporations and individuals. Cumulative foreign direct investment has quintupled since the beginning of 2000 and was boosted by large privatization receipts. As of 2002, Slovakia had per capita foreign direct investment of about US\$ 1800 per year (4). The unemployment rate at end of 2004 was 13.1% (5).

Slovakia is a member of the EU, the Organisation for Economic Co-operation and Development (OECD), the World Trade Organization and the North Atlantic Treaty Organization.

## 2.3 Social background

The majority of the population is Slovak (85.8%), followed by the largest ethnic minority of Hungarians (9.7%), who are concentrated in the southern and eastern regions. The second largest ethnic minorities are the Roma (480 000–520 000, about 10%). Other minorities include Czechs, Ruthenians, Ukrainians, Germans and Poles (5).

Slovakia is a very rural country; 45% of Slovaks live in villages with less than 5000 inhabitants, and 14% live in villages with less than 1000 inhabitants. The total population in May 2001 was 5.4 million. Bratislava (428 000), Kosice (236 000), Presov (93 000), Nitra (88 000), Zilina (87 000) and Banska Bystrica (83 000) are the largest cities (5).

Articles 33 and 34 of the Slovak Constitution (6) are specifically concerned with the rights of national minorities and ethnic groups. However, little legislation has been adopted to support this. With respect to the Roma population, in 1999, the government published a Resolution concerning the Strategy of the Government of the Slovak Republic for the Solution of the Problems of the Roma National Minority and the Set of Measures for Its Implementation. The adopted strategy assigns measures to various authorities under the categories of: human rights and rights of people belonging to national minorities; education and training; language and culture; "un/employment"; housing; social sector; and health care. This strategy has been reinforced by an update in 2004 (7).

## 2.4 Health profile

Slovakia has better outcome on health indicators than most countries in central and eastern Europe but not as good as that of countries in western Europe. For example, life expectancy at birth for women has improved from 74.3 years in 1980 to 77.8 years in 2002 and for men from 66.8 years in 1980 to 69.9 in 2002 (8). The crude birth rate per 1000 population has decreased, although the crude natural growth rate is still positive and fertility rates have fallen below the replacement level. The major health problems in Slovakia are noncommunicable diseases related to unhealthy lifestyles (such as sedentary lifestyle, unhealthy diet, smoking and poor stress management). The major causes of death are cardiovascular diseases, accounting for more than half of all deaths. This indicator was twice as high as the EU average, with a negative trend since 1990. Cancer is another major health problem with higher incidence rates than in EU countries. Although infant mortality and maternal mortality have been reduced dramatically, the rates are still higher than EU countries. Communicable diseases are well under control in Slovakia, and the immunization rate has been maintained at high levels for many years (1).

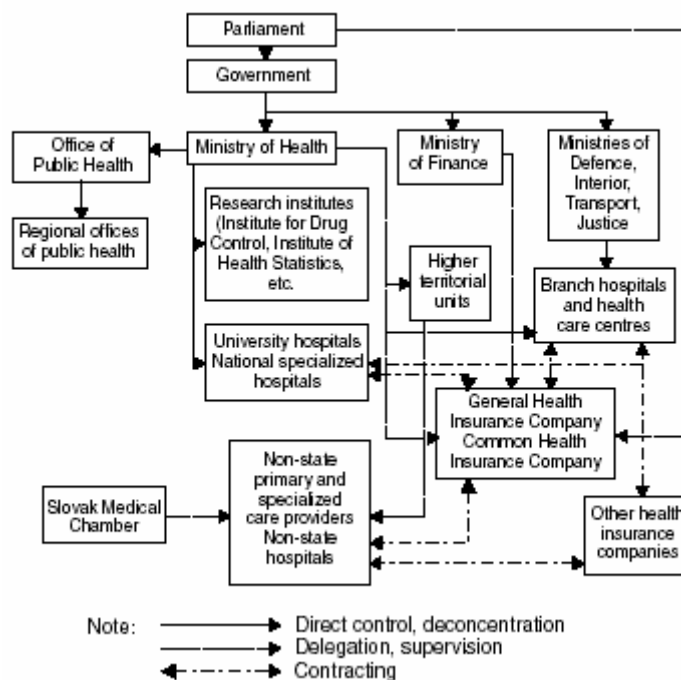
## 2.5 Health care system

The current structure of health care has become rather fragmented in comparison to the previous socialist health care system. The integrated three-tier hierarchical structure consisting of local, district and regional institutions was abolished. The health care system is organized into a mixture of decentralized and centralized structures.

The Ministry of Health (main state level executive body) is responsible for a wide scope of competencies: developing policy and drafting of legislation on health care and health protection, but also wider competencies over health care provision, especially over public inpatient facilities. It is also the main body committed to planning, regulating and managing health care provision. A political document called the Programme Proclamation of the Government of the Slovak Republic lays out the direction of the development of the health sector. This document defines the goals and priorities of the government, including health care, for the following four years. Thus via this document, the Ministry of Health has committed itself to finalizing a comprehensive reform of health care in the near future.

Figure 3 shows an organizational chart of the health care system in Slovakia (1).

Figure 3. Organization of the health care system in Slovakia



Act No. 416/2001 transferred several authorities and responsibilities from the state administration to the self-governing territorial administration – municipalities and higher-level territorial units. Thus, since January 2002, the municipalities have:

- established outpatient centres, including first-aid centres and outpatient departments in social care facilities;
- established specialized outpatient facilities, polyclinics, type I hospitals and hospitals with type I polyclinics;
- established home care agencies;
- participated in health promotion programmes; and
- approved daily working hours in non-state health care facilities.

The autonomy of higher-level territorial units in organizing and managing health care has been strengthened even more, for they:

- establish polyclinics and hospitals with type II polyclinics;
- maintain the register of health care facilities;
- issue licences for the provision of health care in several types of non-state health care establishments (such as home care agencies; polyclinics, hospitals with types I and II polyclinics, psychiatric hospitals, etc.);
- hear appeals of the decisions of health facility managers;
- ensure health care coverage among health care establishments;
- establish and operate secondary nursing schools; and
- participate in health promotion programmes.

On 1 January 2004, the state district offices were closed and the posts of state district physicians and pharmacists abolished. Their duties were transferred to the physicians and pharmacists in higher-level territorial units. The functions of the former state regional and district hygienists were transferred completely to the 36 public health offices that provide specialized state administration for public health. To ensure adequate performance of all tasks in the territory of a given region, the posts of higher territorial unit physician and higher territorial unit pharmacist have been established to supervise the provision of health care and the delivery of pharmaceutical care respectively. The subsequent Act No. 118/2002 and Act No. 138/2003 further specified the competencies of municipalities and higher territorial units. In the legislation submitted to parliament in 2004, many of the present duties of the physicians and pharmacists of the higher territorial units have been transferred to the Office for the Supervision of Health Care (1).

The government adopted the National Programme for Health Promotion in 1991; the parliament accepted this in January 1992. The first update took place in 1995 and the second in 1999. This included the approval of over 31 projects. The main goal is to promote health and prevent disease through the determinants of health across multisectoral policies and activities. The determinants of health being tackled include lifestyles (tobacco, alcohol, drugs, diet and physical activity), social and economic factors affecting health (including inequality in health), environmental factors (drinking-water, air pollution, occupational health and radiation) and genetics (genetic screening). The aim of the projects under the National Programme for Health Promotion is to improve the health status of the population and to decrease health inequality for 2000–2010. The priorities of the programme are as follows:

- optimizing the effect of health management, including explicitly mentioning the use of health impact assessment, with the results to be reviewed at a national conference in 2005;
- developing human resources for health capacity-building;
- ensuring family health;
- living healthier and improving the quality of life;
- removing influences harmful to life; and
- involving health care workers, especially those in primary health care.

The Programme is being implemented through various WHO projects such as Health Promoting Schools, Healthy Workplaces, Health Promoting Hospitals and Healthy Cities. Additional programmes include monitoring the trends and determinants of cardiovascular diseases, promoting physical activity in the population, healthy nutrition and a National Environment and Health Action Plan.

## **2.6 Sustainable development**

Political changes after 1989 led to fundamental economic and social changes, including sustainable development approaches in Slovakia. The Ministry of Environment was created to protect the environment; to oversee zoning and construction procedures; to conduct geological research; and to provide an integrated information and monitoring system for the environment. State administrative bodies established agencies to address local environmental concerns. The Ministry of Environment is the principal supervisory body that identifies strategies in collaboration with other state administrative and legislative bodies. The structure includes the Ministry of Environment (8 regional and 46 district departments of environmental protection),

the Slovak Environmental Inspection (4 offices across Slovakia), the Slovak environmental agency (10 offices across the country) and 10 other specialized organizations (9). Municipalities run their own environmental protection departments. Significant success has been achieved in environmental protection: 752 regulations of varying legal status. These include revised laws on air quality, water quality, forest protection and waste management.

The National Sustainable Development Strategy of the Slovak Republic was prepared in the framework of the project Capacity Building for Sustainable Development in the Slovak Republic for 1999–2000 with financial support from the United Nations Development Programme, guaranteed by the Ministry of Environment and accepted by government resolution No. 978/2001 (10). The process used for implementation included applying the principles of participation, transparency and a bottom-up approach. The strategy defines sustainable development as a target-oriented, long-term (continual), comprehensive and synergetic process affecting the conditions and all aspects of life (cultural, social, economic, environmental and institutional) at all levels (local, national, regional and global). Further, sustainable development is oriented towards a functional model of a community (local, regional, national and international), which qualitatively meets people's biological, material, spiritual and social needs and interests while eliminating or significantly reducing the effects that threaten, damage or destroy conditions and forms of life. Sustainable development does not overburden the landscape, utilizes resources reasonably and protects the cultural and natural heritage.

Within the framework of Capacity Building for Sustainable Development in the Slovak Republic, a small grant programme was carried out for the purpose of initiating Local Agenda 21 action. This provided support to municipalities and nongovernmental organizations for promoting sustainable development at the local level.

In October 2000, the government approved a draft of the updated National Environment and Health Action Plan (NEHAP II) in the Slovak Republic. The aim of the NEHAP II is to ensure the permanent health of the public in the 21st century by applying the principles of sustainable development. The key areas in the NEHAP II are food safety, soil, air pollution, drinking-water, health promoting working environment and conditions, company health services, housing, environmental health services, public relations and relations with nongovernmental organizations and education and training in environmental health (11). NEHAPs are usually drawn up in cooperation with a wide range of partners, including professional and technical experts, national, regional and local authorities and nongovernmental organizations.

## **2.7 Environmental impact assessment**

Article 44 of the Slovak Constitution of 1992 (6) established the right to the protection of the environment and the cultural heritage.

1. Everyone has the right to an auspicious environment.
2. Everyone is obliged to protect and enhance the environment and the cultural heritage.
3. No one must endanger or damage the environment, natural resources, and the cultural heritage, beyond the extent established by law.
4. The State looks after an economical use of natural resources, ecological balance, and effective environmental care.

Article 45 states that “everyone has the right to timely and complete information about the state of the environment and the causes and consequences of its conditions”.

In addition, Article 3.2 of the Administrative Law Procedure Act clearly states that administrative organs are required to proceed in close cooperation with citizens and organizations, providing them an opportunity to defend their rights and interests. Further, Article 35 of the Basic Rights guarantees the right to a healthy and favourable environment.

Prior to 1994, there were no formal requirements for environmental impact assessment, although some ecological analysis and requirements for permits similar to an environmental impact assessment process had existed since 1976. These processes were mainly applicable to land-use planning and construction.

After separation from the Czech Republic, Slovakia adopted its own Environmental Impact Assessment Act on 29 April 1994 (No. 127/1994), amended by the National Council Environmental Impact Assessment Act (No. 391/2000) (12). The Environmental Impact Assessment Act complies fully with the EU Environmental Impact Assessment Directive. The amended Environmental Impact Assessment Act sought to ensure timely transposition of certain requirements of the EU Environmental Impact Assessment Directive and screening categories from the 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context (ratified by Slovakia).

The Environmental Impact Assessment Act explicitly states that the process of assessment should ensure the full involvement of experts and the public. This will ensure that the presumed effects of proposed activities and certain development policies on the environment are properly assessed before permission is given for implementation.

The Ministry of Environment, the national and regional offices of the Environmental Protection Agency, the Environmental Inspectorate and the Hydro-meteorological Institute are key in environmental monitoring and enforcement (including for environmental impact assessment). Authorities granting permits and other competent authorities including the Ministries of Economics, Health, Interior, Transport, Post and Telecommunication, Soil Management, Construction and Regional Development, Education, Defense and Agriculture, participate together with regional and local authorities in a well-coordinated environmental impact assessment process. In Slovakia, environmental impact assessment obligations for sectoral strategies, policies and programmes must be submitted to the national government for approval.

## **2.8 Strategic environmental assessment**

The Environmental Impact Assessment Act provides for a comprehensive approach to strategic environmental assessment. It requires the assessment of development policies and legislative proposals in relation to their likely impact on the environment. Article 35 presents a brief procedure for environmental assessment that is obligatory for proposed development policies in the fields of energy supply, mining, industry, transport, agriculture, forestry and water management, waste management and tourism. In addition, the Act covers spatial planning documentation for regional and residential settlement in selected areas and any legislative proposal that may adversely affect the environment.

Although draft guidelines were prepared for strategic environmental assessment of policies (13) and spatial plans (14), these have not been approved or issued but remain on file in the Ministry of Environment and can be informally consulted.

Between October 2000 and March 2001, a voluntary strategic environmental assessment of the draft Bratislava Land-use Plan was undertaken (15). The aim was to make the process more democratic, increase the quality and acceptance of the plan as well as the involvement of citizens to implement its intentions and to verify the principles as mentioned above. The Environmental Impact Assessment Centre, Faculty of Architecture at the Slovak University of Technology, and the Faculty of Natural Sciences at the Comenius University in Bratislava undertook this. The strategic environmental assessment was carried out as a case study. Strategic environmental assessment is helping to get away from just describing existing environmental conditions to finding the actual impact of activities on the environment.

### **3. The health impact assessment process – material and methods**

The introduction of the HIA process was coordinated by the WHO Project Manager together with the coordinator of the Association of Healthy Cities of Slovakia, the local Healthy City coordinator in Trnava and researchers at Trnava University. The HIA process was introduced from March to September 2004. To be able to introduce and implement the HIA process, an HIA toolkit was developed. The toolkit presented the background to HIA, the technical aspects of the process (from screening to evaluation) and how to practically implement the process. The toolkit was translated into Slovak and was used by the local officers in Trnava during the whole process.

First, the literature on the political and executive system at the national and local level in Slovakia was searched. Understanding the political processes is crucial in implementing the HIA process, since it should assess proposals by various stakeholders in early stages in the political decision-making process. Chapter 1 in this document describes the political and administrative processes in Slovakia.

When the political processes were mapped, three HIA meetings were planned and held in Trnava, Slovakia. The first meeting started off the HIA introduction in Slovakia, aiming to reach a wide audience. Prior to this meeting, representatives from Trnava University met with the Mayor of Trnava to explain the HIA project and process. Immediately thereafter, the same representatives presented the project to the Healthy City board, which consists of the Vice-Mayor of the city, the heads of the departments in the city administration, elected city council members and local public health workers. The start-off meeting was a 1.5-day seminar intended to raise awareness about HIA, gain political commitment and support and provide basic training on the determinants of health and the broad methods of HIA. Forty-one politicians, officers and researchers attended the first training meeting, including people from other cities in the Association of Healthy Cities of Slovakia.

The City of Trnava organized a press conference. Five representatives of mass media attended: Slovak National Radio, Slovak National Press Agency, two local newspapers and the local television station. The National Radio and the local television station interviewed the lecturers, which were broadcast later. Another mass-media representative from the major national weekly

health newspaper *Zdravotnicke Noviny* attended the whole training seminar in full length and also conducted an interview about the project.

The second meeting provided in-depth training in HIA for the 29 local officers in Trnava who were going to carry out the HIA. External experts carried out the training together with researchers of the HIA process at Trnava University.

After the second meeting, officers of the local authority carried out the HIA process together with the researchers at Trnava University and the local Healthy City coordinator. A steering group was created consisting of the five people (from three departments of the city office and from the local public health institute) to be responsible for the HIA. The steering group started with various screening exercises before selecting a proposal that should undergo HIA. Scoping was carried out as well as the appraisal of the proposal to build a playground for children in a residential district. The pilot appraisal was selected to fit within the time period of this project and could therefore not be too complex. The report showed the potential negative and positive health effects (Annex 1).

A third meeting was held in September to evaluate the HIA process. The evaluation was divided into two parts; taking part in an interview as a group discussion and filling in an evaluation form. All the participants took part in both parts: the administrative officers, the directors, the Vice-Mayor, the Healthy City coordinator and the researchers. First, a two-hour interview as a semistructured group discussion took place with all the participants. Translation was needed during the meeting. Two people from Trnava University helped to translate from English to Slovak and vice versa. These two people were not authorized translators, but technical skills were considered more important than official translation skills. The interview was recorded and was later transcribed in English.

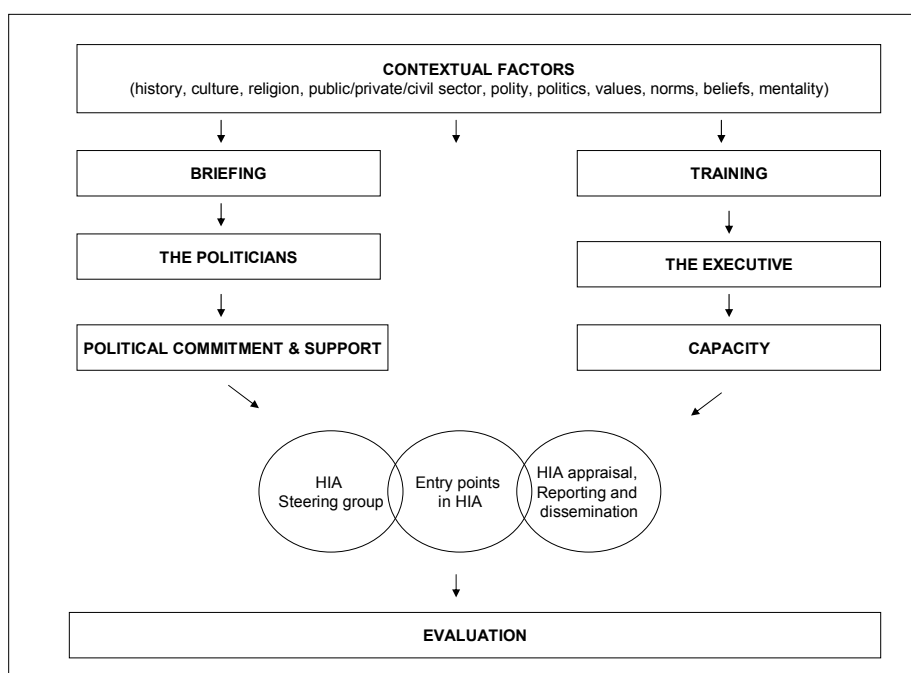
Second, the participants filled in an evaluation form about the HIA process individually after the interview was concluded. The form consisted of 67 questions assessing the participants' opinions and knowledge about their understanding of HIA, the application of HIA and the use and understanding of the HIA toolkit. This study only analyses the first two issues, since the results of the HIA toolkit have been used to improve the toolkit.

## **4. Results of the health impact assessment process**

The results of the HIA process have been analysed through the implementation of the HIA process (Figure 4). An HIA process will always be introduced into a specific context where the country, city and the population have a certain political, economic and social background. This background and current status will always influence new processes. Figure 4 shows that there are two different strands within the HIA introduction: political and executive. Politicians are being briefed in various ways, which leads to political commitment and support. The executive are the officers trained in HIA, since these officers carry out the HIA appraisal. The training of the executive builds capacity. Both strands influence the creation of a steering group, the entry points of HIA and the HIA appraisal, reporting and dissemination. After these steps have been taken and the HIA process is introduced, the process should be evaluated to learn from and improve the process. The HIA process that was piloted in Trnava, is being analysed through the stages in Figure 4.



Figure 4. The HIA process



### *Contextual factors*

The second chapter of this document sets out the contextual factors in Slovakia. The economic, political and social issues have been described to provide background for the current situation in Slovakia. The ongoing transition, which includes changes in the social, economic and environmental determinants of health as well as changes in the administrative and legislative power between the state and local authorities (decentralization), opens up good opportunities to introduce new work methods. However, this is still an ongoing transition period, which therefore requires time and effort to introduce and implement new processes into the decision-making.

### *Briefing for political commitment and support*

The HIA introduction started with an awareness-raising meeting in Trnava in March 2004. Politicians, officers and researchers attended the meeting, which included three sub-meetings. Both internal and external experts explained the components of HIA, its application to the local level and the benefits and limitations of HIA. The aim was also to present case studies to show the participants that several countries, organizations and institutions are introducing HIA.

The evaluation of the HIA process showed that all the participants expressed that this step is of great importance. Briefing politicians by raising awareness is one way to inform the politicians. The politicians also expressed that this was very helpful to understand the HIA process for further support. The politicians highly promoted the HIA process, but they were not sure whether the HIA process should stand on its own or be implemented via environmental impact assessment.

The officers stated that the HIA process or any process as such starts with a political commitment, which means that they can only carry out the process if there is enough support. There is therefore a difference between commitment and support. Even if there is a commitment to carry out HIA, there may not always be enough support. In this particular case, there was

enough commitment and support for the HIA pilot, but the officers expressed their doubts about the process in the long run since the HIA process requires time, capacity and resources. The officers said that HIA would be easier to carry out if it were fully institutionalized.

The HIA values were also discussed during the interview with the participants, where many officers said that transparency and participation are not yet fully in place. Slovakia has been independent since 1993 with a general, equal and direct voting system every four years. Democratic processes are therefore required from the political viewpoint. The HIA process requires that the political and administrative agenda be “open” for everyone, since the health effects of proposals should be assessed in an early stage of the political administration. HIA also requires that these proposals be open to a wide audience, since numerous stakeholders both inside and outside will work together on the assessments. The officers said that transparency and participation are lacking within the administration. This therefore makes performing full HIA difficult. There has not been any tradition of bringing various stakeholders together beyond the actual department. Even if this is now fully promoted, the officers still considered that this will take some time.

Both politicians and officers pointed out another issue that is important for HIA implementation: the way a proposal could lead to an HIA. There are not yet any formal standard ways for HIA, but there are formal methods for environmental impact assessment. Performing environmental impact assessment at the local level requires the local government to get permission from the Ministry at the national level. This means that, even if HIA were highlighted within environmental impact assessment and were therefore institutionalized, it would not always be applied at the local level.

#### *Training the executive for capacity-building*

The second meeting targeted the executive side: the officers who needed in-depth training in HIA. No participant had any knowledge of or training in HIA before this project started. Half the participants had some knowledge about the determinants of health and their overall correlation with policy and health status. Many of the participants had worked with environmental impact assessment, which gave good understanding about the concept of HIA. However, the evaluation showed that all the participants clearly understood the concept after the HIA process was introduced.

The officers highlighted the fact that this project did not provide enough training (two meetings), and they would like to have more training, especially more practical training. The participants mentioned that knowing how to start the HIA process is difficult. They strongly suggested expanding the training and the documents to include practical implementation of the HIA process and not just in theory. The participants thought that applying the content to the real world was difficult. It is both understandable and reasonable when it is on paper but doing it is not as easy in reality. Due to this, the HIA process is time-consuming, and it is important to have enough political commitment and support to carry out the HIA. To correct these difficulties, the participants expressed a need for more support from colleagues and politicians.

#### *Steering group*

After both meetings, a steering group was created. The steering group consisted of five people from three different departments. The steering group was responsible for the HIA, including carrying out the HIA pilot study. The group started with a number of screening exercises. This aimed to get the participants into the HIA way of thinking to understand its components.

HIA is underpinned by intersectoral and multisectoral collaboration. This factor is crucial to HIA, as many organizations, institutions, the general public and the government assess health impact. This is a completely new way of working for many people, and such collaboration is not adequately promoted, perhaps because people are not used to it. However, when HIA was implemented, the directors and officers of different departments worked together, which required coordination and again transparency. The participants all thought that it worked out well, even though they considered HIA to be quite time-consuming and costly in resources. They pointed out that this was just a pilot and that there is no formal systematic way of carrying out HIA normally.

### *Entry points*

Finding the best available entry points to start the HIA process is important. In this sense, it is important to map the political process and to understand other types of impact assessment that are already being implemented. Starting and introducing a new process is rather challenging, since it requires knowledge, commitment, support, time and funding. In the pilot project in Trnava, all these entry points were being raised while introducing the HIA. The participants clearly stated that implementing or highlighting the health aspects in the environmental impact assessment, which had already been introduced, would be better. They also explained that HIA could not be implemented in Slovakia without being stipulated by law. This seemed to be the best entry point for Slovakia.

### *HIA appraisal, reporting and dissemination*

The literature study showed that assessments are being carried out in Trnava but not systematically. That means that the assessments are indeed undertaken without any screening and scoping, no reporting is done and there is no monitoring or evaluation. The evaluation showed that reports and information are not disseminated from one department to another or from an institute to the government. The assessments are not done as reports and they are therefore not disseminated. There is little collaboration among the departments.

The HIA pilot took the whole HIA process into consideration. The HIA process consists of screening and scoping, appraisal, reporting and dissemination and monitoring and evaluation. The officers started with various screening exercises to better understand the HIA process. They selected a proposal that was subjected to HIA. The proposal, whether or not a children's playground was going to be built within the city, was selected based on the time left for the pilot, and it was therefore not a complex proposal. The officers carried out scoping and appraisal, which was later presented in a report (Annex 1).

The politicians strongly focus on sustainability and monitoring, analysing and evaluating the long-term and short-term effects. This is related to the ethical use of evidence. The participants pointed out that good data are collected but this is not coordinated. This means that there is no dissemination from one department to another, and the employees therefore do not know about the existence of the data collected. Some also indicated that, even if they had the data, they would not immediately know what to do with it. There is a lack of knowledge and training about the overall picture and how to plan and monitor effects or health status. There are data about the population, but there is difficulty in breaking down the data into vulnerable groups and into different kinds of effects and in obtaining good robustness and validation. This is, however, underway, even though people said that this would take some time.

HIA requires considering equity, which means taking into account vulnerable, disadvantage or marginalized groups. Analysing the health effects for a whole population does not necessarily produce data about how various groups are affected. A policy will cause various effects, but this will not be visible in an analysis of a whole population. In Trnava, the participants were aware of this, and the politicians strongly promote equity in health. However, the evaluation showed that, even though there are good intentions to require consideration of vulnerable groups in the community, there is no tradition of collecting data for vulnerable groups. The data for various groups are rarely used effectively.

### *Evaluation*

Nevertheless, the participants said that the project had been successful in the form of intersectoral work, that this is fully possible and data are available but not formally coordinated. The participants also stated that this project also worked out well since an external partner, WHO, was leading the project. The officers do not think that the results would have been the same without WHO involvement, and they also doubt that HIA will continue to be implemented if it is not fully institutionalized (required by law).

## **5. Enablers and barriers of the health impact assessment process in Slovakia**

Examining enablers and barriers to HIA can provide a better perspective on the potential for introducing HIA in Slovakia. Enablers are possible factors that have the potential to aid in the introduction of HIA, and barriers are factors that may hinder its introduction.

Enablers and barriers can be divided into four categories: evidence; political and policy; institutional; and resources (Table 1). The barriers and enablers shown are by no means exhaustive but provide an overview of the situation in each country.

Table 1. Enablers of and barriers to introducing HIA in Slovakia

<b>Category</b>	<b>Enablers</b>	<b>Barriers</b>
<b>Evidence</b>	<p>Availability of local data on the determinants of health for cities within that national network that carry out city health profiles</p> <p>Data are available through the monitoring and information system set up to support the National Environment and Health Action Plan, with support from WHO and the OECD</p>	<p>Although elements of HIA (risk appraisals) are routinely performed, dissemination of case studies on the local application of HIA in Slovakia is lacking</p> <p>Data collected by one department or institute are rarely available to other departments</p> <p>Links are lacking between data on the determinants of health and data on health outcome</p>

Category	Enablers	Barriers
<b>Political and policy</b>	<p>A process of fundamental reform in such fields as public administration, education and social services</p> <p>Gradual transfer of competence from the state to the local level</p> <p>There is a local political support for HIA, which is seen as a tool to improve decision-making (collaboration) between the local and national levels</p> <p>National legislation on environmental impact assessment and health protection exists and allows assessment of health impact</p> <p>Slovakia is a signatory to European Conference of Ministers of Transport Resolution 2003/1 on Assessment and Decision-making for Integrated Transport and Environment Policy</p> <p>The National Programme for Health Promotion explicitly mentions the use of health impact assessment, and the state health policy contains a statement on HIA; although these are not laws, the government has approved them</p>	<p>A policy framework for HIA is lacking</p> <p>Transfer of competence is confronted with lack of capacity and expertise; people are overwhelmed by other duties</p> <p>Awareness about HIA differs between the local and national levels</p> <p>Existing legislation does not support full assessment, including screening and scoping</p> <p>Public health is not high on the political agenda. Health and public health are frequently seen as being equivalent to health care</p> <p>The formal decision to carry out environmental impact assessment is taken at the national level (Ministry of Environment)</p>
<b>Institutional</b>	<p>Institutions are reformed and legal instruments amended regularly</p> <p>Research-level use of strategic environmental assessment on policy matters</p> <p>The Environmental Impact Assessment Centre within Comenius University in Bratislava</p> <p>Research experience on transboundary consultation for strategic environmental assessment</p>	<p>There is no real support for methodological or capacity development of HIA at the local level</p> <p>Intersectoral cooperation is lacking</p>
<b>Resources</b>	<p>Funding may be accessed through EU sources</p> <p>A national Healthy Cities network adds value: sharing costs through exchange; supporting cities with training; translating international experience; etc.</p>	<p>Lack of access to HIA expertise</p> <p>Lack of training opportunities and literature in Slovak</p> <p>Limitation of resources also limits the work on HIA</p>

## 6. Concluding remarks

The introduction of HIA into decision-making could be seen as the diffusion of a innovation (16). Three key elements of the diffusion explain the process: communication channels, time and social system. The main conclusions of this pilot introduction of HIA (the innovation) in Trnava could be categorized into the three elements.

The training sessions and evaluation meetings were used as communication channels in the pilot study. The participants of the pilot project in Trnava fully endorsed the selection of these channels. Time is a key element in introducing a new process such as HIA. The participants have mentioned repeatedly that more time and additional training are needed. However, the role of the social system seems to be the most important one given the conditions in Slovakia. A call for legal introduction of HIA was issued at each meeting regardless of the position of the person interviewed (from officers to the Mayor). In the absence of a legal framework for HIA, existing capacity, legislation and resources for other types of impact assessment (environmental impact assessment) and health protection needs to be built on. There is also a need for continual awareness-raising and briefing about HIA to politicians to improve transparency in decision-making.

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## *Annex 1.*

# FINAL REPORT OF THE HEALTH IMPACT ASSESSMENT ON A PLAYGROUND FOR CHILDREN AT THE HLINY HOUSING ESTATE, TRNAVA, SLOVAKIA

## Contents

1. The project proposal
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  - b) Determinants of health in the community
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3. Effects of the project
  - a) How will people be influenced by changes?
  - b) Estimated extent of impact
4. Summary of the effects
5. Impact on equity
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  - b) Who will lose if the project is implemented?
6. Recommendations to maximize benefits and minimize harm
7. Monitoring and evaluation

## **1. The project proposal**

In August 2003, the residents of the Hliny housing estate in Trnava requested by petition that playgrounds and soccer fields be constructed in a vacant lot in Hliny. The City of Trnava decided to accept this request and to invest in construction of the playground, including a recreational zone. The basic project documents were developed and presented in June 2004 for construction of the Children's Playground Hliny. The project is proposed in compliance with the district development plan of the City of Trnava from 2000.

The project proposes two functions, a playground and recreational areas. A multifunctional playground with 24 by 13 m with equipment, a 3-m fence and benches will be constructed. Further, a playground for children up to 12 years of age and a central relaxation zone shall be located. In connection with both zones, sidewalks, new green spaces, public lighting and parking places will be reconstructed.

The total cost of the project is about €18 300 depending on the material used; the final technical documentation is not yet known.



## **2. Description of the current situation**

The described area is currently used for leisure activities and parking cars. The leisure zone and the car parking spaces are not separated.

Children play games in the same space in which cars arrive and park in the estate, a negative interaction. The safety of children playing is negatively affected by arriving and leaving cars given a high accident risk, children inhale directly emissions from cars. Further, playing children might cause damage to parked cars.

The leisure zone is unsightly, equipped by outdated equipment, green spaces are lacking both quantitatively and qualitatively, green spaces do not act hygienically, microclimatically and aesthetically. In addition, lawns were not developed for playing with resistance to stomping during games and end up in poor quality and unable to provide protection against dust.

Cars frequently park on the green spaces, which were not designed for this purpose.

### **a) Health status of the community**

A health-related database at the level of the City of Trnava is lacking, and we cannot therefore measure the health status of people living in the community. We can only use the existing demographic data. There are 985 inhabitants (476 males and 509 females) of the City of Trnava living in the Hliny estate: 257 (129 males and 128 females) 0–14 years, 712 (344 males and 368 females) 15–59 years and 16 inhabitants 60 years or older. Thus, the population is relatively young. The mean age of the males is 28.0 years and 27.8 years for females. We expect that the health status of people corresponds with age. Based on data for Trnava district, we might expect increasing incidence of influenza. Fortunately, this is not the case with other communicable diseases. Assessing the health status in Hliny housing estate based on existing data is very hard.

### **b) Determinants of health in the community**

The major determinants of health in this community include the following.

**Obesity.** Obesity is one of the most widespread risk factors of many civilization diseases such as atherosclerosis, cardiovascular disease and musculoskeletal disorders (mostly joints). The most frequent cause of obesity is poor leisure habits, sedentary lifestyle, a lack of physical activity and a poor diet. One way to measure risk of atherosclerosis and cardiovascular disease is by measuring blood cholesterol. The blood cholesterol concentrations of 11- and 17-year-old children were measured during 2002 in a nationwide project on the primary prevention of atherosclerosis in childhood. The project found that 24% of girls and 23% of boys 11 years old and 18.5% of girls and 9% of boys 17 years old have elevated blood cholesterol concentrations. About 5% of children in both age groups have dangerously elevated body mass index according to questionnaire-based data.

**Injuries.** Injuries are among the most important causes of sick-leave, disability or even death. A project mapped the epidemiology of injuries among children. Children 9–15 years old and two years old most frequently consulted emergency services because of bruises and fractures. The most frequently affected parts of body were hands (46%), legs (23%) and head (19%). The causes of injuries were mostly falling (45%) and crashing into an object, device or durable goods or into a person (30%). Regarding environment, one third

of injuries happened at home, slightly less on roads and about one fifth at sport facilities. Sport-related injuries could be considered one of the negative effects of physical activity, but regularly well-maintained playgrounds and fields could prevent injuries on roads, mostly involving motor vehicles.

**Drugs.** Survey data show negative trends in drug abuse. The living environment of young people during puberty largely promotes drug use. Parents' tolerance of alcohol and tobacco negatively influences young people as well. They explain it by being afraid of marijuana, LSD and heroin, and they consider alcohol and tobacco to pose a lower risk. Actively spending leisure time in physical activity and decreasing the anonymity in the community seem to be the best ways to prevent drug abuse.

**Psychological burden – relaxation.** Constructing the proposed playground will bring new opportunities for leisure activities for both children and adults. Physical activity in fresh air is the best way of actively relaxing during leisure.

The community will be formed and created on the playground, anonymity will decline, resulting in better interpersonal relations, increasing friendship and decreasing crime. Developing such a community of children, youth and parents (mothers on maternity leave) and developing good interpersonal relations while using the playground will result in better use of the playground in future.

**Free time.** Television and video are frequent leisure activities, and the share of computer games and gambling is increasing. About 20–30% of students spend at least 1–2 hours per day on these activities. These sedentary activities after a full day of sitting in school and a lack of physical activity could lead to musculoskeletal disorders. Since 1993, the most frequent leisure activity has been listening to music during weekdays and going to discothèques during weekends. More physical activity is needed during leisure to compensate for the one-sided mental burden in school, at the workplace and at home. There were also questions regarding physical activity in the project on Primary prevention of atherosclerosis. About 34% of 11-year-olds and 21% of 17-year-olds are members of sport clubs or visit sports schools or dancing schools. Respondents answered the questions as provided in the Table A1.

Table A1. How frequently do you exercise in your free time – outside school?

	<b>11 years</b>	<b>17 years</b>
<b>Every day</b>	30%	15%
<b>4–6 times per week</b>	13%	15%
<b>2–3 times per week</b>	30%	29%
<b>Once a week</b>	14%	20%
<b>Once a month</b>	2%	7%
<b>Less than once a month</b>	3%	5%
<b>Never</b>	6%	8%
<b>I cannot due to illness</b>	1%	2%

Table A2. How many hours do you exercise outside school?

	<b>11 years</b>	<b>17 years</b>
<b>I do not exercise</b>	15%	17%
<b>About 30 minutes</b>	22%	20%
<b>1 hour</b>	19%	23%
<b>2–3 hours</b>	23%	20%
<b>4–6 hours</b>	13%	11%
<b>7 or more hours</b>	9%	9%

Data show that still there is a lack of interest for physical activity and that this interest needs to be supported. The third part of the survey on attitudes, consumption and drug abuse among high school youth in the Trnava region concluded that about 21% of respondents exercise daily, 37% more times per week and about 17% only once a week. About a quarter of the respondents exercise rarely or never.

**c) Vulnerable population groups**

The most important vulnerable population groups touched by the project are children and adults.

1. If the project is not implemented, the injury risks and poor leisure habits will continue and rise and negatively impact children.

2. Adults, especially older adults, say that implementing the project will harm them by reducing parking space or increasing noise levels.

**d) Description of the situation if the project is not implemented**

- Cars will continue to park on not fixed, green spaces, and negative interaction between the leisure activities of residents and car parking will continue.
- There will be no increase in the amount and quality of green spaces and consequently no positive change in dust, noise and microclimate around the housing estate.
- The biodiversity and ecological stability of the areas will not be ensured.
- The area would remain anonymous, with no improvement in living conditions and few social contacts between age groups.
- Interaction zones for interpersonal relations will not be defined for the quality of green spaces, functional micro-spaces will not be defined for parking, games or short-term relaxation, and this will result in a continuing process of degradation.
- The probability of injury will increase both for adults and children.
- Poor leisure habits will be supported, and rising obesity among children, drug abuse, alcohol and tobacco consumption are expected.
- The anonymity of the housing estate will be promoted and increasing crime is expected.

- Animals (cats, dogs) can pollute the playground, imposing on children the risk of infectious and parasitic diseases. Building a fence around the playground and providing waste bags for dog manure could be an efficient way of preventing this.
- Based on the results of the second part of the survey on following up of regimen of work and relaxation of children and youth in schools of different levels, it was concluded that children spend too little time outside and this time cannot compensate for sedentary lifestyles and mental overload in school and at home. Conditions must be provided at the housing estate that support staying outside and engaging in physical activity.
- The needs of the part of the population that does not agree with the proposed changes must be fulfilled as well.

### **3. Effects of the project**

#### **a) How will people be influenced by changes?**

- A disorganized, chaotic area will be replaced by a well-organized, approved area with a construction permit.
- Non-systematic green spaces will be resolved in accordance with the project documentation with increasing quality and quantity. The project documentation is going to ensure the biodiversity and ecological stability of the district.
- After reconstruction, the district will be reclassified into a higher level of maintenance, resulting in less dust in the local environment.
- Increasing the shade coverage will reduce noise, increase air flow and improve the temperature and humidity around the estate.
- The green spaces will fulfil psychosocial, aesthetic and educational roles.
- The residents in each age group will more positively perceive the more natural and cultivated environment, and a decline of vandalism among youth is expected.
- Functionally dividing the district will improve the social relations between age groups at least in taking care of the new environment.
- Safety will be enhanced during collective sports and games and leisure time.
- Obesity will decrease by increasing physical activity – many children have elevated blood cholesterol levels.
- Decline in accidents – the most frequent age group affected by accidents are children of 9–15 years old (one third of the accidents at home, slightly less on roads and one fifth on sport fields).
- The expectations of at least 50% of the inhabitants will be fulfilled regarding needs for leisure space and facilities for physical activity (413 inhabitants 0–19 years old)
- The interests of inhabitants who wants to use parks for walking and spending leisure time will be fulfilled.

## b) Expected extent of impact

Implementing the project will influence not only inhabitants living in the housing estate (985 inhabitants) but also people nearby (about 3756 inhabitants).

The cost of maintaining the new playground will not exceed €130 annually, a very small sum compared with the total maintenance budget of the City of Trnava.

## 4. Summary of the effects

Table A3. Effects in implementing the project

Positive effects	Negative effects
Modification and cultivation of the area	Parking space problem not solved
Increase in green spaces and vegetation	Increased noise
Modification of social relations	
Improved safety during collective games	
Declining obesity because of increased physical activity among children	
Decrease in transmission of infectious diseases	
Improved quality of leisure activity opportunities for low-income families	

## 5. Impact on equity

### a) Who will gain if the project is implemented?

The population groups who requested that it be implemented are expected to gain from the project. Families with children are those who are worried about the current situation at the housing estate. Another benefit for the entire population, including those who disagree with the project, is improvement of the quantity of green spaces, increased biodiversity and ecological stability, decreased dust, cultivation of uncultivated public land, likely improved social relations, decreased anonymity in the housing estate and decreased transmission of communicable and parasitic diseases from the sand playground. Improving road safety and improving accident prevention (by fencing the playground) not only for children but also for car owners is another benefit of the project.

### b) Who will lose if the project is implemented?

People whose children have already grown up and for whom the playground does not fit their expectations due to lack of parking spaces could be the losers in this case. Using this area for playgrounds instead of new parking places could initiate negative attitudes among those people. Another group of people who might feel a negative impact of the project are those who cannot tolerate noise and playing children. It is hard to imagine that 5–10 dissatisfied residents will prevent the poor situation related to lack of playgrounds and leisure opportunities from being solved for about 280 children 0–14 years old.

## **6. Recommendations to maximize benefits and minimize harm**

- The green spaces should be maintained regularly and the playground cleaned.
- The public should be involved in controlling the use of the playground (to prevent vandalism etc.).
- The public should collaborate with the organization responsible for the playground.
- Consider parking space in future development projects in housing estates.

## **7. Monitoring and evaluation**

In collaboration with elected city council members from the housing estate, a questionnaire survey was conducted about a year after the playground was constructed on the use of the playground, people's attitudes towards it and proposals on how to improve the situation more and how to solve the new problems arising in use.

Together with the organization responsible for operation and maintenance of the playground, the annual financial costs and benefits of the project have been evaluated.

*Written by Ingrid Hunava, Healthy City Coordinator in Trnava, Slovakia on 20 August 2004. This report is based on the input of the members of the Trnava health impact assessment steering group.*