CHILDREN’S HEALTH AND ENVIRONMENT
CASE STUDIES
SUMMARY BOOK

WORK IN PROGRESS

FOURTH MINISTERIAL CONFERENCE
ON ENVIRONMENT AND HEALTH
BUDAPEST, HUNGARY
23-25 JUNE 2004
Children’s Health and Environment Case Studies Summary Book

WORK IN PROGRESS

edited by

LEDА NEMER AND KATHRΙΝ VON HOFF
WHO European Centre for Environment and Health
Rome Office

FABRIZΙΟ SIMONELLI, ΜΑΡΙΑ ΙΟΣΕ ΚΑΛΔΕΣ ΠΙΝΙΛΛΑ AND ΚΑΤΑΛΙΝ ΜΑЈΕΡ
Health Promotion team of
"A. Meyer" Children University Hospital
Tuscany Region
The Children’s Health and Environment Case Studies Summary Book is a partial collection of case studies collected thus far from WHO Europe member states. This should be considered a work in progress and an initial reporting to member states of work carried out so far. This publication contains case studies from the following countries:

- Austria
- Bosnia and Herzegovina
- Czech Republic
- Denmark
- France
- Georgia
- Hungary
- Italy
- Ireland
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Sweden
- Switzerland
- Turkey
- United Kingdom
- Uzbekistan

Heartfelt thanks to our partners in this initiative, who have supported and contributed to this publication.

The Tuscany Region Working Group on Children's Health and Environment, specifically:

- Tuscan Regional Department “Right to Health”
- Tuscan Regional Department “Territorial and Environmental Policies”
- “A. Meyer” Children Hospital
- Agenzia regionale per la protezione ambientale della Toscana (ARPAT)
- Agenzia Regionale della Sanità (ARS)
- Centro per lo Studio e la Prevenzione Oncologica (CSPO)
- International Society Doctors for the Environment (ISDE)
- Associazione Nazionale Comuni Italiani (ANCI)
- Federazione Medici Pediatri; and
- ARPAT (Agenzia regionale per la protezione ambientale della Toscana), that has generously supported the cost of printing this draft edition.

Thanks to Manuela Gallitto, HEV/CHE Unit Assistant for cover and general layout of this document.
INTRODUCTION (i-iii)

CASE STUDIES ON ACTIONS AND INTERVENTIONS (1-102)
This section features case studies by environmental risk factor:
- 5 on indoor air pollution (Czech Republic, France, Ireland, Poland and Sweden);
- 3 on unsafe water (Denmark, Hungary and Romania);
- 4 on dietary intake (2 Austria, Georgia and Switzerland);
- 9 on hazardous chemicals (2 Austria, 2 Denmark, Netherlands, 2 Poland, Portugal and Uzbekistan);
- 6 on mobility and transport (Austria, Denmark, Italy, Portugal, Switzerland and UK);
- 3 on unsafe building (Portugal, Sweden and UK);
- 2 on noise (Denmark and Sweden);
- 1 on occupational risks (Turkey);
- 2 on other risk factors (Norway and Portugal); and
- 9 on multiple risk factors (Bosnia and Herzegovina, 2 Italy, Norway, 2 Portugal, Slovakia, Slovenia and Uzbekistan).

SURVEY TABLE (103-115)
Introduction

The need to collect examples of successful actions to protect children from harmful environmental risk factors has arisen as part of the development of the Children’s Environment and Health Action Plan for Europe (CEHAPE) and in preparation for its future implementation. Over a period of approximately one year and in the context of a number of CEHAPE preparatory meetings, member states were encouraged to submit case studies to the WHO Children’s Health and Environment (CHE) unit in Rome, Italy. These case studies were collected using a standardised case study template developed by the Children’s Health and Environment unit in March 2003, later distributed to representatives of ministries of health and environment. The template allowed for documentation and tracking of the key steps followed in the selection of a priority action/s, its translation to an intervention/project at national or local level, and planning and implementation of the action. It also allowed for highlighting of key processes, information and tools that would enable the user to transfer and adapt the process to their country setting.

This collection of case studies is meant to enable countries to share their experiences in the planning and implementation of actions to improve children’s health and environment with other member states. Specifically, this project aims to draw attention to actions and implementation experiences carried out at the local and national level as well as highlight the practical elements that made such an action possible and successful. The final aim in collecting the case studies is to provide member states with a collection of relevant examples of actions (with an assessment of the underlying mechanisms and the results achieved) that were prompted by environmental health issues affecting children, to elicit an exchange of experience, inspiration and adaptation to different contexts throughout Europe. Where possible, useful tools and resources that aided the implementation of the given action are documented within the case study.

A total of 90 case studies were initially received, screened and placed in a table specifying country, topic, title, and contact information. In March 2004 the Children’s Health and Environment (CHE) Unit began the review and evaluation of the case studies. After review, they were incorporated into a new template that would serve as the basis for the version of the case studies presented in this publication. The case studies were then assembled as summaries in a format that highlights and reviews the actions and policies implemented to support the CEHAPE and children’s health and environment initiatives.

By and large, the case studies address one or more of the fifteen environmental risk factors covered by the CEHAPE Table of Actions - a menu of actions proven to be effective in protecting children’s health and environment developed with the contribution of member states, International Agencies and NGOs.

These risk factors are:

- indoor air pollution
- outdoor air pollution
- unsafe water and inadequate sanitation
- dietary intake
- food contamination
- hazardous chemicals
- non-ionizing radiation
- ionizing radiation
- mobility and transport
- unsafe building and construction standards and materials
- noise
- occupational risks
- specific adverse social circumstances (abandoned children, etc)
- natural and manmade environmental disasters
- direct and indirect consequences of armed conflict (landmines, etc)
- other topic
By addressing a total of fifteen environmental risk factors, the most important health effects of environmental exposures highlighted in the CEHAPE, such as injuries, asthma and allergies, respiratory diseases arising from exposure to environmental tobacco smoke (ETS), neuro-developmental disorders, cancer and water and food-borne diseases, are covered. In a few cases, case studies covered other topics and a risk factor number 16 ("other") was created for this purpose.

During the evaluation process, grids in EXCEL-format were set up specifying:

<table>
<thead>
<tr>
<th>Country Code</th>
<th>Driving forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study number</td>
<td>Partners</td>
</tr>
<tr>
<td>Implementation level</td>
<td>Transferability</td>
</tr>
<tr>
<td>Setting</td>
<td>Impact</td>
</tr>
<tr>
<td>Target groups</td>
<td>Duration</td>
</tr>
<tr>
<td>Relevance to CHE (referring to the list of risk factors covered)</td>
<td>Description of intervention</td>
</tr>
</tbody>
</table>

After the initial review, the case studies were separated into two different groups: 1) Actions and Interventions and 2) Research and Surveys. Case study authors were contacted in order to obtain additional information to complete the template. After incorporating their feedback, the summaries were finalised and put into the format in which they appear in this publication. Thanks to the dedicated participation of the member states 44 Actions and Interventions and 24 Research and Surveys (listed in a table format) are now presented in this publication. This initial collection is a work in progress, since new case studies for other environmental risk factors and from other countries must still be collected. Next steps and follow up to this project post-Budapest include a larger Children’s Health and Environment Case studies publication as well as a web-based databank of case studies on actions and policies to serve as useful tools for Member States wanting to develop National CEHAPs or implement children’s health and environment initiatives.

Of the 90 case studies received, this publication presents 68 - 46 from Western Europe, 19 from Central and Eastern Europe (CCEE), and 3 from the Newly Independent States (NIS). Of the 68, 44 have been classified as “Actions/Interventions” and appear in a full template. The remaining 24, classified as “Research or surveys” have been placed in a table providing information on country, topic, title of the research and a brief description.

When examining the 44 Actions/Interventions by ‘Implementation level’ and ‘Setting’, most actions took place at the local (10) or national (7) level and with the most common setting being the school. The top three environmental risk factors that emerged in this set of 44 case studies (as multiple occurrences) were Indoor air pollution 14/44 (31%), Water/Sanitation 10/44 (22%), and Hazardous Chemicals 10/44 (22%) followed by Inadequate dietary intake 9/44 (20%)and Mobility and transport 9/44 (20%). As far as target groups, for Water/Sanitation, the focus of actions was on children age 0-14 years. For Indoor air pollution, children 5-14 were the main target group followed by parents and teachers. For Hazardous chemicals, children 0-4 were the main target group followed by 10-14 year olds, 5-9 and 15-19 year olds and then parents. For mobility and transport, the focus was on 5-9 year olds followed by 10-14 year olds as main target groups. Finally, for unsafe building standards and materials, 5-9 year olds were the main target group for action.
The three most involved sectors in this set of case studies were health (in 30 cases), education (in 27 cases) and local authorities (in 19 cases). Other sectors frequently involved were Environment (12), Parents and Community (11), other (5), Transport (3), and Industry (2). A combination of sectors emerged a number of times in the case studies. The most common combinations were Education and Health (in 17 cases), Health and Local Authorities (in 12 cases), Education and Local Authorities (in 11 cases), Environment and Health (in 8 cases), and Education and Environment (in 7 cases). Average duration of actions went from 1-5 years.

With reference to selection of risk factors on a sub-Regional basis, the Western European Countries in this sample addressed Mobility and Transport in 9 case studies and Indoor Air Pollution in 8 case studies. The topics of water and sanitation, inadequate dietary intake, hazardous chemicals and unsafe buildings were each addressed in 6 case studies. Noise was addressed in 4 case studies and outdoor air pollution in 2 case studies.

For Central and Eastern European countries, Indoor Air Pollution was addressed in 5 case studies, Water and Sanitation, in 3, Hazardous Chemicals in 3, Outdoor Air Pollution and dietary intake in 2 case studies. Few case studies were received from the Newly independent States and those concentrated on Water and Sanitation (twice), food contamination (twice), Indoor Air Pollution (once), dietary intake (once), and hazardous chemicals (once).

The descriptive analysis carried out on this initial collection of 44 Actions/Interventions is meant to provide an initial assessment of the main risk factors, actions, settings, sectors and target groups involved. As the publication has been produced using the case study submissions sent to WHO by MSs, it is not to be considered a representative sample of the main risk factors affecting European countries, nor the priorities for action, but rather an indication of areas of concern where action has been taken in those countries. No review or scientific validation of statements made in the case studies template has been carried out by the WHO. A full review of the case studies will be performed before their final publication. This work will continue on the collection of case studies in partnership with MS with the aim of identifying "best practices" that can be shared among countries. Comments and suggestions on this first draft are welcomed.

<table>
<thead>
<tr>
<th>Risk Factor(s)</th>
<th>Total Cases*</th>
<th>children 0 - 4</th>
<th>children 5 - 9</th>
<th>children 10 - 14</th>
<th>15 - 19</th>
<th>parents</th>
<th>teachers</th>
<th>community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor Air Pollution</td>
<td>14</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Outdoor Air Pollution</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Water and Sanitation</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Dietary Intake</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Food Contamination</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Hazardous Chemicals</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Non-Ionizing Radiation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ionizing Radiation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mobility and Transport</td>
<td>9</td>
<td>2</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Unsafe Buildings/Constructions</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Noise</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Occupational Risks</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spec. Social Circumstances</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Natural/Mannmade env. Disasters</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conseq. of armed Conflict</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>other topic</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Total number of case studies is 44. Total includes multiple responses.
Case Studies

ACTIONS and INTERVENTIONS
“Smoking and Me”
Czech Republic

**Implementation Level**
National

**Setting**
Schools

**Driving Force**
Ministry of Health

**Partners**
Masaryk University Medical School of Brno, Public Health Institutes, Regional Public Health Centres, Psychologists, teachers, Ministry of Education, Youth and Sports, Counter-Cancer League, Czech Power

---

**Background**

**Rationale**
In the Czech Republic smoking is being taken up at a younger age. Certain regulatory measures have been incorporated as fragmentary legislation such as bans on selling of tobacco to children under age 18, on smoking at the workplace, on smoking in public places, and restrictions on advertising. Smoking among children over 15 is, however, tolerated to such an extent that a large number of high schools have established smoking rooms to be used by their young smokers. Provision of health information is not sufficient to change behaviours. Increasing familiarity with anti-smoking interventions applied abroad, focusing on healthier lifestyles, has generated an effort to set up domestic programmes based on delivering information, influencing attitudes, instilling skills for identifying risk situations, and looking for more appropriate alternatives that could be voluntarily chosen and observed.

**Description of action/objectives**
A smoking prevention programme, based on U.S. teaching materials called “Smoking and Me”, was developed for primary school seniors to:
- deliver information;
- influence attitudes; and
- develop skills to identify risk situations.

**Planning and Implementation**

**Mechanisms used**
- Between 1993-1996 the programme was pilot tested in pilot at 10 schools (involving approximately 500 children).
- A follow-up study was conducted at 97 primary schools in 17 Czech localities (approximately 5,000 children) with a control group as well as an intervention group.
- Programme success criteria were based on a comparison of smoking prevalence, significantly lower in those involved in the programme than in the control group.
- Checklist questionnaires provided valuable information on links between smoking-related behaviour of children with the smoking habits of their parents, on alcohol and other drug abuse, on sexual behaviour, on pocket-money allocation, and on children’s attitudes towards smoking.
- Teachers were thoroughly briefed on the core of the programme and its individual lessons by means of seminars (4 four-hour seminars).

---

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Children 11 -15 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Two: Health, Education</td>
</tr>
<tr>
<td>Project duration</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Population reached</td>
<td>About 950 schools nationwide</td>
</tr>
</tbody>
</table>
DESCRIPTION OF ACTION/IMPLEMENTATION

- The programme contains 4 manuals (for 6 to 9-graders), with 6 lessons for each grade. Information on health-related consequences of smoking with an emphasis on the acute effects of smoking such as irritation, smell, vasoconstrictions, CO-haemoglobin attraction, increase in heart labour, and harmful effects of smoking on pregnancy and fertility. U.S.

- Imported teaching materials (mechanical smoker, smoking pregnant woman) and video programmes were used (Passive Smoking Effects, Smokeless Tobacco Use, Respiratory Functions & Physical Performance Impact).

- The programme includes lectures on the tobacco industry, identification of deceptive advertising, addiction, alcohol, marijuana, and pathological gambling. Children are shown ways of rejecting cigarettes and drugs and protection from passive smoking. They are also instructed on how to effectively support a smoker in his/her effort to get rid of his/her addiction.

- The programme is designed to be incorporated into regular classwork and based on active involvement of children working in small groups, led by pupil-selected "peers", who meet with their programme-leading teacher prior to each lesson. Aside from using the illustrative materials and videotapes, both children and teachers work with pre-printed progress reporting forms and result summaries are recorded on a transparent sheet, shown using the overhead projector. Children were encouraged to create anti-smoking advertisements (to decorate their T-shirts and other objects).

NOVELTY OF ACTION

Within the existing educational structure, an anti-smoking education programme has been implemented, based on a totally new principle of health education and using an active group work approach.

Evaluation/ Impact

Intervention effects were evaluated in two studies, published in professional journals in the Czech Republic and abroad and presented at domestic and international conferences. The main criteria was smoking prevalence (both regular and occasional), the annual rate of decrease in all localities in comparison with the verification sets of respondents. The programme is compatible with the ESFA Programme (author: De Vries, University of Maastricht). Unofficial success rate is being evaluated at seminars by teachers who also report on the popularity of the programme among children.

SUSTAINABILITY

Further interested parties can still be brought in the programme. Its guidelines have been incorporated in teacher training curricula at Masaryk University and at the Teacher Training College of Brno. Within the framework of the Programme, many schools have held a number of events, usually on the occasion of the World non-Smoking Day.

TRANSFERABILITY

Programme materials include Checklist Questionnaires so that each school can independently monitor both intervention success rate and smoking-related factors. The principal concept of the programme is transferable to any country. There are a few country-specific details in several lessons (economy, advertising, development of community-specific situations in which children refuse to accept a cigarette).

Lessons learned

KEY FACTORS LEADING TO SUCCESS

- Active involvement of children.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- While teacher-training seminars were developed and well structured, the problem arises when a trained teacher leaves as the new teacher is either interested in programme continuation (then, he/she needs at least the basic briefing) or the programme is discontinued. Whether the programme functions or not depends exclusively on teacher enthusiasm, which may not be tangibly rewarded. Seminar graduates are awarded a diploma the importance of which is ignored by a number of schools in connection with the teachers' pay.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

The basic principle of the programme would be maintained as the current programme allows for creative modifications. For higher grades, it would be appropriate to identify among smokers those that are already addicted to ensure adequate habit-breaking procedures. Such a project has been prepared.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING

The results of programme implementation from several EU countries are similar. The ESFA Programme was launched after the "Smoking & Me" Programme and comparisons of both would be interesting. It would be appropriate to discuss the two programmes more thoroughly.
ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- For those interested in developing national versions of the programme, it would be of immense help to have English translation of “Smoking & Me” manuals produced. The Czech version has been made available to several specialists in Slovakia.

HELPFUL TOOLS

- The training of instructors to conduct the seminars.
- Teaching material, Videos, and Lectures.

Contacts
Name: Alena Kernová
Address: Komenskeho nam. 2
         662 43 Brno, Czech Republic
Tel.: +420 549 49 1311
Fax: +420 542 213 996
E-mail: 59971@mail.muni.cz
URL: http://www.muni.cz/
Medical Indoor Environment Counsellors  
France

**Implementation Level**  Local  
**Setting**  Hospital  
**Driving Force**  Chest Diseases Physicians, Medical Indoor Environment Counselor, Ministry of Health  
**Partners**  Not applicable

**Background**

**Rationale**
Allergy is very common in France as well in other European countries. Asthma frequency varies from 6% at the age of 6 year old to 12% at the age of 13-14 year old. Rhinitis varies from 20 to 25%. The role of allergens and indoor pollutant exposure in the sensitisation of atopic people has been demonstrated. Moreover, allergen exposure is a risk factor for the development of rhinitis and asthma symptoms among sensitised patients. Providing advice and recommendations about avoidance of allergens to affected patients is critical. The effectiveness of mite allergen avoidance has been discussed recently. Several published studies have shown that anti-mite measures appear to effectively reduce mite if carried out for least six months. An important issue in the success of mite avoidance is compliance. One study has pointed out this difficulty and demonstrated that use of educational home-software might increase compliance with mite allergen avoidance methods. While allergen reduction measures, as primary prevention interventions are controversial, secondary prevention of well-defined allergic and non-allergic diseases is warranted.

**Planning and Implementation**

**Description of action/implementation**
- By means of a home or work place visit performed upon suggestion of the physician, a Medical Indoor Environment Counsellor (MIEC) contacted the patient (the visit was free of charge). The MIEC prepared a report and sent it to the patient and the physician.
- A second visit was scheduled 5 months later, to check the compliance to the recommendations given by the MIEC.

**Novelty of action**
This action was completely new.

**Evaluation/ Impact**
- Work with the Ministry of Health to develop this new role was undertaken in several pneumology departments and in hygiene labs of large cities.
- A university diploma was created in Strasbourg to validate this work.
- An inter-university diploma for indoor environment pollution and health was created as of 2004 in cooperation with 5 others universities (Paris, Marseille, Toulouse, Brest, Montpellier).

**Target audience**
Patients who suffer from respiratory symptoms caused by domestic and occupational indoor environments  
Allergic patients who are sensitised to a number of indoor allergens  
Patients whose symptoms could be linked to indoor environments

**Sectors involved**
Three: health, environment, local authorities

**Project duration**
Not applicable

**Population reached**
725 patients

**Description of action/objectives**
This activity was focused on secondary prevention of allergic and non-allergic respiratory diseases related to indoor environments. The main objective was to improve diagnosis and treatment of allergic and non-allergic respiratory diseases related to indoor environments.
Lessons learned

CHALLENGES DURING PLANNING/IMPLEMENTATION

- To convince the hospital administration to recognize this new role and include a MIEC as part of the hospital staff.
- Every step of the process had to be approved by the patient association, the scientific societies of allergology and pneumology and the administration of the Ministry of Health.

Contacts

Name: Dr de Blay
Dr Pauli

Address: Les Hôpitaux Universitaires de Strasbourg
Service de Pneumology
1 place de l'hôpital BP 426
F-67091 Strasbourg Cedex, France

Tel.: +33 3 88 11 67 68
Fax: +33 3 88 11 60 99
E-mail: communication@chru-strasbourg.fr
URL: http://www.chru-strasbourg.fr/Hus/index.html
Tobacco sales to under age children
"Just ask campaign"
Ireland

**IMPLEMENTATION LEVEL** Community

**SETTING** Sligo/Leitrim Community Care Area, North Western Health Board

**DRIVING FORCE** Tobacco Unit, Environmental Health Department, Sligo/Leitrim Community Care, North Western Health Board

**PARTNERS** Media, Retailers, an Oncologist

---

### Background

**RATIONALE**

Tobacco is considered to be one of the leading causes of preventable deaths in the Western World and 500,000 EU citizens die prematurely from each year smoking related illnesses, 7,000 of them in the Republic of Ireland. In Ireland the number of children, especially girls, who smoke is on the increase and is as high as 40% nationally. In 2001, the Marketing research bureau of Ireland survey (MRBI) found that 88% of 8 - 17 year olds were not asked for identification when purchasing cigarettes. According to Environmental Health News (October 2001), in Ireland approximately €13 million worth of cigarettes are illegally sold to children each year. In light of such evidence and the legislative requirement which prohibits the sale of cigarettes to persons under 18 years of age in Ireland, a test purchase survey was carried out by the Environmental Health Department of the North Western Health Board during August/September of 2001 to test the extent of illegal cigarette sales to persons under 18 years in the region. The results indicated that of 96 outlets surveyed in the region, 44% were involved in the sale of cigarettes to persons under 18 years of age in Ireland, a test purchase survey was carried out by the Environmental Health Department of the North Western Health Board during August/September of 2001 to test the extent of illegal cigarette sales to persons under 18 years in the region. The results indicated that of 96 outlets surveyed in the region, 44% were involved in the sale of cigarettes to persons under 18 years of age. In order to reduce the level of illegal sales to minors it was felt that a local initiative was required.

**TARGET AUDIENCE** Retailers and public at large

**SECTORS INVOLVED** Environment, health, industry, parents and community, media

**PROJECT DURATION** Almost 2 years

**POPULATION REACHED** Approximately 60,000

### Health Board personnel relations and press office:

- involved local newspapers and radio in campaign.

### Description of action/objectives

The action consisted of a campaign to educate retailers, retail assistants and the public at large about the legislative requirement to prohibit cigarette sales to persons under 18 years of age. The main objectives were to:

- encourage retailers and retail assistants to ask for identification when young persons tried to purchase cigarettes;
- establish what forms of identification should be considered acceptable and encourage retailers and retail assistants to refuse sales if the person was under 18 years and did not have acceptable identification to prove otherwise; and
- encourage the public to complain to retailers and the environmental health department if they witnessed an illegal sale of tobacco products.

### Planning and Implementation

**MECHANISMS USED**

- All shops in the area were informed that a test purchase survey had taken place in the area. Survey results were included in the letter and retail outlets were informed that test purchases would be take place in the region. Shops that participated in the survey, and who sold cigarettes to minors were advised that they would be prosecuted if they sold on further test purchases.
- Presentation of survey results and publication of a press release in the main local newspapers for both Sligo and Leitrim informing them that a test purchase would be carried out in the local area and outlining the
implications for retailers if they sold cigarettes to minors.

- Consultation with retailers to develop an educational initiative for them and the public at large since they felt they were not getting necessary support from the Health Board.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

- A training pack was developed specifically for retailers and retail assistants consisting of a training booklet and a training video. This was sent to 650 retail outlets outlining the purpose of the booklet and the possibility of acquiring the training video free of charge.
- The media worked in consultation with the Health Board’s personnel relations/press office and all local newspapers and radio were involved and invited to an official launch of the “Just Ask” campaign.
- Adverts appeared in all local newspapers and local radio for two weeks.
- Radio interviews were given with retailers, Environmental Health Officers and a consultant Oncologist from Sligo General Hospital represented.

**Evaluation/ Impact**

Of 96 test purchases pre intervention there were 43 sales-equivalent to 44.8% of businesses selling cigarettes illegally to under-aged persons. Of these, only 7 sales took place to the 10-14 year olds and 36 took place to the 14-17 year olds. From a total of 15 vending machines tested pre intervention, 13 sales took place after the campaign.

Post intervention, of 57 test purchases there were 24 sales, 2 sales to the 10-14 year old (from youth peers) and 22 to the 14-17 year old- equivalent to 42% of premises tested selling to minors. Twenty-seven of the tested sales pre-intervention were from rural areas with only 16 sales in urban areas. Post intervention there were two sales from urban areas as opposed to 22 sales from rural areas, concurrent with international evidence that very small towns were much less likely than larger towns to adopt tobacco control policies.

Despite all this 97.3% of owners and 96.4% of employees felt that campaigns of this nature were good at raising awareness. Both owners and employees said that they noted a reduction in the number of persons under 18 looking for cigarettes. Almost 22% of owners said that it was difficult to prevent sales to people under age 18 whereas 42.9% of employees felt it was difficult. This indicates that employers and employees perceptions differ with regard to cigarette sales.

The results indicate that younger children are more likely to be refused sales than older children and suggest that interventions should be targeted at older children. It also reiterates the need for sales assistants to ask for and check identification to ascertain age on a routine basis.

With a small decrease in the number of sales to minors post intervention, it appears that the intervention did not significantly reduce the level of illegal sales to minors in the region.

**SUSTAINABILITY**

This initiative is very sustainable with comprehensive education and enforcement activities around the whole area of tobacco and tobacco control.

**TRANSFERABILITY**

This programme could be run on a pilot basis in a small community or rolled out to national basis.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Adequate media coverage, support from retailers, involvement of an oncologist and an enforcement agency.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- Co-ordination of the activities and getting volunteers to carry out test purchases.

**IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?**

It might be better to carry out the campaign over a shorter time span and provide individual/group instruction on training materials.

**IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING**

Partnerships must be established through health promotion with youth groups or transition year students so volunteer children can facilitate carrying out of a regular test purchase programme.

The Health Board needs to ensure a continuous test purchase programme is in place complete with enforcement action in order to prevent illegal sales. It is recommended that all cigarette vending machines be token activated.

Training material should be delivered in person by Environmental Health Officers and involve individual or group instruction. An independent evaluation of all campaign work to be carried out should include interviewers personally visiting retailers by prior appointment.
ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Involve various partners from the planning stage to ensure a multi-sectoral approach.

HELPFUL TOOLS

Training materials. Test Purchase programme. Use of radio, brochures, books, video, press, and billboards as communication channels.

Contacts

Name: Caitriona Syron
Senior Environmental Health Officer

Address: North Western Health Board
Community Care Offices
Teeling Street, Tubbercurry, Co. Sligo

Tel.: +353 719 185 478
Fax: +353 719 185 478
E-mail: caitriona.syron@nwhb.ie
"Clearing the air from tobacco smoke pollution: creating healthy and safe environments for children"

Poland

**Implementation Level** Community

**Setting**
Kindergartens, schools, health centres, community (city halls and other public places supervised by local authorities), public transport and culture and art centers; local media, including press, radio and TV; church parishes; homes of families with small children

**Driving Force**
Health Promotion Foundation (Warsaw); Foundation “Breath of Hope” (Bydgoszcz); Association “Consortium Health for Ciechanow” (Ciechanow)

**Partners**
Bydgoszcz: City Hall and Council; Municipal hospital and 6 primary health care clinics; 4 municipal kindergartens, 2 primary schools, 2 “gymnasiums” and 2 high schools; local theatre and the Cultural Centre; Institute of Health Care and Public Health; Roman catholic church; Bydgoszcz TV channel “TV3” and national TV channel “TVP2”; Regional radio stations “Radio PIK” and “Radio PLUS”; Daily “Gazeta Pomorska”
Ciechanow: City Hall and Council; Regional hospital and few private health care settings; 7 municipal kindergartens, 6 primary schools and vocational school of culture animators; Centre of Culture and Art; Institute of Health Care and Public Health; Roman Catholic Church; Ciechanow Television Channel “TV5”; Catholic Radio Ciechanow; Ciechanow Weekly and regional edition of the Gazeta na Mazowszu daily; Commercial companies (supermarkets and telecommunication)

**Background**

**Rationale**
Recent national surveys show that 56% of children and 24% of pregnant women are exposed to smoking from others. Smoking among women of childbearing age (27%) and pregnant women (15-20%) is also estimated to be high. These numbers are even higher in groups with low socio-economic status. For example, smoking rates reach 35-40% among low-educated pregnant and unemployed women. Epidemiological studies show that approximately 100,000 Polish newborns have symptoms of tobacco smoke intoxication and 4 million children are exposed to enforced passive smoking (EPS).

Many newborns and small children exposed to passive smoking during pregnancy or in first months of their life have symptoms of smoking-attributable diseases and nicotine dependence syndrome. Estimates suggest that this is a major risk factor for health of Polish children at age of 0 to 4. Pilot studies conducted in the communities of Bydgoszcz (May 2001) and Ciechanow (April 2002) showed that respectively 77% and 60% of small children are exposed to tobacco smoke at their home.

Although these numbers have been reduced in last years, exposure of children and pregnant women to enforced passive smoking is still high in Poland.

| Target audience | schoolchildren aged 6 to 12 years; parents and grandparents and older siblings or peers; teachers, educators and priests; pregnant women and young mothers; family, pediatric and gynecological doctors and nurses |
| Sectors involved | Six: Education, health, local authorities, parents and community (including grandparents), other (media, cultural institutions, church, commercial companies) and industry (supermarkets, telecommunication) |
| Project duration | Approximately 2 years |
| Population reached | Bydgoszcz (the media campaign reached a population of 370,000 and in Szwederowo district, the intervention reached a 40,000 Ciechanow (population 50,000): •about 2,000 children, 500 families with small children, •130 teachers and educators, 150 students, 50 health care professionals |
Description of action/objectives

The main goal of the intervention was to improve children’s health by reducing their exposure to enforced passive smoking. The project strategy aimed at building capacity for strengthening smoke-free policy in children’s environments, raise public awareness on ETS and its impact on children’s health, and reduce smoking prevalence among adults in children’s environment. The main objectives chosen for both communities were:

- to increase the number of non-smoking pregnant women and women of childbearing age;
- to increase the number of smoke-free kindergartens and schools; and
- to increase the number of smoke-free homes, especially those with small children.

Planning and Implementation

MECHANISMS USED

The project consisted of preparation of the intervention design, training of country and local coordinators and collaborators, conducting baseline and follow up studies, organizing intervention and education activities, and lobbying for changing public health policy. This was carried out by means of pre-meeting for country and international coordinators, workshop for local coordinators, baseline study, pilot intervention, follow up study, public and press conference, training for regional coordinators from small towns, and evaluation meeting on Polish and Latvian project development.

In one community, activities were implemented using a multi-stage strategy. In the other, local coordinators searched continuously for those target groups and environments to be informed (“flood” strategy).

DESCRIPTION OF ACTION/IMPLEMENTATION

The intervention consisted of:

- preparing and distributing health education materials (advisory kit, leaflets, booklets, guidelines, posters, toys and gadgets);
- education of schoolchildren, parents, pregnant women and young mothers during medical visits and pre-marital counselling;
- training and consultation meetings with task coordinators, doctors, nurses, teachers, psychologists, volunteers;
- cessation counseling, quitline for parents, pregnant women and women of childbearing age;
- media campaign (press conferences, press articles and notes, radio and TV spots, experts interviews, TV reports);
- medical diagnostics and examination of children, pregnant women, young mothers and smokers: lung function and volume (spirometry), exposure to tobacco smoke (CO level by smokerlyser), tobacco dependence (FTND), motivation to quit (Schneider’s test), stages of smoking cessation (Prochaska’s model);
- public events (children street march, meeting with Mayor, stands and consultation desks on air, support from other campaigns: WHO No Tobacco Day (31 May 2002-2003) and Great Polish Smokeout (21 Nov 2002 and 20 Nov 2003); and
- lobbying local authorities to ban smoking in public places and worksites (children, parents and NGOs petition to city mayors and council).

NOVELTY OF ACTION

In order to effectively implement the project strategy, a broad coalition of government agencies, local NGOs, media, medical associations, schools, church as well as public health leaders, health providers and volunteers was set up by country and local coordinators. In both communities, high-level representatives of local authorities were involved in project implementation, including town mayors.

Evaluation/ Impact

Institutional changes:

- Total ban of smoking in all participating kindergartens and schools in Bydgoszcz and total ban of smoking in 50% of schools and 40% of kindergartens in Ciechanow.
- Total indoor ban of smoking in all participating health care settings in both communities.
- In Ciechanow, the city council discussed banning of smoking at bus stops and other public places.
- Behavioural changes:
  - In Bydgoszcz, 93% of participating children discussed tobacco and health issues with their parents and 72% decided to request no smoking in their presence.
  - In 2002, 68% of participating parents in Bydgoszcz decided not to smoke in the presence of their children and create smoke-free environment in their homes.
  - In Ciechanow, 38% of smoking parents and 70% of pregnant women decided to make attempt stopping smoking to protect their children’s health.
  - The number of smoke-free homes increased from 33% to 42% in Bydgoszcz and from 40% to 50% in Ciechanow (was 56% in 2002).
The number of children exposed to enforced passive smoking in their homes decreased from 77% to 58% in Bydgoszcz and from 60% to 44% in Ciechanow.

Sustainability
Country and local coordinators effectively sustained the project. It will become a model intervention for other communities and one of the key elements of the national strategy to protect children’s health from tobacco smoke pollution and create healthy and safe environments.

Transferability
The project and its strategy will be extended to small Polish cities as one of few tobacco control modules of the National Program of CVDs Prevention and will become one of the key elements of environment protection in these communities. Through local initiatives to ban smoking in public places and worksites, this project will help lobby parliamentarians and strengthen smoke-free policy at the country level.

Lessons learned

Key factors leading to success
- Protection of children's and pregnant women's health was seen by the community as a very important health, social and ethic problem that should be solved by well organized and systematic health promotion activities.
- Need for a comprehensive intervention and evaluation strategy based on internationally proved science and an evidence-based approach adapted to local community needs.
- Building up one-aim-oriented, multi-sectoral and multi-channel project laid the foundation for effective project implementation.
- Building capacity for active participation of individuals (volunteers), professionals, institutions and organizations.
- Broad media coverage of the project.

If done again, what would be done differently?
To make the project more effective and build infrastructure for its implementation, it should become part of community and national strategies for tobacco control.

Important aspects to be considered for future planning
As project will be implemented in Poland in the coming years in small towns with a range of social, economic and health problems, it should be adapted to those environments.

Advice to countries that want to do something similar
- The project should be coordinated by someone (individual, institution, coalition) who has the ability to focus the community's attention and resources on effective implementation. The Polish experience shows the most effective link to be between health providers or teachers and representatives of local authority.
- Knowledge on sources of exposure from the project: The home is a major source of exposure of children and pregnant women to enforced passive smoking. For children, additional hazardous environments are schools or peer groups. For pregnant women, the worksite. Project activities should be mainly concentrated on those environments.
- Although the program is mainly addressed to adults who want to protect children's health, small children and their older siblings or peers should play an active role in implementing the project strategy.

Helpful tools
- Series of workshops for project coordinators and collaborators.
- Comprehensive and attractive guidelines, advisory kits and health education materials prepared both on the basis of international, country and community examples and experience-various media materials and events, including TV spots, press releases and conferences.
- Existing tobacco control measures (WHO, EU and national standards).
- Existing health education materials, health and tobacco control networks, websites, programs and strategies.

Contacts
Name: 1) Krzysztof Przewozniak 2) Witold Zatonski
Address: Health Promotion Foundation 110 Sobieskiego Str., appt. 7 PL-00764 Warsaw, Poland
Tel.: +48 22 644 4806 +48 22 643 9234
Fax: +48 22 643 9234
E-mail: 1) kp@promocjazdrowia.pl 2) wz@promocjazdrowia.pl
URL: www.promocjazdrowia.pl
Allergy inspection in schools: a checklist
Sweden

**Background**

**RATIONALE**

A good school indoor environment is important for all children, especially those with asthma and allergy. Allergies are increasing in Sweden, especially among children. Studies show that half of the young Swedish population have or have had some form of allergy. Currently, 5-10% of the school children have asthma. Some pupils have severe symptoms and many children have to take more medicine or miss school due to indoor air pollution in the school environment. The year 2003 was declared as Children’s Allergy Year in Sweden. The Swedish Asthma and Allergy Association, an NGO with 25,000 members that works at the national, regional and local level, took the lead and developed a campaign to deal with this issue. The Association has a network with 1,700 “allergy representatives” at Swedish schools. During 2003, the Association’s campaign focused on improving quality of life for children with allergies.

A letter from the Swedish Asthma and Allergy Association was sent during winter 2002-2003 to all schools in Sweden with information about the checklist, “Allergy inspection in schools”.

All schools were encouraged to use the checklist during 2003. A letter to more than 5,000 schools went out and one national and three regional conferences with 100-200 participants took place in 2003. More than 500 information-kits about allergy were ordered. It is not clear how many students were reached since the letter was addressed to school nurses at all schools (5,264 schools) and 270 of 500 answered the questionnaire about the checklist (evaluation carried out during spring 2004).

**Description of action/objectives**

The current project aimed at improving the indoor school environment using the Allergy inspection checklist, which was developed by the Swedish Asthma and Allergy Association. An additional tool, “Feel well at school”, was also used as a basis for discussion about allergy issues among pupils. Specific objectives of the project were:

- to use a checklist as a tool to find allergy risks in the school indoor environment; and
- to take measures for improving the indoor environment.

**Planning and Implementation**

**MECHANISMS USED**

- Planning started in 2002 with a working group with representatives from the Swedish National Institute of Public Health, the developer of the checklist, the project leader from the Swedish Asthma and Allergy Association, a representative from the Association’s regional level and an expert on indoor environments.
Children's Health and Environment Case Studies Summary Book - Actions and Interventions

- A workshop about "Allergy inspection at schools" was held at a national conference. A letter was later sent to all Swedish schools (5,264) so they could order an information kit about allergy and the checklist. Five regional conferences for school personnel about asthma and allergy at schools were later held. During 2002 and 2003 newsletters about the checklist were sent to the association at the local level and to the network of allergy representatives at schools (parents or school personnel).

**Description of Action/Implementation**

- One workshop was carried out at a national conference and five regional conferences for school personnel and others were also held.
- Local initiatives took place by means of lectures and distribution of information.
- Letters were sent to all schools and an information newsletter to 1,700 allergy representatives went out four times during 2002 and six times in 2003 as well as an e-mail service for people who were interested before and during Children’s Allergy Year 2003.
- An Internet site was set up with e-mail service to subscribers about what is going on in the country during Children’s Allergy Year.
- The checklist and the "Feel good at school" tool were ready to order at the beginning of 2003.

**Novelty of Action**

The Swedish National Institute of Public Health (FHI) has been working with allergy issues and school environments since 1992. "Allergy inspection in Schools" is a tool, which has been used in schools since 1995, but not known nor used in all schools. The Swedish Asthma and Allergy Association re-launched this work with this tool.

**Evaluation/Impact**

An evaluation was carried out by sending a questionnaire to 500 school nurses with questions about the checklist. A total of 270 replied as follows: 80% knew the checklist exists; 32% used the checklist during 2003; and 37% used the checklist earlier (before 2003). When asked if the checklist had contributed to a better environment for allergic people in school, 1% answered “not at all”, 13% answered “to a small extent”, 54% answered “partly”, 18% answered “to a large extent”, 9% answered “to a very large extent”, and 5% answered, “do not know”.

When asked in where allergy inspection in schools could have the most impact, the replies were: in cleaning, ventilation, from perfumes/scents, allergens such as furry animals, food and smoking. Attention from the media to the problem of indoor air pollution increased during Children’s allergy year. As far as participation at conferences about allergy in school, a total of 583 participants - school personnel - (50-180 participants in each conference) took part in 5 regional conferences in Sweden about asthma and allergies at school.

**Sustainability**

While some schools have been carrying out the Allergy inspection yearly, some stopped doing it after some time. From the questionnaire, the four most common answers to the question "Which obstacle/s is are preventing the checklist from being used every year?" the replies were: "no obstacle" (52 of 270); "lack of time" (38 of 270); "interest and priorities of headmaster "(16 of 270); and "no obstacles but some specific conditions are required" (13 of 270).

**Transferability**

It is easier if there are health professionals and schools at the local level who have experience using the checklist and are interested in spreading their example to others.

**Lessons learned**

**Key factors leading to success**

- From the Swedish experience, it seems like small/medium sized municipalities with strong spirited people, interested in allergy issues had the best conditions to succeed with implementation of the checklist.
- Cooperation between different sectors in the municipality in allergy committees was also important support to the implementation of the work with allergy issues.
- The initiative was most successful when there was full support of school nurses by the headmaster.
- Local and regional conferences for education and training were effective mechanisms for attracting many participants.

**Challenges during planning/implementation**

- Difficulty reaching over 5,000 schools.
- Even if school nurses were interested in health issues and allergies it was difficult to be sure they had read the information in order to get the school personnel to use the checklist. It was also difficult to know if the recommended measures would be taken.
- The checklist revealed that school nurses have much to do and limited time. They do not have much extra time for prevention work as inspection of working environment.
IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

Develop resources to educate school personnel about allergy and the checklist at the local level. Standardise questions in the checklist and structure the instrument to focus more on evaluation.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Start by means of pilot studies and spread the good examples of where the project has succeeded to further disseminate allergy inspection in the country.

- It is important to integrate the checklist with the ordinary working environment at the school to keep the work going. It is also important to use it on a yearly basis.

- It is easier to get people to listen if the school personnel themselves tell others how they succeeded. An evaluation can be carried out easier and more effectively at the local level in the municipalities.

- It is important that the work is followed and evaluated at the national level, a big task, that could be undertaken by the appropriate authority.

HELPFUL TOOLS

- The working group was important for planning of the project and discussing ideas.

- Support from evaluation professionals.

- Training on project management.

Contacts

Name: Marie-Louise Luther
Address: Astma och Allergi Föverbundet
Box 49303
Sankt Eriksgatan 44, 5 tr
100 29 Stockholm, Sweden
Tel.: +46 8 506 28 211
Fax: +46 8 506 28 249
E-mail: marie-louise.luther@astmaoallergiforbundet.se
URL: http://www.astmaoallergiforbundet.se
### Hand Hygiene in Danish Kindergartens

#### Denmark

**Implementation Level:** Local  
**Setting:** Kindergartens  
**Driving Force:** Public health nurses in Odense municipality  
**Partners:** Caregivers, parents, children

### Background

#### Rationale

Illness among children in day care centres is between two to 7 times as frequent as among children being taken care of in private homes. Smaller children have on average 6-8 episodes of acute infections per year. Illness is more frequent among small children and decreases from the ages of two to four. Children age 6 months to 2 years have on average 23.7 sick-days and children age 2 to 6 years have on average 10 sick-days.

### Description of action/implementation

The action was carried out in 3 phases: i) observation period, ii) intervention period and iii) evaluation period. In the intervention period, written material was provided with information about hygiene, airing, being outdoors, and intensive hygienic guidelines in cases of diarrhoea, other ailments such as the common cold and eye infections was given out. Staff was instructed on proper hand hygiene by practical training with a fluorescent material. Children were trained in a 1 hour-session with information on and discussions about bacteria, illness and when to practice hand-hygiene. Hand hygiene practice was conducted in small groups of children. A fairytale about a princess that would not wash her hands was told, and the book distributed. Songs were taught and rhymes and riddles performed. Children in all age groups received a T-shirt with the logo "Clean hands - yes please". Parents received a folder with information on infections and hand-hygiene practises and were encouraged to sing and speak with the children based on the fairy tale book, songs and riddles. During the evaluation period, the effects of the intervention were measured as the difference in sick-days between the control and the intervention group.

### Evaluation / Impact

The overall intervention on hand-hygiene had a positive effect on reduction of sickness in children attending day-care centres. Better hand hygiene can reduce morbidity and absence among children attending day-care centres. Eye infections and diarrhoea were reduced as a result of this intervention.

### Sustainability

Educational instruction on proper hand hygiene practices are a sustainable way of reaching children and staff and parent support is key to maintaining the better habits.

---

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Kindergarten-children from 0 to 6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Two: Parents and community, Education</td>
</tr>
<tr>
<td>Project duration</td>
<td>6 months (2 months for each period)</td>
</tr>
<tr>
<td>Population reached</td>
<td>475 children</td>
</tr>
</tbody>
</table>
TRANSFERABILITY

The success of the project resulted in a lot of media attention, and contributed to an increased focus on hand hygiene in a large number of day-care centres. The message about hand hygiene is transferable, simple and easy to comply with and disseminate. It can be used in kindergartens all over the world.

Lessons learned

KEY FACTORS LEADING TO SUCCESS

- The project was well grounded in educational theory as well as theories on disease prevention and health promotion. The fact that the intervention was broad, and approached children, staff and parents in the same campaign was perceived as a contributor to its success. The dialogue with children was based on a cultural understanding of children’s emotional and motor development. Children cherish fairy tales and identify with the persons in the fairy tales. By organising theatre performances and involving children in washing and singing, children were very engaged.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- The success of the campaign resulted from the trust and collaboration between the health visitors and the project partners at the outset of the project.
- Initially, some representatives of potential day-care institutions that were to be involved in the project thought it was an attempt to cut costs or stated that hygiene was not a problem and that children were seldom ill.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING

- The two project managers propose that staff sick days are registered to assess whether the intervention also had an influence on adult illness. They also recommend that staff observe whether there is a reduction of cases of impetigo.
- There is some evidence that space available per child in day-care centres is correlated to the rate of absence caused by diseases.
- On a related environmental health issue, a recent intervention study in a number of Danish kindergartens revealed that removing top soil with lead and replacing that with clean soil reduced the amount of lead measured on children before and after the application of the new soil. One can speculate, that a combination of removal of leaded soil and of proper hand hygiene plays a role also in preventing lead contamination of children.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- The methods are easy and simple, but it is important to establish a good relationship with the kindergartens before starting.
- The two project managers have made themselves available for further queries related to this project.

HELPFUL TOOLS

Technical assistance, an international consultant.

Contacts

Name: 1) Vibeke Stage  
2) Mette Ladegaard
Address: 1) Godthåbsgade 56  
5000 Odense C, DK-Denmark  
2) Langelinie 30, 5230 Odense M
Tel.: 1) +45 66 114 228  
2) +45 66193414
Fax: +45 3920 8010 (NIPH)
E-mail: 1) VST@odense.dk  
2) MBL@odense.dk
URL: http://www.si-folkesundhed.dk
Unsafe Water and Inadequate Sanitation
Hungary

**Implementation Level**  Local

**Setting**  Community

**Driving Force**  National Public Health and Medical Officer Services - NPHMS

**Partners**  Teachers, children, community, public health professionals

### Background

**Rationale**

In the last decade drinking water has become more expensive and as a result some people in villages started to re-use old private wells. Water quality of these wells is unknown by NPHMS and users as well. Water pollution is a basic environmental issue since pollution widespread in soil may appear in ground water. Children should be aware that information on soil and water pollution can immediately protect their health in the short run and their water supply, in the long run.

**Target audience**  All villagers

**Sectors involved**  Three: education, health, community

**Project duration**  4 months

**Population reached**  4,000 – 10,000 people

### Contribution of each sector

The three sectors involved contributed as follows:

- health professionals: gave basic information in written form (letter), made posters, and developed educational materials;
- teachers: forwarded the information to children, who took water samples, described the circumstances of potential pollution of ground around wells; and
- villagers: based on the results could make decisions on whether to use wells as water source or not, or to make the territory around wells cleaner or not.

### Planning and Implementation

**Mechanisms used**

- In the beginning, communication was established between NPHMS and schoolteachers. This was later passed on by teachers to children and later to the community.
- Information on the dangers of using private shallow wells due to the high nitrate and nitrite concentration was provided to the participants before starting the project. A recommendation on not using wells before water quality is known was also provided.

**Description of action/implementation**

- Teachers were provided with information about potential hazards of drinking water from private wells.
- Teachers acquainted children with the above-mentioned in the classroom and this information was later passed on by the schoolchildren to their parents, grandparents or neighbours.
- As a practical stage of project, children took samples from the wells, and at the same time were asked to complete a special questionnaire describing the soil pollution around the wells and the related parameters (depth, animal faeces, etc.).
- NPHMS gave presents to the participating schools, such as small books and cassettes with songs in English about water pollution and protection, and so that these could be used in different classroom activities (singing or English lessons) and at school events.
- For better illustrating and understanding the problem NPHMS specialists made posters about water pollution, and placed them on the walls of general practitioners’ waiting rooms in the villages.

### Description of action/objectives

The intervention was part of the National Environmental Health Action Plan (NEHAP). The main objectives were to:

- analyze the water of wells which are used for human purpose; and
- protect the villagers from high nitrate consumption which can poison children (blue baby syndrome) and affect adults as well (stomach cancer).
NOVELTY OF ACTION
It was a completely new action.

Evaluation/ Impact
- After carrying out the investigation residents of the villages were informed on the results of the measurements, including the exact data related to the nitrate components of the water in their wells. Thousands of inhabitants, who drink water from the village wells, were protected. Children took water samples, learned about water pollution and its hazards. Fifty to one hundred teachers were involved in this project. The teachers received updated information about water pollution while learning more about the NPHMS.

SUSTAINABILITY
This program was incorporated into the National Environmental Health Action Plan, and in 1999-2000 completed in 9 counties in Hungary. The work is still going on and has spread to several counties with the help of the National Public Health Center.

TRANSFERABILITY
This action can potentially be transferred with minimal change since many countries in the Carpathian basin have problems with water pollution.

Lessons learned

KEY FACTORS LEADING TO SUCCESS
- Teachers who took the responsibility for children’s work and keeping in touch with NPMOS.

CHALLENGES DURING PLANNING/IMPLEMENTATION
- Persuading teachers to take part in the planning.
- Persuading villagers that this investigation would not bring any negative consequences such as fines or penalties when implemented.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?
Repeating the project in a shorter form every year on “Water day”.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING
Not only nitrates but also high concentrations of arsenic were found in shallow wells in one of the counties. A bacterial test or survey for chemicals such as pesticides could provide useful information about soil and groundwater pollution.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR
- The intervention is not very expensive, yet very effective.

Contacts
Name: Maria Benyi
Address: Deputy General Director - Fodor Jozsef National Centre for Public Health Environmental Health Institute Nagyvárad tér. 2 H - 1096 Budapest, Hungary
Tel.: +36 1476 1158
Fax: +36 1476 1348
E-mail: Benyi.maria@fjokk.hu
URL: http://www.fjokk.hu/start.html

HELPFUL TOOLS
- Media.
Polluted drinking water
Reducing effects on children's health
Romania

**IMPLEMENTATION LEVEL**
Local

**SETTING**
Community of Garla Mare (kindergarten, school and dispensary)

**DRIVING FORCE**
Medium & Sanitas (NGO), Women in Europe for a Common Future (WECF)

**PARTNERS**
Dutch Ministry of Foreign Affairs, Technical University of Hamburg-Harburg

---

**Background**

**RATIONALE**
The UN estimates that in Eastern Europe and the NIS 150 million people do not have access to safe drinking water and sanitation. Seven million people in rural Romania get drinking water from wells, mostly private ones. These wells are often polluted with nitrates, bacteria, and pesticides. Romania is not an exception in Eastern Europe.

In Romania the national drinking water legislation has been consolidated with EU directives and sets quality levels and control mechanisms for public drinking water systems but does not cover the main source of drinking water for the rural population: private wells. Connecting even 50% of the rural population to a central drinking water and sanitation system largely surpasses the Romanian government’s means. For private and even for public drinking water wells there is no effective water quality control system. Furthermore, there are only a few Romanian laboratories, which have the equipment for adequate water analyses.

Health effects of nitrate pollution in drinking water are both long term (thyroid and brain dysfunction) and immediate (blue-baby-disease, diarrhoea, hepatitis) and can be lethal to small children.

**Health:** the 2 medical doctors and the nurse of Garla Mare and the national Institute for Public Health in Bucharest. Local authorities: the local authorities of Garla Mare, the national ministry for health and environment of Romania, state water and sanitation agencies. Parents and Community: a community project committee was set up with 12 representative from village inhabitants from both the Roma and Romanian ethnic communities, both men and women. Industry: The German company 'Provitec' donated the first water filter and built it custom-made to address the high nitrate levels.

**Description of action/objectives**
The NGO Medium & Sanitas (M&S) together with its German and Dutch partners of Women in Europe for a Common Future (WECF) carried out a multi-stakeholder pilot project. The main objectives were:
- to develop replicable low-cost short-term solutions to health effects from drinking water pollution among children; and
- to improve the health of 500 children of the 2nd primary school in Garla Mare as well as the health of all new-borns in the village by reducing occurrence of gastroenteritis and blue-baby disease by education and provision of a better sanitation and clean water.

**Planning and Implementation**

**MECHANISMS USED**
- A survey was carried out by the M&S NGO staff among 2,480 inhabitants about their knowledge and experience with health effects of water pollution.
- In-depth socio-economic gender analysis was carried out by means of focused interviews with a representative group of 20 inhabitants.
- Hydro-geological study.

---

**Target audience**
Children

**Sectors involved**
Four: education, health, local authorities and industry

**Project duration**
1 ½ years

**Population reached**
3,500 inhabitants of Garla Mare, 500 children of the schools and kindergartens

**CONTRIBUTION OF EACH SECTOR**

**Education:** participation in the programme by the school director, teachers and pupils of Garla Mare, students of Bucharest university and students and professors of the University of Hamburg-Harburg and students of the University of Groningen and Wageningen.
Public meeting to present the results of the investigation.

The local project committee and the project staff in cooperation with the local authorities decided to focus on 3 preventive solutions: a short-term emergency solution, a medium- and a long-term solution.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The project was comprised of three main implementation activities:

1. **Short-term solution:** Clean water and better hygiene in the schools by installing a water filter and hand washing basins
   - Three small-scale water filters were specially made to reduce the high levels of nitrates, micro-organisms and pesticides in the wells of the school and dispensary.
   - Six hand washing basins were installed in the school and dispensary.
   - Posters were put on the public wells showing the level of pollution and warning about health effects for children.
   - Educational material was published on how to use the filtered water.
   - A children’s drawing contest was organised by the 2 schools on the theme of clean drinking water and the winning pictures were used for a calendar-poster.
   - Eight leaflets on hygiene, nitrates, pesticides, bacteria, their health effects, well-maintenance, organic agriculture and dry-toilets were written and printed.

2. **Medium-term solution:** hygienic toilets, that do not pollute the ground water. These dry-separation toilets are ecological because they do not use water for flushing and separately collect urine and faeces, so it does not enter into the ground water. At the same time these eco-toilets have the advantage that they do not smell and can be built inside the homes.
   - Six ‘luxury’ dry-separation toilets were built in one of the village schools and 2 ‘low-cost’ dry-separation toilets were built in 2 private homes as a demonstration project.
   - Education material was published to explain the benefits of the dry-toilets, how to use them and how to built them (for private families).

3. **Long-term solution:** addressing agricultural pollution.
   - Project staff and project committee initiated cooperation between the farmers in Garla Mare and organic farmers in Sibiu, Constanza, Germany and the Netherlands to reduce exposure to pesticides. A training visit was organised for 25 farmers to an organic farm in central Romania and 5 farmers visited the organic farming fair ‘Biofach’ in Nürnberg, Germany.

**NOVELTY OF ACTION**

The project was built on the experience of the WECF and the University of Hamburg-Harburg in other countries as well as the experience of the staff of Medium & Sanitas from previous health research in Garla Mare.

**Evaluation/ Impact**

Water tests in Garla Mare showed three types of pollution: nitrates, bacteria and pesticides. None of the 78 municipal wells tested had safe water: nitrate levels averaged 120 mg/l with peaks over 500 mg/l (the limit is 50 mg/l), faecal-streptococci 5420/liter (limit 0/l) and atrazine up to 160 ng/l (the limit for atrazine is 100 ng/l). The high faecal bacteria levels indicate that the primary causes of bacterial pollution are the latrines in people’s gardens. These latrines are not sealed and not emptied, so faecal bacteria and urine can leach into the ground water and cause high levels of faecal bacteria and nitrates.

This case study shows that with low-cost preventive measures immediate improvements in the health situation of children in areas with polluted drinking water from wells can be achieved.

**SUSTAINABILITY**

The pilot project results lasted beyond the end of the project. The project committee and women’s organisation have said that they wanted to continue to develop new activities, including organic agriculture. Existing project partners have already promised continued cooperation, in particular the Technical University of Hamburg-Harburg and Women in Europe for a Common Future. WECF has been trying to help the local authorities and NGOs find sponsors for a centralized water supply system.

**TRANSFERABILITY**

The University of Hamburg-Harburg will continue to follow the eco-sanitation demonstration project in Garla Mare for the coming 5 years and carries out 6-monthly tests on the urine and composted faecal material. The research results from this project and the educational materials are already being used in similar demonstration projects in Ukraine (WECF) and are planned for Uzbekistan, Bulgaria and Armenia.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Educational activities of the local NGOs;
- Multi-stakeholder debates and cooperation; and
Ownership of the project by the local community helped increase public participation in decision-making on drinking water and sanitation policies and investments.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- To obtain data at the start of the project: a lot of time was spent on water testing, surveys and finding a good hydro geological study.
- To get the 2 opposing political parties in the village to cooperate and work together.
- To find the right building materials, correctly install the pump and filter, and storage tanks for the eco-san toilet building.

**IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?**

The level of poverty of the village inhabitants was underestimated when the project was designed. In hindsight it would have been better to include more income-generating activities in the project. Furthermore, the link between lack of waste management and children’s health outcomes became clear during the project but no actions had been planned during the project design phase. This should be included in future projects. In particular the burning of plastic waste in open ovens inside homes is probably an even greater health concern (dioxin emissions) than the high nitrates, pesticide and bacteria in drinking water.

**IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING**

Several tests, carried out throughout the year and analysed in a German laboratory, showed that the well water contained atrazine (a triazine herbicide) in concentrations from 300 up to 500 mg/l. Levels of desethylatrazine, a breakdown product of atrazine, were also found in the well water, but below the pesticide limit of 100 ng/l. The same was the case for simazine. Both atrazine and simazine recently failed the EU pesticide review process for older compounds because of the risks to groundwater and will be withdrawn in 2004. More research is needed to find out where this pesticide pollution comes from.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**

- Involve all sectors and give women and children the opportunity and tools to take action themselves.
- Address the problems from a preventive perspective. Water filters alone are not sustainable in the long term whereas reduction of water pollution at the source is.
- To foster cooperation between local and international water laboratories as it is very difficult to get reliable test results especially for organo-chlorine pesticides in water.

**Contacts**

Name: Sascha Gabizon  
Address: WECF, Regulierenring 9, NL - 3981 LA Bunnik, The Netherlands  
Tel.: +31 30 2310 300  
Fax: +31 30 2340 878  
E-mail: wecf@wecf.org  
URL: www.wecf.org
Organic Food
in the Vienna Hospital Association
Austria

**Implementation Level** Local

**Setting** Hospitals

**Driving Force** City of Vienna, Vienna Hospital Association (KAV)

**Partners** Not applicable

### Background

**Rationale**

Good nutrition contributes significantly to the healthy development of children and to prevention of diseases. In Austria, 1.9 million meals are prepared daily in community kitchens, hospitals, nursing homes, company canteens, kindergartens, and schools. For a long time, large-scale catering establishments had the reputation for cheap mass production. Special attention is increasingly being given to the food supply, because the quality of nutrients contributes to good health and to holistic medical therapy. Excellent and fresh quality and good taste are particularly important for children and adults, but especially for the ill and elderly.

### Description of Action/Objectives

The Vienna Hospital Association initiated an extensive project to incorporate organic food into the hospital meals. The main objective was: to convert to organic food.

### Planning and Implementation

**Mechanisms Used**

- Establishment of the working group for organic food within the scope of the project "OEKOKAUF WIEN".
- Distribution of information about organic food to kitchen management.
Organization of seminars on healthy diet and the importance of organic food as a means for disease prevention and development of games/learning material for teachers in kindergartens to teach children about organic food.

**Evaluation/ Impact**

The placing of orders for the supply of exclusively organic baking goods began at the end of 2002 and the share of organic food being used in the hospital increased to over 30%. It was shown that it is cheaper to employ personnel for the preparation of raw food rather than to buy ready-made products.

**Sustainability**

Environmental benefits were linked to decreased material (PRODUCTS, MATERIALS, PACKAGING), energy, and water consumption as well as decreased amounts of waste.

**Transferability**

This project represents an example of the protection of child and adult health and can also be implemented in other public institutions such as schools, kindergartens, nursing homes.

**Lessons learned**

A feasibility study showed that increased use of organic food in hospital meals would increase costs by only 10-15%.

**Challenges during planning/implementation**

There was a lack of organically raised meat at the time of the reports about BSE.

**If done again, what would be done differently?**

The same procedure would be followed performing a feasibility study in a project kitchen and spreading the positive results to all kitchens of the organization.

**Important aspects to be considered for future planning**

To employ personnel for the preparation of raw organic food instead of the use of convenience products is a key factor to get best quality and save money.

**Advice to countries that want to do something similar**

- Motivation of the kitchen personnel is very important and support by responsible people is necessary in order for the extra costs connected with the purchase of organic products to be accepted.
- Clear targets and appropriate goals agreed to with the management increase their commitment.

Organically grown fruit and vegetables are only seasonally available and require an appropriate adjustment of the food plans so this must be taken into account when planning. At present, very few organic convenience products are available.

**Helpful tools**

- Kitchen-specific technical training courses in handling quality products that were necessary to guarantee the correct processing of organic products (i.e. taking into consideration the substantially smaller loss of weight when fried).

**Contacts**

Name: 1) Claus Holler  
                     2) Bruno Klausbruckner  
Address: Vienna Hospital Association  
                     Hospital Care Provider Austria  
                     Schottenring 25  
                     A-1010 Vienna, Austria  
Tel.: +43 1 53114 60541  
Fax: +43 1 53114 60544  
E-mail: 1) Claus.holler@wienkav.at  
                     2) Bruno.klausbruckner@wienkav.at  
URL: www.wienkav.at
PRESTO - Prevention Study of Obesity
Austria

**Background**

**RATIONALE**

Data from Vienna show that 12 - 22 % of children between the age of 10 and 15 years are overweight, 5 - 10 % are obese and up to 2 % are extremely obese.

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Children between 10 and 15 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Two: education, health</td>
</tr>
<tr>
<td>Project duration</td>
<td>2 years</td>
</tr>
<tr>
<td>Population reached</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Description of action/objectives**

PRESTO is a pilot health education/nutrition project in Austria. The main objectives were:

- prevention of obesity during infancy and adolescence;
- recording and provision of therapy to overweight and obese children and adolescents and identification of patients at risk;
- provision of education about the development of obesity and strategies to prevent overweight to children-better prevention and health care for children and adolescents within the bounds of existing health care structures; and
- promotion of healthy nutrition.

**Planning and Implementation**

**MECHANISMS USED**

- A school medical examination was carried out in cooperation with the school medical officer.
- Taking a family history to provide information about risk factors and influences on developing obesity during infancy and point out possibilities for suitable interventions.
- A quiz administered to the children before and after the intervention to assess their nutrition knowledge and eating habits.

**Evaluation/ Impact**

**SUSTAINABILITY**

After successful completion and evaluation PRESTO will be expanded to other schools throughout Austria.

**Contacts**

Name: Kurt Widhalm
Address: Med. University of Vienna
Dept. of Pediatrics
Div. of Clinical Nutrition
Waehringer Guertel 18-20
1090 Vienna, Austria
Tel.: +43 1 404002337
Fax: +43 1 404002338
E-mail: Kurt.widhalm@univie.ac.at or kurt.widhalm@akh-wien.ac.at
URL: http://www.univie.ac.at/
Prevention of Iodine Deficiency Disorders
Georgia

**IMPLEMENTATION LEVEL** Regional, local

**SETTING** Health centers

**DRIVING FORCE** National Center of Nutrition

**PARTNERS** UNICEF; Ministry of Labor, Health and Social Affairs: Department of Public Healthcare; regional centres for prevention of iodine deficiency; regional and city centres of public health care; regional and city outpatient department

---

**Background**

**RATIONALE**

Following the breakdown of the former Soviet Union, environmental pollution and its negative influence on the health and living conditions of the Georgian population became an issue of concern. As a result of the economic crisis, issues related to environmental health remained in the background. Furthermore, grave economic conditions of the population led to famine, low-calorie nutrition, and iodine, and other micronutrient deficiencies. All the above-mentioned made it necessary to develop a state program to prevent these deficiencies that has been in place since 1997. For Georgia endemic goiter is a regional problem: as a large part of the population suffers from iodine deficiency. While appropriate preventive measures had been established, they had not been continued in the government’s transitional period. Worsening of the social-economic situation and subsequent modification of the nutritional status of the population, combined with radionucleid pollution in the west of Georgia from the accident at the Chernobyl atomic power station, led to an increase in iodine deficiency disorders throughout the country, especially in endemic regions.

**Description of action/objectives**

The main interventions were the detection of iodine deficiency and the epidemiological study. The main objective was to offer treatment and preventive measures to children and decrease the rate of morbidity caused by iodine deficiency.

**Planning and Implementation**

**MECHANISMS USED**

- Relevant actions, interventions and administrative regions and cities for activities were identified on the basis of official medical statistics, UNICEF data and epidemiological research on the topic.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

An iodine deficient thyroid gland was identified by means of an ultrasound investigation of the gland and clinical and laboratory investigations. The following was offered to the target population:

- free medical service to the Georgian population and patients underwent a consultation with an endocrinologist, an ultrasound investigation of the thyroid gland, renal iodine excretion test, hormone investigations of the thyroid gland, and cytological investigations of the thyroid gland;
- 439,500 tablets of Antistrumin and 293,400 tablets of L-Thyroxine were provided to the population;
- ACTS Georgia, an international humanitarian organization, granted 6 million tablets of Levoxil, that were distributed to all medical institutions, participating in the program, which made it possible to give due treatment not only to children but also to adults;
- capsules of iodized butter were distributed to children and pregnant and nursing women in 10 administrative regions of the country, mostly highly endemic regions.

---

**Target audience**

Children, pregnant and nursing women, whole population of Georgia

**Sectors involved**

Two: health, local authorities

**Project duration**

Over 5 years and ongoing

**Population reached**

600,000 people including up to 200,000 children

**CONTRIBUTION OF EACH SECTOR**

- Endocrinologists of the regional and city outpatient departments detected iodine deficiency disorders, administered treatment and provided preventive measures to the population; Epidemiologists of the regional and city public healthcare centres conducted an epidemiological study of endemic goiter.
- treatment was given to children diagnosed with a II or III degree goiter, nodular goiter and hypothyroidism. The programme also provided surgical treatment for children with nodular goiter where malignancy was of concern;
- four regional centers for iodine deficiency prevention were created in different regions of the country and regional committees on iodine deficiency prevention were established;
- health education measures were carried out, including preparation, publication and distribution of leaflets, brochures and posters, and lectures; and
- the Ministry of Labour, Health and Social Affairs of Georgia prepared a bill, which envisages production and importation of only iodized salt in the country. In August 2003, the bill was approved by the Georgian Government and was sent to the Georgian Parliament.

**Novelty of Action**

Actions and interventions were built on an existing structure.

**Evaluation/ Impact**

Evaluation of results of program activities were periodically carried out by the Ministry of Labour, Health and Social Affairs of Georgia as well as by UNICEF together with program participants. In September 2003, the Ministry reported results of program implementation at a session of the Georgian Government. There has been a gradual decrease in thyroid pathology due to programme activities. The morbidity rate has decreased by 12% since the initiation of activities (from 1997 to 2002). There has also been a sharp increase in the number of people, utilizing iodized salt over the past few years: According to the UNICEF data, in 2000 only 8% of the Georgian population consumed iodized salt, while in 2002, the rate increased to 68%.

**Transferability**

The training of local endocrinologists and epidemiologists could be transferred to other countries.

**Lessons learned**

**Key Factors Leading to Success**

- Extension of the programme to the state level as well as provision of annual funding showed the interest and support of the Georgian Government in solving this problem.

- Methodological and technical support of UNICEF and ACTS Georgia, international humanitarian organizations, overall support and assistance from the Ministry of Labour, Health and Social Affairs of Georgia and its structures in carrying out programme activities.

- Training of regional and city endocrinologists and epidemiologists by means of special workshops within the framework of the program.

**Challenges during Planning/Implementation**

- Insufficient medical equipment for diagnostic purposes in remote regions of the country.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

The treatment component of the program would have been expanded.

**Important Aspects to be Considered for Future Planning**

Aside from measures taken within the framework of the program, more activities are needed to achieve sustainable results, minimize and eliminate disorders caused by iodine deficiency. Legislative actions should be taken to ensure the provision of only iodized salt to the population. The quality of the dietary intake of the population must be improved and would be correlated with a rise in social status.

**Advice to Countries that Want to Do Something Similar**

- Planning and implementation of activities for providing iodised salt to the population should take place simultaneously with treatment-preventive activities and health education measures.

**Helpful Tools**

- Training; technical, methodological and advisory assistance; national and international consultants.

**Contacts**

**Name:** Prof. Zurab Sekhniashvili  
**Address:** National Center of Nutrition, Director 16 Kavtardze st. 0186 Tbilisi, Georgia  
**Tel.:** +995 32 30 65 30  
**E-mail:** zse@posta.ge
The Snack-Kiosk - “Znůni vo de Bůri”
Switzerland

**Implementation Level**: Local
**Setting**: Secondary school
**Driving Force**: Teachers, parents
**Partners**: Farm women, the baker, agricultural extension services

### Background

#### Rationale
School timetables can affect pupils concentration if they are not allowed to have an intermediate snack to prevent blood sugar level drops. The school lacked in canteen or place where pupils could buy something to eat.

### Target audience
All pupils of that school (age: 12-16)

### Sectors involved
Three: Parents and community, education, other (farm women)

### Project duration
Ongoing, trying to expand to national level

### Population reached
More than 30% of the pupils in the school

#### Contribution of each sector
Teachers, parents, pupils, farm women and bakers were involved at different stages. The farm women sold the products, teachers taught about healthy snacks during class time, agriculture extension service led the project.

### Description of action/objectives
The initiative “Snack kiosk at school” had one main objective: to provide a healthy snack to pupils during the morning breaks.

### Planning and Implementation

#### Mechanisms used
- Interdisciplinary project group and a needs analysis among pupils.

#### Description of action/implementation
During the morning breaks a healthy, seasonal and delicious snack was offered once a week to pupils. This snack was prepared by farm women who use their own products.

#### Novelty of action
This was a completely new activity.

### Evaluation/Impact

#### Qualitatively speaking, this school project contributed to improved nutrition education and was simple to implement. There was good cooperation between teachers, local authorities, parents and agriculture extension services.

#### Sustainability
The project is now a fixed service in the school. Other schools in Switzerland have started a similar project.

#### Transferability
The project is an on-going process. However, it is easily applicable to other countries.

### Lessons learned

#### Key factors leading to success
- Very good networking.

#### Challenges during planning/implementation
- To convince farmers’ wives of the idea since they already have a big workload.

#### If done again, what would be done differently?
Involve health authorities in the project.

#### Advice to countries that want to do something similar
- It is important to have a good network set up between partners integrating parents and pupils.
- The list of products, which can be prepared by farmwomen, can be useful as well as their organizational ideas.
HELPFUL TOOLS

- Clear project organization, training in calculation of prices.

Contacts

Name: Isabelle Odermatt Schwarb
Address: Landwirtschaftliche Beratungszentrale Lindau
         CH-8315 Lindau, Switzerland
Tel.: +41 52 354 9718
Fax: +41 52 354 9797
E-mail: isabelle.odermatt@lbl.ch
URL: http://www.lbl.ch
Environmental friendly cleaners and disinfectants
Austria

**Implementation level**
Local

**Setting**
Hospitals

**Driving force**
Vienna Hospital Association

**Partners**
The Department of Environmental Management of the Viennese Hospital Association (KAV); Responsible managers in all KAV hospitals; Centralised Purchasing; External scientific advisors: IFZ Graz (Austria), Ecology Institute Vienna (Ökologie Institut), Concerned People, Environmental Consulting Vienna (Die Umweltberatung, Wien)

**Background**

**Rationale**
Hospitals and other health care institutions use a number of potentially toxic chemicals (traditional cleaning products, floor strippers, and disinfectants) many of which present a variety of human health and environmental concerns as they can contribute to poor indoor air quality and may cause cancer, reproductive disorders, respiratory ailments (including asthma), eye and skin irritation, central nervous system impairment, and other health effects. Because hygiene and cleanliness standards in hospitals are very high such chemical detergents are used, with a significant impact on wastewater. In previous years, an increase in susceptibility to allergies was noticed among the hospital staff. At the same time more detailed knowledge on the estrogen-like effects of detergents in water were found.

**Target audience**
Children and adults

**Sectors involved**
Three: Industry, health, local authorities

**Project duration**
4 years (1996 - 2000)

**Population reached**
3,000 users of detergents and cleaners, 15,000 patients/day, 1,000,000 visitors/year

**Description of action/objectives**
The project aimed to promote the exclusive use of ecological products to protect children and adults from the potentially harmful effects of exposure to chemicals in hospital settings. The main objectives were to:

- assess all detergents following scientifically designed environmental criteria;
- reduce polluting products and chemicals; and
- reduce the variety of cleaning products used and ensure the correct use and dosage of detergents.

**Planning and Implementation**

**Mechanisms used**
- Development of criteria for environmentally friendly detergents.
- Establishment of a working group on detergents supervised by the Environmental Department of the Vienna Hospital Association (KAV).
- An expert committee assessment of cleaning products (105 of the 175 products under evaluation were excluded) for their potential hazardous effects. The remaining 70 products were evaluated and ranked. The best products were then put into use and tested by the hospital staff in 2000.

**Description of action/implementation**
- A catalogue of requirements for environmentally friendly detergents was developed as well as an evaluation grid and product database.
- A new call for tenders was issued for detergents, containing detailed information on the environmental requirements and evaluation criteria.
- Each hospital appointed a person as responsible for responding to all questions relating to detergents.
- A training programme for cleaning personnel was set up.

**Evaluation/ Impact**
An extensive test phase was carried out which showed that environmentally friendly detergents met the necessary requirements and allowed users to get acquainted with the new products. During the test phase of the project, 121 previously used products were reduced to 20 environmentally friendly ones. These formed the set of “recommended products”.


Twenty-two other products were classified as “tolerable” meaning they were not hazardous but were not ideal for use. By the end of the project, the amount of detergent and cleaning agents used annually was reduced by 23%, from 368 to 297 tons. The purchasing costs of these products were reduced by 10% (from € 646 800 to € 588 600 per year). The use of detergents approved by KAV was written into all contracts with external cleaning companies. The project was expanded within the context of the Eco-purchasing project into other establishments in the city of Vienna. Previously sceptical users accepted the new, environmentally friendly products.

**SUSTAINABILITY**

The use of ecological cleaning products reduces long-term contamination of air and water.

**TRANSFERABILITY**

The Vienna Hospital Association project "Ecologically friendly cleaners and disinfectants” represents an example of an action to protect children's and adult's health and can be implemented in other public institutions like schools, kindergartens and nursing homes, as well.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- An ongoing information campaign in the beginning resulted in the acceptance of the new, environmentally friendly products by previously sceptical cleaning personnel.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- The detergent industry caused quite a few difficulties and they disputed about the criteria for requirements and the effectiveness of more environmentally friendly products.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**

- Develop a criteria catalogue of ecological cleaning products as a first step.

**HELPFUL TOOLS**

- The scientifically sound evaluation of the products was a helpful tool.
- An extensive training program was developed for the cleaning personnel of the hospitals.

**Contacts**

**Name:** 1) Herbert Nentwich  
2) Bruno Klausbruckner

**Address:** Vienna Hospital Association  
Hospital Care Provider Austria  
Schottenring 25, A-1010 Wien, Austria

**Tel.:** 1) +43 1 53114 60542  
2) +43 1 53114 60541

**Fax:** 1) +43 1 53114 99 60542  
2) +43 1 53114 99 60541

**E-mail:** 1) Herbert.nentwich@wienkav.at  
2) Bruno.klausbruckner@wienkav.at

**URL:** www.wienkav.at
Elimination of hazardous substances from health care settings in Vienna, Austria

**Implementation Level**: Local, city of Vienna  
**Setting**: Hospital  
**Driving Force**: Vienna City Council  
**Partners**: Glanzing Paediatric Hospital, Preyer Paediatric Hospital, Neonatology Unit of the Paediatric Clinic Glanzing, Otto Wagner hospital, Lainz hospital, Baumgarten nursing home, Municipality of Vienna

**Background**

**Rationale**

In the late 1980s, many concerns were raised about PVC and its environmental impacts. Consequently, in 1992, the Vienna City Council declared PVC products undesirable in the future, and packaging materials containing PVC were banned. This directive was and still is binding for the Vienna Hospital Association (KAV) and will be implemented in the near future. Furthermore, the KAV strategy involves the consequent elimination of PVC from building materials.

**Target audience**: Patients and hospital insiders  
**Sectors involved**: Health, local authorities  
**Project duration**: On-going since 1989  
**Population reached**: Not applicable

**Description of action/objectives**

This project carried out a ban on PVCs in packaging materials by means of a directive carried out by the city of Vienna. The aim was to minimise the use of medical products containing PVCs and reduce the amount of PVC waste. The objectives of this project were to:

- Eliminate PVCs in packaging materials used in hospitals;
- Minimise the use of all PVC products to an extent that is technically and economically justifiable in hospitals; and
- Eliminate PVC from building materials such as floors, window frames, cables, installation pipes and pipes for wastewater and other smaller building materials.

**Planning and Implementation**

**Mechanisms used**

- PVC conference and PVC working group set up in Vienna (1989).

**Description of action/implementation**

- Directive issued by the municipal authorities where all tender offers must state that use of PVC products is undesirable and packaging materials containing PVC are banned (1992).
- Initiation of research for alternatives, first for building construction and later within health care settings.
- Waste audits to ensure the success of PVC elimination measures.
- Investigation of all medical products containing PVC used in neonatal intensive care units and research for alternative products.
- Avoidance of PVC flooring and windows.
- Reduction of PVC use to a minimum in newly constructed buildings.
- A shift to polyethylene, polypropylene, and Latex for shoe covers, gloves, aprons and mattress covers.
- A search for PVC-free products for catheters, tube systems, IV bottles & bags, tap adapter-connecting parts.

**Evaluation/Impact**

- As a result of the project, PVC share declined from approximately 10% (1992) to 2.5% (1995) and a further 0.6% (1999) of the total weight of medical waste.
- Share of PVC medical products was reduced to 20%.
- The proportion of PVC packaging material was reduced from 3.6% to 0.04%.
Altogether, the PVC share in the hospital waste has dropped from 10% to 0.37% in the last 10 years, representing a significant reduction.

PVC statement by suppliers confirming that packaging materials are PVC free and products supplied contain no PVC.

**TRANSFERABILITY**

Since 2003 several hospital buildings including Otto Wagner hospital, the Lainz hospital, and the Baumgarten nursing home were renovated while the reconstruction also involved the substitution of PVC cables, pipes and other building materials with environmentally friendly alternatives. PVC-free alternatives have also been introduced for shoe covers, gloves, bed mattresses and aprons.

**Lessons learned**

**IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING**

The reason for a slower reduction of PVC medical products were the significantly higher costs of PVC-free alternatives. On the other hand certain special products are not available in any other material than PVC.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**

- It would be advisable to increase the demand for PVC-free medical products and to reduce their costs and encourage development of PVC free alternatives.

**Contacts**

Name: Bruno Klausbruckner,
Address: Vienna Hospital Association - Hospital Care Provider
         Schottenring 25
         A-1010 Vienna, Austria
Tel.: +43 1 53114 60541
Fax: +43 1 53114 60544
E-mail: Bruno.klausbruckner@wienkav.at
URL: www.wienkav.at
Chemical Days - website for teenagers
Denmark

**IMPLEMENTATION LEVEL**
Started nationally but now is international

**SETTING**
The web community

**DRIVING FORCE**
Danish Environmental Protection Agency

**PARTNERS**
Consulting company specialized in communication for school children, Danish Ministry of Environment

### Background

#### RATIONALE

In spring 2003 the Danish Government published Denmark’s first Strategy and Action Plan to protect health against environmental factors. The objective was clear: Cleaner environment - healthier Danes. The new strategy stressed that Denmark must have a high level of protection, and that special efforts must be made to protect vulnerable groups such as pregnant women, children and the elderly.

Denmark has initiated several communication initiatives targeted to children, health and environment.

### Description of action/objectives

A website was developed for teenagers about chemicals they encounter in products in their everyday lives and the composition of these. A teacher’s lesson guide and course materials for students were also prepared. The main objectives of the website are:

- to give teenagers the opportunity to decide for themselves which chemicals are "cool" or "uncool";
- to increase knowledge about which ingredients deodorants, t-shirts or lipsticks and such products contain; and
- to let students find their own standpoint and opinions through assignments and discussions.

### Planning and Implementation

#### MECHANISMS USED

- Chemical Days was developed in close cooperation with teachers of 13 to 15-year-olds. Students in a Danish school tested the material together with their teachers.

#### DESCRIPTION OF ACTION/IMPLEMENTATION

The Chemical Days website takes 13-15 year-olds on a chemical tour of a teenager’s room. During the tour they are asked to consider the choices they make each day, when they use their mobile phone, read a magazine, do their hair, or put on a pair of trousers. The teaching materials in the website focus on the ongoing debate about hazardous substances they come into contact with in everyday life and the importance of involving youth in this debate, since they are consumers. It stresses how they must be able to take a personal stand and distinguish between necessary and unnecessary chemicals. In creating this website, the Danish Ministry of the Environment challenged students and teachers to find answers to questions about hazardous chemicals in a new set of interactive teaching materials.

#### NOVELTY OF ACTION

The topics of the teaching materials are generally well known in Denmark. However the Danish EPA had never informed the public about it in this way and for this target group.

### Evaluation/ Impact

A class teacher said: "Chemical Days is a good introduction to a subject that is otherwise difficult and uninteresting for students. I saw that the students were very enthusiastic and involved because the Chemical Days material is based on their own interests and concerns".
SUSTAINABILITY

The teaching material is suitable for interdisciplinary teaching, involving, for example, physics, chemistry, social studies and English.

TRANSFERABILITY

The teaching materials (lesson guide and course materials) are available in both Danish and English languages. Chemical Days is free and ready to use.

Contacts

Name: 1) Søren Jensen  
2) Petersen, Flemming Bo  
Address: Ministry of Environment - Danish Environmental Protection Agency - Communication Division  
Strandgade 29  
1401 Copenhagen K, Denmark  
Tel.: +45 32 66 0529  
Fax: +45 32 66 0155  
E-mail: 1) soj@mim.dk  
2) fp@MST.DK  
URL: www.chemicaldays.dk
**Phthalates in Toys and Child-care articles**  
**Denmark**

**Implementation Level**: National  
**Setting**: Community  
**Driving Force**: Ministry of the Environment, Danish Environmental Protection Agency  
**Partners**: Danish retailers

### Background

**Rationale**

In 1998 an investigation from the Danish National Environmental Research Institute showed a high migration of phthalates from teething rings and teething rattles. In 1998 the Scientific Committee for Toxicity, Ecotoxicity and the Environment published a statement on phthalate migration from soft PVC toys and child-care articles since some phthalates have been shown to have health effects in animal testing, such as reproductive disorders, developmental toxicity and liver damage. As a consequence, Denmark placed a ban on phthalates in toys and certain child-care articles intended for children under the age of three, issued in a statutory order in 1999. At the same time, in 1999, an action plan to reduce the phthalates from all sources was issued, as well as a tax on other uses of phthalates. Information on phthalate alternatives was collected and a fact sheet on alternatives to PVC in toys was published.

### Target Audience

- **Industry**: specifically retailers of toys for children aged 0-6 years old.

### Sectors Involved

- **Two**: Environment, Industry/retailers

### Project Duration

- **4 years including time for negotiations and legislative preparations (1998-2003)** Legislation still in force

### Population Reached

- **Not applicable**

### Contribution of Each Sector

**Ministry of Environment**: issued the statutory order for toys containing phthalates for children less than 3 years (36 months) and negotiated a voluntary agreement with the Danish retail organization, finalized in autumn 2003. **Industry and consumers**: were involved in legislative hearings.

### Description of Action/Objectives

This action consisted of a ban (statutory order) on phthalates in toys and other products for children under the age of 3 likely to be put into the mouth, and a voluntary agreement with retailers to not market toys for children between ages 3 and 6 years, if intended to be put in the mouth (for example music instruments).

The action illustrates the application of scientific results and a precautionary approach to policy, with regulation and a voluntary agreement as the main outcomes. The main objective was:

- to reduce the exposure of young children to phthalates in toys and child-care articles; and
- to protect children under age 6 and other population groups who come into contact with toys by enforcing existing legislation.

### Planning and Implementation

**Mechanisms Used**

- Standard legislative procedure was followed.
- Dialogue with stakeholders was carried out.

**Description of Action/Implementation**

Great interest was shown from the public media and journalists and NGO’s followed the case closely. The statutory order was proposed by the Minister of Environment. Several campaigns were necessary to prepare for the ban and meetings with importers and retailers were held several times. Following an extended dialogue, in 2003, the Danish retailers voluntarily made the promise not to sell toys containing phthalates intended for children from 3 to 6 years of age, if the toy could possibly be put in the mouth as could be the case with music instruments.
Other outputs from action:

- a report on migration of phthalates from toys was published and a report on health and environmental effects of alternatives to phthalates was published;
- a fact sheet on alternatives to phthalates was made available; and
- information on definition of toys intended for children under the age of 3 and examples of child-care articles covered by the ban was published on the website of the Danish EPA with a focus on toys that could be put in the mouth.

**Novelty of Action**

The 1998 investigation carried out by the Danish National Environmental Research Institute served as a basis for this action.

**Evaluation/Impact**

The ban (statutory order) on phthalates in toys and other products for children under age 3, intended to or likely to be put into the mouth, as well as the voluntary agreement with retailers concerning certain toys for children between 3 and 6 years of age, resulted in the removal of such products from the Danish market and decreased the exposure of children to phthalates.

**Sustainability**

The action was meant to eliminate the exposure of children to phthalates since the health effects are likely to occur in the long run, and protective measures for health (especially reproductive health) were deemed necessary.

**Transferability**

The same measures could be taken in other countries. The investigation into the chemical content of toys for children as well as the migration values, research on the effects of phthalates, negotiation of voluntary agreements and the process of informing the general public can also be transferred.

**Lessons learned**

**Key Factors Leading to Success**

- Regulation/legislative measures.
- Establishment of a dialogue with industry and retailers.
- Interest from the public and media.

**Challenges During Planning/Implementation**

- To find the right balance between legislation and a voluntary agreement.

**If Done Again, What Would Be Done Differently?**

More information should have been provided to retailers earlier including definitions on which products the ban covered.

**Advice to Countries That Want to Do Something Similar**

- To establish dialogue with groups such as industry and retailers.

**Contacts**

**Name:** Lea Frimann, Danish Environmental Protection Agency

**Address:** Strandgade 29, Copenhagen K

**Tel.:** +45 32 66 05 46

**Fax:** +45 32 66 04 79

**E-mail:** Mst@mst.dk

**URL:** http://www.mst.dk/homepage/
**Background**

**RATIONALE**
In the Netherlands and many other countries, children under 5 years suffer a relatively high number of accidental poisonings due to household chemicals and pharmaceuticals. The number of hospitalisations for this age group is high: in 1982/83, there were about 1,300 cases due to pharmaceuticals and about 1,600 cases due to other substances. In total, this corresponded to over 320 per year per 100,000 persons in this age group. In addition, the number of accident and emergency treatments per year per 100,000 children was about 230.

**Target audience**
Children under 5 years of age

**Sectors involved**
Two: health, industry

**Project duration**
Since 1981 ongoing

**Population reached**
1 million (approximate number of children younger than 5 years in the Netherlands)

**CONTRIBUTION OF EACH SECTOR**

- **Ministry of Health**: issued a Decree for child-resistant packaging of certain hazardous substances. The Consumer Safety Institute: supported the idea of legislation. Its injury surveillance system provided part of the data to demonstrate the need for legislation. The Inspectorate for Commodities has established laboratory facilities for testing child resistant packaging.

**Description of action/objectives**
The main objective of this was to reduce the problem of accidental poisonings and the legislation sought to make child-resistant packaging compulsory for household chemicals and pharmaceuticals.

**Planning and Implementation**

**MECHANISMS USED**
- Data was collected by the Consumer Safety Institute on poisoning incidents to demonstrate the need for legislation on poisoning chemicals and pharmaceuticals.

**DESCRIPTION OF ACTION/IMPLEMENTATION**
- 1981: Ministry of Health presented a proposal for legislation to stakeholders, including producers of detergents.
- 1984: Decree issued for child-resistant packaging for certain hazardous substances as part of the Commodities act.
- 1990: Decree added for child-resistant package of certain pharmaceuticals.

**NOVELTY OF ACTION**
This legislation was built on existing decrees.

**Evaluation/ Impact**
The discussion about the Decrees led to a gradual introduction of child resistant caps even before 1986. Furthermore, pharmaceuticals are distributed more and more in small (blister) packages. From consumer enquiries, it is clear that the introduction of child resistant packaging has also alerted parents to the risk of poisoning. In 1994, the Decree for household chemicals was extended to very poisonous products, preparations containing 3% or more of methanol, and preparations containing 1% or more of dichloromethane. In 2000, the Consumer Safety Institute and the National Poison Information Centre published an evaluation report showing a reduction in the number of hospitalisations of children under 5 due to poisoning.
Sustainability

The Decrees remain in force and therefore the effect of these measures is sustained. All legislation requires an enforcement organisation. Testing facilities are provided by the Inspectorate of Commodities.

Transferability

To transfer this type of action to other countries, the following should be in place:

- Criteria for requiring child resistant packaging that can be derived from European Directives regulating hazardous substances. The performance requirements for packaging are available in international/European standards.

Lessons learned

Key factors leading to success

- Objective data that convinced people that legislation was necessary.

Challenges during planning/implementation

- Drafting legislation is time consuming. If one wants to demonstrate effectiveness, prolonged data collection, using standardised and sufficiently detailed classifications, is essential. As injuries are fortunately, relatively rare events, demonstrating an effect in the trend requires collecting data for long periods.
- Convincing politicians of the need for legislation; staff capacity and testing facilities for enforcing legislation require a budget.

If done again, what would be done differently?

Nowadays, a European Directive or regulation would probably be preferred instead of national legislation, the advantage being that all products on the European market would then have the same safety level. Reaching consensus on a European level may require much more time.

Important aspects to be considered for future planning

When new substances appear on the market, it is necessary to assess the need for child resistant packaging for these new products. Until now, this has been done only on an ad hoc basis, the injury data do not indicate a clear need to add other substances.

Advice to countries that want to do something similar

- It is essential to demonstrate effectiveness by means of prolonged data collection, using standardised and sufficiently detailed classifications.

- Since national regulations may trigger discussions about barriers to trade; it is important that international standards for testing the performance of child resistant packaging are produced and that several other countries adopt regulations.

Helpful tools

The initiative was national, but of course the availability of other data sources such as those from the CPSC in the USA was helpful. In addition, the European and international standards for child resistant packaging were drafted by a large number of international experts.

Contacts

Name: Dirk van Aken, Centre for Information and Safety Technology, Consumer Safety Institute

Address: P.O. Box 75 169
1070 Amsterdam
The Netherlands

Tel.: +31 20 511 4583
Fax: +35 20 511 4510
E-mail: D.vanAken@consafe.nl
URL: www.ecosa.org
Environmental lead poisoning prevention in children living in the Silesia Province
Poland

**IMPLEMENTATION LEVEL** Regional (11 cities of the Silesia Province)

**SETTING** Health centers, community

**DRIVING FORCE** Institute of Occupational Medicine and Environmental Health (IOMEH) in Sosnowiec (Environmental Medicine Outpatient Clinic <EMOC> and Department of Epidemiology).

**PARTNERS** National Fund for Environmental Protection and Water Management (NFOŚiGW), the Voivodship Fund for Environmental Protection and Water Management (WFOŚiGW), Ministry of Health

**Background**

**RATIONALE**

Human exposure to lead remains one of the most serious environmental health problems, especially for children. It is a physical and socio-economic problem affecting IQ levels and limiting the opportunity for good education and job prospects. In Poland, children are exposed mainly to lead-contaminated dust and soil originating from industrial processes and combustion of leaded gasoline, estimated to account for 72% of total lead uptake. The most industrialized and densely populated region of Poland is Upper Silesia home to a large lead industry. In Poland data on blood lead levels in children come from sources such as research projects, monitoring and prevention programs, developed by the research institutes and community based organizations operating in the regions with industrial sources of lead. A national centre of collection and analysis of data on blood lead levels (BLLs) does not exist in the country and there is a lack of sufficient information on environmental lead exposure.

**Target audience** Children and their parents, health professionals (primary care providers, pediatricians, nurses), school and kindergarten teachers, health authority and local government, workers occupationally exposed to lead, industrial hygienists in industrial plants situated in the program area, and NGOs.

**Sectors involved** Two: Health, Environment

**Project duration** 7 years

**Population reached** 14,000 children were tested to assess exposure to lead. Over 20,000 families received information and educational materials.

**CONTRIBUTION OF EACH SECTOR**

**Department of Epidemiology** development of the project, questionnaire, database. Data collection and analysis; Environmental Medicine Outpatient Clinic:

- environmental physicians - analysis of environmental data, identification of study group, communication with local partners, questionnaire data analysis, environmental history taking, development of educational materials, informative presentations and lectures;

- pediatricians, neurologists, psychologist, laryngologist - clinical examination of patients (medical and environmental history taking, physical examination, clinical evaluation, education and medical intervention);

- nurses - blood sampling, interaction with parents and children involved in the project and pediatric outpatient clinics, day care centres, schools; distribution and gathering of completed questionnaires, data registration, local nurses training, education;

- technical assistants - correspondence with parents and children involved in the project and pediatric outpatient clinics, day care centres, schools; distribution and gathering of completed questionnaires, data registration.

**Department of Chemical Hazards:** measurement of blood lead concentration. **Toxicological Laboratory:** laboratory analysis (red blood count, calcium, iron, magnesium, ZnPP). **Publishing section:** design and editing of educational materials **Local cooperatives, local primary care providers, pediatricians and nurses:** preparation of address list of children in chosen area, blood sampling. **Health Departments and Education Departments** in local government: intervention in the contact with schools and day-care centres in the area, assistance in organization of educational and informative meetings. **School and kindergarten teachers:** preparation of address list of children in chosen area, assistance in the organization of blood sampling points at their institutions, assistance in questionnaire distribution and gathering. **Silesian Medical Academy experts:** cooperation in development of the program; **Pediatric Hospital:** provision of
medical treatment for children (during the first stage of the program). **Voivodship Sanitary Epidemiological Council:** Measurement of blood lead levels in some tested children; systemic environmental measurements.

**Description of action/objectives**

Screening of child BLLs accompanied by educational and informative activities. The main objectives were:

- to raise knowledge about lead poisoning; and
- to identify children at risk and prevent environmental lead intoxication.

**Planning and Implementation**

**MECHANISMS USED**

- The planning of this programme took place by means of expert meetings and professional discussions based on the examination of the problem.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The programme consisted of the following components:

- Distribution of leaflets and information bulletins on lead toxicity, magnitude of the problem in the local environment and basic preventive methods were prepared for children and their parents, health professionals (primary care providers, pediatricians, nurses), school and kindergarten teachers, and for workers occupationally exposed to lead as well as industrial hygienists.

- Organization of informative and educational meetings for environmental education leaders and decision-makers (health authorities and representatives of the local administration).

- Presentation of the magnitude of the lead problem as a toxic hazard and its impact on the population, specifically children in the local community.

- Provision of information on environmental health risks from lead exposure to patients who participated in a one day - health promotion activity carried out in 3 cities in the Silesia Province.

- Incorporation of environmental health into the teaching curriculum to increase the understanding of professionals. This consisted of discussions with experts on the development of the pre- and postgraduate training programmes on the discipline for medical and non-medical professionals.

**NOVELTY OF ACTION**

The project was a completely new action built on the existing structures of IOMEH.

**Evaluation/ Impact**

The educational and informative activities raised the interest of local governments in the cities of Stawków and Bukowno. Child BLL screening was continued using their own financial support. There was an observed decrease (from 8.3µg/dl to 5.5µg/dl) in the mean BLL of Silesian children as well as a lower proportion of children with elevated BLL in the years following the program partly due to a change in the region’s industry as well as to advocacy and educational activities. Awareness of the potential sources of lead poisoning of children, and especially among parents increased. Better understanding of the problem among regional authorities was shown by means of improved cooperation in subsequent years as well as an agreement to continue the program in local populations covering the costs. The educational materials proved to be interesting and helpful, confirmed by requests for copies by health professionals, NGO representatives and teachers.

**SUSTAINABILITY**

The program has been extended to other populations. A small preventive program that includes BLL screening in children has been ordered and financed by the Silesian Division of the National Health Fund, confirming the effectiveness of advocacy activities addressed to health authorities and financial institutions in the new Polish health care system.

**TRANSFERABILITY**

This programme is transferable but would need to be adapted to the local situation.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Development of a good quality, consistent project and clear identification of the population at risk.

- Use of a comprehensive approach to environmental lead poisoning risk communication involving NGOs and local communities.

- Cooperation with local government and health authorities representatives as well as between partner institutions involved in the project.

- Well-trained, professional and creative staff. Environmental physicians working in the group, successfully passed two years of a postgraduate training in environmental health organized and conducted by IOMEH under the WHO, Polish Ministry of Health and the Dutch Government. Some of them were also trained in overseas environmental medicine centres in the USA, Belgium, and Germany.
Growing awareness of environmental health risk in local society and understanding of the problem among school and kindergarten teachers made it easy to introduce this preventive project in many educational institutions.

Direct contact of the project staff with representatives of the local government and health authorities, meetings with presentation of results obtained from the screening in the area both with informative and educational material development and distribution made programme dissemination possible.

Contacts with local communities and NGOs in the area interested in environmental health. Local environmental pollution data, information on lead toxicity, and outcomes of childhood lead screenings were presented during meetings with representatives of NGOs and community-based organizations.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- Limited ability to carry out continuous screening due to a lack of regulations in the Polish health care system as well as the need for financial support. Childhood lead screening is not required by law, so there is no formal tool to oblige parents of children with elevated BLLs to seek further individual medical treatment.

- The age distribution of blood lead levels in children is not clearly defined in Poland, making it difficult to target testing of BLL.

- At the beginning, child recruitment to the program depended heavily on cooperation with health care and educational institutions.

- Limited admission of patients to EMOC possibly due to the low socio-economic status of most of the families at risk, an inadequate understanding of environmental lead poisoning risk and consequences and lack of compliance among unemployed or low income parents, who were not in the position to spend money for prevention but only for treatment.

- A change in the primary child health care system resulted in the need for advocacy addressed to different groups of health professionals involved in the child health care system. Financing of screening activities coming from different sources, including the National and Regional Funds for Environmental Protection and Water Management, and the Ministry of Health called for yearly application for financial support from different institutions, limiting long-term action.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

Future efforts should focus on the development of criteria to easily identify the places where children are most at risk for lead exposure in Poland in order to target prevention. An educational campaign should be implemented as the first step of the programme. Preventive activities should be modified according to the socio-economic situation and include social workers as well as social centres.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Environmental monitoring should be carried out to recognize environmental pollution and the main sources of exposure.

- Other groups or individuals involved in this policy issue should be identified as possible partners and relevant decision-makers should be identified and involved as well as potential partners and structures, which may be helpful in implementing the programme.

- Availability of good quality laboratory equipment, technology, and laboratories participating in international quality control systems should be ensured.

- Adjust the advocacy and advertising campaigns to local conditions as well as the subject and design of educational materials and ensure the availability of sufficient financial support.

HELPFUL TOOLS

Training of health care professionals to recognize the risk factors and health effects and magnitude of the problem of environmental lead poisoning in children. Public relations tools developed as part of the programme allowed the small project staff to carry out successful advocacy and education activities.

Contacts

Name: 1) Dr Maja Muszynska, Assistant 2) Joanna Kasznia-Kocot, Senior assistant 3) Dorota Jarosinska, Chief of the Outpatient Clinic of Environmental Medicine

Address: Institute of Occupational Medicine and Environmental Health (IOMEH) 13 Koscielna Street PL-41200 Sosnowiec, Poland

Tel.: +48 322 66 0885

Fax: +48 322 66 1124

E-mail: 1) m-muszynska@imp.sosnowiec.pl 2) kasznia_kocot@poczta.onet.pl 3) d.jarosinska@imp.sosnowiec.pl

URL: http://www.imp.sosnowiec.pl/english/indexen.htm
Chronic Lead Intoxication
in children from Legnica-Glogów copper basin and prophylactic treatment by the Foundation for the Children of the Copper Basin

Poland

**IMPLEMENTATION LEVEL** District  
**SETTING** Community  
**DRIVING FORCE** Foundation for Children of the Copper Basin (NGO)  
**PARTNERS** Medical Center for Monitoring, Treatment & Prophylaxis (Environmental Medical Polyclinic, Primary Health, Heavy Metal Laboratory - atomic absorption spectroscope, hematological and biochemical laboratory, Statistical Center, Manager of Spa Treatment); Ecological Education Branch; Nutrition Advisory Club; General Office; Rehabilitation Ward for Handicapped Children; Family Consultant

**Background**

**RATIONALE**

While childhood lead poisoning can be prevented, once exposed the effects are irreversible with non-specific symptoms and signs associated with multiple sources of exposure (silent epidemic). This is why the Foundation decided to carry out the special programme of prevention and treatment of children’s with lead poisoning. This programme was the Polish implementation of the US Centers for Disease Control “Preventing Lead Poisoning in Young Children” project.

**Target audience** Children and youth from the Legnica Voivodship  
**Sectors involved** Four: education, health, community, environment  
**Project duration** Ongoing  
**Population reached** 14,500 children in 1992-2002

**Description of action/objectives**

The Foundation for Children of the Copper Basin NGO, established in 1991, aims to provide children relief from lead exposure and youth from the Legnica Voivodship. Specifically, the work of the foundation focuses on:

- monitoring and trying to minimize the effects of pollution from heavy metals, especially lead.

**Planning and Implementation**

**MECHANISMS USED**

- Guidance from the National Health Programme.  
- Assessment of community’s needs.  
- Cooperation with Copper Mining Industry.

**Description of action/implementation**

- Screening for child blood lead concentrations.  
- Paediatric health status examinations.  
- In-patient and out-patient treatment of children suffering from lead poisoning.  
- Training on prevention measure for children and parents (ecological education).  
- Organizing international seminars and conferences and preparing publications.

**Novelty of action**

This intervention was a completely new action.

**Evaluation/ Impact**

There was a decrease in blood lead level in children at risk in this region.

**Sustainability**

Action would need to be financially supported by the cooperation with local communities national subsidies and NGOs.

**Transferability**

The actions can be transferred to other countries.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Fundraising;
- Continuity of work; and
- Strict cooperation with the local community supported by scientific institutions.
CHALLENGES DURING PLANNING/IMPLEMENTATION
- The building of a foundation as an organisation.
- To set up a modern and convenient workplace.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?
The cooperation with heavy metal industry could be more effective by means of financial support.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR
- Invite consultants to present the experiences in organization, financial support and cooperation with similar centres.

HELPFUL TOOLS
- International scientific consultants.

Contacts
Name: 1) Halina Strugała-Stawik
       2) Tomasz Pietraszkiewicz
Address: Foundation for Children in the Copper Basin P.O. Box: 33 PL-59220 Legnica, Poland
Tel.: 1) +48 76 8524 661
      2) +48 76 8621 023
Fax: +48 76 8621 023
E-mail: 1) office@fundacja.pl
        2) tpietra@fizio.am.wroc.pl
URL: http://www.fundacja.pl/menu.html
**Act properly during fire**

**Portugal**

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETTING</td>
<td>Kindergarten</td>
</tr>
<tr>
<td>DRIVING FORCE</td>
<td>General Directorate of Health and Environment Institute</td>
</tr>
<tr>
<td>PARTNERS</td>
<td>School community, local health professionals, fire brigades, civil protection association and local authorities</td>
</tr>
</tbody>
</table>

**Background**

**RATIONALE**

On the World Health Day, 7th April 2003, a challenge was launched to Portuguese schools by Ministries of Health and Environment with the subject: "School improves the environment". A toxic gas was identified in the school area that alerted to the need of a project on emergency situations.

**Target audience**

Children, parents, school and community

**Sectors involved**

Four: Education, health, parents & community, local authorities

**Project duration**

4 months

**Population reached**

100

**CONTRIBUTION OF EACH SECTOR**

- **Local health authorities**: identified needs by an evaluation of the sanitary and safety conditions by a school visit. **Local authorities**: helped to improve the existing equipment by providing fire extinguishers to the school. **Fire brigades**: trained school assistants and teachers to act accordingly in emergency situations. They also contributed to increase awareness of children and their parents on environmental risks. **Local health professionals, civil protection associations and the latter two sectors**: prepared an emergency evacuation plan during meetings and helped to install a fire detection system.

**Description of action/objectives**

A project on emergency situations was carried out. The main objectives were:

- to increase awareness of children and their parents to environmental risks.

**Planning and Implementation**

**MECHANISMS USED**

- Evaluation of the safety and sanitary conditions of the kindergarten.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

- Implementing the emergency and evacuation plan.
- Installation of fire detection system and development of fire drills.
- Training actions on “safety in case of fire”

**NOVELTY OF ACTION**

The development of an emergency plan was a completely new intervention.

**Evaluation/ Impact**

This project was well accepted by the school community and local authorities. Other actions on environment and health will be carried out.

**SUSTAINABILITY**

Research on environment areas that affect children’s health will continue on the following years.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Children’s participation in environmental health projects are a valuable contribution as they enjoy taking part in the solution of risks that affect them;
- Gathering all the stakeholders to find the proper solution.
CHALLENGES DURING PLANNING/IMPLEMENTATION

- To increase awareness on environmental risks and their effects on health.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

Have more time for planning and implementation of actions.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Establish effective deadlines for the planning and implementation steps.
- Involve all the stakeholders in the process from the beginning.

HELPFUL TOOLS

- Training on risk assessment, management and communication and allow more time for planning and implementation

Contacts

Name: 1) Gregoria Amman  
2) Catarina Lourenço

Address: School Health Division  
General Directorate of Health  
Al. D. Afonso Henriques  
451049 - 005 Lisbon, Portugal

Tel.: 1) +351 21 843 0500  
2) +351 21 843 0705

Fax: 1) +351 21 843 0530  
2) +351 21 843 0600

E-mail: gamann@dgsaude.min-saude.pt  
catarinal@dgsaude.min-saude.pt

URL: http://www.dgsaude.pt
**Background**

**RATIONALE**

The Aral Sea Crisis has had significant health and environment consequences for the 3.5 million people in this region, including about 1.5 million children. Irrigation from the two rivers supplying the sea, the Amu-Darya and the Syr Darya, cut its size by more than half. As a result, over three million hectares of salty contaminated sediments became exposed on the dried-out former seabed and strong winds disseminated them as a white powder all over the region, exposing the whole ecosystem to their toxic components. Pollution of the area by chemicals used in the cotton industry in Central Asia has led to environmental degradation with resulting health impacts on the population in this region. All natural resources have been polluted - the water, air, soil, and food. The main concern is the deterioration of public health, especially of maternal and child health, with maternal and infant morbidity and mortality being significantly higher in Karakalpakstan than in other parts of Uzbekistan. There has also been an increase in homeopathic, endocrine and immune system disorders, birth abnormalities and cancer rates in the Aral Sea region.

**Target audience**

Teachers, doctors, scientists, agronomists, local community, farmers, kindergarten teachers, children and their parents.

**Sectors involved**

Six: Education, health, parents and community, local authorities, agriculture, other (scientific sector)

**Project duration**

Almost 5 years and going

**Population reached**

About 100,000

**Description of action/objectives**

The main objectives of the project, carried out by the "Perzent" NGO, were to:

- increase awareness of the population about the influence of environmental pollution on human health;
- increase responsibility of people for their health and environment;
- evaluate environmental hazards and risks for human health and promote the community’s involvement in finding practical solutions for the environmental pollution problem;
- establish "Perzent" as a professional institute with wide national and regional activities on health and environment.

**Planning and Implementation**

**MECHANISMS USED**

- training of key staff and training of trainers;
- developing a team of volunteers;
- workshops & seminars;
- round tables with local authority; and
- collecting information by target groups.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

Center "Perzent" created an Action Plan which consisted of:

- a strategy on institutional development;
- short- and long-term strategy, management, methodology, etc.;
- training of key staff on skills for organic farming, community health, and IEC;
- assessment of the level of pollution in mother and baby bodies in order to know possible risk and damage for health; identify sources of pollution - food, water, soil, etc.;

**CONTRIBUTION OF EACH SECTOR**

**Scientific sector:** helped in identifying the level of pollution and risk factors to children’s health.

**Health sector (doctors):** helped in monitoring the health condition of the children. **Agriculture (agronomists and farmers):** prioritised organic farming methodologies and adapted them to local conditions. **Education (school teachers):** contributed to information-education campaign.
- an information-education campaign on environment and health, drinking water quality, hygiene and sanitation among the population, especially in the most affected region - the north part of Karakalpakstan;
- workshop and meetings with agencies working in the area of environment and health;
- provision of practical assistance to the rural population;
- development and training in micro-organic farming;
- development of a Healthy Nutrition campaign (training mothers on nutrition, healthy diet); and
- development of partnership with professional organizations working on similar problems in Uzbekistan, Central Asia, NIS, Europe, USA, Asia; organizing local, regional and international workshops and conferences to share information and experience.

**Novelty of action**
This methodology was completely new in this region. This was the first time that a rural Karakalpak community was involved in the process of discussing environment and health problems. Development of active groups of people in a rural area on such a topic was new for the community since they were not aware of the problems before.

**Evaluation/ Impact**
The “Perzent” staff, as well as outside experts, regularly evaluated project activities. The project has contributed to raised community awareness of the environment and health problems affecting the community. The various programs contributed to increasing the sustainability and capacity of “Perzent” as an NGO, giving them more credibility among the population and government.

**Sustainability**
The staff improved their skills in environment, health, organic farming, and community development and developed a number of training guidelines and educational materials on Health and Environment and other subjects. Different active community groups were established in the project districts. Each group identified the needs and prior problems in the community and in the district and will continue to work at solving them. Good collaboration has been established and developed with the government and local authorities, professional agencies, and community leaders. There are more offers to expand the activity over the other rural districts. “Perzent” is planning to develop its educational programs on health and environment, and this activity will be expanded to other regions.

**Transferability**
Perzent’s experience in Karakalpakstan might be transferable to other countries in transition. The Aral Sea crisis has been quite problematic for the region. Despite the involvement of international agencies in this region during many years, the health and environment conditions of the local people have seen little improvement.

**Lessons learned**

**Key factors leading to success**
- Good motivation, develop professional staff, as well as good partnerships with the community.
- The new methodologies (health education, IEC, organic farming) adapted to the local situation, and regular evaluation and monitoring of the activity.
- Collaboration with local, national and international agencies working in the same area.

**Challenges during planning/implementation**
- To establish the organization and train the staff and team. A grassroots NGO was a new phenomenon in this region and people were not ready to work at an NGO since it was unknown to them as an organization. For the first 3-5 years there were only few people working at “Perzent”.
- To work with local authorities because of the novelty of the NGO activities.
- The strong traditions and customs of the communities since they were not accustomed to taking personal responsibility for health and environment.
- There was a lot of staff turnover due to the non-stable economic condition. Many trained staff moved to other organizations or regions.
- Most of the population speak the Karakalpak language and there is lack of information materials in this language. Furthermore, professional translation of materials from English/Russian into the Karakalpak languages is not well developed and takes much time.
- Sustainability of the activity - most projects are short-term and most staff is discouraged for this reason.
- To develop collaboration/partnership with international agencies (NGO) as there are no well-developed strategies for involvement of local/national NGOs.
If done again, what would be done differently?

It would be better to include public relations elements and include more advocacy elements in such a project. Effective collaboration with international agencies should be further developed with identification of expectations and possible outcomes of the partnership.

Important aspects to be considered for future planning

To conduct independent research and get expertise on the situation, inform the population about real the environmental situation and health status, develop an action plan to care for the environment and the population’s health, taking into account specific sources of contamination and develop the strategy on public participation in health and environmental problems.

Advice to countries that want to do something similar

- Any activities and strategy should be based on realistic and relevant data of the situation. It is important, first of all, to identify the problems which should be addressed and carry out a feasibility study of the situation.
- Involve the target groups in all steps of the activity - planning, implementing, evaluation and monitoring, reporting.
- Collaboration with the agencies working in the same area.

Helpful tools

- Training in professional skills; technical and consultative assistance from international partners; information materials from different professional NGO and agencies; co-operation and partnership with NGOs and institutions. The sharing of experiences with other countries, if possible by means of visiting similar projects in other countries, when experience and results have been achieved.

Contacts

Name: Oral Ataniyazova
Address: Center Perzent
          The Karakalpak Center for Reproductive Health and Environment
          P.O.Box 27, Nukus 12
          Rep. Karakalpakstan 742012
          Uzbekistan
Tel.: +998 61 222 3417
Fax: +998 61 222 3405
E-mail: oral@intal.uz; perzent@intal.uz
URL: http://www.civilsoc.org/nisorgs/uzbek/perzent.htm
**Background**

**RATIONALE**

An increase in motorised traffic as well as wide car lanes, which make it easier for drivers to speed, in addition to the lack of space for playing, safe walking and cycling have significantly raised the risk of accidents involving children and young people in Austria. As a result, the number of children who can safely and independently get around is decreasing. Parents now spend a major part of their spare time driving children to and from one place to another. Children today have fewer opportunities to develop their motor, cognitive and social abilities. Without adequate measures it can be expected that the amount of traffic and the time spent driving children will double within the next decade as well as the risk for childhood injuries. For these reasons, the ministries, in collaboration with other partners, launched the School Mobility Management Plans in Austria.

**Target audience**

Pupils, teachers, parents and municipalities

**Sectors involved**

Five: education, local authorities, transport, parents and community, other (external consultants)

**Project duration**

3 years

**Population reached**

About 1,500 people within phase 1 (pilot project)

**Description of action/objectives**

The main objectives of the intervention were:

- to increase the number of playgrounds for children;
- to create school mobility management plans in Austrian schools: setting up walking buses, bike-pools, competitions, and an awareness campaign for alternative transport modes and promote them to make ways to school safe and enjoyable (forming part of the WWW.SCHOOLWAY.NET), and
- to increase traffic-safety in the school vicinity: reducing car-traffic on the way to school and promoting health of children by supporting walking and cycling.

**Planning and Implementation**

**MECHANISMS USED**

- Mobilizing partnerships, alliances and coalitions around transport and mobility of children.
- Dialoguing and negotiating with schools and other institutions and networking with other countries to share experiences.
- Building up a steering committee with transport experts, traffic-planning officers, and politicians in the field of transport, including representatives of teachers and parents, school administration and police officers.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The initiative was carried out in Austria in three phases. **Phase I**: pilot projects in 4 primary schools in Graz (2002-2005); **Phase II**: model projects to implement Mobility Management Plans in 16 schools; **Phase III**: initiatives to implement Mobility Management Plans in Austrian schools.
Specific project activities were:

- Development of a marketing scheme for all activities; information collected by means of an on-line survey of the mobility behaviour of students at www.schoolway.net.
- Kick-off workshops with teachers and building core working groups; with the most ambitious teachers proposing a catalogue of measures for the following year.
- Lectures at parents’ night and initiatives such as car-pools, bike pools, walking buses, and various awareness campaigns/competitions.
- Networking with other countries to share experiences.

**Novelty of Action**
The development of School Mobility Management Plans included completely new actions in traffic-education.

**Evaluation/Impact**
The main quantitative result was the reduction of car-traffic on the way to school by 12% as measured by a pre- and post-intervention questionnaire in Graz. As far as qualitative results, former pilot projects have shown that the success of this project depends on the commitment of the teachers. Therefore, at the beginning of the project it was decided to emphasize the communication and information component for teachers. They got information on mobility through various events. This led to the teachers and parents starting to create and carry out measures by themselves and encouraging others. Involvement of politicians, administration officers, and police made them realise that working together brings more success than working alone. In the steering committee they stated that a school mobility management plan is an interesting tool that encourages learning from one another and better understanding of different points of view.

**Sustainability**
To ensure continuity measures should be worked out in such a way that further implementation in schools could take place after the pilot phase.

**Transferability**
This project can be carried out anywhere, because tools are available on the Internet (platform in six languages).

**Lessons learned**

**Key Factors Leading to Success**
- Commitment of adults (especially teachers).
- More self-confidence and self-initiative on the part of the children.
- “Fun” is an important motivation for working together.
- Partnerships between schools and traffic planning departments of the municipalities.

**Challenges during Planning/Implementation**
- to motivate teachers and involve as many schools as possible;
- to empower children and work out a marketing and education scheme; and
- budgetary constraints and collaboration with municipality.

**Important Aspects to be Considered for Future Planning**
For using the Internet the right hardware is needed. With a higher budget the success could be increased.

**Advice to Countries that Want to Do Something Similar**
- Awareness raising needs time, therefore the project should last at least 3 years. Start with a clear education and marketing concept. Define aims according to the concerns of the involved people.
- Personal contact increases the success of the project and building partnerships/networks is one of the first steps to take. The success of the work with schools can be increased by building interdisciplinary partnerships and settings.
- Surfing www.schoolway.net valid teaching materials can be found, which are very sought-after.

**Contacts**

**Name:**
1) Robert Thaler  
2) Cosima Pilz

**Address:**
1) Federal Ministry of Agriculture, Forestry, Environment and Water Management · Stubenbastei 5A  
1010 Wien, Austria
2) Austrian Mobility Research (AMOR), Schönaugasse 8a  
8010 Graz, Austria

**Tel.:**
1) +43 1 5152 21209  
2) +43 3 16810 45120

**Fax:**
1)+43 1 51522 7208  
2) +43 3 16810 45175

**E-mail:**
1) robert.thaler@lebensministerium.at  
2) pilz@fgm.at

**URL:**
1) www.fgm.at  
2) www.schoolway.net
A Bicycle Helmet Campaign for fifth graders
Denmark

**IMPLEMENTATION LEVEL** Local, Fredriksborg county

**SETTING** Community, schools

**DRIVING FORCE** Fredriksborg county Road and Traffic Department

**PARTNERS** Parents, teachers, campaign secretariat

**Background**

**RATIONALE**
The use of bicycle helmets can reduce the risk of head injuries among children by at least 50%. Head injuries amount to 40% of all injuries among cyclists and can be serious. The motor development of fifth graders (10-12 year olds) allows them to cycle alone, concentrate on traffic, and indicate intentions of turning or stopping with their arms. Unfortunately, children this age tend to not wear bicycle helmets because they think the helmets do not look “cool”.

**Target audience**
10-12 year olds (Fifth grade students)

**Sectors involved**
Four-Education, transport, parents and community, local authorities

**Project duration**
Not applicable

**Population reached**
The number of participating students in 1998 was around 1,000 and almost 2,000 in 2003

**Description of action/objectives**
The intervention was a bicycle helmet campaign. The main objectives of the campaign were:
- to reduce the number seriously injured children from bicycle accidents; and
- to teach children to use bicycle helmets and to perform safely when biking in traffic.

**Planning and Implementation**

**MECHANISMS USED**
- Implementation of the campaign was done as a collaborative effort between the traffic safety group in the county and teachers in the participating schools in the municipalities.

**DESCRIPTION OF ACTION/IMPLEMENTATION**
The campaign aimed to give the children arguments in favour of using bike helmets, know the dangers of not using it, and feel that they are “in” or being “cool” when they used it. The campaign portrayed the helmet as something attractive so that everybody felt like using it.

Children with out-of fashion or without helmets were able to borrow a brand new model of their own choice from the county and, at the end of the campaign, could purchase the helmet for a reduced price. The campaign is meant to run for three months with enrolment closing four months prior to the start of activities. Activities with students inside and outside the classroom took place from March through April and the campaign ends in May of each school year. The schools that enrolled in the campaign received free educational materials, bicycle helmets, questionnaires and materials for competitions between classes. The campaign encouraged children and teachers to have class discussions and sought to involve parents in supporting its goals. The educational material consisted of 4 booklets that explained dangers in traffic and taught some simple rules on how to handle dangerous situations while cycling. The children learned that traffic can be dangerous and that use of a helmet can be an effective safety measure.

A separate package containing the teaching material explained the campaign process, provided ideas and proposals for class-based activities, as well as letter to parents that children were asked to take home. Included are also contact information and questionnaires for the evaluation plus pre-stamped envelopes for submitting the evaluations to the county. Parents of fifth graders received information about the campaign that encourages them to support the children in using the bicycle helmet. Another part of the project was a helmet-exchange-program where children and adults received a new helmet after an accident if they hand in the damaged helmet and describe the circumstances that led to the accident. The pool of helmets was used for an exhibition that displayed the damaged helmets and the narratives of children’s accidents. Schools and institutions are able to borrow the exhibition on request.
Evaluation/ Impact

The county established a mechanism to assess the effect of the campaign on children’s use of helmets. A survey of how many children use helmets was carried out three times during the campaign: one before the campaign, one during and one at the end of the campaign. In order to measure the effectiveness of the campaign, a questionnaire was distributed to children and teachers in all participating classes. The teacher distributed the questionnaires to students and carried out the survey of helmet use on days unknown to the children. In 2003 teachers and children were asked about their use of helmet and traffic behaviour before and after the campaign. Among the teachers, 55% said that the campaign had increased students’ use of bicycle helmets and 83% of teachers said that students had safer traffic behaviour after the campaign. Among the students, 30% said that they used the helmet more after the campaign, 37% said that they were now better at cycling and 68% of students were very or somewhat satisfied with their helmet.

Teachers were also asked about how much time the class had spent on discussions about helmets and traffic safety as well as an estimation by parents of how much time they had spent discussing the campaign with their child.

From 2000 the number of participating schools and students slightly decreased, probably reflecting that fact that other new campaigns, such as days of practical bicycle-training, competed with the time and interests in schools. Teachers also indicated that students increasingly wore and owned their own helmets, so a campaign was less necessary.

Transferability

The bicycle helmet campaign is one of a series of traffic campaigns aimed at children implemented to reduce the number of seriously injured persons by 40% in the period 1998 to 2012.

Lessons learned

Key factors leading to success

- The strong political commitment to accident and injury prevention in the Fredriksborg county expressed by the work of the traffic safety group in the county Road and Traffic Department was critical to the campaign’s success.

- It was unclear as to whether teachers chose to participate or not in the campaign and how much time they were actually willing to spend on campaign activities. Some schools repeated the campaign for their new 5th graders, whereas other schools never enrolled.

- Teachers with experience in the campaign said that parents were important partners for the campaign’s success. As a result, the campaign secretariat recently prepared a brochure to inform parents of the goals of the campaign and on how parents can contribute, by being good role-models for their children.

- A key factor for the success of the campaign was consistency of activities. Teachers knew that the campaign would be repeated each year and some teachers planned the curricula to include the campaign as part of their class.

Advice to countries that want to do something similar

- According to the organisers, the importance of the campaign should be assessed as a long-term effort. It is not possible to make an exact calculation of the effects of the campaign or to establish a cause-effect relationship, but it is probable that the campaign contributed to the decrease in deaths and serious injuries among cycling schoolchildren in the county.

Helpful tools

A campaign benefit was that participation was free for the school. The campaign distributed teaching materials and helmets could be borrowed and later purchased for a reasonable price.

Contacts

Name: Jacob Wrisberg
Address: Frederiksborg County
Kongens Vænge 2
3400 Hillerød
Denmark
Tel.: +45 48 20 50 00
Fax: +45 48 20 51 49
E-mail: jw@fa.dk
URL: http://www.frederiksborgamt.dk/
"Scuolabus a Piedi" or Walking bus  
Italy

**Implementation Level**  
Local, City of Rome

**Setting**  
Community

**Driving Force**  
Rome City Council Children and Family Policies Department XVI

**Partners**  

### Background

**Rationale**

This project is part of the Children and Family Policies department’s aim to make Rome a city suitable for children by means of a series of actions aimed at child-centred city planning, road systems, services organisation, cultural activities and free time.

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Parents &amp; primary school age children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Three: education, local authorities, parents and community</td>
</tr>
<tr>
<td>Project duration</td>
<td>2002-2004</td>
</tr>
<tr>
<td>Population reached</td>
<td>About 600 children and 400 adults</td>
</tr>
</tbody>
</table>

### Description of action/objectives

The walking bus is a safe, fun and healthy way for children travel to and from school. Children walk to school in a group, along a set route picking up additional "passengers" at specific "bus stops" along the way. Each walking bus has an adult spare “driver” in the front and another adult at the rear. The main objectives are:

- to give children the chance to get some exercise on a daily basis, provide them with road safety education and help them become better pedestrians; and
- to give children the opportunity to socialize with other children on the way to school, and improve the quality of the urban environment around schools by limiting traffic and pollution due to excessive use of cars.

### Planning and Implementation

**Mechanisms used**

- Planning of the initiative took place by means of meetings held with school authorities and parents, local police, district representatives and road safety officers and municipal police.

- Each school set up a technical group comprised of Department XVI, Districts, local Police, road safety officers, school authorities and parents.

- The technical group decided on the possible routes to school according to number of children involved, the timetable for picking up children, created lane marks and traffic signs, and located dangerous points in the route to be guarded by local police. Routes to school and “bus stops” were selected and checked with a road safety officer for safety and suitability.

- A cultural association was selected as the implementing agency for the project. After the planning meetings, the cultural association developed the “scuolabus” route materials as well as preparation of communication materials. Adult “drivers” and volunteers were later provided with road safety training.

**Description of action/implementation**

The bus runs rain or shine and everyone wears a reflective jacket or caps and coloured scarves to be in full view. All walking buses are different and vary in timetable and routes to suit the needs of the children and their parents. The ratio of adults to children in the walking bus is usually 1:8. The walking buses also have handcarts to put books and school bags into and decrease the weight the children carry. Adult "drivers" undergo training and are later covered by an accident and liability insurance. Each "driver" should have a register of students who use their bus on each day. The driver keeps track of attendance and children can be rewarded with stickers or other gifts. Children join the bus at the set “bus stops” along the route at the set timetable. The walking bus route can stretch for 2.0-2.5 km, usually covered in 30-40 minutes.
NOVELTY OF ACTION
In Rome this was a completely new action that has already been carried out successfully in several European countries.

Evaluation/ Impact
At the end of the project the Department XVI gave parents a new questionnaire to check the popularity ratings. From the questionnaire, it was clear that parents appreciated the service since it helped optimize the family timetable, provided children autonomy and an opportunity to socialize, and showed parent’s willingness to pay to contribute to the project.

SUSTAINABILITY
- The future plan is to implement the project in all primary schools in Rome, as well as conduct a feasibility study on the sustainability and the management of the project.

TRANSFERABILITY
Although it is clear that each place has specific characteristics, transferable elements are the initiative’s objectives and the desire to ensure a better quality of life and a better environment. Teamwork, sharing of same objectives, selection of actions linked to children’s needs.

Lessons learned

CHALLENGES DURING PLANNING/IMPLEMENTATION
- The variety and complexity of the city posed a challenge when studying and identifying routes to schools.
- Coordination of meetings with parents, school authorities, local police, mostly for the communication and action.
- Organisation and implementation of the service.
- As this was a new project, it was important to gain the trust of schools and parents on the efficiency and good quality of the service.
- To start the ‘Scuolabus a Piedi’ service on time and extend the project throughout the city because it was a completely new project in Rome, spread the ideas about sustainable mobility and the need for children’s autonomy.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?
- Due to the complexity and size of the city area, it would be necessary to find better tools to communicate and disseminate the project to all primary schools.
- Strengthen communication, training and monitoring.
- Involve voluntary organizations and Institutionalisation of the service.
- To help with the cost of the activity in the future, it could be possible that parents be asked to pay for part of the service.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR
Teamwork is critical to the success of this initiative as well as the development and implementation of a communication plan to sensitise parents and make them aware of the project’s goal.

HELPFUL TOOLS
- Training, organised for the Cultural Association by the Local Police officers. This training helped workers acquire better knowledge on road education and about the territory of the Districts.
- Communication, by means of information to parents and school authorities and the media, newspapers and magazines.

Contacts
Name: 1) Francesca Pitaccio
2) Pamela Pantano

Address: Rome Municipality, Director’s Office
Dept for Family and Children’s Policies
Promotion
Via Tempio di Giove, 3
I-00186 Rome -Italy

Tel.: +39 06 6710 3047
Fax: +39 06 6796 509
E-mail: 1)f.pitaccio@comune.roma.it
2) ass.bambini@comune.roma.it
URL: http://www.comune.roma.it/bambini/eventi_e_iniziative/scolalbus_piedi.html
Safe Road to School in Faro
Portugal

**Implementation Level** Local
**Setting** Municipality of Faro
**Driving Force** Portuguese Association for Child and Adolescent Injury Control (APSI)
**Partners** Police (PSP), National Institute of Medical Emergency (INEM), General Directorate for Transports (DGV), Paramedical Rescue Teams, Local Government of Faro, Parents, Students and Teachers of primary and secondary school, General Directorate for Environment (DRAOTA), Rehabilitation Center for Handicapped and Disabled (EXISTIR), Paediatric and Orthopaedic Departments of Faro Hospital

**Background**

**Rationale**
Road accidents are the largest cause of child injury death in Portugal. Although passengers account for 50% of deaths, 80% of children in cars travel without using seatbelts on their way to primary school in Faro. Despite existing legislation, enforcement is poor.

**Target Audience** Parents, primary and secondary school students and teachers
**Sectors Involved** Five: education, health, local authorities, parents & community, transport
**Project Duration** 2 years
**Population Reached** 2,500 students/parents, 120 teachers, 100,000 visitors

**Contribution of Each Sector**

Portuguese Association for Child and Adolescent Injury Control (APSI): planned the action with Police (PSP). Local Police (PSP): planned the action with APSI, educational program with students, teachers and parents, enforcement activities. Rescue Teams and Paramedicals: provided an educational program at school with role-playing. General Directorate for Transports (DGV): helped oversee the enforcement activities. Rehabilitation Centre for Handicapped and Disabled (EXISTIR): carried out educational programmes at schools involving discussions with victims of road accidents. General Directorate for Environment (DRAOTA): provided educational programmes at school on other environmental threats aside from injuries, such as exposure to air pollution and noise. Local Government of Faro: helped with logistical issues. Faro Hospital: promoted student visits to the Paediatric and Orthopaedic Department to see and talk to victims of road accidents.

**Description of Action/Objectives**
The main objective of the Road safety awareness programme was:
- to promote road safety awareness and raise the use of safety belts among primary school children.

**Planning and Implementation**

**Mechanisms Used**
- APSI and Local Police (PSP) first got together in a seminar on Road Safety in Faro to design the project. A few informal meetings took place and the other partners were invited to join.

**Description of Action/Implementation**
- A seminar on road safety was held, where children invited their family, teachers and police to attend.
- Local police was trained to enforce legislation according to the Convention on Rights of Child.
- A workshop was organized at a school with children, to raise awareness and knowledge of child road safety.
- Discussion was held with parents, presenting the programme, informing about legislation and enforcement activities.
- Fines were given to drivers not using seat belts and seat belt use surveys were led.
- Exhibitions were held in an open and public place, with real pictures of road accidents. 'Road Safety Weekend' (simulation with crashed cars and prevention, rescue and treatment teams) at Secondary schools (10-16).
NOVELTY OF ACTION
The structure already existed: Working Group of APSI in Faro and the Department of Safe School of the Police of Faro.

Evaluation/ Impact
- Enforcement police actions led to 243 reports of inadequate protection of children in cars.
- The use rate of seatbelts increased from 20 to 89% in the school population involved. The final exhibition was visited by 1,800 children with their teachers in the first day, and by a total of 100,000 persons during the weekend.
- Enforcement of seat belt use continued and one year later the use rate reached 90%.
- The use rate of seatbelts went from 15% to 85% in the back seat, and from 91% to 100% at front seat.
- The local press covered all the activities thereby improving contact with general public and decision makers. The programme was extended to other cities with the aim of reaching the national level.
- From September 2002 to May 2003, the programme was extended to a secondary school with 700 students.

SUSTAINABILITY
The involvement of teachers and parents facilitated the sustainability of the programme, adopting safety behaviour. The educational intervention of the police helped the population accept enforcement and police became friends despite their enforcement role.

TRANSFERABILITY
Currently the project team is pressing local Government to integrate this program into the National Plan for Road Safety. The project started in Faro, but the same methodology has been adopted by 3 other cities in the south of Portugal.

Lessons learned
KEY FACTORS LEADING TO SUCCESS
- Adoption of a combined approach to road safety, with an effective education and enforcement led to increased use of seatbelts by children in cars.

CHALLENGES DURING PLANNING/IMPLEMENTATION
- The big challenge, but also a key to success was to find the right person in each sector to facilitate the network. An informal network was slowly set up, where all partners had specific tasks to increase road safety.

- To motivate the parents to come to the school meetings. Even with a personal invitation there were never more than 5% of the parents in attendance.
- Integrating the topic of road safety in the school curriculum.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING
A research study on direct health and economic impact should be carried out.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR
- It is important to adopt a combined approach that involves education and enforcement measures taking into account the cultural needs of each country.

HELPFUL TOOLS
- The effective training of police on child road safety played a central role in enforcing legislation.

Contacts
Name: Elsa Rocha
Address: Associação para a Promoção da Segurança Infantil
Vila Berta, 7 – 1º dto
1170-400 Lisboa, Portugal

Tel.: +351 21 887 01 61
Fax: +351 21 888 16 00
E-mail: apsi@apsi.org.pt
URL: http://www.apsi.org.pt/
A pied c’est mieux!
It’s better on foot! An education campaign in Neuchâtel
Switzerland

**IMPLEMENTATION LEVEL** Regional (an entire Swiss canton)

**SETTING** Kindergarten through third year of primary school

**DRIVING FORCE** Commission of road education (CER) of Canton Neuchâtel

**PARTNERS** Public relations agency

### Background

**RATIONALE**
More and more parents take their children to school by car, which has several consequences for the children. First, they do not benefit from the way to school as a source of discovering their environments and secondly, they become accustomed to motorized mobility at an early age and traffic is increased around schools areas. Moreover, children do less exercise, and this reduction in physical activity can lead to overweight.

Target audience: Parents

Sectors involved: Four: Education, local authorities, parents & community, other

Project duration: 2 weeks to take action; 2 or 4 times a year to repeat it

Population reached: 6,073 pupils, plus community

### Contribution of each sector

**School:** Noticed the problem. **All:** Discussed the problem, developed the intervention strategies. **Federal Offices:** provided scientific input about medical reasons to move more and paid for the evaluation of the campaign. **Public relations agency:** designed the intervention materials.

### Description of action/objectives

Motivation and education campaign with the aim of encouraging parents to accompany their children to school and at a later time let the children walk alone.

### Planning and Implementation

**Mechanisms used**
- Organized meetings that brought different sectors together and fostered decision making.

**Evaluation/ Impact**
An evaluation is carried out every year by the University of Bern. Positive results have been found so far and are available in French.

**Sustainability**
This project has been ongoing over the past 3 years and will continue for another 3 years, as it has just been funded by a grant from Promotion Santé Suisse.

**Transferability**
This kind of project could be adapted to other Swiss cantons throughout Health and Education Departments. The ‘Pedibus’ concept could be easily transferred.

### Lessons learned

**Key factors leading to success**
- Direct contact between project developers and teachers in this field.
ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- It is critical for action to be repeated because after a visible and measurable success during and immediately after introduction of the action the old behaviour, driving children to school, is adopted again very quickly.

- Introduction of the “Pédibus” as a complementary activity is an ideal complement to this project.

Contacts
Name: Thierry Gogniat
Address: Rue de la Paix 11
         CH-2300 La Chaux de Fonds
         Switzerland
Tel.: +41 32 914 2025
Fax: +41 32 914 2026
E-mail: tgdesigner@bluewin.ch
An effective city wide school travel policy: A case study from York United Kingdom

**Implementation Level** Local

**Setting** Schools, community

**Driving Force** Sustrans NGO and the City of York Council

**Partners** School travel plan co-coordinator, cycle and pedestrian trainers, road safety officer, highway development control (planning) staff, highway safety engineers, York Primary Care Trust, North Yorkshire Police, local bus companies, local cycle retailers and the local media.

### Background

#### Rationale

There has been much progress on mobility management for schools in the UK, although this has been mainly at a policy level and local authorities are just beginning to develop programmes of action with schools. In the UK, programmes of work with schools are generally referred to as ‘School Travel Plans’, often supported by ‘Safe (or Safer) Routes to Schools’ projects. In 2003, the Departments of Transport and Education announced a national School Travel Action Plan, which includes grants for local authorities to employ school travel advisers and capital grants of up to €15,000 for schools. All schools in England are to produce a school travel plan by 2010.

York is a medium-sized city (population 180,000) with a historic centre and typical modern suburban sprawl. The city has been at the forefront of traffic reduction policy in the UK with expertise in developing integrated traffic management policies including Park and Ride buses, a cycle network, and a large pedestrianised core. In addition the city has implemented specific policies at schools which aim to increase levels of walking and cycling to school. Sustrans, one of the key players in this project, is a national charity which promotes sustainable transport and which can justifiably claim to have had a major influence over school travel policy in the UK. In partnership with 10 schools and 4 local authorities, Sustrans started its Safe Routes to Schools demonstration project in 1995. It also launched an information service for local authorities and schools including a national conference which attracted over 400 people.

### Contribution of each sector

**Education sector** or school travel plan adviser - assisted the school in developing a school travel plan, helped with some in school travel related activities, liaised between different council departments and agencies, and was the council’s main contact with the school. **Cycle and pedestrian trainers** - delivered road safety training with pupils, offered advice about safest routes to school, coordinated school travel surveys every two years. **Local authorities** or Road safety officer - recommended measures to be included in school safety zones and safe routes to schools, and co-ordinated road safety education including a twice-yearly ‘Walk to School’-Week. **Highway safety engineers** - designed and implemented road safety measures including school safety zones, parking restrictions, safe crossings, footways and cycle lanes, and ‘Safe Routes to Schools’ measures. **Highway development control** (planning) staff - required travel plans from schools and other organisations as a condition of planning consent, where appropriate. **Other agencies** - York Primary Care Trust (health promotion materials and the ‘Healthy Schools Scheme’); North Yorkshire Police (parking and speed enforcement); Sustrans (Safe Routes to Schools studies, assistance for school travel plan coordinator including training and advice); local bus companies (supporting school travel initiatives such as ‘bus monitor schemes’ and ’bus training’); local cycle retailers (‘in-kind’ sponsorship for school travel initiatives); and the local media (positive media coverage of school initiatives).

### Description of action/objectives

The City of York has a school travel strategy within its five year Local Transport Plan. The plan sets out how it intends to work with schools to reduce levels of car use for school journeys and reduce traffic accidents on school journeys.
In the Local Transport Plan, targets and priorities relating to school journeys include:

- to develop travel plans (mobility management plans) for all schools, particularly those with higher levels of car dependency, poor safety records and social exclusion problems;
- to reduce the proportion of primary and secondary school students travelling to school by car from 26% to 19% of the total;
- to reduce the number of primary and secondary school students involved in road accidents;
- to improve the health of young people by encouraging more school students to walk or cycle to school; and
- to reduce the proportion of school staff that are travelling to school by car from 66.5% to 50%.

Additionally, targets under the Public Service Agreement, for which the city of York receives additional government funding if met, are to:

- increase levels of cycling to school (ages 10 to 14) from 5.8% (1999) to 10.3% (2005); and
- reduce numbers killed or seriously injured by 45% by 2010.

### Planning and Implementation

#### MECHANISMS USED

- The school travel strategy was drawn up as part of the city’s Local Transport Plan following consultation with key stakeholders, i.e. the health authority, Sustrans, transport action groups, school representatives and local residents. A local authority working group met monthly to review strategy. Occasional focus groups were held with local residents to discuss specific issues such as promotion of cycling.

#### DESCRIPTION OF ACTION/IMPLEMENTATION

Key activities were:

- a rolling programme of school safety zones (including 30kph speed limits) with new zones at 20 primary schools;
- ‘Safe Routes to Schools’ measures taken at 5 schools;
- school travel plans at 14 schools;
- a road safety training programme; and
- a newsletter, ‘TravelZone’, distributed three times a year to all schools and school governors in York, to make them aware of the initiatives and resources open to them to tackle travel issues.

Roughly £750,000 is allocated each year towards ‘Safe Routes to Schools’ projects and secure cycle storage in schools and around £50,000 towards pedestrian and cycle training in schools.

### Novelty of Action

The project adopted the Danish model from Odense where accidents involving children on journeys to school had been reduced by 85% and where 50% of children feel safe enough to cycle to school.

### Evaluation/ Impact

A citywide survey of all schools was carried out in 1999 and 2002. Roughly 16,500 (75%) of all school students in the city returned a questionnaire. This showed:

- levels of walking and cycling amongst school students were higher than the national average and an overall rise in cycling in all age groups since 1999 and a small decrease in walking;
- an increase in driving to school (likely to be due in part to rising car ownership and in part to child safety scares);
- increase in cycling to school and a reduction in car use at schools where cycle parking had been installed, and/or where a school travel plan had been developed;
- advanced cycle training appeared to have a positive impact on levels of cycling at secondary schools;
- school safety zones (30kph zones) did not appear to have brought about a modal shift, but self-reported accident rates were lower at schools where they had been developed;
- the road safety training programme is now delivered at all but one of the city’s 80 schools, and has been expanded to four stages: pedestrian (ages 5 to 8 yrs), pre-basic cycling (age 9/10), basic cycling (in the process of being moved from age 10/11 to 9/10 and advanced cycling (age 11/12); and
- new cycle parking has been installed at 5 schools and several schools have upgraded their own cycle parking.

### Sustainability

The programme is an essential part of the Local Transport Plan for the city which is reviewed every 5 years. A key requirement of the transport plan is that it addresses environment and pollution issues. Travel to school is also referred to in York’s Local Agenda 21, Health Improvement and Children and Young People strategies.
The high profile and importance of reducing traffic congestion and traffic accidents, and improving child health, means that funding for the programme is likely to increase in future.

Transferability

Government directives encourage all schools to produce school travel plans by 2010 and grants of up to €15,000 are available to schools implementing travel plans. The government has committed funding to support a network of 250 full time school travel advisers throughout England. Every local authority is required to produce a school travel strategy as part of their five year Local Transport Plan. The Regional Transport Strategy for the Yorkshire and Humber Region seeks to reduce car dependency, partly by encouraging schools and hospitals to produce school travel plans.

Lessons learned

Key factors leading to success

- Incorporation of a school travel policy as part of an overall strategy to reduce traffic and promote alternatives to the car, especially development of a city-wide walking and cycling route network.
- Traffic engineers willing to test innovative safety measures (which benefit children in particular) that may have an adverse impact on traffic capacity.
- A thorough, well-funded road safety training programme to ensure that all children have at least a basic awareness of active travel, whether their school is engaged in a travel plan or not.
- Appointment of enthusiastic staff who liaised between traffic engineers, development control staff, education planning staff and schools.
- The linkages made between school travel initiatives and key education objectives, i.e. curriculum links.
- Involvement of young people in the political process, i.e. school council involvement in the school’s travel plan, young people discussing traffic options, making presentations to councillors, etc.

Challenges during planning/implementation

- Persuading schools to invest staff time in writing and implementing their travel plans.
- The need to maintain the momentum of travel plans as they become more widespread.
- Consultation and implementation of detailed safety improvements requires time from traffic engineers and planners and the right balance between capital and revenue funding must be found.
- The challenge of communicating the benefits of increased physical activity for children to parents against the relatively low risk of being hurt in accidents, and to overcome physical inactivity and car-dependence in the general population.

If done again, what would be done differently?

The programme would have invested in secure cycle storage from the outset. The council is only now trying to win public acceptance for more radical measures (such as taking space from cars to build segregated cycle paths and wider footways) and should have started on this process much earlier. The council underestimated the level of support amongst residents for improving safety along routes to schools.

Advice to countries that want to do something similar

- Concentrate resources on reaching pupils aged 9-13 years old - good travel (and physical activity) habits are established early in life and schools are a natural place to promote walking and cycling on a daily basis. Young people below 13 years are interested in walking and cycling to school and are naturally receptive to the sustainable transport message.
- Other official policies may work against efforts to reduce car use on school journeys - in the UK parents are able to express preference in their choice of schools meaning that journeys are longer and more scattered. Other relevant policies include funding of school buses and entitlement to free school transport, policies on cycling to school and wearing of cycle helmets, lesson planning, locker provision and the number of books children must carry home.
- Make sure activities are embedded in other local authority departments and strategies so the overall strategy is not reliant on one person. For example health budget planners should consider funding cycle and pedestrian training as a means of increasing levels of physical activity; highway engineers should carry out safety audits of all new highway schemes, which take account of the needs of children and non-car travellers.

Helpful tools

- Feedback from pupils and technical staff who visited successful projects in Denmark.
- Experience from local demonstration projects. Regular meetings, site visits and training sessions run by networks of school travel advisers.
- Safe routes to schools studies identifying the potential for change in travel patterns carried out by Sustrans working with Young Transnet.
- Useful teaching resources i.e. 'The trouble with traffic' and 'Let's take a walk' published by Lincolnshire County Council.
- Networking with school travel advisers in other areas via web forum.

Contacts

Name: 1) Paul Osborne, Sustrans  
2) Catherine Heinemeyer, City of York Council

Address: Sustrans - The Danesmead Wing, 33 Fulford Cross, York YO10 4PB United Kingdom

Tel.: +44 1904 651 506
Fax: +44 1904 651 506
E-mail: 1) paulo@sustrans.org.uk  
2) catherine.heinemeyer@york.gov.uk

URL: 1) www.saferoutestoschools.org.uk  
2) www.york.gov.uk
**Safe Building**

**Portugal**

**IMPLEMENTATION LEVEL** Local (Sangalhos)

**SETTING** School

**DRIVING FORCE** General Directorate of Health and Environment Institute

**PARTNERS** Local authorities, local health professionals

---

**Background**

**RATIONALE**

On the World Health Day, 7th April 2003, a challenge was launched to Portuguese schools by Ministries of Health and Environment with the subject: “School improves the environment.”

**Target audience**

Schools, local authorities and community

**Sectors involved**

Four: education, health, local authorities, parents & community

**Project duration**

During school year

**Population reached**

100

**CONTRIBUTION OF EACH SECTOR**

**Education and health:** sensitisation of teachers, educators and children on environmental health risks. **Community:** wells owners were contacted and asked to protect wells and fence their properties. Local authorities were also alerted on the issue. **Municipality and parents association:**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Problem</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>Bad conditions of the floor and ceiling</td>
<td>Repaired the floor and ceiling</td>
</tr>
<tr>
<td></td>
<td>Inexistent fire extinguisher and emergency plan</td>
<td>Equipment and evacuation plan elaboration and implementation</td>
</tr>
<tr>
<td></td>
<td>Bad management of the cesspit</td>
<td>Sanitation Plan elaboration and implementation</td>
</tr>
<tr>
<td>Municipality Parents Association</td>
<td>Bad conditions of the sidewalks</td>
<td>Rebuilt the sidewalks</td>
</tr>
<tr>
<td>Parents Association</td>
<td>Unprotected electric devices</td>
<td>Repaired the electrical equipment</td>
</tr>
<tr>
<td></td>
<td>Opened school gate all day long</td>
<td>Installed the front bell</td>
</tr>
</tbody>
</table>

**Description of action/objectives**

This project aimed to improve the safety of the physical school environment, specifically addressing:

- unprotected electric devices;
- opened school gate;
- inexistent fire extinguisher and emergency plan;
- bad management of the cesspit; and
- safety of the school surroundings, mainly the existence of 3 wells without any protection, in areas with no fence.

**Planning and Implementation**

**MECHANISMS USED**

- A team was set up to address problems and find solutions.
- Teachers, educators and children had a checklist of the environmental health risks, given by the health centres, and they identified the existing problems in school and how to solve them.
- School administration sent official letters to the local authorities to alert them for the environmental health risks in school.
- Meetings between teachers, children and local authorities, and community.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The following actions were taken to address problems:

- the floor was cemented;
- the sidewalks were re-built;
- the ceiling and the electrical equipment were repaired;
- a front bell was installed; and
- an evacuation plan was requested as well as a sanitation plan.

**NOVELTY OF ACTION**

This was a completely new initiative.
Evaluation/ Impact

Information, Education, and Communication (IEC) strategies were used to give information, education and to motivate children in order to change knowledge on environmental health risks as well as gather social and political support to solve the identified risks.

A partnership was built between school, health professionals, parents association and municipality regarding the problem of unsafe building, construction standards and materials.

Sustainability

Research on environment areas that affect children’s health will continue in the following years.

Lessons learned

Key Factors Leading to Success

- To involve all stakeholders in the process.

Challenges during Planning/Implementation

- To increase awareness of environmental risks and their effects on health.

If Done Again, What Would Be Done Differently?

Have more time for planning and implementation of actions.

Advice to Countries that Want to Do Something Similar

- Establish effective deadlines for the planning and implementation steps. Involve all the stakeholders in the process from the beginning.

Helpful Tools

- Training on risk assessment, management and communication and allow more time for planning and implementation

Contacts

Name: 1) Gregoria Amman
       2) Catarina Lourenço

Address: School Health Division
         General Directorate of Health
         Al. D. Afonso Henriques
         451049 - 005 Lisbon, Portugal

Tel.: 1) +351 21 843 0500
      2) +351 21 843 0705

Fax: 1) +351 21 843 0530
     2) +351 21 843 0600

E-mail: gamann@dgsaude.min-saude.pt
        catarinal@dgsaude.min-saude.pt

URL: http://www.dgsaude.pt
Working for a healthy indoor environment in schools and nursery schools through the MVG collaboration

**Sweden**

**IMPLEMENTATION LEVEL** Regional (Västra Götaland)

**SETTING** Schools, nursery schools

**DRIVING FORCE** Environmental Health Collaboration of Västra Götaland (MVG)

**PARTNERS** Regional Associations of Local Authorities, Environmental Health Offices in all the 49 municipalities in the region, Labour Inspectorate, Public Health Board

### Background

**RATIONALE**

By means of a yearly questionnaire sent out to all environmental health offices, indoor environment was proposed as a topic of concern and later a project in the region of Västra Götaland. The main concerns expressed were:

- Reports of “sick buildings” in Västra Götaland as well as in other parts of Sweden, including schools and nursery school buildings.
- Reduced cleaning of classrooms due to budget cuts as well as increased crowding in schools in many municipalities.
- A realisation that the indoor environment of schools and nursery schools is important for the health of children.
- Few inspections of schools and nursery schools carried out by the Environmental Health Offices in most municipalities.

### Description of action/objectives

The intervention consisted of:

- a general manual to guide the Environmental Health Office’s inspections of the quality of indoor environments;
- an inspection campaign; and
- setting up a supervision system as a method to make school leaders aware of their responsibility for self monitoring and to understand the importance of managing correctly.

### Planning and Implementation

**MECHANISMS USED**

- A project group was formed, with representatives from Environmental Health Officers, County Administration, Public Health Board, Labour Inspectorate and two managers of school buildings and other public buildings.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

An Indoor environment manual was developed consisting of four chapters on:

- handling indoor problems in residential buildings and providing guidance to Environmental Health Offices on how to handle complaints, perform investigations and advice to provide building owners;
- handling indoor environmental issues in schools and other public buildings in the municipalities and providing advice and guidance to the Environmental Health Office, the school and nursery school administrations and the managers of school buildings for setting up indoor cooperating groups and self-monitoring programmes;

### Contribution of each sector

**Project leader:** responsible for supplying the Environmental Health Offices with background facts, practical advice, ideas and methods for the inspections, and compiling written reports from the results gathered from the participating municipalities. **All members of the project group:** participation in development of project plans, fact checking manuals and reports.

---

**Target audience**

- Children from 0 to 15 years of age

**Sectors involved**

- Three: Environment, Health, Local authorities

**Project duration**

- About 4 years and ongoing

**Population reached**

- The number of population reached through these activities cannot be specified but the region has 1.5 million inhabitants.
a guide to examine indoor environments and
guideline values that could be used; and
a summary of the legislation involved (Part 3
and 4 are complimentary chapters, to assist in
following the advice given in parts 1 and 2).

Other activities included:
- a series of information meetings throughout the
  Region to launch the manual and convince
  school leaders and managers of public buildings
to follow the advice, especially that in part 2 of
  the manual;
- a special manual (“Indoor Environment 2002 -
  manual for supervision of schools and nursery
  schools”) for inspection of schools and nursery
  schools through system supervision, focusing on
  the self-monitoring responsibilities of schools
  and nursery schools. This manual also included
  fact sheets on self-monitoring that could be
  supplied to the schools;
- an inspection campaign for schools and nursery
  schools, which was carried out from October
  2002 - April 2003. The Environmental Health
  Offices ran the campaign using the special
  manual. To promote the campaign, a series of
  launch meetings was held for the
  environmental health inspectors where the
  manual and methods were described; and
- an in depth questionnaire administered to the
  Environmental Health Offices of all the 49
  municipalities to evaluate 1) The inspection
  campaign 2) The project activities at large, as
  well as other indoor environmental work
  performed in the municipalities.

NOVELTY OF ACTION
The region-wide collaboration on the topic of
indoor environments was new.

Evaluation/ Impact
Both the general and the special manual were very
well received. When rated on a scale 1 - 5 they got
4 and 4.4 respectively by the Environmental Health
Offices as an average. The participating
Environmental Health Offices reported that the new
inspection supervision system worked well as a
method for inspecting schools and nursery schools.
Those being inspected also appreciated this system.

SUSTAINABILITY
In one third of the municipalities, Indoor
environment cooperating groups have been formed.
A few had started even before the project and
some quite recently.

TRANSFERABILITY
The manuals have been used in other parts of
Sweden and are accessible through the MVG
website at www.miljosamverkan.se.

Lessons learned

KEY FACTORS LEADING TO SUCCESS
- System supervision requires good training of
  the inspectors and by those being inspected.
- As the core of the supervision system are the
  inspection meetings, it is important that not
  only the formal responsible officer (e.g. head
  of school) is present, but also other persons
  whose work is important for the indoor
  environment, such as janitors and building
  managers

CHALLENGES DURING PLANNING/IMPLEMENTATION
- Lack of personnel and time were the main
  reasons given by the Environmental Health
  Offices as the main reasons for inadequate
  inspections in schools and nursery schools.
- According to the inspectors, the main factors
  responsible for poor indoor environment
  initiatives within the schools were lack of
  interest, other issues getting higher priority,
  lack of knowledge on indoor environment and
  health, and lack of resources.
- While there is awareness by Environmental
  Health offices of the study, it has not yet been
  incorporated into routine inspection planning.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?
It would be better to run future inspection
campaigns over a longer period of time and also
provide more start up activities, such as meetings,
information materials to those who will carry out
or supervise the inspections.
IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING

Although the MVG should do more to inform the school leaders and others of their responsibility for self-monitoring in schools, the Environmental Health Offices, through inspections and participation in indoor environment cooperating groups, are more important. It is important to carry out discussions on how information on indoor environment and responsibilities can best reach the school leaders and invite the Swedish Association of Local Authorities and the National Board of Health and Welfare to take part in providing such information.

Contacts

Name: 1) Lasse Lind (project leader)  
2) Gudrun Törnström, (Västra Götaland County Administration, Environmental Department)

Address: Miljösamverkan Västra Götaland
Miljösekretariat
Box 1726
501 17 Borås, Sweden

Tel.: 1) +46 33 -17 48 27 (Miljösekretariatet)  
2) +46 532 714 47 (project leader)

Fax: 1) +46 33-17 48 05 (Miljösekretariatet)  
2) +46 70 609 87 70 (project leader)

E-mail: 1) Lind.lasse@telia.com  
2) Gudrun.tornstrom@o.lst.se

URL: www.miljosamverkan.se
The Central Stepney Single Regeneration budget (SRB) “Health Gain” Study
United Kingdom

Implementation Level: Local
Setting: Community - a housing complex in the Borough of Tower Hamlets, East London
Driving Force: The SRB Management Board and the Borough Council
Partners: The Stepney Housing and Development Agency (SHADA)
The Limehouse Project (a bi-cultural advice agency)

Background

Rationale
Prior to this project, Professor Peter Ambrose and his team at Sussex and Brighton Universities had already carried out a survey of the literature linking poor housing and poor health. As a result, this group was asked to carry out a ‘Health Gain’ study to assess health improvements after the housing renewal. The two housing estates, in the Borough of Tower Hamlets, East London, built about 50 years ago, had become very dilapidated and unhealthy. Renovation was urgently required. The national Government and the Borough of Tower Hamlets selected the area and that most in need of regeneration under the SRB programme. The population of the area is predominantly Muslim and there are many large families and a young age structure.

Target audience: Families living in housing Borough of Tower Hamlets
Sectors involved: Stepney Housing and Development Agency (SHADA) managed the intervention
Project duration: 4 years
Population reached: 525 people in 107 households plus interviews with 50 service provision agencies

Description of action/objectives
This project dealt with the renewal of two rundown estates in the Borough of Tower Hamlets in East London. The objectives were to:

- produce a better, safer and healthier living environment; and
- measure the degree of health improvement brought about by the regeneration.

Planning and Implementation

Mechanisms used

- The project was planned and implemented by the Sussex and Brighton teams in close collaboration with the Stepney Housing and Development Agency (SHADA). The research team included over 20 people including some qualified in economics, planning, administration and health sciences.

- A ‘pre’ survey, was carried out in 1996 on a random sample of 107 households (which included 525 people). In depth interviews were also conducted to assess the health of all household members. These revealed a picture of extremely bad housing conditions, bad health and various other social pathologies. An additional survey of 50 frontline professionals in health, policing and education was also carried out.

- The area regeneration took place over the 1996-1999 and by 2000. The ‘after’ survey was carried out on the re-housed population in 2000. The same survey methodology was used on as many of the original households as still existed in the area.

- The ‘before’ and ‘after’ interviews were carried out by a bi-lingual team of six trained interviewers working in pairs. After the survey several meetings were held with community and residents groups to report on the findings.

Description of action/implementation

- The majority of the residents in the SRB area were re-housed in new or improved accommodation within the same area. Many other improvements were made to the environment in relation to education and to safety.
**NOVELTY OF ACTION**

This was a completely new regeneration in this area but it used a Government Programme (SRB) which has been used elsewhere.

**Evaluation/ Impact**

- As a result of the housing regeneration, the rate of self-reported illness days fell from 37 per 100 person/days to 5 per 100. This led to a reduced use of healthcare services with consequent savings for those services. The fear of crime was much reduced and there were also improvements in the progress of children at school. There was an increased loyalty to the neighbourhood and improved community solidarity as a result of the renovations. Various other benefits in relation to children’s use of play-space were recorded.

- Children’s’ health was not measured separately in the survey. Per household cost savings by factors of x5 to x7 were noted in relation to some health and police services. A great deal of qualitative comment was recorded on the benefits of the regeneration but some adverse comments about increases in rents and living costs were noted.

- The work was covered by four full reports and no matters were left unreported. The final report is P. Ambrose, Second Best Value, published by HSPRC, University of Brighton, Falmer, Brighton BN1 9PH, England in 2002.

**SUSTAINABILITY**

Several new resident and community groups were set up and others were strengthened.

**TRANSFERABILITY**

The effects of this project are trans-national and similar effects have already been noted in Australia and elsewhere. Satisfactory housing should be seen as vitally important health-promoting infrastructure and as a means of saving costs on many budgets.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Close involvement of residents and resident organizations in the planning and implementation of the regeneration programme.

- Use of a separate agency (SHADA) to manage the progress

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- The very poor quality of the housing to be renewed.

- The lack of jobs in the area and the run down of local service.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**

- Ensure that the evaluation project is carried out with the full support and co-operation of the residents of the area.

- Ensure, where ’minority’ populations are concerned, that full account is taken of cultural issues and linguistic differences.

**HELPFUL TOOLS**

Training to research the effects of a regeneration process by the university team.

**Contacts**

Name: Peter Ambrose
Address: HSPRC, University of Brighton, Falmer, Sussex BN1 9PH Brighton, UK
Tel.: +44 1273 643 798
Fax: +44 1273 643 480
E-mail: ambrose@solutions-inc.co.uk
URL: http://www.brighton.ac.uk/sass/research/abouts/prc.htm
Effects of a Noise wall: the role of Playgrounds
Denmark

**Implementation Level**
Local

**Setting**
Day care centers and kindergartens in Copenhagen

**Driving Force**
Staff and parents

**Partners**
Municipal authority

**Background**

**Rationale**
Planning for the design and location of day-care centres should consider how to avoid environmental noise since the quality of the care offered by the day-care centre is reduced if noise prevents the outdoor space from being used optimally.

The Danish Federation of Early Childhood Teachers and Youth Educators and Danish Union of Nursery and Childcare Assistants conducted a survey of 1,011 parents with children in day-care centres, including day nurseries, kindergartens, age-integrated centres, after-school centres and after-school activities at school. The survey found out that parents were generally pleased with the day-care centres, but were unsatisfied with aspects such as the indoor environment, lack of space, and noise levels in their child’s day-care setting.

The kindergarten in this case study is located at the intersection of two major streets regulated by traffic lights, in the greater Copenhagen area. During the week, road traffic contributes to high noise levels. Variation in the noise levels comes from vehicles stopping and starting because of the traffic lights, interspersed with the occasional but almost daily passing of emergency vehicles with sirens.

The playground is located between the road and the building with the day-care centre, and an old noise wall was separating the playground from the busy road. The noise level at the building facade was measured at 77 dB(A), and the former noise wall was not tall or sturdy enough to reduce the noise from traffic.

**Contribution of Each Sector**
Parents and community submitted complaints to the municipality about excessive noise at their children’s school. The municipality was responsible for building the new noise wall.

**Description of Action/Objectives**
This project dealt with building a new noise wall to reduce the noise levels in the playground and inside the kindergarten.

**Planning and Implementation**

**Mechanisms Used**
- Discussions among staff and parents in the kindergarten on the unacceptable noise levels and the actual establishing of the new noise wall. Consultation with staff on the design of the noise wall.

**Evaluation/Impact**
The effect of the new noise wall in terms of reduction of noise levels was measured by an occupational health consultant. After the new wall was built, noise was reduced up to 10 dB(A).

**Transferability**
Many day care institutions could benefit from an efficient noise wall and parent and staff pressure for this could lead to success.

**Contacts**
**Name:** Marie Louise Bistrup

**Address:** National Institute of Public Health
Svanemøllevej 25
DK-2100 Copenhagen

**Tel.:** + 45 3920 7777

**Fax:** + 45 3927 3095

**E-mail:** mlb@niph.dk

**URL:** http://www.si-folkesundhed.dk/default_ny.asp
Background

RATIONALE

Several studies show that as much as 10-15% of the Swedish population have some form of tinnitus. Approximately 50,000 suffer from this condition and have difficulties living a normal life. Hearing injuries have increased the past few years in Skaraborg and tend to afflict more younger people than previously. Most often injuries are manifest as tinnitus and/or sensitivity to sounds. In Skaraborg, on a daily basis, approximately one young person between the age of 15 and 25 years seeks help from a doctor for hearing problems related to noise or high sound levels. One of these young people per week is found to have a serious problem, however, there are no statistics as to the number of people disturbed by noise in the Swedish school system. The Environment and Safety Board considers important that the general public gain knowledge about the causes of tinnitus to prevent lifelong disturbances. Increasing knowledge by spreading information may be a step in the right direction and schools may be an entry point for such interventions.

Target audience: Children and Adolescents (1 through 19 years of age)

Sectors involved: Three: Health, Education, Environment

Project duration: 12 months

Population reached: A total of approximately 500 pupils and 100 adults (class teachers, principals and school nurses) received verbal information about tinnitus and high sound levels. Fifty persons participated in an information meeting for the general public.

CONTRIBUTION OF EACH SECTOR

General project cooperation by all parties: took place between the project manager, the audiologist, municipal public health planners and responsible persons within the educational system during the course of the project.

Project manager: responsible for performing sound level measurements and alternatively placing measuring equipment on a people (teacher or pupil) that would carry it for a pre-determined time period. Teachers: performed sound measurements. Some pupils: wore dosimeters (sound level meters) to measure sound levels.

Description of action/objectives

Sound level investigations were carried out in child and adolescent environments. The cornerstones of the project were identification of hazardous environments, distribution of information, sound level measurements and follow-up. The main objectives of the project were:

- to prevent new hearing injuries due to noise to children and adolescents in Skövde Municipality;
- to reduce the risk of tinnitus among children and adolescents by performing sound level measurements in children’s and adolescents’ environments;
- to provide information to responsible persons in hazardous environments where children and adolescents spend time;
- to investigate whether the general guidelines of the National Board of Health and Welfare regarding inside noise and high sound levels (SOSFS 1996:7) were being adhered to; and
- to investigate which occupations (pre-school teachers, physical training teachers, music teachers, other teachers) were being exposed to high sound level.
Planning and Implementation

**MECHANISMS USED**

- In autumn of 1999, a working group, made up of representatives from the Environment and Safety Board, the Public Health Board, the Committee for Recreational Activities and audiology took on the task of developing a proposal for a policy and action plan.
- In spring 2000, the Public Health Board in Skövde Municipality approved an action plan with the objective to prevent hearing injuries.
- Information meetings were held with parents' associations, school nurses, headmasters, municipal administration managers and responsible operators of the amusement places in town.
- Information to the general public was distributed via television, radio and local newspapers. An information evening for interested persons was arranged in Skövde city hall.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

The project concentrated on environments where children and adolescents spend time and those considered "hazardous environments". Sound level measurements were performed at pre-schools, schools and in environments where children and adolescents spend time such as cinemas, theatres, concert halls, discotheques, and sports arenas. The activities carried out consisted of:

- distribution of written information about the project to persons such as headmasters, gym owners, discotheque owners and others responsible for environments where children and adolescents spend time;
- an invitation to each person to a project information meeting;
- lectures about the effects of high sound levels, tinnitus and what to do in order to prevent hearing damages (performed in 20 school classes at different schools);
- performance of sound level measurements from January to June 2001 and from November 2002 to February 2003. Follow-up measurements at amusement places were performed in October 2003; and
- information meetings and lectures about high sound levels, tinnitus and preventive work took place throughout the course of the project.

**NOVELTY OF ACTION**

This is the first project of its kind to be completed in Skövde Municipality. The project was based on an original model with local support and design.

Evaluation/ Impact

Results showed that the highest sound levels at pre-schools occurred primarily during playtime and decreased after project implementation. The average maximum sound level in 2001 was measured at 112 dB (A) and in 2002 it decreased to 103 dB (A). Gymnastics lessons seemed to be a problem area. Higher sound levels (both equivalent and maximal) were measured when the gym instructors carried the dosimeter instead of the project manager. The results indicate that gym instructors are an exposed occupational group at risk for hearing damages. The average maximum sound level measured by gym instructors in 2001 was 116 dB(A) and in 2002 108 dB(A). Average equivalent (one hour) sound level in both 2001 and 2002 was 90 db(A). Eight hour average equivalent sound levels were similar in 2001 and 2002. Despite active communication, open dialogue and distribution of information to responsible persons, results show that sound levels increased at the town’s discotheques and concert places. The equivalent sound level on average increased from 103 dB(A) to 104 dB(A). One concert place had an equivalent sound level of 110,5 dB(A) and a maximum sound level of 117 dB(A). Swedish legislation states that no more than 100 dB(A) as an equivalent sound level and 115 dB(A) as maximum sound level is permitted. When follow-up measurements took place in February 2004, the sound level in that specific place had decreased and did not exceed 100 dB(A) as the equivalent sound level or 115 dB(A) as maximum sound level showing that the concert organizer had taken action and implemented several preventive measures to reduce sound levels.

**SUSTAINABILITY**

Although the project is completed, to achieve sustainable results, the Skövde Municipality should take on the future work and examine teachers’ and pupils’ environments to bring about changes leading to improved work and study environments.

**TRANSFERABILITY**

This project can be transferred to other countries. It is important that sound levels in pre-schools and schools are investigated both for the sake of the pupils as well as teachers. High sound levels at discotheques and concerts are a problem in Sweden and may be the case in other countries.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Employment of a full-time project manager.
- Well-functioning co-operation with audiologists, teachers, principals and school.
**Challenges during Planning/Implementation**

- A challenge during the project was to involve the principals at an early stage. It was important to have good co-operation with all sectors involved.
- Another challenge was to persuade the media to recognize problems with high sound levels and the possibility of suffering permanent hearing damage such as tinnitus.

**If done again, what would be done differently?**

Use the same measuring method and procedure throughout the course of the project as speech, behaviour and activities may have influenced the results in cases where persons other than the project manager carried the measuring equipment. Post-project, the Environment and Safety Board believes that the best procedure is to let the same person perform all measurements, in order to ensure the quality of the measuring results. The negative aspects of choosing this method is that it requires personnel resources in order to carry out the task and that an outsider performing sound level measurements may unconsciously influence the environment being measured. Pre-school children and pupils may become more withdrawn or excited than usual in the presence of an outsider.

**Important Aspects to be Considered for Future Planning**

Noise "clean-up" in pre-schools and schools by utilising aids such as acoustic boards and sound indicators, e.g. SoundEar in order to maintain consciousness about high sound levels should be prioritised. The working environment (with reference to noise) for pre-school teachers and teachers should also be improved. Establishment of reference values for different occupations may be a step in the right direction.

**Advice to Countries that Want to Do Something Similar**

- Good co-operation and good communications with key persons and the media at an early stage lay the foundation for a positive final outcome.
- Increase the knowledge of restaurateurs and concert organisers of hazards from noise.

**Helpful Tools**

The media published interviews in newspapers, radio, and TV and contributed to the several month long debate about high sound levels at amusement places. Information meetings, lectures, teaching materials, the Internet as well as press conference, and brochures as information channels.

**Contacts**

**Name:** Fredrik Schaeder  
**Address:** Skövde Municipality, the Environment and Safety Board  
SE-541 83 Skövde  
Sweden  
**Tel.:** +46 500 49 81 37  
**Fax:** + 46 500 41 83 87  
**E-mail:** fredrik.schader@skovde.se  
**URL:** http://www.skovde.se
Background

RATIONALE

The city of Izmir is heavily industrialized with a population of approximately 3 million people and an average family size of 7-12 persons. It is the destination of a large number of migrants, that hope to find jobs but gravitate to low income residential areas and quickly come to depend on the income of their children as necessary to supplement the family income. Previous activities of labour inspectors in Izmir pointed out that most working children were employed in unregistered small and medium size enterprises with unsafe infrastructure and working conditions and therefore faced common health risks. Based on the investigation of the sectors in terms of hazards, footwear, textile and auto-repair sectors were targeted.

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Children aged 6-18, including siblings provided with preventive interventions, and their families</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Five or more: Education, health, industry, local authorities, other (labour, trade unions, social services and child protection, tradesmen and handicrafts)</td>
</tr>
<tr>
<td>Project duration</td>
<td>About 3 years</td>
</tr>
<tr>
<td>Population reached</td>
<td>A total of 8,270 children were reached- 6,079 of them children at the workplace and 2191 of them siblings of working children. 1,829 of these children have benefited from medical screening and treatment.</td>
</tr>
</tbody>
</table>

CONTRIBUTION OF EACH SECTOR

Ministry of Labour and Social Security: Overall coordination of the programme, identification of working children, directing them to social support unit, training of employers, awareness raising of labour inspectors.

Ministry of National Education: Provision of primary boarding school system to the benefit of working children, complementary courses provided for working children so as to let them receive their primary school diplomas and continue their education in apprenticeship training centers. Provision of teachers for after school classes organized within the social support unit.

General Directorate of Social Services and Child Protection: In kind and financial support for the families of working children, rehabilitation and social support services provided.

Turkish Employment Agency: Provision of vocational training and job placement services for the families of working children in cooperation with the vocational training institutions.

Trade Unions: Awareness raising activities towards their members and public in general, support labour inspectors in identification of working children.

Employers: Establishing child labour monitoring mechanisms, awareness raising programmes for the employers.

Ministry of Health: Regular medical examinations of working children and provision of necessary treatment services.

General Directorate of Sanitary: 670 children medically screened. Municipality: Provision of social services staff to the benefit of social support unit, providing transportation services.

Governorate: Overall coordination of the local directorates of health, education, social services and security and ensuring timely and effective contribution to activities of the social support unit.

Description of action/objectives

- A multi-component programme consisting of interventions to reduce child labour was implemented.
Planning and Implementation

**MECHANISM USED**
- A Rapid Assessment Survey was conducted and the Action Programme objectives were built on the outcomes of this study. Within this study meetings and focus group discussions with families and children took place.
- A multi-sectoral network was set up. Clear guidelines on the roles, responsibilities and the specific tasks of each institution were developed.
- Protocols of cooperation were signed to formalise the procedures and the processes to be used during programme implementation.
- Central and local level meetings with stakeholders were organized for the preparatory work. An Action Committee Against Child Labour was established in Izmir. Progress was regularly discussed in the Action Committee meetings and necessary measures were taken for the effective implementation of the Action Programme.

**DESCRIPTION OF ACTION/IMPLEMENTATION**
The multi-component programme consisted of more than one type of intervention and made explicit linkages between them to maximize the impact of these synergetic efforts on child labour. These included:
- provision of education on subjects related to children’s rights;
- establishment of a child labour monitoring unit to identify the worst forms of child labour and direct children to social support units for rehabilitative and preventive measures;
- routine check ups and blood work for working children;
- awareness raising on child labour issue for families and communities; and
- anti-poverty measures such as vocational training and job placement services were provided for families of working children by the Vocational Training Institutions in textile, shoe production sectors.

**Evaluation/ Impact**
As of 31 January 2004 a total of 4,892 workplaces have been visited and 8,270 working children and children at risk (2,554 girls and 5,176 boys) have been reached. The number of children placed in the educational system and getting benefits from different educational alternatives reached 5,891 (1,808 girls and 4,083 boys) (including siblings under 15).

The breakdown of the services provided for the referred children are as follows: 2,839 children were withdrawn from work and placed in the primary education system; 570 children completed literacy courses; 1,257 children were directed and placed in the long distance primary and high school education; 1,225 children placed in the apprenticeship training centers. A systematic approach to national and regional capacity building was adopted. During programme implementation, specific measures were taken to ensure synergistic effects towards the achievement of the country programme objectives.

**SUSTAINABILITY**
Following the finalization of the action programme, the existing structure and with the MOLSS will continue its services towards working children in cooperation with other institutions in particular with the Municipality of Izmir.

**TRANSFERABILITY**
The experience might be transferable to other countries: Turkish experts have already provided training for labour inspectors of Azerbaijan, Romania, Ukraine and Yemen. These experts at tripartite level (government, employers and workers) have extensive knowledge and experience on interventions against child labour that might be beneficial to other countries.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**
- A network consisting of local government departments, non-governmental organizations, professional groups, police, education, authorities, teachers, community organizations, research institutions and universities allowed for pooling and securing of resources on a large scale.
- A partnership agreement was devised to enhance coordination and the flow of information.
- Within the context of this programme, the withdrawal of children from work was addressed simultaneously with the issues of poverty, education and social welfare.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**
- ensuring sustainability of multi sectoral cooperation, and
- convincing families and employers to allow children to benefit from the services of the social support unit.
**If done again, what would be done differently?**

It would be useful to convince the Municipality or Governorate of the need to provide a building at the initial stages of the programme as well as employment of the professional personnel should also be ensured.

**Important aspects to be considered for future planning**

The AP is in progress and will be finalised by the end of 2003. The outcomes of this AP and the lessons learned will facilitate the implementation of time bound programme for the elimination of Worst Forms of Child Labour which is going to be start as of January 2004.

**Advice to countries that want to do something similar**

- ensure multi sectoral cooperation and a well established labour inspection system.

**Helpful tools**

- national and international consultants,
- well planned training programmes for service providers
- learning from the experience of other countries and institutions

---

**Contacts**

**Name:**
1) Faik Arseven, Head of Labour Inspection Board  
2) Olcay Aydin, Project Coordinator

**Address:**
The Ministry of Labour and Social Security, Labour Inspection Board  
İnönü Bulvarı No 42  
Emek/Ankara, Turkey

**Tel.:**
1) +90 312 212 2176  
2) +90 312 296 6904

**Fax:**
+90 312 212 2961

**E-mail:**
1) farseven@csgb.gov.tr  
2) aydinolcay@hotmail.com

**URL:**
http://www.csgb.gov.tr
"Children’s Tracks"
Norway

**Implementation Level**: Local and regional

**Setting**: Community, school, kindergarten

**Driving Force**: Ministry of Children and Family Affairs

**Partners**: Ministry of Environment Affairs, Department of Community Planning, Department of Culture, Department of Parks and the Outdoor Environment, Department of Education, local ombudsmen for children, teachers, nursery school nurses

**Background**

**Rationale**

In 1997, the Municipality of Sandnes visited the Municipality of Andebu/Vestfold to study the of “Children’s Tracks” method being implemented in the area and at the end of 1998, they received an invitation from the Ministry of Children and Family Affairs to take part as one of 10 local authorities in a development program aimed at improving the environment in which children and young people grow.

**Target Audience**: Children, 8 through 13 years old

**Sectors Involved**: Three: Education, Local Authorities, Environment

**Project Duration**: 1 year and 3 months

**Population Reached**: 16 primary schools, one middle school, 34 nursery schools

**Contribution of Each Sector**

- **Department of Culture**: launched the project, completing the application to the Ministry of Children and Family Affairs and chairing the steering committee. **Project manager**: registered the children’s tracks. **Department of Parks and Outdoor Environment**: responsible for technical “Children’s Tracks” arrangements and provided the project manager with mapping tools. The **Department of Education**: responsible for initially contacting and later, motivating schools and nurseries to take part in the project.

**Description of Action/Objectives**

"Children’s Tracks” is a method that involves children and young people in registering their use of urban outdoor areas based on their knowledge and the identification of informal green, play-areas and tracks or paths they feel are important for games, movement and physical activity. Children point out the areas they use by drawing them on a map. The goal of the initiative was:

- to give children and youth the possibility of participating and having an influence in the use of their own environment;
- to provide a better decision-making platform for future land use; and
- to follow national directives taking into account the needs and interests of children and youth in urban planning.

**Planning and Implementation**

**Description of Action/Implementation**

- Children in all schools were asked to record their use of all kinds of areas on maps.
- They provided qualitative information about areas and paths highlighting the positive aspect of the area and what could be done better.
- All mapped information was transformed into a digital format and made available through the municipal mapping programme and intranet system.

**Novelty of Action**

This method was invented and further developed in the Vestfold region in Norway and has been used as a tool for “soft” Environment Impact Assessment (EIA) in recent years. In 1993 the "Children’s Tracks” method was used for the first time in the County of Vestfold in Norway.

**Evaluation/Impact**

The City Council endorsed the project final report and decided that all physical planning should take into account the information collected by means of "Children’s Tracks" in urban planning.

**Sustainability**

The registration is a regular part of the “start package” handed out to estate developers at the start of the planning work. Municipal and private planners proposing local development plans are strongly urged to use the mapped information of
the project in their planning, to take into account and possibly include informal children’s paths and play areas in their plans. The children and youth representatives in the municipality should, among other tasks, ensure that the recorded children’s tracks and playing areas are taken into consideration. The Municipal Development Plan contains separate targets and initiatives aimed at ensuring that areas which are defined as important for physical activity and development of children in the "Children’s Tracks" project, are taken into account and preserved through physical planning and development. The "Children’s Tracks" method was used as an analytical tool in a Public Road and Development Project in the Region of Toensberg County in Vestfold 2003-2004.

**Transferability**

Since 1993, the "Children's Tracks" method has been adopted throughout Norway and in Sweden as well.

**Lessons learned**

**Key factors leading to success**

- Adults, both professionals and politicians, took children and young people and their ideas into consideration.

**Challenges during planning/implementation**

- To deal with the adults that tried to undermine children and young people’s knowledge.

**Important aspects to be considered for future planning**

It is important to develop formal local systems and implement national political guidelines at local and regional level to ensure that children and young people are included in municipal and regional land use planning.

**Advice to countries that want to do something similar**

- Adults taking part in registering children’s tracks should be professionally guided through the whole process.
- Children should be given serious information about the time land use planning can take, and the limitations of their influence, to prevent unrealistic expectations about the results.

**Helpful tools**

Well-developed digital and analytical tools.

---

**Contacts**

**Name:** Eva Almhjell, Senior Adviser  
**Address:** Vestfold fylkeskommune, Fylkeshuset  
N - 3126 Toensberg, Norway  
**Tel.:** +47 33 34 42 70  
**Fax:** + 47 33 31 59 05  
**E-mail:** eva.almhjell@tiscali.no; evaa@vfk.no
Urban environment: the missing trees, or where is the green going? Portugal

**Implementation Level** Local
**Setting** Schools
**Driving Force** General Directorate of Health and Environment
**Partners** School community (teachers, children, assistants) of Agrupamento de Escolas Passos Manuel; an educational agency - Centro de Educação Ambiental de Matosinhos; a College - Escola Superior de Biotecnologia da Universidade Católica; School Health Team

### Background

**Rationale**
There are few green spaces in urban areas and the ones that exist are not adequate for children.

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Local authorities, community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors Involved</td>
<td>Four: local authorities, parents and community, health and education</td>
</tr>
<tr>
<td>Project Duration</td>
<td>4 months</td>
</tr>
<tr>
<td>Population Reached</td>
<td>500 pupils, 35 teachers, 7 school helpers</td>
</tr>
</tbody>
</table>

### Contribution of Each Sector

- **Local authorities:** provided trees, plants and seeds for the garden. **Parents and community:** contributed with human resources. **Health:** sensitisation for the environmental health risks. **Education:** offered training to solve environmental health risks.

### Description of Action/Objectives

This was an educational project to raise awareness of the need for green spaces in urban areas. The main objectives were:
- to increase awareness of the local community and authorities on the need to create and maintain green urban areas;
- to search for information about existing green areas, analyse and publish the results through panels, games and role plays; and
- to build and maintain a vegetable garden in the school area.

### Planning and Implementation

**Mechanisms Used**

- with teachers of different subjects, for project integration as a lessons in class; and
- with parents, to involve them in the project.

**Description of Action/Implementation**

- Collecting old photographs of the school and its surroundings and gathering testimonies from the local people.
- Carrying out a survey on urban green areas; evaluating the existing ones and proposing new ones.
- Promoting the discussion on environment health issues by lessons and educational materials, such as posters in every school and kindergarten.
- Writing articles about environment and health issues for the school or local newspaper written by students and teachers.
- Organizing activities to preserve the environment.
- Sending simple messages, written by students, about environment and health questions to households developed during classes.
- Preparing posters on the issue for the local shops.

### Novelty of Action

The initiative was completely new.

### Evaluation/ Impact

This school received an award for this project. The role play developed was presented to other schools in the World Health Day 2003 celebrations. Their presentation was a motivation for other schools to develop similar projects.

### Sustainability

There were positive changes in school spaces to improve the environment. Products from the vegetable-garden were used in school meals.
Transferability

The project can be applied if the school has the necessary space to grow a vegetable-garden. The project can be implemented in other countries, using the same methodology and planning.

Lessons learned

Key factors leading to success

- The involvement of the entire school community (teachers, students, parents, local authorities...).

If done again, what would be done differently?

Start planning earlier.

Advice to countries that want to do something similar

- Be aware of the needs of each country.

Helpful tools

- Early training and technical assistance.

Contacts

Name: Gregoria von Amman
Address: School Health Division, General Directorate of Health, Al. D. Alfonso Henriques 45, 1049-055 Lisboa, Portugal
Tel.: +351 21 843 05 00
Fax: +351 21 843 05 30
E-mail: gamann@dgsaude.min-saude.pt
URL: www.min-saude.pt.
Week of Health in the Republic of Srpska
Bosnia and Herzegovina

IMPLEMENTATION LEVEL  National
SETTING  School and school centres
DRIVING FORCE  Ministry of Health and Social Welfare, Ministry of Education
PARTNERS  School directors, team of teachers, pupils

Background
RATIONALE
World Health Day, 7 April 2003, was celebrated with the theme "Shape the future of life, healthy environments for children". For this reason, the Ministry of Health and Social Welfare and the Ministry of Education supported an action named "Week of Health" in all schools in the Republic of Srpska.

Target audience  Pupils and teachers in primary schools, secondary schools and schools for children with special needs, home for children without parents and school centres
Sectors involved  Four: Education, Health, Environment, local authorities
Project duration  1 week
Population reached  25,000 children, 300 teachers

Description of action/objectives
"Week of Health" consisted of educational activities to:

- inform teachers, pupils and parents about harmful chemicals and the need for sanitary hygiene conditions; and
- develop a campaign for non-smoking places.

Planning and Implementation
MECHANISMS USED
- Experts from Ministry of Health and Ministry of Education prepared a call including recommendations from the WHO for World Health Day and concrete actions, education and information about improving the environment and protecting children’s health. All schools in the Republic of Srpska were involved in the "Week of Health" activities.
- School directors and school coordinators for Health Promoting schools organized specifically activities (trainings, lessons, working with health services).

Description of action/implementation
"Week of health" was made up of the following activities:

- cleaning rivers and ways from and to school, planting flowers;
- organising sports terrain and competitions provided by sport associations;
- education about sanitary hygienic conditions;
- education about smoking, campaign for non-smoking areas; and
- literature association organized an exhibition "Healthy environments in which we are living, learning and working".

Novelty of action
Actions were integrated into school life.

Lessons learned

KEY FACTORS LEADING TO SUCCESS

- Support for activities from the Government of the Republic of Srpska and highlighted in "Health Policy and Strategy for Health in Republic of Srpska until 2010.
- Good cooperation between pupils, teachers, parents, health workers and other people in community who were involved in those activities.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- To get the participation of all pupils and teachers in primary and secondary schools in Republic of Srpska.
- To implement concrete activities according to Recommendation of WHO for year 2003 "Shape the future of life, Healthy environments for children".
- To find ways to increase knowledge about environment and health risk factors and children’s health.
IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

Increase the number of people involved in the activities. Establish effective working relationships between the health sector and other relevant sectors.

IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING

Actions on traffic safety should be incorporated.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Practical research on health and environmental risk factors should be conducted to enable identification and priority settings for actions.
- Guidelines for schoolteachers and pupils are important for planning and improving their role in ensuring healthier and safer environments.
- There should be some assistance to identify funds for implementing activities at the community level.

HELPFUL TOOLS

WHO material available for World Health Day 2003 was important input for implementation of some activities; consultation with experts from the Ministry of Health and Ministry of Education; involving specialists in the area of environment and health; organizing media campaigns and training lessons, and national and international consultation.

Contacts

Name: Dr. Dušanka Danojević (National Coordinator for NEHAP) and Sladjana Petkovic (National Coordinator for Promoting Healthy School for RS)

Address: AD Hoc Working Group on CEHAPE
Public Health Institute of Republic of Srpska
Jovana Dučića 1
78000 Banja Luka
Republic of Srpska
Bosnia and Herzegovina

Tel.: +387 51 216 509
Fax: +387 51 216 510
E-mail: duschkad@yahoo.com
Background
RATIONALE
Communication plays a crucial role in modern medicine, because of the need to get the results of biomedical research, information and health promotion messages the general public and the larger scientific community. Mass media can be a powerful tool for promoting health. In many cases, communication campaigns are a source of accurate information but in others, these campaigns may be misleading and inaccurate. For this reason, the role of medical journalists covering biomedical subjects has become complex, and the need for a correct method of communication, as well as a code of ethics, has become increasingly important. In the field of promotion of healthy lifestyles, the aim is to provide a set of clear, consistent, focused and positive messages based on current scientific knowledge that will reach the general population, be accepted and followed.

Target audience
Pregnant women and new mothers

Sectors involved
Two: Health and other (print media)

Project duration
2 years and ongoing

Population reached
Insieme magazine - circulation 130,000 copies; readers/issue - about 400,000.

Description of action/objectives
Insieme is a monthly magazine published as a series of articles covering all psychological and medical aspects of pregnancy and issues related to the 0 to 5 year age group. The main objectives are:
- to promote children’s health at the household level by providing useful information that parents will use to protect their children; and
- to help the readers-parents create a clean and healthy indoor environment for their children.

Planning and Implementation
MECHANISMS USED
- One of the sources of information for the magazine has been the manual "For a healthier house", developed by researchers of the Italian National Research Council. This manual provides suggestions and advice on how to prevent home risks, with an analysis of chemical products utilised for cleaning and gardening that are potentially dangerous for health.

DESCRIPTION OF ACTION/IMPLEMENTATION
Insieme is a health magazine that features articles, surveys, and focuses on selected health topics.

Evaluation/ Impact
In one issue of Insieme dealing with indoor air pollution, a set of questions to determine how healthy the environment in which a reader lives was published. This was done for other environmental health topics pertaining to the home as well.

SUSTAINABILITY
The plan is a monthly publication of other stories and articles on the subjects of indoor air pollution and housing conditions, and on other environmental risk factors, such as outdoor air pollution, food contaminants, hazardous chemicals, and other specific adverse social environments. Eight to nine articles have come out as part of this series.

Lessons learned
KEY FACTORS LEADING TO SUCCESS
- Contact with readers by means of letters and emails to get their continuous feedback on the magazine.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR
- The collection of articles, frequently asked questions and answers to the journal, together with the manual on indoor air pollution and housing risk conditions from the Italian National Research Council, could be published in other countries, as an effective health promotion instrument.
HELPFUL TOOLS

Other documents by international organizations were a source of inspiration for writing articles on environmental health.

Contacts

Name: Dario Manfellotto
Address: Rome
Tel.: +39 06 683 7300
Fax: +39 06 683 7360
E-mail: dario.manfellotto@afar.it
URL: http://www.aseweb.it/pubblicazione.htm?categoria=3&pubblicazione=22
Incorporating environmental health issues into a multi-factor health promotion programme
Italy

**IMPLEMENTATION LEVEL** Regional

**SETTING** Community (households) and health centres (maternal and child services, family doctors and maternity wards)

**DRIVING FORCE** An NGO (CSB, Centre for Child Health, Trieste) and an academic Institution (the Department of Pediatrics at the University of Rome)

**PARTNERS** Regional and local health Authorities, Professional organizations (family doctors, paediatricians, obstetricians and gynecologists), and the Ministry of Health (funding Agency)

**Background**

**RATIONALE**
The main causes of infant mortality and morbidity can be prevented with a few key interventions delivered in a comprehensive way.

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Couples planning a pregnancy, pregnant women and their partners and parents with newborn children were the target of the intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Two: Health sector and households/parents</td>
</tr>
<tr>
<td>Project duration</td>
<td>2 years</td>
</tr>
<tr>
<td>Population reached</td>
<td>25,000 newborn babies (a total reference population of 3 million)</td>
</tr>
</tbody>
</table>

**CONTRIBUTION OF EACH SECTOR**

- **Ministry of Health:** provision of 60% of the project funding. **Regional Health Authorities:** provision of 30% of the project funding. **CSB and Centre for Child Health:** Provision of 10% of the project funding as well as technical support to intervention development. The CSB was in charge of the development of the technical background for the key messages and the IEC strategy.

**Description of action/objectives**
The action consisted of a health promotion programme aimed at improving parental knowledge and behaviours on seven important issues for infant health: pre-conceptional folic acid supplementation, avoidance of parental smoking during pregnancy and after birth, back to sleep position, breastfeeding, safe transport in cars, immunisation, and reading aloud to infants. The expected health benefits of the intervention include a reduction of the main causes of infant mortality and morbidity such as congenital malformations, low birth weight, SIDS, diarrhoeal and respiratory diseases, and injuries from car accidents. Additionally, the intervention contributes to improvement in infant cognitive development as well as a strengthening of the parent-child relationship.

**Planning and Implementation**

**MECHANISMS USED**
- The programme was implemented by a network comprised of Regional Health Authorities, peripheral health services, research institutions and NGOs.

**DESCRIPTION OF ACTION/IMPLEMENTATION**
- Provision of information on the evidence base for the seven interventions and messages to all health professionals involved in pregnancy, birth and infant care.
- Development of media messages on the 7 issues.
- Education to health professionals on effective communication with parents.
- A memo on the "seven steps to health" was offered to parents during consultations.
- Dissemination of information by health professionals in maternity health centres, family practices and professional organizations.

**NOVELTY OF ACTION**
This comprehensive approach using preventive interventions was new. In some regions there were previously only isolated one-factor programmes, such as breastfeeding promotion or routine immunization coverage.

**Evaluation/ Impact**
The evaluation was based on a before-after comparison of knowledge and behaviours through...
structured interviews given to a large sample of parents (about 2,000) in all the areas involved. An area where the intervention was carried out with only pre-conceptional folic acid served as internal control. Focus groups were conducted among parents and health professionals to explore the determinants of behaviour change. Findings after the interventions showed that the number of women taking folic acid in the right period and correct dosage increased from 5 to 12%; women smoking during pregnancy decreased from 12 to 9%; parental smoking at home decreased from 14 to 9%; back to sleep position went from 47 to 62%; exclusive breast-feeding at 4 months went from 58 to 86%; and attitude to early reading from 34 to 52%. The main sources of information for parents were doctors but media also played a role, particularly in influencing prenatal behaviours.

Sustainability

The IEC campaign ended after the programme concluded but all components have now been incorporated into the health plan of at least 2 of the regions involved. Reading aloud to babies is now a national program in Italy. Many other health authorities have requested the IEC materials as well as technical advice to replicate the programme.

Transferability

The approach can be easily transferred to other countries that have similar health priorities, or modified to include /exclude specific items. Requisites for transfer of the experience include:

- initial start up funding;
- an institutional champion (at the Ministerial or Academic level but could also be an NGO with adequate technical resources); and
- some initial technical assistance from the Italian centre.

Lessons learned

Key factors leading to success

- The incorporation of important environmental issues such as exposure to ETS, safe car transport and pre-conceptional folic acid together with more traditional MCH issues such as breastfeeding and immunisations proved to be feasible and more efficient than single factor campaigns.
- Full involvement of professionals is of importance for the success of such programs. Results varied and were better in areas where more effort was put into involving health professionals directly and through their associations from the beginning.
- The study offers a better understanding of relevant knowledge and behaviours of parents and health professionals and their determinants and provides a model for a comprehensive approach to health promotion interventions in the perinatal period.

Challenges during planning/implementation

- Amount of time necessary to thoroughly involve health professionals.
- Logistical and technical problems for evaluating the impact.

If done again, what would be done differently?

Involves all professional organizations (Family doctor, paediatricians, nurses) from the very beginning. The IEC component, although of good quality, should be even stronger to achieve more impact.

Important aspects to be considered for future planning

Careful identification of obstacles to improvement of practices to adapt the strategy and careful planning of resources.

Advice to countries that want to do something similar

- See the previous three boxes plus the bullet points under transferability.

Helpful tools

The ‘Six+one’ memo for parents and young couples; summary of evidence for the interventions for health professionals; standardized questionnaire for monitoring; teaching materials, brochures, posters and a media campaign prepared through collaboration with scientific journalists.

Contacts

Name: 1) Giorgio Tamburlini 2) Luca Ronfani

Address: WHO Collaborating Centre for Maternal and Child health IRCCS Istituto per l’Infanzia Burlo Garofolo and Centro per la Salute del Bambino (Centre for Child Health) Via dei Burlo 1 Trieste, Italy

Tel.: 1) +39 040 3220 379 (WHO CC) 2) +39 040 3220 447 (CSB)

Fax: 1) +39 040 3224 702 (WHO CC) 2) +39 040 3224 842 (CSB)

E-mail: tamburlini@burlo.trieste.it (WHO CC) csb.trieste@iol.it (CSB)

URL: http://www.burlo.trieste.it
Background

RATIONALE

"Clean Up" project reflects the thoughts and visions of the Agenda 21, based on the United Nations conference on environment and development in Rio de Janeiro (1992) and the World Summit on Sustainable Development in Johannesburg (2002). The project is an example of contribution to sustainable development, and how new forces can be brought together to create local and regional agendas (LA21).

Target audience Children & adolescents (14 - 25)

Sectors involved Three: education, local authorities, parents and community

Project duration 3-8 months for planning

3 months for implementation

Population reached 1,200 pupils for a total audience of almost 9,000 public

CONTRIBUTION OF EACH SECTOR

Education, Parents and Community (NGOs): direct cooperation with schools, teachers, students and directors in concrete projects. Local Youth club representatives from 12 different European countries participated on seminar level. Local education, environment, health, and culture authorities: opened their doors to the performance and took children’s suggestions seriously. County level: contributed to network building. National level: the Ministry of Environment initiated the project and contributed economically together with Ministry of Family Affairs and Ministry of Foreign Affairs.

Description of action/objectives

The project is designed to focus on all environment and health problems (risk factors) that exist locally and to investigate the alternative possible solutions. Children and youth participating in the project decide what should be the focus area in their local community. The project material consists of a musical manuscript named "Clean Up", sheets of music, an instructors’ pamphlet and a CD with demo songs and sing-along. The theme of the play puts the question: "Shall the grown-up generation continue to pollute the earth, water, air and oceans? Is the next generation going to get the bill? Or should the grown-ups clean up now?". The main objectives were to:

- work across borders to create an understanding of environmental problems, which increasingly influence everyone’s life;
- ask grown-ups to clean up the environmental problems they have created; and
- activate a web-based network between future participating schools.

Planning and Implementation

MECHANISMS USED

- “Cultural Border Projects” (CBP) contacted directors of schools and municipalities and made project agreements.
- CBP developed project plans and applied for grants. Each school made local project contacts with the municipalities.
- The mayor was asked to invite the city council to the first night performance, and the items
Cooperation between schools and city councils in a region created regional agendas.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

- Classes at the middle school level or higher, guided by their main teachers and music teachers, used one-two hours each week over a period of 2.5-3 months to learn a speech and five songs.
- At the same period the class worked on local environmental issues. With the assistance of professional expertise, they made suggestions on items to a Local Agenda 21.

**NOVELTY OF ACTION**

The project action was partly built on existing structure and mostly completely new action. The project was initially developed in Norway, then translated and transferred to Russia, Finland and Sweden. It is planned to extend this project to other European countries.

**Evaluation/ Impact**

- There was a trial period for the Norwegian project, where different topics for the activity were tested in different geographic areas.
- Translation and adaptation of the project material in English and Russian language.
- There was a trial period for the Russian project, where the project material and different topics for the activity were tested in 9 cities in Murmansk Oblast.
- The English version of the project material was tested by European youth aged 14-25 year, with good results and feedback.

**SUSTAINABILITY**

The project material is suitable for children and youth and participating schools have welcomed it. It has been presented by one political Youth organisation (AUF) successfully. A Norwegian WEB-site was constructed: WWW.RYDDOPP.COM. Officials and unofficial organisations have welcomed the project. A Russian WEB-site is under construction: WWW.CLEANWORLD.DA.RU.

**TRANSFERABILITY**

The project is interesting for the Mayors and the city councils and can easily be transferred to other countries. The manuscript for the performance has a duration of 35 minutes and could be adapted to local circumstances.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- Combination of theatre and environmental message by the youth.
- The youth involvement in making items for a Local Agenda and the possibility to get directly in touch with the mayor, members of the city council and to reach the adults as audience.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- To get the right partners and the adjustment of the performance to focus on problems.

**IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?**

The project continually evolves, and new and better methods for implementation are developed. The project is still running and developing.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**

- The world of the adults must be open for youth and child involvement in local tasks and youth must feel that they can influence the local and regional authorities.
- “Cultural Border Projects” advise others to contact them, as they will be happy to share their experiences.

**HELPFUL TOOLS**

- Training, rehearsals, availability of more knowledge about environmental issues and how to make a performance based on this topic.

**Contacts**

**Name:** Espen Koksvik

**Address:** Adviser, Ministry of Environment

Solhellinga 34 B

2315 Hamar, Norway

**Tel.:** +47 22 245 822

**Fax:** +47 22 249 560

**E-mail:** eko@md.dep.no

**URL:** www.ryddopp.com
**Intake, Mobility and Transport**

**School improves the environment**

**Portugal**

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETTING</td>
<td>Schools</td>
</tr>
</tbody>
</table>
| DRIVING FORCE        | General Directorate of Health - Ministry of Health  
 Institute of Environment - Ministry of Environment |
| PARTNERS             | School community, parents |

**Background**

**RATIONALE**

On the World Health Day, 7th April 2004, the Ministries of Health and Environment launched a challenge to Portuguese schools, with the subject: “School improves the environment”. In collaboration with the School Health Teams and with the contribution the school community (teachers, educators, children, parents and assistants), the Health Centres succeeded in creating a momentum on the occasion of the World Health Day 2003 “Healthy Environment for Children” creating dynamics in school to raise awareness on environment and sustainable change.

In the context of the school surroundings (inside and in the vicinity of the school, on the way from home to school, the areas of game and recreation), there are risks for the health related to environment.

**Target audience**

- Schools (children, teachers, educators), local authorities and community (parents, associations)

**Sectors involved**

- Three: health, education, environment

**Project duration**

- 5 months

**Population reached**

- About 3,500 people. 71 schools participated, including teachers, educators, children, parents, assistants; and also health professionals, from the health centres and firemen corporations

**CONTRIBUTION OF EACH SECTOR**

**Education, health and environmental professionals:** sensitisation of teachers, educators and children to environmental health risks.

**Teachers, educators:** training of children to identify environmental health risks.

**Description of action/objectives**

This project sought to identify existing environmental risks in schools and surroundings and more specifically:

- to reduce unintentional injuries, such as falls, burns, drowning and poisonings;
- to ensure safe sanitary facilities, proper waste management and the relocation of waste dumps away from settlements;
- to educate children to eat healthy food which can prevent some diseases; and
- to advocate for safer roads, traffic regulation and lowering of speed limits to reduce the risk of injury and deaths which children face from road accidents.

**Planning and Implementation**

**MECHANISMS USED**

- Actions and interventions were selected based on research that was already going on. The Portuguese General Directorate of Health gave a list of environmental health risks to the health centres. The health professionals from these centres contacted their focal points at schools to introduce the challenge to the education sector. Schools (administration, teachers, educators and children) identified the main environmental health risks they wanted to solve and planned and implemented their own strategy.

**DESCRIPTION OF ACTION/IMPLEMENTATION**

In order to identify risks and find solutions, it was necessary to alert children of the environment problems through some information activities during class. The identification of risks and assessment of solutions took place in two stages:

1st Stage: Identify existing environment risks in the school or in the school surroundings:

- describe the risks;
- register the risks (photographs, draws or video); and
- consider solutions, with all the school community, in order to minimise or eliminate the risks.
2nd Stage: To assess solutions for the elimination of the identified environmental risks:

- describe the implemented measures and the changes that had occurred, indicating if and to what extent the problem was solved; and
- register the changes (photographs, draws or video).

Representatives from the Ministry of Health and the Ministry of Environment made up the jury. This jury had to evaluate all the actions taken in schools to solve environmental risks and promote health in the community. The criteria were:

- the subject chosen;
- accomplishment of objectives - identification and solving environmental risks in the school area and surroundings;
- the good presentation of the risk identifiers and changes after measures were implemented (photos, draws, posters...); and
- the level of involvement of the school community and local authorities.

**Novelty of Action**

The intervention was built on an existing structure although the subject was completely new.

**Evaluation/ Impact**

The challenge was well accepted and projects on environment and health are still being received.

**Sustainability**

Research on environment areas that affect children’s health will continue on the following years.

**Transferability**

The project can be easily transferred to other countries.

**Lessons learned**

**Key factors leading to success**

- All the stakeholders were involved in the process.

**Challenges during planning/implementation**

- To increase awareness on environmental risks and their effects on health.

**If done again, what would be done differently?**

Enlarge deadlines for planning and implementation of actions.

**Advice to countries that want to do something similar**

- Establish effective deadlines for the planning and implementation steps.

- Involve all the stakeholders, municipalities, local organizations and civil society in the process, from the beginning.

**Helpful tools**

Training and time.

**Contacts**

**Name:** Dr. Catarina Lourenço  
Environmental Health Division  
**Address:** General Directorate of Health  
Al. D. Afonso Henriques 45  
1049 - 005 Lisboa, Portugal  
**Tel.:** +351 21 843 07 05  
**Fax:** +351 21 843 06 00  
**E-mail:** catarinal@dgsaude.min-saude.pt  
**URL:** http://www.dgsaude.pt
Background

Rationale

On the World Health Day, 7 April 2003, a challenge was launched to Portuguese schools by Ministries of Health and Environment with the subject: “School improves the environment.”

Target audience: Community and local authorities

Sectors involved: Four: education, health, local authorities, community

Project duration: 4 months

Population reached: 100

Contribution of each sector

Education and health: sensitisation of community on environmental health risks. Teachers, educators: training children to identify and solve environmental health risks. Municipality: waste management of the school area.

Description of action/objectives

An Awareness Campaign was initiated:

- to solve the waste management and treatment issue and contact local Authorities to ask for interventions; and
- to prevent accidents due to the bad conditions of the floor and staircases.

Planning and Implementation

Mechanisms Used

- Local health professionals contacted focal points in schools in order to identify the main environmental health issues affecting them.

Description of action/implementaton

- Children created posters and put them around the school fence in order to involve the community

- Waste management teams were contacted to ask them for more attention concerning the waste management around the school area and contact local authorities.

Novelty of action

The intervention was built on an existing structure although the subject was completely new.

Evaluation/Impact

This and other actions continued after World Health Day. Municipality services solved the building conditions issue.

Sustainability

Research on environment areas that affect children’s health will continue on the following years.

Lessons learned

Key factors leading to success

- All the stakeholders were involved in the process.

Challenges during planning/implementation

- To increase awareness on environmental risks and their affects on health.

If done again, what would be done differently?

Have more time for planning and implementation of actions.

Advice to countries that want to do something similar

- Establish effective deadlines for the planning and implementation steps and involve all the stakeholders in the process, from the beginning.
HELPFUL TOOLS

- Training on risk assessment, management and communication and allow more time for planning and implementation.

Contacts

Name: 1) Gregoria Amman  
2) Catarina Lourenço

Address: School Health Division General Directorate of Health Al. D. Afonso Henriques 451049 - 005 Lisbon, Portugal

Tel.: 1) +351 21 843 0500  
2) +351 21 843 0705

Fax: 1) +351 21 843 0530  
2) +351 21 843 0600

E-mail: gamann@dgsaude.min-saude.pt  
catarinal@dgsaude.min-saude.pt

URL: http://www.dgsaude.pt
Healthy Kindergartens
Slovakia

**Background**

**RATIONALE**

The health status of the population of Slovakia is inadequate when compared to that of developed Western European countries:

- the average life expectancy is 4-6 years less than in Western European countries;
- morbidity due to respiratory and allergic diseases is increasing;
- alcohol consumption, cigarette smoking and drug addiction is increasing, especially among young people; and
- the number of neuroses and psychosomatic diseases is increasing.

**Description of action/objectives**

A special targeted health education program was introduced into kindergartens to educate teachers, children and parents about the main causes of chronic diseases and how to improve health by:

- promoting a healthy lifestyle in early childhood;
- strengthening the immune system of the child;
- educating and informing on environmental health risk factors such as physical, chemical and biological health risk factors (outdoor, indoor, drinking water), effects on health, and possible actions to control or eliminate the risk; and
- promoting healthy personal habits and behavioural education.

**Planning and Implementation**

**MECHANISMS USED**

- The health education program was planned and prepared at the SHI in Banska Bystrica in co-/operation with health care professionals for the topics of allergy, nutrition, health education, orthopaedic defects, oral health, healthy environments, and psychosocial environments.
- The health education programme was developed focusing on the main health problems of the Slovakian population, e.g. cardiovascular, respiratory diseases, orthopaedic diseases, neurosis, and psychosomatic diseases.
- A working group of health sector specialists, public health specialists, and local authorities was established to prepare the plan and programme for the educational programme.

---

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Children between 3 and 6 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sectors involved</td>
<td>Four: health, education, parents, local authorities</td>
</tr>
<tr>
<td>Project duration</td>
<td>2 years</td>
</tr>
<tr>
<td>Population reached</td>
<td>About 70 kindergartens, 3,500 children</td>
</tr>
</tbody>
</table>
DESCRIPTION OF ACTION/IMPLEMENTATION

The action was carried out in 3 Phases:

- Phase 1 consisted in preparation and organization of workshops on psychology-sociology, healthy nutrition, physical activity, health education, alcohol and drug abuse prevention, strengthening the immune system, and healthy environments, with specific reference to outdoor and indoor air pollution and drinking water. The workshop on OAP focused on health effects, raising awareness about the hazards of OAP, building kindergartens in clean places, and the importance of regularly maintaining surroundings. The workshop on IAP aimed at raising awareness about the health hazards and the possible contributors. The workshop on safe drinking water focused on possible risk factors related to unsafe water.

- Phase 2 consisted of an evaluation of kindergartens as a basis for preparing case studies of each individual kindergarten examining children’s social environment, physical activity, and prevention of cardiovascular diseases. Evaluations of the outdoor and indoor environment of kindergartens, the child’s psychological environment, risk factors for allergic respiratory diseases and asthma as well as a checklist for finding allergy and asthma risk factors in indoor environments.

- Phase 3 consisted in the development of case studies by teachers in individual kindergartens in co-operation with public health specialists from SHI with the aim of changing the situation in that particular kindergarten and include new elements in the programme Information for case studies was collected during phase 2.

NOVELTY OF ACTION

All actions and interventions were built on existing structures and were strengthened with the addition of preventive actions.

Evaluation/ Impact

A qualitative evaluation of the microbiological and biological quality of indoor air in kindergartens was carried out in summer 2003 and in spring 2004 by aeroscope in ten kindergartens. The presence of sources of indoor air risk factors was evaluated in these kindergartens by means of questionnaires. New activities for the topics of IAP, OAP, safe water, physical activity and others were incorporated into the daily educational process and in the daily program of children in the kindergarten.

SUSTAINABILITY

The “Healthy Kindergartens” project is one of the main responsibilities of the Chief Hygienist in the Slovak Republic and a National network of Healthy Kindergartens was set up in the Slovak Republic.

Lessons learned

KEY FACTORS LEADING TO SUCCESS

- The importance of communication between the school and health sectors.
- The need to actively involve key players.
- The value of high quality educational workshops.
- The teamwork among health care professionals, public health professionals, directors and teachers from kindergartens, parents, parliamentarians, staff in kindergartens.

CHALLENGES DURING PLANNING/IMPLEMENTATION

- Unwillingness of some professionals, superiors, parents, colleagues to collaborate.
- Insufficient funding to carry out activities.
- Lack of interest or enthusiasm towards health.

IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?

- Include a strategy of information, education and communication in the context of national environment health activities.
- Establish an umbrella organisation, such as a Methodological Centre, to support health education programmes.
- Establish continuous communication among sectors involved.
- Assess the progress of activities.
- Nominate a responsible authority, such as a network of professionals for keeping activities up.
- Monitor requests by setting up working group (health professionals, school representatives) to take the lead in checking for problems and follow-up actions.
- Spread more public information about activities.
- Cooperate better with parents.

ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR

- Work around the prioritization of environmental problems, cooperation between the education and health sectors, local authorities, and media should be organised at the local level.
- Have a responsible organisation and network of professionals at the national and local level.
- Evaluate activities
HELPFUL TOOLS
Training or consultant for the different types of information and, educational methods, design of intervention and implementation of programme, specification of the most effective intervention measures and age when they should be applied and measures to improve primary, secondary and tertiary prevention.

Contacts
Name: K. Slotova
Address: State Health Institute
Cesta K. Nemcnici 1
975 56 Banska Bystrica, Slovak Republic
Tel.: +421 88 4335 746
Fax: +421 88 4142 642
E-mail: slotova@szubb.sk
URL: http://www.szubb.sk/
Asthma, Allergies and Environment in Schools
Slovenia

**Implementation Level**: National

**Setting**: Schools (especially classrooms, gyms, kitchen and school gardens)

**Driving Force**: Institute of Public Health Republic of Slovenia

**Partners**: Regional Public Health Institutes, Pulmonary and Allergic Patients Association

### Background

**Rationale**

Asthma and allergies are increasing mainly among children who spend much of their time at school (sometimes 9 hours and more), and cannot make decisions concerning their school environment.

### Planning and Implementation

**Mechanisms Used**

- The Institute of Public Health adopted the "Checklist for allergy inspection in schools" from Sweden and adapted it to Slovenian conditions.

**Description of action/implementation**

- Questionnaires were sent out to 118 schools with questions about health, indoor climate and moisture, ventilation, smoking, animals, plants, cleaning and food.
- Schools visits, visual inspection and discussions were carried out.
- Discussion of the results with school staff, publishing preliminary results in a congress for school and university health and medicine.

**Novelty of action**

This action was built on an existing structure since the public health institutes regularly meet the staff from kindergartens and schools in their region. They are solving emerging problems in the field of health and environment (indoor environment, food safety, playgrounds safety).

**Evaluation/ Impact**

Preliminary results consisted of identification of most common problems.

**Sustainability**

Improving the school environment is part of a process that integrates environmental, economic and social considerations into decision-making.

**Transferability**

This action could be integrated into the ‘Healthy school network’ with pupils taking part in the inspections at the schools.
Lessons learned

**KEY FACTORS LEADING TO SUCCESS**
- Good collaboration between the Institutes of public health and schools in their regions.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**
- The data about percentage of people with asthma and/or allergy is not precise. The National Institute for Public Health does not know how many children actually saw a doctor or who self diagnosed and treated themselves.

**IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?**
For a precise estimation of prevalence it would be better to choose more precise questionnaires and research methods such as the ISAAC protocol.

**IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING**
The future plan is to use the checklist as a new tool, which could help to identify risks and plan necessary measures to make school environments more "friendly" for allergic people. The Institutes of Public Health will estimate problems like moisture, ventilation, temperatures, moulds more precisely by measurements and sampling and they will prepare some health education (materials for instance, about working environment, preparing the food, cleaning) for school staff and pupils.

**ADVICE TO COUNTRIES THAT WANT TO DO SOMETHING SIMILAR**
The questions posed in the checklist raised awareness of the problem. Educational material is even more effective.

It is important to have a good relationship with school staff and train the persons who visit the schools and have national coordinator and consultant available for emerging questions.

**Contacts**

Name: Ana Hojs
Address: Institute for Public Health of the Republic of Slovenia
         Trubarjeva 2
         1000 Ljubliana, Slovenia
Tel.: +386 1244 1487
Fax: +386 1244 1447
E-mail: Ana.hojs@ivz-rs.si
URL: http://www.gov.si/ivz/
ZdravPlus Community IMCI project
Uzbekistan

**IMPLEMENTATION LEVEL**
Regional

**SETTING**
Schools, community, health centers, kindergartens, rural primary health care clinics

**DRIVING FORCE**
ZdravPlus and the Ministry of Health

**PARTNERS**

---

### Background

**RATIONALE**

The Integrated Management of Childhood Illness (IMCI) strategy adopted in Uzbekistan provides clinical training for health staff in preventing childhood illness and providing prompt and appropriate treatment to avoid deaths. To be effective IMCI needs to involve families and communities, and not just health workers.

### Target audience

- Primary target group: young women of age 15 to 30, women with children under 5.
- Secondary target group: Mothers in law and young husbands, because in Uzbek culture they play important role in decision-making for the health of the family.

### Sectors involved

Five: Health, education, parents and community, local authorities, other (Media: national TV, radio and newspapers)

### Project duration

2 years and ongoing (since 2001)

### Population reached

Over one million

---

### Contribution of each sector

**Health:** Health centres and rural primary health care clinics conducted various interpersonal communication activities and events. **Education:** Kindergartens and schools collaborated with Health Centres to organize celebrations around campaign themes. School children and kindergarteners prepared various performances. Sixteen pilot schools in Ferghana Oblast introduced new approaches to health lessons and were actively involved in the campaigns. **(Other) ZdravPlus staff:** developed health lessons on campaign topics, based on the key messages of the campaign, and trained teachers to conduct these lessons in grades one through eight. Introduced new approaches to health lessons. **Community:** active involvement in the implementation process and cooperated with Health Centres, rural clinics, and NGOs to organize interpersonal communication events.

### Local Authorities

1) kicked off each campaign with a launch ceremony in Ferghana City - the administrative centre of Ferghana Region, and also in rural areas. 2) The Government of the Ferghana Region and authorities in rural areas supported the launch ceremonies by providing venues and making speeches, giving great significance to the events. 3) Issued necessary orders to support implementation of the campaigns that opened in the summer months—"There is No Place for Anemia" and "Stop Diarrhoea"—featured outdoor opening ceremonies held in conjunction with a health fair. **NGOs:** Two NGOs, Unsinoy and the SVP Association, conducted “Healthy Food Festivals” as part of their public education activities for the anemia campaign. Another NGO, Navbahor, was responsible for setting up health booths at one of the largest bazaars in Ferghana Oblast to distribute IEC materials and counsel shoppers on health topics during campaigns. They also provided health information over the bazaar loudspeaker systems. Navbahor also conducted seminars for visiting nurses on how to prevent and treat ARIs at home, helping the nurses better communicate messages to the population. NGOs Esculap, Edem and others conducted activities to support the campaigns. **National and local TV, radio, newspapers:** supported the campaigns by providing free air time to broadcast soap operas, TV and radio spots, and placing newspaper articles and advertisements free of charge.

### Description of action/objectives

The large-scale health promotion campaigns covered the issues of indoor air pollution, water and sanitation, food contamination in the context of prevention of diarrhoeal diseases and ARIs. The main objectives were to:

- increase the percentage of the population knowing how to properly care for a sick child at home;
- help the public to take responsibility for its own health; and
increase population awareness of the IMCI danger signs.

Planning and Implementation

MECHANISMS USED

The development of each campaign followed the following steps:

- the identification of key IMCI messages for mothers/caretakers, based on IMCI materials and algorithms;
- a review of existing research, supplemented by conducting additional formative research to assess the population’s knowledge and attitudes on the selected health topics, their current practices, traditional beliefs, the terminology used by the population as well as sources of information on the selected health topics;
- a blending of the key IMCI messages with the results of the research to identify objectives for each campaign, key messages and target audiences. These were discussed and approved by an expert advisory committee;
- development of campaign materials, such as radio and TV products, newspaper articles and advertisements, brochures and posters, using the key messages to achieve the campaign objectives. These materials were pre-tested with the population for understanding and appropriateness, as well as reviewed and approved by the campaign advisory committee and the Ministry of Health (MOH), before going into production;
- production of the materials, followed by final approval from the campaign advisory committee and the MOH; and
- campaign launch and implementation over a six-week period.

DESCRIPTION OF ACTION/IMPLEMENTATION

The large-scale health promotion campaigns consisted of:

- use of mass media as the foundation for many creative interpersonal communications activities and repetition of key messages, both in entertaining format though soap operas, and more directly through educational TV and radio spots;
- provision of brochures and posters as well as newspaper articles and advertisements to reinforce key messages;
- a launch ceremony in Ferghana City and in 16 rural districts of Ferghana Oblast, bringing together health educators and with distribution of the new materials, discussion of the key messages and an opportunity to share ideas with others;
- a theatre troupe that toured all rural districts of Ferghana with a live drama on anaemia/nutrition one year and on diarrhoea the next, working hand-in-hand with health centre staff who collected people for the event and then facilitated discussions after the drama, to help people understand the key messages;
- distribution of IEC materials by PHC staff in their clinics and communities; seminars for the public and counselling of caretakers on use of the mother’s card conducting health fairs with games, puppet shows and skits in public places, reaching hundreds of people; and
- School children and kindergarteners prepared skits, songs, dances and poems covering key messages of the campaigns.

NOVELTY OF ACTION

The "edutainment" approach was something new for Uzbekistan that had not been used before, therefore attracted public attention and considerable media interest.

Evaluation/ Impact

The campaigns were effective in reaching the population, both through mass media and through interpersonal communications. Eighty-three percent of the Ferghana population reported that they received health information through television in 2002, a significant increase over the 62 percent in 2001. There was an even bigger increase in the proportion getting information through radio: 18 percent in 2001 and 41 percent in 2002. Newspapers were also highly effective, going from 25 to 38 percent. Interpersonal communications through primary health care workers jumped from 15 to 30 percent.

SUSTAINABILITY

ZdravPlus conducted interpersonal communications skills training for health workers in selected areas of Ferghana Region to build their capabilities to counsel clients better and to provide education in their communities more effectively. Nurses played an important role in these activities. Combined with the broad training of doctors in IMCI in Ferghana Region, this increased the amount of information reaching the public through interpersonal communications and improved the accuracy of this information.

ZdravPlus’ health promotion campaigns proved highly popular with the MOH, which has arranged for the TV materials to be broadcast nationwide. Building the interpersonal communications skills of health workers was a lengthy undertaking and the project will not even be able to complete that task in Ferghana Region—let alone in other parts of the country. It is hoped, that these efforts built capacity for community mobilization that is the hallmark of true Community IMCI. The ZdravPlus
Health Promotion team works closely with Ministry of Health Institute on Health staff to build up their capacity in designing and implementing information, education and communication interventions such as these health promotion campaigns.

**Lessons learned**

**KEY FACTORS LEADING TO SUCCESS**

- A team of talented communicators, working in collaboration with IMCI experts, contributed significantly to the development of materials that proved attractive, understandable and successful with the public, as well as providing technically accurate information.

- The link between health education and clinical training on IMCI, so that health workers trained in IMCI were familiar with the messages of the health promotion campaigns. The ability to focus resources on one oblast was also important, enabling the project to reach virtually every household through a variety of different media.

- Political support provided by the MOH and Oblast officials was also invaluable in involving health workers throughout the Oblast and attracting media attention to the campaigns. The doctors, nurses, midwives and health educators of Ferghana who invested their time and energy in promoting IMCI messages and providing services following IMCI protocols were invaluable.

**CHALLENGES DURING PLANNING/IMPLEMENTATION**

- Since IMCI targets five health problems in an integrated manner it was difficult to effectively communicate messages to the population on so many topics at one time.

- Increasing awareness of the IMCI danger signs—when a child should be taken to a health worker immediately—presented a particular challenge, since there are nine danger signs, which is a large number to promote in a short period of time.

**IF DONE AGAIN, WHAT WOULD BE DONE DIFFERENTLY?**

Nationwide broadcasting from the beginning.

**IMPORTANT ASPECTS TO BE CONSIDERED FOR FUTURE PLANNING**

Public knowledge and behaviour does not change as a result of a year on-going effort, it takes many years of repeating information in different ways, though different media. This project was a good start, but much more effort is needed to improve caretakers’ practices with respect to childhood illness.

**HELPFUL TOOLS**

Soap operas, educational TV, Radio spots, brochures, posters, newspaper articles, advertisements, theatre, information materials, games, puppet shows, skits, songs, dances, poems.

**Contacts**

Name: Farruh Yusupov  
Address: ZdravPlus/Central Asia Quality Health Project  
16 Bozbozor Kochasi  
Tashkent 700007, Uzbekistan  
Tel.: +998 71 169 2211  
+998 71 169 2212  
+998 71 169 1491  
Fax: +998 71 169 1492  
E-mail: farruh@zdravplus.uz  
URL: http://www.zplus.kz/UZ.htm
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Bosnia and Herzegovina  | Multiple Cluster Indicator Survey (MICS) covering Education, Water and Sanitation, Child Malnutrition, Low birth weight, Immunization Coverage, Diarrhoea, Integrated Management of Childhood Infections (IMCI) Initiative, HIV/AIDS, Contraception, Prenatal Care, Assistance at Delivery, Birth registration, Orphan hood and Living Arrangements of children, Child Labour | Household Survey on Women and Children 2000 | A Multiple Cluster Indicator Survey (MICS) was carried out to provide up-to-date information for assessing the situation of women and children in the Federation of Bosnia and Herzegovina at the end of the decade for future planning. This survey provided data needed for monitoring progress toward the goals established at the World Summit for Children. It also contributed to the improvement of data and monitoring systems in the country with the objective of strengthening technical expertise in the design, implementation and analysis of such systems. | Name: Osman Slipićević (Survey Coordinator)  
E-mail: osmana@bih.net.ba  
URL: http://www.childinfo.org/MICS2/newreports/bosniaherzegovina/bosnia.htm |
| Bosnia and Herzegovina  | Survey on health, health behaviour and factors that affect children's health | Health Behavior in school-aged children 2002 | In autumn 2002, a children’s health behaviour survey was carried out among 11, 13 and 15 years old pupils in 6th and 8th grade from 65 randomly selected schools in the Federation of Bosnia and Herzegovina. The survey was based on the WHO Health Behaviour in School-aged Children (HBSC) protocol, representing a methodological framework for school-based surveys where data are collected by means of self-administered questionnaires in class. The results of the survey will be used as a foundation for future health monitoring system in the country and to influence the development of effective health education and health promotion policy, programmes and practice targeted at young people. | Name: 1) Aida Pilav  
2) Jelena Ravlija  
E-mail: 1) dir@bih.net.ba, aida.pilav@gastrosa.net  
2) zzjz@cob.net.ba |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Bosnia and Herzegovina       | Multiple Cluster Indicator Survey (MICS)                             | Republika Srpska Multiple Indicator Cluster Survey 2000 (RS MICS 2000) | This research looked at the health status of women and children as well as socioeconomic factors. It was part of an assessment of progress in achievement of planned goals with programmed care for these populations and for a planning of new actions. The results contributed to continuous quality improvement of data related to public health, and development of a health information system. | Name: Amela Lolić  
Address: Primary Health Care Centre Public Health Institution “Dom Zdravlja” Zdrave Kordė bb 58 000 Banja Luka Republic of Srpska  
Tel. No.: +387 58 23 14 68  
Fax No.: +387 58 23 16 68 |
| Bulgaria                     | ETS and children: This study aimed to show the negative health effect of ETS on the health conditions of preschool aged children. | Environmental tobacco smoke and health risk in preschool-aged children | A cross-sectional ETS prevalence study of a representative sample of 1000 children aged 4-7 years from 15 randomly selected kindergartens in Sofia was carried out. Information on lifetime exposure to household ETS, exposure to maternal smoking in utero and characteristics of the housing were obtained from parents of children.  
Case control study of 200 children (100 exposed and 100 non-exposed to ETS, matched by age, sex, household characteristics and living conditions). Parents reported on respiratory symptoms and morbidity based on wheezing, cough, upper respiratory infection, or pneumonia in the last 12 months and chronic bronchitis or physician-diagnosed asthma at any time. A medical check-up and anthropometric measurement of the children were also conducted and spirometric parameters and urine cotinine levels measured. | Name: Hristina Mileva  
Address: State Health Control, Health Promotion and Diseases Prevention Ministry of Health Sveta Nedelya sq. 5 Sofia 1000, Bulgaria  
Tel. No.: +35 92 93 01 269  
Fax No.: +35 92 988 34 13  
E-mail: hmileva@mh.government.bg |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Commission</td>
<td>Noise</td>
<td>RANCH - Road traffic and Aircraft Noise exposure and children’s cognition and health (UK, Sweden, the Netherlands, Spain)</td>
<td>1) 4 epidemiological field studies on chronic exposure from road and aircraft noise, conducted in The Netherlands, Spain, Sweden and the UK; 2) 2 quasi-experimental psychological field studies, conducted in Sweden and the UK; 3) 2 biomedical laboratory studies on acute noise exposure, conducted in Sweden and the UK; 4) a test battery for child cognitive function for children, a health evaluation model for children, exposure effect relationships for chronic noise exposure and cognitive function and health, psychoacoustical models for 24 hour noise exposures, exposure effect relationships and children’s psychological restoration and sleep and policy recommendations based on pan-European database applicable to the EU directive on ambient noise</td>
<td>URL</td>
</tr>
<tr>
<td>France</td>
<td>Lead</td>
<td>Childhood lead poisoning</td>
<td>Research studies on the relationship between housing and childhood lead poisoning. Risk analysis on drinking water and wall-paints in houses built before 1948. Screening of blood lead levels of children from 0-6 years of age.</td>
<td>Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Address</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tel. No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>URL</td>
</tr>
<tr>
<td>Country</td>
<td>Topic</td>
<td>Title</td>
<td>Description</td>
<td>Contact info</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
</tbody>
</table>
| Germany | Environmental survey for children               | The German Environmental Survey for children (GerES IV) as part of the National Health Interview and Examination Survey for children and Adolescents | Data on the health situation and the burden of environmental pollutants in children from 3 to 14 years of age are collected to analyze and document the extent, distribution and determinants of German children’s exposure to environmental pollutants and to discover links between environmental exposure and health. Main objectives of the survey are to evaluate of the relationship between respiratory symptoms of allergies and mould spores, house dust mites and pet allergens; irritation of eyes and the respiratory system caused by formaldehyde other aldehydes or total volatile organic compounds (TVOC); the impact of non-occupational noise on hearing loss, stress and sleep disturbances; and the connection between nickel, scents or biocides and contact allergies. | Name: 1) Markus Steiner 2) Bärbel Kurth  
Address: 1) Umweltbundesamt (Federal Environmental Agency), Corrensplatz 1 14195 Berlin, Germany 2) Robert-Koch-Institut Postfach 65 02 61 13302 Berlin, Germany  
Tel. No.: 1) +49 30 89 03 1715 2) +49 30 454 73101  
Fax No.: 1) +49 30 8903 1830 2) +49 454 73181  
E-mail: 1) Markus.steiner@uba.de 2) kurthb@rki.de |
| Germany | Health effects of environmental pollution from industrial sites | Epidemiology of Children’s Health near Industrial Sites in North Rhine Westphalia, Germany | The study evaluates the health impact of industrial environmental pollution on children at the age of school entry and their mothers. | Name: Diana Hein  
Address: Ministerium für Umwelt, Naturschutz, Landwirtschaft und Verbraucherschutz des Landes Nordrhein-Westfalen Schwannstrasse 3 40476 Düsseldorf, Germany  
Tel. No.: +49 211 4566 589  
Fax No.: +49 211 4566 417  
E-mail: Diana.hein@munlv.nrw.de |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Germany | Dioxins and toddlers | Health Impact of Environmental Dioxins on Toddlers Development in the City of Duisburg, North Rhine Westphalia, Germany | An epidemiological cohort study to examine the relationship between pre- and postnatal exposure to dioxins and dioxin-like compounds on neurological and neuropsychological development (tested by 'Neurological Optimality Score'-NOS, 'Fagan-Test' and 'Bayley-Scales') of children from birth to 18 months of age. | Name: Diana Hein  
Address: Ministerium für Umwelt, Naturschutz, Landwirtschaft und Verbraucherschutz des Landes Nordrhein-Westfalen Schwannstrasse 3  
40476 Düsseldorf, Germany  
Tel. No. +49 211 4566 589  
Fax No. +49 211 4566 417  
E-mail: Diana.hein@munlv.nrw.de |
| Germany | Hazardous Chemicals | Sentinel Health Departments in Baden-Württemberg | An environmental health surveillance combining an exposure surveillance and an outcome based surveillance. The exposure surveillance consists of a biomonitoring program of persistent chemicals like heavy metals and chlorinated organic compounds and collection of data on outdoor and indoor air pollution. The outcome based surveillance consists of a parents questionnaire on respiratory tract diseases and allergies, a lung function test and of the determination of specific IgEs in the blood of the children. | Name: Bernhard Link  
Address: Landesgesundheitsamt Baden-Württemberg (State Agency for Public Health) Wiederholdstrasse 15  
70174 Stuttgart, Germany  
Tel. No. +49 711 18493 09  
E-mail: link@lga.bwl.de |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Germany | Noise from traffic  | Traffic noise exposure and stress in children                        | A pilot study was performed to investigate the degree of exposure of children (age 9-11 years) to traffic noise as well as stress and annoyance by giving out a questionnaire (“traffic counting”). Home visits and visual inspections were carried out, according a checklist, to obtain information on type and age of home, size of the dwelling, tightness of windows and surrounding streets. Noise measurements were done outside of homes. Stress hormone excretion was measured in urine and in saliva (collected over 2 days in the morning, noon and evening). A questionnaire on annoyance (the children were asked how much they were disturbed by traffic noise in their homes) was administered as well as parent questionnaires regarding the health of children. | Name: Snezana Jovanovic  
Address: Landesgesundheitsamt (State Agency for Public Health) Baden-Württemberg Wiederholdstrasse 15 70174 Stuttgart, Germany  
Tel. No.: +49 711 18 493 10  
E-mail: jovanovic@lga.bwl.de |
| Ireland | Passive Smoking      | 'Smoking Monitors': Smoking exposure in a sample of school aged children | 1) Biological monitoring of cotinine by sampling saliva; 2) questionnaire designed to capture data on household smoking, the child's smoking status and a subjective assessment of passive smoking exposure locations                                                                                                                                                                                                                   | Name: Éilís Gilvarry  
Address: Environmental Health Unit Department of Health and Children Hawkins House Dublin 2, Ireland  
Tel. No.: +35 30 16 35 477  
Fax No.: +35 31 635 4552  
E-mail: Eilis_gilvarry@health.irlgov.ie |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Italy       | Asthma and Allergy     | Changes in the prevalence of asthma and allergies among Italian children                                                             | SIDIRA is the Italian extension of the phase one ISAAC (International Study on Asthma and Allergy in Childhood). It is an Italian Study on Respiratory Diseases in Children and Environment composed of two separate studies: A Prevalence study of the distribution of asthma, respiratory symptoms and of known or suspected risk factors among a wide sample of 40,000 6-7 year-old children and 13-14 year-old adolescents in northern and central Italy; and a correlation study of the relationship between environmental level of urban air pollutants (TSP, NO2, SO2) measured by 29 highly standardized sampling stations and respiratory disorders in 10,000 children from schools close to the sampling sites. | Name: Francesco Forastiere  
Address: Dipartimento di Epidemiologia, ASL Roma E  
Via Santa Costanza 53  
00198 Roma  
Tel. No.: +39 06 83060484  
Fax No.: +39 06 83060463  
E-mail: forastiere@asplazio.it |
| Macedonia   | Lead                   | Lead Impact from the ambient air and evaluation of the health status of the child population                                            | Multidisciplinary study to assess the environmental health impact of lead on schoolchildren (10 years of age)                                                                                                                                                                                                                     | Name: Municipality: Veles and V. Ivankovci  
School: Elementary school 'Vasil Glavinov' and 'Stojan Burcevski' |
| Macedonia   | Nutrition              | Multiple Indicator Cluster Survey in the Republic of Macedonia with Micronutrient Component                                             | Measuring the indicators envisaged by the MICS survey, nutritional status of mothers and children, micronutrient deficiencies and evaluation of feeding patterns of infants and young children by 1) administration of a questionnaire, 2) physical measurements of children under 5 (weight and height, or length, clinical assessment of rickets signs and vision impairment) and their mothers (weight, height, clinical assessment of thyroid size) and 3) biochemical assessment of micronutrient status (serum haemoglobin in women and children, serum ferritin, serum retinol and serum alkaline phosphatase in children) | Name: Ministry of Health/ UNICEF  
Address: Vodnjanska, bb  
1000 Skopje Former Yugoslav Republic of Macedonia  
Tel. No.: +389 91 147 147  
Fax No.: +389 91 113 014 |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| **Macedonia**| Noise               | Cognitive-behavioural disorders at school children in noisy urban environments | Pilot study to investigate noise exposure of school children (10-11 years of age) by measuring noise levels in school and residential environments, use of psychological instruments for children (Coner’s questionnaire) to determine anxiety as a stress-response, administration of questionnaire to teachers about cognitive-behavioural disorders in school children | Name: Ministry of Health  
Address: Vodnjanska, bb  
1000 Skopje Former Yugoslav Republic of Macedonia  
Tel. No.: +389 91 147 147  
Fax No.: +389 91 113 014 |
| **Poland**   | Endemic Goiter      | The prevalence of endemic goiter in children and adolescents         | Population-based bio-monitoring and surveillance program, identification of children (age 6-13 years) at risk. Secondary prevention of endemic goitre incidence in Poland, especially in Lower Silesia Province.  
A clinical multicenter study was also performed in a group of pregnant women from different regions of Poland and in newborn children. | Name: Teresa Zak, Renata Wasik, Rafal Poreba  
Address: Wroclaw Medical University  
Department of Internal Medicine  
Occupational Diseases and Hypertension  
Pasteur 4  
50-367 Wroclaw, Poland |
| **Portugal** | Child safety restraints injuries | Reward facing child restraint system use according to children’s age | Survey to quantify the use of reward-facing and forward-facing child restraint systems according to the age of the children (0-15 months) and relate information to child restraint system dimensions and marketing strategies. | Name: José Pedro Dias  
Address: Associação para a Promoção da Segurança Infantil  
Villa Berta, 7 - 1’dto  
1170-400 Lisboa, Portugal  
Tel. No.: 21 887 01 61  
Fax No.: 21 888 16 00  
E-mail: josedias@apsi.org.pt |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Contact info</th>
</tr>
</thead>
</table>
| Romania                       | General Environmental Health and Socioeconomic situation              | Children and youth; the state of health in relation to environmental factors | Evaluation of the environmental conditions in the teaching units and of pupil’s and student’s state of health | Name: Ionel Iosif  
Address: Ministry for Protection of Natural Resources and Environment, Directorate of Forests  
Tel. No. +381 11 54 38 68  
Fax No. +381 11 54 38 68  
E-mail: ekabin@ekoserb.sr.gov.yu |
| Serbia and Montenegro         | Water and Sanitation, Hygiene, Indoor and Outdoor Air Pollution, Mobility and Transport, Waste Management, Hazardous Chemicals | -                                                                   | Description of general environmental health and socioeconomic situation of the population of Serbia and Montenegro. |
| Slovakia                      | Arteriosclerosis prevention in children                              | "Healthy children in healthy families” Primary prevention of arteriosclerosis in children. National Study aimed at risk identification. | Examined total cholesterol levels, blood pressure, pulse, anthropometrical measurements, life style characteristics, family and personal history and other important data. | Name: M. Datelova  
Address: State Public Health Institute of Banska Bystrica  
E-mail: fabianova@szubb.sk |
| Sweden                        | Indoor/Outdoor Air Pollution and health effects                       | The National Environmental Health Study of Swedish children           | Consisted of questionnaires on various outdoor- and indoor-exposures focusing on infections, allergic diseases, learning difficulties, stress, disturbances, annoyance and perceived health | Name: Magnus Wickmann (Associate Professor and Paediatrician)  
Address: Department of Environmental Health at Occupational and Environmental Health, Karolinska Hospital, SE 171 76 Stockholm, Sweden  
Tel. No. +468 5177 7912  
E-mail: Magnus.wickmann@smd.sll.se |
<table>
<thead>
<tr>
<th>Country</th>
<th>Topic</th>
<th>Title</th>
<th>Description</th>
<th>Name</th>
<th>Address</th>
<th>Tel. No.</th>
<th>E-mail</th>
</tr>
</thead>
</table>
| Sweden    | Indoor and Outdoor Air Pollution, Noise, Dietary Intake, Hazardous Chemicals | Environmental Health Study of Swedish children | This environmental Health Study assessed children’s environmental exposures and their overall health by interview, medical examination (lung function, blood pressure and atopic constitution) and a questionnaire to parents of children (8 moths, 4, 8 and 12 years of age) to provide a basis for priorities and future decisions within the field of environment and health. The results will form an important part in the follow-up, evaluation and revisions of the national environmental quality objectives. The report is targeted at authorities responsible for environmental health protection at the local, regional and central levels, as well as at stakeholders within the health care system, including Departments of Environmental Medicine. It also addresses sectors whose activities play a part in the prevention of environmental health risks and environmentally related ill health, and it will be of value for the general public with an interest in this field. | 1) Marie Becker  
2) Dr. Katarina Victorin  
3) Dr. Magnus Wickmann | 1) National Board of Health and Welfare  
Division of Environmental Medicine  
SE 106 30 Stockholm, Sweden  
2) The Institute of Environmental Medicine  
Karolinksa Institute  
Box 210  
SE 171 77 Stockholm, Sweden  
3) Department of Occupational and Environmental Health  
Karolinska Hospital  
SE 171 76 Stockholm, Sweden | 1) +468 555 532 43  
2) +468 728 75 32  
3) +468 5177 79 12 | 1) Marie.becker@sos.se  
2) katarina.victorin@imm.ki.se  
3) magnus.wickmann@smd.sll.se |
| Turkey    | Hazardous Chemicals                         | Heavy metal pollution related to traffic in Ankara | This study aimed at defining heavy metal contamination, mainly by Pb, Cd, Ni and Zn in soil and dust samples taken from parks, child play areas and school gardens near to main arteries from East to West and South to North in Ankara. To observe the seasonal changes in the concentration of heavy metals, samples were taken in autumn and spring covering up the living environment of 100,000 children.                                                                                                                                       |                    |                                                                                             |                   |                                             |
Increasing hazards where European children live are raising concern about the effects of the deterioration of the environment on their health. Children have a special vulnerability to a number of environmental risk factors and their specific exposure patterns put them at risk for higher exposures.

This draft presents a collection of children’s health and environment case studies on actions or implementation experiences carried out by the member states of the WHO Regional Office for Europe to protect children from environmental risk factors. As this is a work in progress, more case studies will be collected with the final aim to facilitate the sharing of successful experiences among Member States. It is foreseen that these and new case studies will be made available on the CHE website in the near future.