



**ENVIRONMENTAL HEALTH PROJECT**

# **ACTIVITY REPORT**

**No. 36**

Summary of EHP Activities under the  
“Promotion of Private Health Markets” Project  
Slovakia, Poland, and Romania

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## ACRONYMS

AIHA	American International Health Alliance
CEE	Central and Eastern Europe
CME	continuing medical education
CMR	Center for Medical Research, Health Services, and Management (a regional office of the Romanian Ministry of Health)
EHP	Environmental Health Project, funded by USAID
ENI	USAID Bureau for Central and Eastern Europe and the Newly Independent States
EU	European Union
<i>gmina</i>	an administrative unit of local governments in Poland
GP	general practice (physicians)
ISO	International Standards Organization
JU SPH	Jagiellonian University School of Public Health, Krakow, Poland
MOE	Ministry of Environment
MOH	Ministry of Health
MOU	Memorandum of Understanding
PCO	photochemical oxidant pollution or ozone
SanEpi	Sanitary Epidemiology station(s), Poland
SK	Slovak Krowns Exchange rate SK325 = US\$1
SPH	School of Public Health
SZU	State Institute of Health (Martin, Slovakia)
SSZU	Specialized State Institute of Health (Banska Bystrica, Slovakia)
UMP	University of Medicine and Pharmacy (Cluj, Romania)

USAID U.S. Agency for International Development  
WHO World Health Organization

## EXECUTIVE SUMMARY

At the request of USAID's Bureau for Europe and the Newly Independent States (ENI), Division of Health and Population, the Environmental Health Project (EHP) provided technical assistance and training to help address the health consequences of environmental pollution, much of which is associated with the ill-planned and uncontrolled industrialization which occurred in Central and Eastern Europe during the communist era. As a component of the USAID regional "Promotion of Private Health Markets" project, EHP conducted three simultaneous sets of activities in Poland, Romania, and Slovakia from 1995 to 1997.

To begin its planning, an EHP team, working with a staff member from the then ENI/HR/Health and Population Division, conducted scoping visits in Poland, Slovakia, and Romania between January and March 1995. The purpose of these trips was to determine, in conjunction with potential local partners and USAID offices in the region, the best way to focus activities in each country to address environmental health problems, with some policy reform impacts.

The interventions that were selected were development (in Poland) and reform (in Romania) of university teaching programs in environmental health, and strengthened outreach capacity and risk communication methods for state health agencies and municipal governments in Slovakia to address pollution problems affecting citizens' health. EHP provided training through a series of workshops in each country, sent two individuals to a training program on environmental health sponsored by the World Health Organization, and funded a study tour/information exchange tour to the United States for partners from the three countries. EHP provided technical assistance on various topics, ranging from ambient air pollution programs (for heavy metals, ozone, and particulates), to radon gas abatement and ISO 14000 standards, to health promotion and interactive adult teaching methods in Poland. A new Environmental Health Certificate Program is being established, and a new module on environmental health has been added to the Health Promotion specialist course as a result of

EHP's work. Fifty percent of the environmental health curriculum for medical students in Cluj, Romania, has been revised and brought up to date with current international standards. Populations in four cities in Slovakia have benefitted from the health promotion and risk communication work led by EHP and its partners—the state health agency and municipal governments.

The results of the work undertaken in this activity were disseminated at an international health policy conference sponsored by USAID, "Realizing the Vision of Health Reform: Health Sector Metamorphosis," held in Bratislava 18–21 March 1997; at a separate national-level workshop in Slovakia; and during two information exchange and study tours in the United States.

Support for health reform efforts can take many shapes. Curriculum development and reform efforts targeting environmental and occupational health in Poland and Romania represent sustainable interventions which can result in continual improvements as each generation of physicians and other health professionals passes through medical training programs in Krakow and Cluj. The skills in environmental health promotion developed by local agencies and the linkages developed in Slovakia between local SZU and SSZU offices, municipal governments, and citizens have shown each group that meaningful health interventions can be developed and implemented through such cooperation. The activities have created a model of cooperation in a democratic atmosphere that can be emulated by others.





# BACKGROUND OF EHP PROGRAMS IN CENTRAL AND EASTERN EUROPE

## 1.1 Environmental Health Issues in the Region

Since the late 1980s, several authors have chronicled the high level of environmental pollution and contamination found in Romania, Poland, and Slovakia (e.g., Hertzman 1990a and b, World Resources Institute 1992, World Bank 1992, Hertzman and Ayres 1994, Ackermann et al. 1994). A recent World Bank report (Hertzman and Ayres 1994) and the draft *Environmental Action Programme for Central and Eastern Europe* (Ackermann et al. 1994) identify a set of environmental “hot spots” in each country. Industrial pollutants generated in these three countries have resulted in severe illness and disability among infants and children, adolescents, workers, workers’ families, and the elderly. Some regions are so severely contaminated that it may take decades before the environmental clean-up is complete, and exposure risks from some pollutants (e.g., lead in soil and food chains, nitrates in groundwater) will probably remain for several generations to come.

The most common environmental health problems for Central Europeans stem from exposure to three categories of pollutants (Hertzman and Ayres 1994): lead in air and soil; airborne dust; and sulfur dioxide and other gases. Pollutants of secondary concern in the region are nitrates in drinking water; chemical contaminants in food; and heavy metals, pesticides, radionuclides, and waterborne pathogens in drinking water (Hertzman and Ayres 1994).

One of the first priorities for each of the national governments is to identify the pollutants of major concern and reduce exposure of the population by establishing epidemiological surveillance systems within the health care system. Another task for each government has been to develop mechanisms within the health care system

to track and recover costs resulting from industrial pollution.

Similarly, the populations in the region need education and incentives to change their personal behaviors in order to reduce their exposure to pollutants from industry (in air, soil, water, and food in the workplace, home, marketplace and open spaces), naturally occurring pollutants (e.g., radon), and health risks from personal choice (e.g., tobacco smoke).

As the health care systems in these countries continue to decentralize, new mechanisms are needed to capture and recover the costs of environmental illnesses. And as the epidemiological transition continues in Central Europe, health care systems need tools to diagnose and treat individuals and populations with pollutant-related illnesses and disabilities, as well as the classical biological agents of disease.

## 1.2 USAID’s Actions to Address Environmental Health Problems

In the early 1990s the governments of Romania, Poland, and the Slovak Republic requested the assistance of USAID to help improve the capacity of the health care systems in each country. The governments also sought USAID’s help in developing policy changes in government and industry to identify and attribute the costs of illness and disability which arise from polluting industries and the environmental hazards they create. Furthermore, the governments sought assistance, via education and financial incentives, to encourage changes in personal health risk behavior which could reduce some of the costs of treating preventable diseases and disability.

At the request of the USAID Bureau for Europe and the Newly Independent States (ENI), Division for Health and Population, the

Environmental Health Project (EHP) provided technical assistance and training to help address the health consequences of environmental pollution in numerous regions of the three countries, much of it associated with ill-planned and uncontrolled industrialization which occurred during the communist era. This assistance was provided through a larger regional USAID-funded project, "Promotion of Private Health Markets," which is addressing policy and institutional issues in the health sector in a number of countries in Central and Eastern Europe. As a component of that large project, EHP conducted three simultaneous sets of activities in Poland, Romania, and Slovakia from 1995 to 1997, which this report summarizes.

### **1.3 Overview of EHP's Work in the Region**

To begin its work and planning, EHP sent technical assistance teams, with a staff member from ENI, to conduct scoping visits in Poland, Slovakia, and Romania in January–March 1995. The purpose of these initial trips was to determine, in conjunction with potential local partners and USAID offices in the region, the focus of activities to address environmental health problems, with some policy reform impacts. Partners and project activities were selected in each of the three countries. In Poland and Romania, universities with medical training programs were identified as local partners. In Slovakia, the partners were the state health agencies and municipalities. Since EHP was attempting to work with multiple partners and the activities required continued collaboration over a fairly long period of time, a Country Coordinator was hired in each country to monitor activities and keep EHP apprised of progress and resource needs.

The interventions that EHP used included development (in Poland) and reform (in Romania) of post-graduate level teaching programs in environmental health, and strengthened outreach capacity and risk communication methods for state health agencies and municipal governments in Slovakia to address pollution problems affecting citizens' health. EHP provided training through a series of workshops in each country,

sent two individuals to a WHO/Europe training program in environmental health, and funded a study tour/information exchange tour to the United States for partners from each country. EHP provided technical assistance on topics ranging from ambient air pollution programs (for heavy metals, ozone and particulates), to radon gas abatement and ISO 14000 standards, to health promotion and interactive adult teaching methods. A new Environmental Health Certificate Program is being established in Poland, and a module on environmental health has been added to the Health Promotion Certificate Program offered as a result of EHP work. Fifty percent of the environmental health curriculum for medical students in Cluj, Romania, has been revised and brought up to date (Prof. I. Bocsan, personal communication 1997). Populations at risk in four cities in Slovakia have benefitted from the health promotion and risk communication work led by EHP along with the state health agency and municipal government partners. In each country, a number of policy issues were identified.

The results of the work of EHP and its partners were disseminated at a USAID-sponsored international health policy conference, "Realizing the Vision of Health Reform: Health Sector Metamorphosis," held 18-21 March 1997 in Slovakia, at a separate national-level workshop in Slovakia, and during two information exchange and study tours in the United States.

### **1.4 Organization of the Report**

Following this introductory chapter, the situation addressed and program activities for

each country are described (Chapters 2, 3, and 4). The appendices give additional information for each country, including samples of materials produced, course content, and a list of other EHP reports (see Appendix A) which describe individual trips, intervention steps, and more detailed accounts of the process used.



## ACTIVITIES IN THE SLOVAK REPUBLIC

### 2.1 Background

In two recent World Bank reports (Hertzman and Ayres 1994, and Hertzman 1990a), hot spots of ambient air pollution and associated acute respiratory disease were identified in Bratislava, along with arsenic dust pollution in Zair nad Hronom. As well, eight energy plants, three ferrous and nonferrous metals plants, two refining and petrochemical plants, five organic and inorganic chemical plants, and six pulp paper plants seriously polluted neighboring communities. Slovakia also faced widespread contamination of rural drinking water with nitrates and an elevated number of cases of newborn methemoglobinemia.

The Ministry of Environment's report, "Strategy, Principles and Priorities for the Governmental Environmental Policy" (1993), noted that according to both environmental and health standards, several cities in Slovakia were "areas threatened and unfit for habitation": Bratislava, Trnava-Galanta, Horna Nitra, Stredne Pohronie, Kosice, and Stredny Zemplin.

USAID/Slovakia had noted that at least ten cities and towns could be considered environmental health hot spots: Bratislava, Zilina, Ziar nad Hronom, Prievidza, Kosice, Ruzomberok, Humennec, Sala, Krompachy, and Jelsava. The local Specialized State Institute of Health in Banska Bystrica noted the presence of elevated radon gas levels in homes in and around that city. This information set the stage for identifying local partners and projects.

#### *Initial Scoping Visit and Project Identification*

In February 1995, an EHP team met with Slovak health and environmental professionals. Officials interviewed noted that the overarching health issue in the country is the reduced life span of

Slovaks (5-7 years less) compared to other populations in Europe; Slovak men live to age 66.5 and women to age 75.3 on average (MOE 1993). Those public health professionals interviewed generally agree the reduced life span is due to a combination of (1) personal or lifestyle behaviors (smoking, diets high in saturated fats and salt, obesity, physical inactivity and limited physical exercise, underconsumption of antioxidant foods such as fresh fruits and vegetables, high rates of alcohol consumption in both men and women, and stress) and (2) exposure to environmental pollutants which can induce respiratory illnesses, intoxications, and malignant tumors, and contaminate breast milk, food, and drinking water.

About 53% of Slovakia's mortality is due to cardiovascular (heart and blood circulation) diseases, and 19% to malignant tumors. Deaths from malignant tumors are especially high in Bratislava (MOE 1993). The balance (28%) of mortality arises chiefly from injuries, respiratory diseases, biological agents of disease, poisonings, and suicides. Of these causes of death, chemical environmental pollutants contribute to malignant tumors, respiratory diseases, and poisonings; however, the evidence for these relationships is often lacking. Definitively proving links between environmental exposure in populations and adverse health outcomes is a rigorous scientific exercise, and confounding variables such as lifestyle factors are numerous and difficult to separate. Slovak health specialists are aware that new government policies require them to inform both workers and the public of their health risks and requested assistance as to how to go about presenting this information in ways which would bring workers and the community into the process of trying to reduce those risks. Thus health promotion and risk communication were seen as priority needs among health officials.

### *Purpose and Objectives*

The primary purpose established for the EHP activities was to support the Slovak Republic's health care system in addressing health problems related to environmental contamination and hazardous conditions in workplaces.

The overall objective of the activity was to strengthen individual and institutional capacity to assess environmental health promotion needs and to design, implement, evaluate, and sustain environmental and occupational health promotion activities in local communities and local industries.

### *Work Plan*

The work plan and scope of work for EHP technical assistance was completed in May 1995. It envisaged the establishment of working relationships with at least three suitable partner organizations in Slovakia; the introduction of environmental health promotion technologies to these institutions through a series of workshops which would be phased to help in the process of designing and implementing trial environmental health promotion projects, and the provision of technical assistance, as required, to support the implementation efforts. The schedule of activities was established as follows:

- # A start-up workshop in Slovakia in June 1995
- # A series of four training workshops to be conducted between September 1995 and October 1996
- # A final workshop and final report in December 1996
- # Up to three technical assistance visits between workshops to assist in program implementation issues.

## **2.2 Accomplishments and Results to Date**

### *Project Design*

After extensive discussions with potential partner institutions including the Ministries of Health and Environment in Bratislava; the National Center for Health Promotion; the Institute of Health Education; the Institute for Preventive and

Clinical Medicine, and several State Institutes of Health (SZUs), a Specialized State Institute of Health (SSZU), and Municipal Environmental Offices, it became apparent that interest at the national level was not strong. The central government, a nationalistic, ex-communist regime, seemed unwilling to cooperate with external aid agencies at the national level. Thus, the team identified working partners at district and municipal levels where stronger interest was expressed and where decentralization policies could be better supported.

The program eventually identified and worked with four partner institutions:

- # The district-level SSZU in Banska Bystrica
- # The local-level SZU in the city of Martin
- # The Environment Office in the Banska Bystrica City Hall
- # The municipal government of Trnava City

In addition, on a more informal basis, staff members from the central offices of the Ministry of Health, the Ministry of Environment, the Institute for Preventive and Clinical Medicine, and Jesenius University, Martin, attended one or more of the workshops.

During the start-up workshop (June 1995), three primary projects were identified and working groups were set up:

1. The Legislation Group (originally targeted for the Center for Health Promotion in Bratislava) identified a set of legislative and policy interventions to control ambient air pollutant emissions affecting the public in Banska Bystrica and Trnava. Activities in these two cities were later separated into two separate projects.
2. The Heavy Metals Group decided to address issues of exposure of community children and plant workers to heavy metals at a former military equipment plant in Martin. The program would work through the State Institute of Health (SZU) in that town. Ultimately the program within the plant was stopped by the plant management for security reasons; hence, the program addressed exposure of children in the community only.

3. The Radon Group addressed the issue of radon gas exposure in homes, led by the SSZU in Banska Bystrica.

#### *Training and Technical Assistance*

During the first training workshop (October 1995), EHP introduced participants to social marketing, environmental health promotion, and risk communication methodologies to be employed and worked with them to define interventions. The approach used a matrix methodology designed to assist in understanding who the target audiences were and what perceptions of the health issues needed to be addressed. After this workshop, the implementation groups each undertook a needs assessment study (formative research) with their intended target audiences.

During the second training workshop (January 1996), the EHP team reviewed the research undertaken by the three groups and helped them redefine their interventions; presented them with some sample technologies (and examples) for developing messages and communications materials and producing a communications plan and budget. Each group then agreed to review and revise its proposed interventions in accordance with the findings and to begin to develop messages and materials and finalize a communications plan and budget.

During the third training workshop (March 1996), the work undertaken by each group was reviewed in detail, and revised. Then participants moved onto issues of project launch, management, and monitoring.

The final workshop (October 1996) established the evaluation parameters that each program would use and assisted each team to develop evaluation methodologies for its program.

Four technical assistance visits were made, in October 1995 and May, July, and October 1996, to support the implementation efforts of each program. In addition extended trips were made during the training workshop sessions to allow for detailed technical assistance to be provided to each group before or after each workshop.

Throughout the program, linkages were created with other programs, in particular the WHO Healthy Cities Program, the European

Union PHARE Project, and Healthy Cities Project sponsored by the American International Health Alliance (AIHA).

#### *Summary of Results for Slovakia*

- # The **SZU in Martin** (a local public health surveillance and disease control unit) developed and disseminated a wide range of environmental health education materials, including brochures, posters and coloring books, to school teachers, children, and parents (see sample in Appendix B). Messages were developed from the research into existing knowledge and practices of parents in preventing children's exposure to contamination by heavy metals. Several sites, notably school vegetable gardens, were identified as sources of children's ingestion of contaminated dust, and remedial actions were taken. The message was that the city's children were at risk from heavy metal contamination from the local machinery plant, and specific ways to reduce their risk through personal actions were given: handwashing, sanitary fruit and vegetable preparation, children's play habits which contaminate hands with soil and dust. Seminars and workshops were also held with parents, teachers, and officials of the city government. Linkages were made with the WHO Healthy Cities Program.
- # The activities motivated the **Mayor and City Council of Trnava** to join the WHO Healthy Cities Program, to establish a Municipal Environment Office, and to set up a committee to formulate an environmental strategy. The committee is headed by the Mayor and includes representatives of the Ministry of Health structure (Trnava SZU), the Technical University, Trnava University, representatives of industry, the Red Cross, sports councils, school representatives, the Green Party, and community groups to coordinate the program. The committee has identified an agenda of several dozen environmental health issues or problems to be addressed (see Appendix C) and has allocated

a budget of 310,000 Slovak Krowns,\* of which SK200,000 will go to local groups to implement environmental health and environmental improvement activities.

In the first-ever experience in local intergovernmental cooperation and information-sharing, the new Municipal Environment Office worked with the local SZU to compile and present quantified data to the City Council regarding local cancer risks and air quality data. The Trnava team was the first to use professional multimedia displays (color transparencies, color graphics handouts, etc.) in presentations to the City Council (Appendix D). The city of Trnava has recently been accepted as a member of the WHO Healthy Cities Program. The committee is now looking at how to strengthen the community participation components of the program and has held a number of community activities, including an art competition and mass-media program with information for the general public (Appendix E, for example).

- # Before the EHP activity started up, the City Council of **Banska Bystrica** already had an **Environment Office** and had agreed to join WHO's Healthy Cities Project. However, no environmental health or risk reduction activities were being undertaken. EHP inputs helped the Environment Office staff to understand the steps needed to develop an environmental action plan and, with limited financial support, to produce a convincing presentation (including computer-generated charts of environmental data and design blue prints) to various committees and the City Council (see Appendix F, for example). Initially they were able to identify a set of environmental priorities including the need for improvement of degraded greenbelts and pedestrian walkways, reform of the public transport (bus) system layout to reduce local concentrations of NOx which exceeded national standards, and control of local air pollution point sources (especially coal-

heating in small businesses and apartment buildings).

EHP funding and technical assistance allowed for the production of a high quality presentation to the City Council and raised the standing of the Environment Office in the eyes of the Council. As a result the Council passed a series of legislative measures to address the three priority issues. These measures include regulations to combine tax incentives and increased fines to promote small businesses' conversion to cleaner forms of energy (i.e., convert from low-grade brown coal to natural gas or electricity); legislation to approve and budget for the green corridors project; and changes in the bus routes to reduce concentrations of NOx at the central bus depot.

The Environment Office supported these efforts through a sustained mass-media public information program and, once the program was approved, using direct mail to advise impacted companies and apartment owners of the tax incentives and increased fines relating to use of cleaner heating fuel. In addition the project has launched a community involvement program to gain support from companies and individuals for tree planting.

- # The **SSZU in Banska Bystrica**, one of three regional public health surveillance and disease control agencies in the country, mounted a comprehensive campaign to address residential radon gas pollution that includes problem assessment, campaign planning, development and field-testing of educational materials, evaluation, technical assistance to homeowners, and house remediation. Prior to the EHP program, the SSZU had been undertaking occasional long-term testing of radon gas in housing, but had never run a program based upon risk communication and consumer demand for such a service. To run the program this way required a shift in management emphasis from a compulsory system (where the state undertook both the testing and the remedial actions) to a consumer-based system where the agency's role was to create demand for the testing service and then for the homeowner to rectify the problem from his or her own resources,

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\* SK325 = US\$1.00

with technical assistance from contractors trained by the SSZU.

Discussions were held with the EHP team as to whether the provision of testing services could be undertaken through a privatized service. A feasibility study on this issue showed that it was impractical, at this time. Demand was nonexistent, and the size of the potential market unknown. In any case, SSZU (working with the Institute for Preventive and Clinical Medicine in Bratislava) had the available resources and equipment which would, otherwise, be unused. A demand-based system would preferably employ a short-term radon testing system, rather than the expensive six-month test system which the SSZU had been using. EHP worked with the SSZU staff to develop a short-term testing system which SSZU produced with its own resources. Fifty-six short-term test kits were supplied from the United States to assist the team in calibrating equipment. To date, 500 households have been notified through direct mail, supported by a mass-media program, of radon gas risk in their vicinity, and 95 homeowners responded and asked to have their homes tested. Of these, two homes were found to have radon exceeding threshold levels, and the homeowners were advised of remedial actions which could be provided by local contractors.

SSZU is continuing the program and intended to mail information to another 1,000 homeowners in the last quarter of 1996 and the first quarter 1997. By mid-1997, SSZU expected to have developed a sound methodology for radon testing and remediation and to be in a position to assess the need for such a service and cost out its effectiveness. The issue would then be to decide on the extent of the program and how best to target it to risk areas. The experience gained would then lead to the development of a broader-based program within the Banska Bystrica District of the SSZU and to transfer the skills and lessons learned to the two other regional offices of SSZU. In addition, SSZU gained invaluable experience in how health promotion programs can shift the emphasis from a "command"-based system to a

"demand"-based system within the context of preventive health activities, the responsibilities of the national SSZU and SZU systems.

#### *Study Tour and Visit*

The EHP team designed and submitted a study tour proposal to USAID/Bratislava, which was subsequently funded by the mission through a separate contract. In June 1996, three of the Slovak team members and the Country Coordinator undertook a two-week study tour in Washington, D.C., and Pittsburgh, meeting with EHP staff, local health departments and air pollution control districts, staff of national government institutions (EPA), and NGOs to learn more about health promotion methods to address environmental health problems in the United States.

#### *Development of Library Materials*

The EHP team gathered a wide range of environmental health and health promotion materials from the U.S., as well as books on social marketing and environmental health practices. These materials have been placed in a central library at the SSZU in Banska Bystrica for use by the local teams and for use in the future as general references. In addition, with the help of the Country Coordinator, material about the program and environmental health promotion methodologies was placed on the Worldwide Web at [www.healthnet.sk](http://www.healthnet.sk).

#### *Dissemination*

A final 2-day Dissemination Workshop was held in Banska Bystrica in February 1997 in association with the AIHA project. Attendees included 62 individuals from a wide range of institutions including State Health Institutes, municipalities, local and regional Environment Offices as well as universities active in public health. Attendees reported that the conference was very useful, particularly in developing interinstitutional contacts and in helping them develop ideas for future projects on environmental and environmental health issues. A copy of the

conference proceedings (in Slovak) is available from EHP (Report for the File No. 119).

### *Introducing Environmental Health Promotion into University Curricula*

As a result of the activities in Slovakia, three universities have expressed interest in developing curricula on environmental health, including health promotion, which would be taught by local agencies who collaborated in the activities. The University of Matej Bell in Banska Bystrica, the University of Trnava, and the School of Public Health and Jesenius University in Martin will be initiating programs.

## 2.3 Issues

- # *Politics and external support.* The director of the Center for Health Promotion in Bratislava, appointed in early 1996, refused to cooperate with the activity. It was reported to EHP that the director had canceled all working relationships with externally funded programs, including WHO and the EU. This lack of cooperation effectively halted activities planned by the Legislation Group in regard to national legislative issues. After discussions between the EHP team and local participants, however, ways were worked out to continue legislative action programs in the cities of Banska Bystrica and Trnava.
- # *Heavy Metals Group, Martin Plant.* EHP meetings with the Heavy Metals Group at the clinic which serves the plant, including an interview with a representative of the plant workers, unearthed a request list for support, which included documentation on standards for worker health and safety in similar U.S. plants as well as literature addressed to plant workers, a copy of ISO 14000 standards, and general support in producing local materials addressing present worker health and safety programs within the plant that are managed by the clinic. The EHP team provided the ISO 14000 documents and worked with the plant clinic team to help them improve their worker safety activities. This activity was stopped by the plant management for "security" reasons (the plant is apparently still

involved in the production of military tanks, as well as nonmilitary heavy machinery).

- # *Child health and Heavy Metals Group, Martin.* This group showed the least interest in taking up new technologies, preferring that the program simply give material support to a wide range of existing programs addressing many health issues in children, including the training of nurses and the medical profession and clinic-based testing of a very small cohort of 100 children for heavy metals contamination. In reviewing these proposed programs, the EHP team felt that the whole package did not reflect the objectives of the program sufficiently, in particular the preventive technologies which were being advanced. The proposed activities were too clinically based and traditional. This component was, therefore, dropped and the program in Martin restricted to a community-based heavy metals prevention program for children. However, at the request of the nursing school, EHP wrote up a summary of environmental health promotion methodologies which was introduced into the school curriculum (see Appendix G).
- # *Sustainability.* All four projects can be sustained with their own resources. Again, the sustainability of these activities is largely due to the fact that the approach has been transferred to the institutions and that the actual in-house costs of running the programs, and continuing them, are small. (Each of the projects was undertaken with seed money of about \$3,000.) In addition, each institution is exploring ways to expand the lessons from these programs into broader activities as well as sharing them with other institutions. The approach is now going to be taken up by at least three universities who will add environmental health promotion technologies introduced by the program into their curricula.

## 2.4 Lessons Learned

- # *Management.* All groups, in one way or another, experienced difficulties in grasping the new health promotion management technologies that were being introduced.

These agencies and individuals had, in the past, managed programs “on demand” from within their respective institutional structures and were unfamiliar with the concept of taking their own initiative to plan and develop their own projects. In addition, they were not accustomed to developing programs based on the perceptions and attitudes of the population itself. At the second workshop, one individual commented that this project gave participants a hands-on, practical methodology for “*putting democracy to work*” within the activities of their institutions, a point well worth making in regard to the impact of the program in Slovakia. However, the introduction of new approaches and new ways for team members to relate and work with each other led to a slower pace of project development than anticipated.

- # *Interinstitutional cooperation.* Cooperation between institutions was minimal at the start. Under the communist regime, environmental and health data were not published and were rarely shared between institutions. It took the team members considerable time to unearth reliable sources of data and then be allowed to share and publish the information. It took time to get the concept accepted that the public could make positive use of health and environmental information and act on it.
- # *A workable project approach.* The methods for developing, implementing, and evaluating a successful environmental health promotion program in Slovakia have been shown to work. In particular, all those engaged in managing their respective programs reported that the experience gave them substantial visibility and professional recognition; it has demonstrated that staff members, within institutions, can develop their own programs and then effectively “sell” them to their superiors. This has had significant impact in a country still undergoing the transition from a “command”-based method of working to one where personal initiatives can be fostered. Without a clear and disciplined methodology, successful demonstration would have been more difficult.

- # *Institutional outreach capability.* The EHP team found that it was important to provide considerable technical assistance to support institutions and individuals in reaching out to communities and communicating effectively about health risks and behavior change.
- # *The need for national dialogue.* The team found that it is necessary to engage in dialogue at the *national* level to encourage primary prevention policies and experiments (like those that the Slovak partners undertook) at the national level, as well as at the municipal and district level.
- # *Creating demand.* The team found there is a need to support development of demand-based preventive public health services where possible (e.g., the radon gas testing and control program model of the Banska Bystrica SSZU), as a way of mobilizing community support and widening government’s ability to create a dialogue with the community and address its health needs. The technique used was a visible illustration of “putting democracy to work” in prevention and public health.

# 3

## ACTIVITIES IN POLAND

### 3.1 Background

Poland, one of the largest countries in Central Europe, has widespread and numerous environmental health problems. Hertzman (1990b) concluded that the principal environmental threats to the health of the Polish people appear to stem from gases and airborne particulates, with health effects resulting from direct inhalation and human contact with contaminated soils. The World Bank (Hertzman and Ayres 1994) identified five specific regions, with 14 cities and towns, having serious environmental pollution problems. Ten of these 14 communities have environmental problems with epidemiologic links to human health problems (e.g., acute or chronic respiratory diseases, abnormal physiology, excess cancer deaths associated with air pollution, lead poisoning of children). Overexposure to lead among children is noted in 10 communities in Katowice Wojewodship. The Silesia and Katowice-Krakov areas have sites that are most seriously affected by air pollutants (sulfur dioxide, dusts, hydrogen fluoride) and lead in soil. Water pollution from chemical and biological agents is widespread throughout the country.

To determine the appropriate way to focus efforts to address these problems, an EHP team made an initial scoping visit to Poland January 25 to February 3, 1995. During the initial visit, a number of Polish institutions identified the following environmental health problem areas as potential candidates for collaboration with U.S. partners:

- # the lack of sufficient environmental health programs in southern Poland to train the cadre of present and future health professionals needed for environmental disease prevention and hazard remediation;

- # the need to develop and maintain the highest professional standards by increasing the number of continuing education courses in environmental health; and
- # the need to learn more about designing and implementing better applied health promotion programs, through collaboration of university faculty, environmental health scientists, public health educators, social scientists, and organizations representing affected communities.

Most environmental health problems in Poland are not addressed comprehensively; medical professionals have limited opportunities to develop skills in environmental and occupational health and health promotion. The Jagiellonian University School of Public Health (JU SPH), established seven years ago, has the opportunity to reach out to medical professionals and physicians working in southern Poland at Sanitary Epidemiological (SanEpi) stations, *gmina* (local government) health departments, and factories and clinics who are seeking opportunities for training courses in environmental health beyond the limited array of courses offered through the Institute of Occupational Medicine and Environmental Health at Sosnowiec and the few other training sites in Poland.

The focus of the EHP activity in Poland arose from a recognized need to develop an environmental health capacity within Jagiellonian University, a major university in the southern region of Poland, thus enabling its School of Public Health to respond to the regional environmental health needs. During the initial visit of the EHP team, the administration of the JU SPH in Krakow expressed interest in developing an environmental health program that would include environmental epidemiology, risk assessment, and health promotion. JU SPH did

not have an academic program in environmental health per se, although it did have a certificate program at the post-graduate level in health promotion.

The goal for the EHP activity was to provide technical assistance to the JU SPH to develop such an environmental health program. The objectives were as follows:

1. Develop an overview module on environmental health (Module 7) as part of the existing one-year Health Promotion Certificate Program. This module would also become the first of a series of modules in the new Environmental Health Program, i.e., a core course.
2. Integrate environmental health into several of the 10 existing modules of the Health Promotion Certificate Program.
3. Identify possible environmental health and health promotion community activities that could be conducted by students as part of the Health Promotion Certificate Program and the new Environmental Health Program.
4. Provide training for faculty on interactive teaching methods in the Health Promotion Program (based on EHP-developed material).

### **3.2 Accomplishments and Results to Date**

The program in Poland has included a start-up workshop, three follow-up technical assistance visits, and an environmental health promotion activity. As a result of EHP's technical assistance, a 22-hour environmental health module was developed for Health Promotion Certificate students. In addition, a 200-hour Environmental Health Certificate Program has been developed and is scheduled to begin in September 1997.

#### **3.2.1 Start-up Workshop**

The start-up workshop, in September 1995, was attended by approximately 25 individuals from various locations and disciplines, representing several universities, institutes, nongovernmental organizations, and government agencies. Throughout the course of the three-day event,

participants discussed the major issues facing the implementation of this program. They identified potential barriers, including the skills of collaborators, availability (or lack) of educational materials, corruption and misinformation, lifestyles and practices detrimental to health and the ecology, the conservative nature of Polish people, reluctance to collaborate or make institutional changes, poor marketing skills for higher education, lack of realism, problems in interpersonal communication, and the quality of lecturers available to teach the proposed Environmental Health Program. The participants also considered solutions to these problems, such as publicizing the program through conferences and publications (newsletters) highlighting the international cooperation with EHP. It was felt that popularizing the expected economic and health improvements would lead to a more receptive and interested audience. (Subsequently, the JU SPH produced the first issue of a project newsletter.)

The participants hoped that the project would be able to train faculty in effective teaching methods and that the JU SPH would use a market survey to target clients/audience for the new Environmental Health Program. The participants also hoped that the process would be kept flexible and informal, to avoid bureaucratic rigidity. Additionally, it was suggested that each level of the program be evaluated and that there be an effort to involve local government, NGOs, and other institutions.

#### **3.2.2 Preparation and Planning**

In December 1995, EHP assessed the capability of JU SPH to design and deliver an environmental health course. The visit resulted in the strengthening of institutional and individual commitment, recruitment of a new Country Coordinator, and identification of additional faculty. In addition, the team obtained reports from Krakow, consolidated material and identified individuals for potential case studies, and initiated planning for the faculty development workshop.

In December 1995, a series of interviews were conducted in Krakow with individuals from JU SPH, JU Collegium Medicum, the Municipal

Office of Health, research institutes in both Sosnowiec and Katowice, as well as the Institutes for Nuclear Physics, Environmental Engineering, and Lung Diseases. The following key points emerged from these meetings:

- # Among those interviewed, there was significant interest in developing an Environmental Health Program for JU SPH.
- # With very few exceptions, all those contacted agreed to provide data, information, case study materials, and their time and effort to prepare a curriculum. They were also willing to teach if requested.
- # JU SPH has more than enough faculty from surrounding institutions to teach the Environmental Health Module (hereafter referred to as Module 7) in the Health Promotion Program, but EHP would need to keep abreast of the process to ensure that they had the necessary materials.
- # It would be helpful for EHP to conduct a faculty and curriculum development workshop in English and Polish. The workshop should be a joint effort among the EHP team members, JU SPH staff for the Environmental Health Program, and the various instructors who would eventually be responsible for the delivery of the components of Module 7. The workshop should include introduction of adult-learning methodologies as well as curriculum development.
- # Several pools of potential students for Module 7 were identified, including teachers of environment/ecology in the primary and secondary schools in the region and students of environmental engineering at the Environmental Protection Department of the AGH (Mining Polytechnic) in Krakow.
- # Based on a meeting with USAID/Poland in December 1995, the Environmental Health Program and SPH initiated a "Smoke Alert" health promotion project in January 1996, with various health and environmental agencies.

Throughout December 1995 and January 1996, JU SPH conducted a survey of the interest and demand for environmental health courses among

municipal government agencies in the Krakow area. Many individuals within planning groups in local government acknowledged the importance of environmental health in their activities. Additionally they were interested in participating in future environmental health educational programs organized by JU SPH.

### 3.2.3 Health Promotion Projects

#### *The "Smoke and Smog Alert" Project*

There are a few existing programs which address environmental health issues of concern in Southern Poland and the Krakow region. One example is an air pollution monitoring program in Krakow: daily atmospheric contaminant concentration data (measured in automated monitoring stations) of the "priority pollutants" are made available to the public on a display board in the old city square. On high pollution days, an accompanying message gives specific health recommendations for at-risk populations (the elderly and the very young). Only a certain number of city residents, however, pass by and read the display board every day, and few of them know what the data mean. Serious pollution events occur in the winter when the threat of thermal inversions are present in the area. In addition, summertime photochemical oxidant (PCO) pollution (ozone) is a serious problem and may be on the rise due to the increased number of automobiles and other internal combustion sources of photochemical precursors. At present, the combined problems of fuel sources and vehicles without catalytic converters mean that the threat from PCOs will continue in the future.

Citizens need to be advised about the hazards—the health risks to children and the elderly and those with cardiac and respiratory illnesses. One practical way to reach a wide audience is through the local media. To date, the nature and extent of the messages made available to the at-risk populations during winter and summer air pollution episodes appear to be inadequate.

In December 1995, EHP and JU SPH were requested by USAID/Poland to develop an environmental health promotion activity to

demonstrate the commitment of the JU SPH to the project's work. In response, JU SPH and EHP developed a "Smoke Alert Project" which was first focused on winter smog problems, but later added information about summer ozone. JU SPH conducted a series of meetings from January through March 1996 with a number of air pollution stakeholders. Based on their meetings and a review of collected materials from a number of agencies, a proposed memorandum of understanding (MOU) and an action plan were formulated. The MOU was signed by the Health Department of the Krakow Municipality, the Krakow Medical Emergency Services, the Polish Ecological Club, and JU SPH in March 1996. The signatories concluded that the following air pollution-related problems face the Krakow region:

- # Low environmental and health awareness of the populace
- # The presentation of incorrect information
- # The absence of adequate epidemiological data
- # The inadequacy of environmental law regarding low-level air pollution, the role and authority of municipalities with regard to air pollution, etc.
- # Economic disincentives to measures which would reduce pollution

The MOU established a course of action for the local partners. It included the following points:

- # Collaboration among experts to identify high-risk groups and to review current threshold values for action to protect the populace from the effects of ambient air pollutants
- # Development and implementation of a health promotion program to reduce exposure to ambient air pollutants during high alert periods
- # Preparation of standard media messages regarding air pollution
- # Establishment of a working relationship with the local mass media
- # Development of proposals for newly emerging environmental laws, regulations, and policies

The media and public information activity would serve as a case study in the proposed two-year environmental health curriculum and faculty development program undertaken by the JU SPH and EHP. The activity supported by the MOU highlights a number of critical issues for the emerging JU SPH Environmental Health Program: (1) the interaction between academic centers, NGOs, and government institutions; (2) the use of scientific information by scientists and health practitioners to improve the health of the public; and (3) the benefits of formal "health promotion" activities. An outline of the Smoke Alert Program is found in Appendix H.

### 3.2.4 Faculty Development Activities

#### *Ustron Workshop—June 1996*

Twenty-three participants, including faculty and staff from the Institute for Ecology of Industrial Areas in Katowice, Institute of Environmental and Occupational Medicine in Sosnowiec, Nuclear Physics Institute in Krakow, Institute of Engineering in Krakow, Sanitary Epidemiology Unit from Krakow, Health Promotion Unit of the Krakow local government, and JU Collegium Medicum and SPH, attended in a three-day faculty development and curriculum planning workshop in June 1996. The goals of the activity included the following:

- # To learn and utilize adult-based learning methodologies
- # To develop the components for Module 7 (see Appendix I) along with specific learning objectives
- # To develop environmental health materials for the epidemiology, health policy, and health promotion modules of the Health Promotion Certificate Program
- # To integrate the teaching faculty into a cohesive unit
- # To prepare materials and syllabi for the presentation of Module 7 in October 1996
- # To outline the elements for the proposed 200-hour Environmental Health course (see Appendix J)

The workshop objectives were fully realized and the teaching faculty was recruited for the fall presentation of Module 7. Dr. Janusz Pokorski organized the preparation of materials during the summer. An extensive bibliography was assembled, relevant articles were selected, and faculty outlines were reviewed and commented upon.

#### *September 1996 Module Review*

The EHP team visited Krakow in September 1996 to assist in preparations for the October session. Objectives of the trip were the following:

- # To review and assess the faculty teaching material for content, teaching method, visual materials, and reading materials. All faculty presenters were interviewed by EHP team members and their materials were reviewed. Attempts were made to avoid repetition among instructors as well as to insure that there were clear learning objectives outlined. Faculty members provided well-developed outlines of their sessions.
- # To meet with the faculty as a whole to provide feedback and suggestions to the group. At the group meeting, the EHP team was able to review the overall focus of the Module 7. In addition, the team identified core materials which provided thematic focus for the module. The faculty members benefited from seeing the entire module outlined, as this clarified how the various components fit together and supported the whole.
- # To meet with the new director of the JU SPH. The director of JU SPH who had been in that position since its inception had been replaced by a new incumbent. The first director, who has been a visionary for the SPH and an enthusiastic supporter of the EHP activity, remains on the staff as Dean of International Relations. The new SPH director was briefed about the project and indicated his support for the EHP activity objectives. The faculty council, with the support of the new director, voted its approval of a 200-hour Environmental Health Certificate Program. The new director also offered suggestions for

integration of environmental health materials into other certificate programs.

The September technical assistance visit provided the JU SPH/EHP team and the teaching faculty with critical and instructive reviews of each modular component and of the module as a unit. Clear, concise, and important themes were identified, reading materials were inventoried, visual aids were reviewed, and teaching methods and delivery techniques were assessed. SPH's role in this activity helped to establish its place as an important new participant in environmental health education and advanced teaching methodologies among the teaching faculty and other institutions in Poland.

#### *October 1996 Course Presentation*

The 22-hour environmental health module (Module 7) was presented as part of the Health Promotion Certificate Program to 45 students in October 1996. At that time, the students were all working full-time in various jobs related to environmental health, including nursing and municipal government. EHP assisted the Polish environmental health staff in the preparation and presentation of the program. Ten faculty delivered presentations over a two and one-half day period. A reader and course syllabus were given to students prior to the session. Individual presentations using interactive/problem-solving exercises varied from the traditional lecture and visual-aid model. Students were asked to fill out a course evaluation. In addition, faculty members were available during and after the module to discuss and assess their individual performances.

The response from the students and the JU SPH director was positive. SPH decided to offer this short course again, as part of its next cycle of the Health Promotion Certificate Program. In addition, the SPH will also include it as part of a similar certificate course in health services management. The completion of the course marks the first time that such a cross-cutting approach to environmental health, with a focus on public health and health promotion interventions, has been conducted in the Southern Poland and Krakow region. This effort required the cooperation of individuals and institutions

that had heretofore had no history of collaboration.

### 3.2.5 Dissemination

The JU SPH Technical Coordinator for this activity and the Country Coordinator participated in a 10-day information exchange tour in the Boston area and Washington, D.C. They had the opportunity to establish professional contacts with environmental health scientists and health promotion experts in the U.S. during their visits. They also made a presentation about the activity to students in an occupational health course at Boston University School of Public Health and to staff at John Snow, Inc. in Boston. The itinerary for the Boston portion of the U.S. tour is given in Appendix K.

The two Polish coordinators also attended a USAID-sponsored conference held in Slovakia, "Realizing the Vision of Health Reform: Health Sector Metamorphosis," in March 1997, and presented the results of the work of JU SPH and EHP to develop and teach the environmental health module in the Health Promotion Program and to develop a new Environmental Health Certificate Program.

### 3.2.6 Summary of Results for Poland

Throughout this activity, EHP developed a partnership with Jagiellonian University's School of Public Health and established an Environmental Health Program which emphasized interactive teaching methods and community-based health promotion activities. The accomplishments include the following:

- # With EHP support, JU SPH created a public-health-based Environmental Health Certificate Program, new in both approach and content for Southern Poland and the Krakow region. With EHP assistance, JU SPH offered its first-ever environmental health course. The 22-hour module was integrated into the existing Health Promotion Certificate Program for health professionals and was given to 31 physicians, nurses, and environmental engineers in October 1996.

- # The 22-hour module has been permanently integrated into both the Health Promotion and Health Management Certificate courses.
- # JU SPH has decided to implement a full 200-hour post-graduate certificate course in environmental health beginning in September 1997. The course is based on the 22-hour module and will include faculty who taught that module in October 1996 as well as others who participated in the June 1996 workshop held in Ustron.
- # A public health and environmental health library was set up at JU SPH with support from EHP.
- # For the first time, effective regional institutional collaboration on environmental health was fostered.
- # JU SPH has initiated a community-based air pollution health promotion activity, "Smoke Alert Project," with many Krakow participants. An MOU and action plan were developed to set out terms for interinstitutional collaboration. This ongoing air pollution project will be assisted by a University of Michigan public health student in the summer of 1997. The project will also serve as an active case study for students enrolled in the 200-hour Environmental Health course.

## 3.3 Issues and Lessons Learned

- # *Environmental health as a public health discipline.* The fields of public health and environmental health in Poland have traditionally been very narrowly based and focused on separate technical disciplines, e.g., hydrology, toxicology, food sanitation, etc. There was neither a history of nor an institutional desire for a holistic approach to public health and environmental health. The lack of an environmental health program and faculty experienced in teaching it made EHP's recommendations and proposals welcome. In order to develop an environmental health program, JU SPH needed to go outside its own walls to recruit individuals from a variety of disciplines who would work together. The leadership of the SPH was progressive and

open-minded, and was not averse to creating new models or trying new teaching approaches.

- # *Interinstitutional cooperation.* As above, there was little practical experience with institutional cooperation. As it turned out, the complete lack of a public-health-based environmental health program in Krakow allowed one to spring up without the usual competitiveness and institutional jealousies which often accompany such initiatives.
- # *Gap between theory and practice.* There is a general reluctance on the part of academic institutions to combine the study of public health with its actual practice. In part, this problem is aggravated by the relative confusion surrounding the meaning and goals of public health in Poland. Consequently, individuals with public health credentials in environmental health can find it difficult to find employment in a field which has yet to be clearly defined, publicly recognized, and publicly accepted. A public health practice component should be required by the Council of Health Education as part of the public health degree requirements. Such a requirement would help to overcome the gap between theory and practice. Another way to bridge the gap would be for the SPH to work with local, regional, and national government, NGOs, and private institutions to set up “internship” opportunities. The establishment of such an arrangement would help to create public awareness of public health and environmental health. Such internships also could lead to the development of future employment opportunities for SPH graduates as well as helping the students, professors, and the “public” develop the practice of public-health-based environmental health.
- # *Inadequate funding.* The funding for public health and environmental health education remains inadequate. In order to develop a cadre of environmental health experts, stable, predictable, and fungible funding sources need to be identified and developed. One potential avenue could be the development and utilization of economic incentives and disincentives (fines) for polluting industries and practices to fund such activities.

Examples of such an approach are derived from the concept of “making the polluter pay.”

- # *Lack of public health recognition.* Public health, and especially environmental health, do not have adequate support from the general public and the government. In part this situation is due to the overwhelming demand for public resources from a variety of sectors. Another major

factor may be the lack of familiarity with the goals and mission of public health by those in positions of leadership. Perhaps the approach taken during the communist period, when public health information was used simply as another vehicle to promulgate the prevailing orthodoxy, has made it difficult for people to understand a new and important role that public health can play. Whatever the explanation, it is essential that public health become more public. This can be accomplished through the development of outreach programs directed at the general population and the primary local and national decision makers. For environmental health in Krakow, it is essential that the "Smoke Alert" health promotion program go forth. Not only will the successful completion of this effort positively impact the public's health, but it will also help inform policymakers and the general public about the importance of the issue.

# *Need to remain visible.* It is critical for the environmental health program to remain active and visible. Establishing a coherent, viable, and realistic series of activities will lend confidence to the cadre of environmental health faculty, maintain their morale, and keep them in the public realm.

# 4

## ACTIVITIES IN ROMANIA

### 4.1 Background

Consultants for the World Bank (Hertzman 1992, World Bank 1992, Hertzman and Ayres 1994) identified 17 specific hot spots in Romania (including Zlatna, site of another EHP project on prevention and environmental health). The Environmental Action Programme for Central and Eastern Europe (Ackermann et al. 1994) put forth a list of environmental “hot spots” in each country, primarily based upon the health risks that they presented.

Overexposure to lead was identified in three Romanian cities. Documented association between acute or chronic respiratory disease and air pollution were noted for 13 cities. Documented associations between abnormal physiological development and air pollution were noted in three cities. Nitrates in drinking water are a widespread problem for Romania, with 38 of 41 districts reporting excessive concentrations. Problems with inorganic arsenic dust and associated skin cancer have been noted in the Arad-Lipora-Ineu District near Hungary. High concentrations of carcinogenic substances in drinking water samples have been found in 32 of 41 districts of the country, and chlorinated pesticides have widely contaminated many water supplies. Several towns have high concentrations of airborne asbestos. In Suceava, children exposed to carbon disulfide have shown neurological disease. Between 500 and 600 new cases of silicosis and accompanying silicotuberculosis appear each year among miners and foundry workers. Overexposure to ionizing radiation has been noted among uranium mine workers.

USAID/Romania recognizes that continuing investment in environmental technologies will be required in Romania to control pollutants, but the lack of resources to make the necessary

improvements to infrastructure will result in continued exposure to environmental health hazards for some time to come. Meanwhile, family (general) practice physicians and other health care professionals can play important roles in identifying existing risks, counseling patients in risk avoidance, and more effectively treating illnesses related to community and workplace exposures to pollutants. These health care professionals need information that will establish and encourage support for policy changes at all governmental levels to deal with root causes of environmental pollution. Families and individuals in Romania also need education and incentives to change their behaviors and practices in order to reduce their exposure to pollutants from industry, the community and home environments, and from personal lifestyle choices (e.g., smoking).

Building upon professional contacts developed by the USAID/Romania health and human resources development officer, the mission was able to identify an interested and cooperative partner in the University of Medicine and Pharmacy (UMP) in Cluj, to implement an “experiment” in reforming the curriculum of a major medical school to better address environmental and occupational health problems encountered by Romanian physicians in their day-to-day contact with workers, children, and families.

At the request of USAID/Romania, a team of experts from EHP conducted an initial scoping visit to Romania in March 1995. The objective of this visit was to identify environmental and occupational health problems in the Transylvania region as well as potential partners for a joint program to help alleviate these problems. This visit resulted in the development of the activity described in this chapter, the purpose of which was to support the efforts of the partners to

enhance the ability of current and future physicians to identify, treat, and prevent illness and injury related to environmental contamination and workplace hazards.

The partners in this activity represent the full continuum of medical education programs and services for family or general practice physicians in the Cluj area. The primary partners were:

- # the new Department of Community Medicine and Family Practice at the University of Medicine and Pharmacy;
- # Center for Medical Research, Health Services, and Management (a regional center of the Ministry of Health); and
- # Sanitary Directorate in the Cluj Judet (the provincial health agency) and the affiliated Association of General Practitioners in Cluj.

From 1995 to 1997, EHP worked with these partners to revise and strengthen the environmental and occupational health curriculum and teaching projects for medical students, family practice residents, and general practice residents in the community.

The training and curriculum revision effort brought together faculty and staff of these organizations. Representatives of these institutions signed Memoranda of Understanding with EHP, establishing a formal partnership for the first time.

## 4.2 Accomplishments and Results To Date

### *Technical Assistance and Training*

With its focus on medical education, family practice training, and curriculum development, the activity aimed to provide partners with training and technical assistance needed to:

- # modernize or otherwise upgrade the curriculum and educational materials used in teaching environmental and occupational health;
- # enhance instructor teaching skills through the introduction of new interactive and/or problem-based methodologies; and

- # facilitate partner interaction and cooperation in order to enhance the design and delivery of educational programs for medical students, family practice residents, and general practice physicians serving residents of the greater Cluj area in Transylvania.

A start-up workshop was held in May 1995 to develop consensus and agreement among the partners on how the activity would function and to develop an initial workplan (see Report for the File No. 13). The workshop also resulted in the establishment of three interagency working groups that identified activities to be undertaken by the partners between EHP visits. The groups focused on: 1) environmental health (hygiene) curriculum for medical students; 2) environmental and occupational health curriculum for family practice residents; and 3) continuing medical education in environmental and occupational health for general practice physicians (GPs) in the Cluj Judet.

Initial activities of these work groups included the following tasks:

- # Design and conduct a needs assessment survey of GPs working in plant and community dispensaries in Cluj. The questionnaire was completed by 172 physicians, and the results were presented at the first workshop in October 1995 (see Appendix L).
- # Identify and assess priority environmental and occupational health problems in Transylvania. This task was undertaken by the Center for Medical Research, Health Services, and Management (CMR). The results of this assessment were presented at the October workshop (see Appendix M).
- # Develop a continuing medical education module on environmental health. A representative from the Cluj Judet Sanitary Directorate participated in the development of the course, which was presented to the Sanitary Directorate before the end of the activity (see Appendix N). The Directorate responded favorably to the proposed course, but because of funding and other constraints, it had not yet been conducted at the time this report was written (Spring 1997).

A one-week technical assistance visit was conducted in February 1996 to provide a preliminary assessment of the existing environmental and occupational health curricula for medical students; to obtain information and views from practicing GPs; and to begin to identify curricular and educational needs. A second, week-long technical assistance visit was conducted in April 1996. This visit focused on assessing progress on activities of the partners, providing needed technical assistance, and preparing for the June 1996 workshop.

Other accomplishments include following:

- # In addition to the start-up workshop, three curriculum and faculty development workshops were held during the project period. These focused on competency-based curriculum development skills and the introduction of interactive and case-based, problem-solving teaching methods. Workshops were held in October 1995, June 1996, and November 1996. These workshops included the demonstration of new teaching techniques and opportunities for participants to practice them (e.g., the June 1996 workshop included a visit to an industrial facility to demonstrate the use of site visits as a teaching tool). The workshops also provided a vehicle for working groups to discuss progress and future plans. EHP consultants provided partners with numerous examples of case studies and other educational materials and a variety of interactive and problem-focused teaching methodologies.
- # A case study was developed, using data collected from the town of Zlatna, Romania (the focus of another EHP activity). The case was presented and discussed at the October workshop and is included in its entirety (i.e., with data from Zlatna) in the workshop report. (For the text portion of the case study, see Appendix O.)
- # A revised hygiene curriculum for medical students at UMP was developed by Professor Ionut of the Department of Community Medicine and Family Practice (see Appendix P). It is reported that the new curriculum

includes learning objectives and is less theoretical than the previous curriculum.

- # The signing of two Memoranda of Understanding—one between the EHP and UMP and the second between the EHP and the Cluj Sanitary Directorate and the CMR.
- # During the course of the activity, EHP sponsored two faculty members to attend a regional workshop on a new environmental health module being introduced by WHO to academic institutions in Europe. The faculty members found the course and course materials to be quite valuable.

#### *Teaching Aids*

The project was able to provide modest audiovisual equipment (e.g., slide and overhead projectors, screens) to the three partner organizations for use in their educational activities. Textbooks and other printed resource materials were also provided as part of the project.

#### *Dissemination*

Eight faculty involved in teaching medical students, family practice residents, and community physicians participated in a 10-day information exchange tour in the Boston metropolitan area and Washington, D.C. in March 1997. The itinerary for the tour is shown in Appendix K.

Professor I. Bocsan, head of the Department of Community Medicine and Family Practice and Vice Rector of UMP-Cluj attended a USAID-sponsored international conference held in Bratislava, "Realizing the Vision of Health Reform: Health Sector Metamorphosis," in March 1997. The conference focused on health policy and health reform in Central and Eastern Europe. He presented the results of the work of UMP-Cluj, its partners, and EHP, including efforts to: 1) assess community physicians' needs in the area of environmental and occupational health; 2) revise the environmental health curriculum; 3) develop a continuing medical education (CME) activity; and 4) use the knowledge and skills acquired during the activity to continue and enhance their teaching and curriculum development skills. He also described several barriers to curriculum reform efforts. This

conference allowed the Romanians to share progress and lessons learned with health officials, educators, and practitioners from seven other Central and Eastern European countries, as well as from the United States, Western Europe, and the former Soviet Union.

#### *Summary of Results in Romania*

In summary, key accomplishments of this activity to date include the following:

- # A needs assessment survey, the first of its type conducted in the region, was designed and administered to 172 GP physicians working in plant and community dispensaries in Cluj.
- # A list of high priority environmental and occupational health problems in Transylvania was compiled by the CMR.
- # A case study on lead poisoning, based on data collected through another EHP activity in Zlatna, Romania, was developed as a model or for use in the revised curriculum for medical students.
- # A CME module on environmental health and medicine was designed and offered to the practicing medical community in Cluj.
- # A revised hygiene curriculum for medical students, including learning objectives and more practical exercises for students, was developed by senior faculty in the Department of Community Medicine and Family Practice. The university's Vice Rector reports that 50% of the hygiene curriculum was revised and upgraded through the EHP and local partner efforts.
- # The experience of the partner agencies was disseminated to a wide, international audience during an information exchange tour to the United States and a presentation of results at a USAID-sponsored international conference on health policy and health reform.
- # Partners involved in teaching medical students, family practice residents, and community groups (through CME programs) enhanced their curriculum development and pedagogical skills.
- # A model for interorganizational collaboration was established, which successfully

demonstrated the development of a work plan and the implementation of projects over time.

### **4.3 Issues**

Several issues have affected the conduct of the activity; some result from historical relationships and rivalries, while others are related to the complex, bureaucratic structure of medical education and health care delivery in Romania.

- # *Lack of experience in interaction and collaboration among agencies.* A common problem in many countries is the lack of interaction and cooperation among groups with related missions or functions. In Cluj, there has been little if any cooperation between or among the four key groups comprising the wider public health system: medical school faculty who teach environmental and occupational health to medical students; staff of the regional MOH Center for Medical Research who study and review environmental and occupational health issues; public health physicians serving the Sanitary Directorate, which is responsible for residency training and continuing medical education in the Judet; and practitioners who actually see patients in the community. Confounding the issue even further is the fact that the individuals in these institutions report to different government ministries (primarily the Ministry of Health and the Ministry of Education).

A major objective of the activity was to help facilitate interaction and cooperation among these groups—in the context of enhancing medical education in environmental and occupational health. Methods employed to achieve this were participation in interactive workshops and working groups, the MOUs, and ongoing encouragement by the EHP team of cooperation and collaboration.

- # *Confusion regarding continuing medical education.* A second issue relates to the

CME component of the activity. The process of CME in Romania is complex, bureaucratic, and in a state of flux. It took many months to develop an understanding of how CME actually operates in Romania and how it might change in the coming years. This has frustrated and slowed the progress of the working group devoted to this area. The technical assistance visit conducted in April 1996 provided the EHP team with a better understanding of the process of developing and delivering CME programs, as well as the problems and barriers that must be addressed before any new CME programs will be available in Cluj (or elsewhere). Principal barriers relate to legal requirements (or lack thereof) for CME; funding issues; low level of interest in certain topics for CME programs; and, to date, a tightly controlled, bureaucratic process for delivery of CME programs.

# *Collaboration in the activity within UMP.* A third issue that has affected the activity's ability to focus on occupational health is the lack of cooperation of the Professor of Professional Diseases (occupational medicine) at UMP. This individual has been reluctant to participate formally in any of the initiatives and programs proposed by the new Department of Community Medicine and Family Practice, although his group does collaborate with another partner—CMR. Thus, to date, the EHP activity has focused primarily on environmental health, although workplace issues have been addressed in the workshops, and individuals from the Clinic of Professional Diseases have participated in some of the workshops. The EHP team sought the involvement of the occupational health group at the university in its activities and believes there are still many possible areas for collaboration.



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