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**EAPS REGIONAL MEETING
CONFERENCE REPORT**

Budapest, May 7-9, 1997

Submitted by:
Chemonics International Inc.

Prepared by:
Members of the EAPS Home Office and Field Office Teams

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EAPS PROJECT OVERVIEW

USAID contract number DHR-0039-C-00-5034-00, Project Number 180-039

Project Purpose: EAPS is designed primarily to provide technical assistance in the CEE and NIS for environmental project identification, selection, and packaging for investment financing. An environmental investment project in the EAPS context is one in which heavy pollution from a point source is significantly reduced through improvement in the operation of the polluting facility, usually requiring investment in improved production technology or energy source substitution. Financing may involve domestic environmental funds, commercial banks; international financial institutions, and/or foreign investors. EAPS also provides institutional evaluation, capacity building, training, information dissemination, and related technical assistance regarding assessment and financing of environmental projects, strengthening environmental funds, environmental regulation and compliance, and environmental technology upgrading.

Background: As the countries of CEE work to accomplish a transition to open markets and democratic institutions they are faced with costly health and financial burdens imposed by pervasive environmental contamination and mismanagement of valuable natural resources. Specific areas that have been identified as health threats are: airborne particulates, heavy metal dust, sulfur dioxide and other gases, and contaminated water supplies.

Responding to a call to address environmental problems particularly harmful to human health, environmental ministers from East and West Europe developed and adopted the Environmental Action Programme (EAP) in Lucerne, Switzerland in April 1993. The aim of the EAP is to establish a partnership between CEE, NIS, and Western countries in which the CEE and NIS countries would undertake essential policy and institutional reforms, while Western governments and international financial institutions such as the International Bank for Reconstruction and Development (IBRD) and the European Bank for Reconstruction and Development (EBRD) would provide assistance to support these reforms and contribute to implementing priority projects.

Project Implementation: EAPS is a component of USAID efforts to support the Environmental Action Programme formulated at Lucerne and a continuation of earlier related activities aimed at improving environmental management and economic development prospects in the CEE and NIS regions. EAPS is implemented by Chemonics International Inc. and a team of subcontractors preeminent in their fields of practice. Currently, EAPS has country programs in Lithuania, Poland, Slovakia, Bulgaria, and Romania, and maintains offices, professional staffs, and working associations with local subcontractors in four of these countries.

Project Duration: March 1995 - March 2000

Key Personnel: Avrom Bendavid-Val, Environment & Development Specialist, Project Manager

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ACRONYMS

BEF	Baltic Enterprise Fund
CEE	Central and Eastern Europe
COTR	Contracting Officer's Technical Representative
EAPS	Environmental Action Programme Support
EBRD	European Bank for Reconstruction and Development
FAR	Fixed Amount Reimbursement
KAP	Knowledge, Attitudes, and Practices
LEIF	Lithuanian Environmental Investment Fund
MEP	Ministry of Environmental Protection
MOE	Ministry of the Environment
MOU	Memorandum of Understanding
MSZ	Municipality of Stara Zagora
NIS	Newly Independent States
OECD	Organization for Economic Cooperation and Development
OHS	Occupational Health and Safety
REC	Regional Environmental Center for Central and Eastern Europe
SFZP	Czech State Fund for the Environment
SO	Strategic Objective
SOW	Scope of Work
USAID	U.S. Agency for International Development

INTRODUCTION

SECTION I

The EAPS regional meeting was held on May 7-9, 1997 in Budapest, Hungary. It brought together for the first time EAPS field teams from Bulgaria, the Czech Republic, Lithuania, Poland, and Romania, and the EAPS home office staff from Washington, D.C.¹ The 20 EAPS staff members were joined by the USAID Contracting Officer's Technical Representative (COTR) for the project Gordon Straub, and EAPS Project Officer Angela Crooks. Five staff members of the Regional Environmental Center (REC) for Central and Eastern Europe, including REC Director Dr. Jernej Stritih, also participated for a portion of the meeting.

The timing of the regional meeting was important because the Czech Republic field team was to be disbanded in June 1997, and the Lithuania team later in the year. This was the last opportunity for the entire EAPS staff to exchange information and capture the lessons of EAPS' experience throughout Central and Eastern Europe (CEE). Also, the REC was embarking on a commercially based sustainability strategy that potentially dovetailed with the EAPS teams' plans to establish environmental consulting firms; thus, the meeting would enable the REC and EAPS field staff to explore collaborations early in their respective "privatization" processes.

The principal objectives of the regional meeting were to:

- Capture and exchange information on developing environmental projects and mobilizing investment capital for them that has emerged from the work of EAPS teams
- Foster a network of CEE professionals and small firms engaged in environmental project development and financing that can continue operating after the EAPS project ends

Participants gathered at the Thermal Hotel on Marguerite Island during the afternoon and evening of May 7, 1997. The meeting was launched with a dinner that provided EAPS staffers with their first opportunity to meet counterparts from other countries.

The next day five country teams presented case studies on EAPS activities in the CEE. The cases covered EAPS activities as diverse, and yet linked, as improving occupational health and safety in lead smelters, providing wastewater treatment at a tannery, identifying and packaging environmental projects for investment, and building national and local environmental investment funds. Each country team summarized insights and lessons learned from its working experience.

Final day sessions focused on:

- REC activities and possibilities for REC collaboration with EAPS teams
- Sustaining EAPS work after the project ends by creating environmental consulting firms
- Transferring to the Newly Independent States (NIS) the practitioner knowledge gained through EAPS work in the CEE

¹ EAPS also operates in Slovakia, but does not maintain a field team there.

- Pursuing region-wide collaborations on issues related to developing environmental projects and mobilizing investment capital for them
- Building additional market opportunities onto the EAPS project preparation approach, which stresses examination of technical alternatives, financial feasibility, cost-benefit analysis for public investments, identification of funding sources, and debt-retirement requirements
- The supportive relationship of EAPS environmental work to privatization, economic development, promoting democratic processes, and improving local government

Meeting sessions produced a wealth of material useful to participants, future EAPS and USAID work, and practitioners in this field throughout the CEE and NIS. The meeting also created the opportunity to establish working relationships among CEE professionals now working for the EAPS project, and between those professionals and the REC.

The essential information generated by the regional meeting is presented in the following sections of this report. Each section offers a summary of the content of a session and includes the associated handouts prepared and distributed by session presenters. The order of the sections follows the order of the sessions: Sections II through VI summarize the presentations of the five EAPS field teams, and Sections VII through X are summaries of the principal sessions of the meeting's last day. Thus, the table of contents of this report represents the agenda of the meeting. The two annexes present the results of a survey of meeting participants, and contact information for meeting participants. Summaries of the sessions presented in this report were prepared by EAPS home office staff, based on notes taken and videotapes recorded during the meeting.

As the survey (Annex A) revealed, the principal complaint was that such meetings had not been held before. Participants found the information exchange and experience invaluable, and encouraged further regional meetings at regular intervals. Events in the four months between the meeting and preparation of this report have demonstrated that the meeting stimulated a higher level of communication and collaboration among participants in the region, and between EAPS field offices and the home office as well. Most important, the meeting helped create the basis for a network of environmental firms and professionals in the CEE region that will be able to carry on the sort of work undertaken by EAPS, at its high level of technical standards, after the EAPS project concludes.

BULGARIA TEAM

SECTION II

A. Background

The thrust of the EAPS Bulgaria program has been to help the Municipality of Stara Zagora (MSZ) convert its non-central heating system of boilers fueled by highly polluting heavy oil or coal to a centrally distributed natural gas system. One aspect of the EAPS assistance was a program of direct financial support to the MSZ to cover the cost of boiler conversions for certain municipal facilities. Under this program, MSZ assumes full responsibility for requesting tender offers for the conversions and for contracting and supervising the work. EAPS reimburses the MSZ for the cost of individual completed conversions up to a specified maximum amount under a Fixed Amount Reimbursement (FAR) agreement.

The Municipal Property Act of 1996 gave Bulgarian municipalities the authority to regulate utilities. The act also allows each municipality the authority to grant, to qualified organizations, the right to distribute various commodities within the municipality using municipal properties. This exclusive distribution right is referred to as a concession. Hence, a second aspect of EAPS assistance, closely linked to the first and directly related to Strategic Objective (SO) 2.3, is helping to create a framework for the MSZ as utility regulator, and helping the MSZ develop a concession agreement for gas distribution.

Early in the MSZ gasification effort and the EAPS assistance program, the economic, legal, and programmatic environment changed, requiring a great deal of flexibility during implementation. For example, severe inflation caused the program to shift from financial assistance based on a revolving fund and soft loans to financial assistance based on direct reimbursement to the MSZ. Passage of the new Municipal Property Act resulted in a decision by MSZ to divest itself of its ownership interest in a joint venture with the private gas supplier and assume a strictly regulatory role. EAPS began its work in Bulgaria under SO 3.3, reducing environmental health risk, but this SO was discontinued and EAPS assistance had to be adapted to SO 2.3, more effective and accountable local government.

B. Results

By the end of the EAPS/Bulgaria program, USAID will have achieved the following:

- **Support for infrastructure development** of the municipality, using the concessions agreement as a tool. Concession agreements in Bulgaria presently exist at the national level but not at the local or municipal level. The Municipality of Stara Zagora is the first city to develop such an agreement. Through their technical assistance, EAPS consultants will have developed a structure for concession fees, and proposals for repayment of previously contributed equity. The municipality will enjoy savings from conversions due to more efficient boilers, enabling the municipality to devote more funds to additional conversions if it chooses. More efficient use of money will lead to a sustainable municipal budget.
- **Formation of the utility commission**, whose responsibility will grow to include:
 - Helping the MSZ interpret regulations and implement the Municipal Property Act, particularly the "Granting of a Concession" chapter.

- Advising the MSZ how to fulfill its obligation to keep the public informed of the Commission's actions. The utility commission framework will create a good opportunity for disseminating information. It will be important to see what impact the Commission's actions will have on the public.
- Assisting the MSZ in its current role of issuing and operating permits.
- Establishing safety standards required of the concessionaire. These standards will be set within MSZ's authority under current national law.
- **Support for democratic processes** through divestiture from the joint venture with the gas distribution company and implementation of a concession agreement. This will enable the municipality to establish a utility framework and utilize new tools and methods for utility regulation and competition. Local government will increasingly be able to encourage competition by conducting open and fair competitions for gas conversion contracts.
- **Substantially reduced environmental health risk** resulting from conversion to natural gas as the fuel for heating throughout the city.

**Lesson Learned:
Strengthening Municipal Government**

Assisting municipal governments to assume appropriate responsibility for environmental management is a powerful focus for strengthening municipal management skills more broadly.

Ultimately, the EAPS project strives to develop a utility framework model that will be replicated in other municipalities. It is hoped the project will have an impact on national policy on management of utilities.

EAPS - BULGARIA

MUNICIPAL GASIFICATION PROJECT
IN STARA ZAGORA

TEAM MEMBERS

Washington Office: Henry Koner, Michelle Otterman, Courtney Marsh

Bulgarian team:

George Chavdarov - Environmental Technical Advisor

Education: **Ph.D.** December 1993 - Technical University, Sofia, **Diplomed Engineer** December 1988 - Technical University, Sofia; Heating, Ventilation & Air-Conditioning, **High School** July 1981, English Language School

Dissertation: George I. Chavdarov. "*Classificatory System for Real Wet Materials*". Technical University, Sofia, 1993.

Employment Experience: **Environmental Technical Advisor** of Chemonics International Inc. for the Environmental Action Programme Support Project (EAPSP) since March 1995, **Coordinator for Bulgaria, Technical Programmes**, of the World Environment Center, New York, since March 1994, **Methods Engineer**. Heating & Refrigeration Department, Technical University, Sofia. December 1988 - April 1992.

Language Proficiency: Advanced professional proficiency in English, general professional proficiency in Russian.

Civic Affiliations: Member of MENSA - International High IQ Society

General roles and specific activities: Collect and process specific technical information, coordinate the project activities in Bulgaria, liaison to USAID, MSZ and EAPS Office in Washington D.C., preparation of project status reports.

George Chavdarov has been with EAPS project since the very beginning - the project identification.

Diana Iskрева - EAPS Project Coordinator

Education: Preliminary **Ph.D. study** on Methodology of Strategic Environmental Impact Assessment, 1995, Human Ecology Department, Free University Brussels (VUB), Brussels, Belgium; **European MSc course**, 1993-1994, Environmental Monitoring, Control and Health; **Post-graduate course**, 1990-1991, Sofia University "Kliment Ohridsky", Faculty of Geology and Geography, Landscape Ecology and Environmental Protection Department; **BSc + MSc equivalent**, 1984-1989, Sofia University "Kliment Ohridsky", Faculty of Geology and Geography, Landscape Ecology and Environmental Protection Department.

Employment Experience: **EAPS Project Coordinator** for Stara Zagora, 1996 and continues; **National coordinator of UNDP project** - Ecovolunteers for Water Supply and Sanitation, Stara Zagora, 1994 and continues; **Coordinator** of project "Help for Building of a Model Irrigation System", 1995-1996; **National coordinator** - Manual on Good Environmental Local Practices, a CEE project of ICLEI, 1994-1995; **Coordinator** of Environmental Action Plan, Stara Zagora, 1992-1993; **High school teacher**, 1989 and continues; **Environmental expert** of NGO "Ecoglasnost - Stara Zagora", 1989 and continues.

Language Proficiency: English and Russian, fluently written and spoken.

General roles and specific activities: Liaison to USAID, the Municipality of Stara Zagora, and the EAPS offices in Sofia and Washington, D.C.; coordination of project activities in Stara Zagora; preparation of project status reports; and processing of project documents.

A **lawyer**, Vesselina Petrova, and **engineering company**, POVVIK, are hired on part-time basis when such services are required.

EAPS Project in Bulgaria was initiated in April 1995 to assist the Municipality of Stara Zagora in the conversion of municipal heating boilers from highly polluting heavy oil or coal to natural gas.

Project Preparation:

- analysis of the costs of gas conversions
- development of the municipal fund and loan program
- household survey - design, interviews, and analysis
- boiler survey and conversion analysis
- legal analysis and preparation of USAID Memorandum of Understanding
- public awareness campaign

USAID Strategic Objective, supported by EAPS Project:

More Effective and Accountable Government

Intermediate Results, supported by EAPS Project:

Increased Capacity of Local Government to Deliver Municipal Services

Establish Sustainable in-Country Training Capability

Improved Capability in Public Information and Citizen Involvement.

WORKSHOP
December, 1996

**Natural Gas Distribution in Stara Zagora:
Alternative Roles for the Municipal Government**

- Status quo - continuing the current partnership arrangement in the joint venture (JV)
- Expanded role - management of the JV as a minority partner
- Exclusive regulatory role - divest in the JV
- Utility ownership/management

The Municipality of Stara Zagora (MSZ) selected to divest in the JV and assume exclusive regulatory role

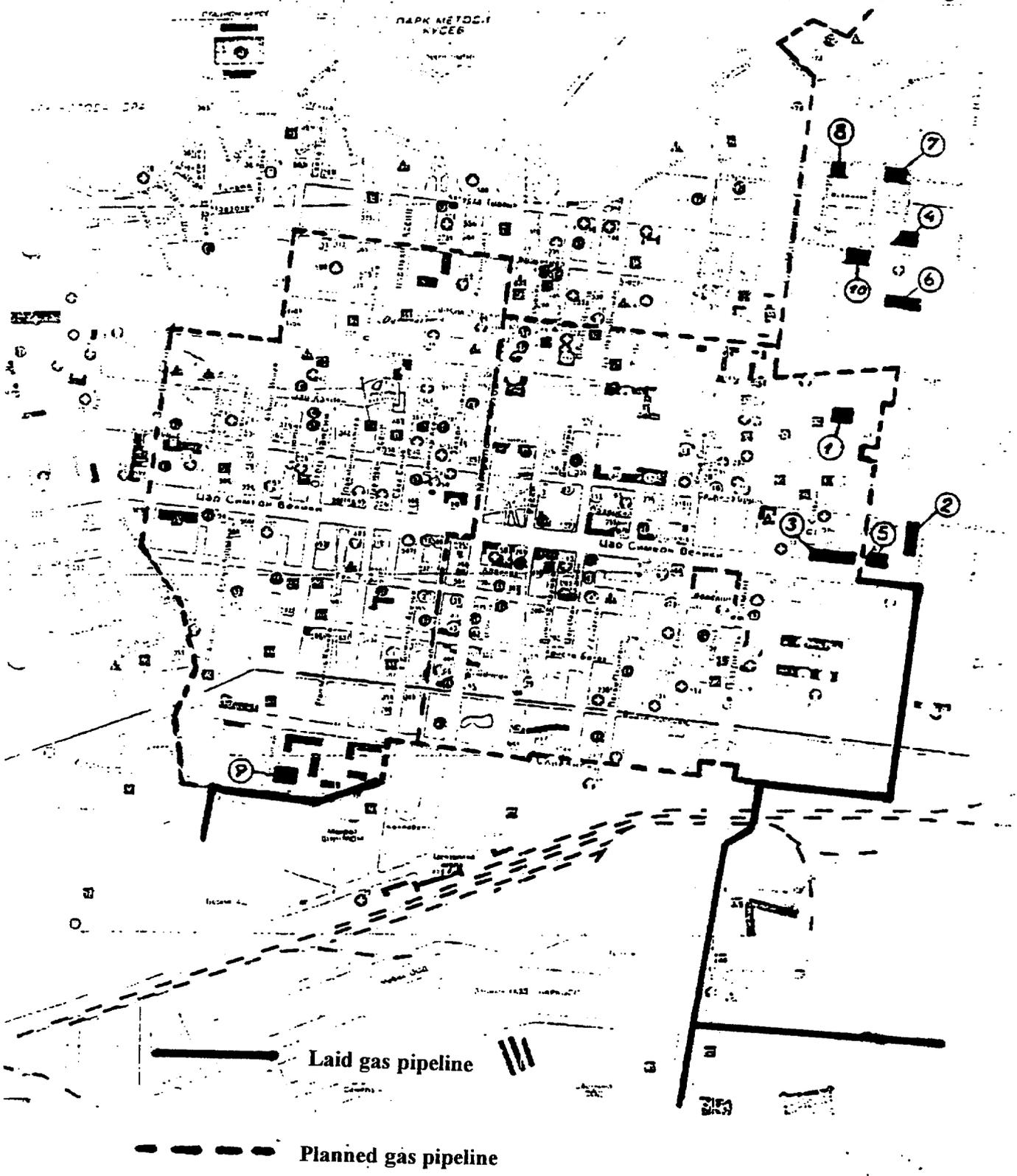
The EAPS Project was restructured to reflect the new economic situation in Bulgaria and new laws, and to support the USAID Strategic Objectives.

The Project work plan was divided into two distinct tasks:

Task I includes activities to provide reimbursement to the MSZ for the conversion of municipal boilers to natural gas. These activities include the approval to the MSZ for the selected conversions to proceed under the program, notification to the MSZ regarding allowable cost reimbursement under the Fixed Amount Reimbursement (FAR) Agreement, update of allowable reimbursable conversion costs on a periodic basis, verification of completed installation certification, and processing allowable payments to MSZ's account in accordance with the FAR Agreement.

Task II includes those activities to assist the MSZ to assume the role as utility regulator: the development of the role for the Municipality as a regulator, development and implementation of a public awareness campaign, and training. These activities will be conducted in close coordination with Local Government Initiative (LGI) in Bulgaria.

Zagorka Brewery



Laid gas pipeline

Planned gas pipeline

CASE STUDY: MSZ ASSUMING THE ROLE OF UTILITY REGULATOR

As a result of the Workshop held in December 1996, MSZ decided to divest itself of its interest in the JV with Overgas Inc. The following reasons supported that decision:

- MSZ participation in the JV results in conflicts in the Municipality's role as regulator and protector of public safety and welfare;
- the benefits of partnership (role in planning the growth of the gas distribution network) will be diminished once the network is completed;
- the Municipality's potential for generating revenues has been decreased by its inability to co-finance expansion of the gas network, thus diminishing its equity share and future claims on profits.

USAID will assist MSZ to improve its capacity to:

- prepare and negotiate a concessions agreement;
- develop a structure of concession fees;
- develop proposals for repayment of previously contributed equity;
- carry out its responsibilities as regulator of the gas utility.

The results of this work will apply to any utility within the regulatory authority of the Municipality. There is no in country examples of how such a regulatory body should be established so the experience can be replicated in other Bulgarian municipalities.

To assume the role of utility regulator, MSZ is establishing a Utility Regulatory Commission. Initially the responsibilities of the commission will be limited to the gasification project. It is believed that as the commission grows in its expertise (such a regulatory body has no precedent in Bulgaria) its areas of responsibility will also grow. Areas of responsibility which have been initially identified are:

- Assisting the Municipality in interpreting and implementing the Municipal Property Act, particularly the Granting of the Concession Chapter;
- Advising and working with the Municipality on how best to take advantage of the funds being provided for the conversion of municipal properties to natural gas;
- Advising the Municipality on how it can fulfill its obligation to keep the citizens aware of the actions of the commission and how these actions will benefit the Municipality. This public awareness responsibility will also seek methods by which the public can participate, to the extent practical, in the deliberations of this regulatory body;
- The commission will assist the Municipality in its current role of issuing construction and operating permits, related to utility issues;
- The commission may establish safety standards which may be required of the concessionaire. These standards will be established within the authority given to the Municipality by current national law.

CONCLUSIONS:

The development of a role for the MSZ as utility regulator contributes to the **Increased Capacity of Local Government to Deliver Municipal Services.**

EAPS Project develops the **new tools and methods for utility regulation.**

The Project contributes to the **democratic processes and privatization processes** and improves the environment, **reducing the air pollution.**

The Public Awareness Program will contribute to **Improve capability in Public Information and Citizen Involvement.**

The training of municipal personnel will contribute to **Establishing Sustainable in-Country Training Capability.**

CZECH REPUBLIC TEAM

SECTION III

A. Background

The EAPS/Czech project is slated to close at the end of June 1997 in anticipation of the country's "graduation" from USAID. A look at the project's achievements shows that the team has developed and refined criteria for winning project packaging, and an effective methodology to work with the Czech State Fund for the Environment (SFZP). The lessons learned and experience gained in the Czech Republic can be applied in the remaining EAPS countries.

B. Objectives

The objectives of the EAPS/Czech project are to:

- Provide technical assistance to high priority environmental projects
- Enhance the performance and quality of municipal environmental services
- Increase the role of local governments in environmental decisions affecting their communities
- Ensure the sustainability of environmental initiatives by improving the ability of domestic funding sources, primarily the SFZP, to efficiently allocate resources among competing projects

In pursuing these objectives, the EAPS/Czech project focused heavily on supporting municipalities, as directed under SO 2.3. EAPS' heavy reliance on local experts created a network around the country of highly qualified short-term environmental, financial, and technical specialists. Overall, the Czech team has been very satisfied with the work of these local professionals and subcontractors.

To attain project objectives, the EAPS/Czech team focused on project preparation, and institutional support to the SFZP. In each area, the Czech team developed screening criteria or standards under which they work.

<p>Lesson Learned: Subcontractors</p> <p>To maximize the chances of a successful subcontractor assignment, the municipality must be involved with selection of the subcontractor, and be comfortable with the final choice.</p>
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C. Project Preparation

In screening projects for technical assistance, the EAPS/Czech team looks for those that:

- Fit into the National Program of Air Protection, a Czech national priority.
- Address small sources (low stack emissions) of pollution, which have the greatest impact on the health of the population. Between 40 to 60 percent of all pollution emanates from these largely unregulated sources.
- Focus on smaller towns and municipalities in Northern Moravia and Northern Bohemia that cannot easily help themselves. Thus, EAPS help is more beneficial.

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As part of the technical assistance, training was provided to representatives of the SFZP, district offices, municipalities, and banks on financing sources for environmental projects.

The first year of the EAPS project was focused on identification, screening, and packaging of municipal projects. The following table summarizes the first-year results.

Projects Identified	Assistance Provided	Submitted to Council	Approved by Council	Signed by Minister
Total Northern Bohemia	6	5	5	4
Total Northern Moravia	9	7	4	3
Total Czech Republic	15	12	9	7

With the typical average of approved financing packages at 12:1 in the Czech Republic, the EAPS/Czech average of 12:9 (4:3) is impressive.

**Lesson Learned:
Project Packaging**

EAPS' success is largely due to the fact that it chose to assist small projects with its limited resources, making it easier to find a winning niche.

The EAPS/Czech project's second year focused on the continuity of project packaging, improvement of the ability of local government and state institutions to make environmental decisions, transparency, and improvement of the ability to use municipal and commercial financial sources for environmental investments.

1. Case Studies

Two case studies reveal how the EAPS methodology helps municipalities access grants and loans for environmental projects.

Case #1. Teplo-Vratimov: Utilizing Waste Heat for the City of Vratimov's District Heating System

Attached handouts provide details of this unique project. During the session, concerns were raised about the viability of this type of project given the current inflationary situation in the Czech Republic. As with many East European countries, the Vratimov mill (Nova Hut) faced possible downsizing and a reduction in its capacity. However, as the waste heat is taken from the rolling mill, it is directed through a heating plant; the heating plant can provide an alternative source of heat in the event the volume of waste heat is reduced. Additionally, as waste heat pricing is not directly related to interest rates or coal prices because it is a waste product, there is no risk of losing money if one enters into a long-term fixed-pricing strategy, as did Teplo-Vratimov (15 years).

**Lesson Learned:
Communication in Financing**

The relative success of Krasna Lipa resulted from EAPS' proactive efforts to promote continuous dialogue and collaboration between the municipality and SFZP; i.e., between borrower and lender.

Case #2. Krasna Lipa and Dolni Poustevna: The Importance of Facilitating Communication Among Borrower and Funder

The attached handouts show that while each town had different issues, each also had the support of a "clever" mayor who was willing to work closely with the EAPS team through the financing application process.

2. Project Packaging Training for Mayors

The need for project packaging training arose from two interrelated factors:

- Poor communication between project proponents and banks has resulted in a failure of applications for financing.
- While changes in the SFZP have resulted in municipalities no longer getting as much money as they did in the past, they can now get more interest subsidies or guarantees if they know how to apply for them.

The EAPS team developed two training sessions (one in Northern Bohemia, one in Northern Moravia) to inform mayors about financing options and to improve their ability to analyze their municipality's financial situation. To support the latter objective, two computer models were presented at the training:

- **Financial Analysis Model** (developed by the Urban Institute): helps local governments understand how much they need and how much they can reasonably borrow
- **Present Value of Gas Lines** (developed by Dr. Nejchelebza): yields information necessary to negotiate with a gas distributor, as eventually it will sell the gas line to the distributor

These models will help municipalities target their applications more appropriately. Both sessions were well attended by a diverse group of representatives, including mayors, district officers, SFZP representatives, alternative financing sources such as MUFIS (provides long-term credit at acceptable terms to improve municipal infrastructure), and representatives of banks who have agreements with MUFIS.

D. Assistance to the SFZP

The major challenges faced at the outset of planning SFZP assistance included:

- A capital shortage relative to the demand for financing, and a large number of requests for small projects¹
- Politicized, nontransparent, and risky credit decisions²
- Limited recognition of SFZP's potential positive role in credit markets.³

**Lesson Learned:
Work with Borrowers and Lenders**

EAPS' success in the Czech Republic results in large part from its intensive work with municipalities to be good borrowers and with the SFZP to be a good lender and collaborator with commercial banks.

¹ The SFZP received 4.6 billion Kc in support from the state, and an additional 2 billion Kc from the National Property Fund. However, it gets more than 12 billion Kc in requests for assistance.

² SFZP's project cycle structure is very time consuming for applicants and not very transparent. It should take approximately 6 months to go through a cycle, but it can take up to 18 months, largely because there are too many decision makers who are unclear on priorities.

³ See handout for further detail.

Given these challenges, assistance to the SFZP has centered on the fund's need to leverage its financial resources, protect long-term solvency, and improve public accountability. Specific assistance included:

- Improvement of the SFZP's credit policies, procedures, and analysis
- Analyses and recommendations not to extend 700 million Kc in guarantees of several large and risky loans
- Assistance and recommendations for establishing a standardized loan guarantee program

EAPS remained responsive and adaptable to requests by SFZP management. As an unbiased and independent advisor, EAPS has been able to draw on outside resources, banks, and other Czech institutions; perform unbiased project analysis; and promote policy changes.

Participants questioned whether the SFZP could completely break away from the government. While this will not be possible until the end of 2000, new fund guidelines mandate that the Minister cannot make "exceptions" to the rules (up to 60 percent of actions were exceptions until now). This will help with transparency and accountability. In addition, while it was difficult for EAPS to implement across-the-board changes because the fund compartmentalizes its technical and financial teams, these recent policy and administration changes bode well for future reforms.

To date, EAPS has helped the Ministry of the Environment (MOE) and the SFZP implement numerous policy changes, including: lengthening loan terms to 10 years; limiting assistance to a maximum of 50 million Kc (\$1.75 million); evaluating applications now based on applicants' ability to self-fund and repay debt; reducing subsidy levels from 80 percent of project cost to 60 percent; charging interest rates on all loans (previously offered no interest loans); and initiating a loan guarantee program. Additionally, Foundation Project North prepared a priority setting methodology that was accepted by the SFZP in February. This methodology is also expected to be applied in the MOE.

E. Conclusion

EAPS has made a significant contribution to the improvement of decision making processes at the municipal and state levels, and to increasing transparency of new SFZP policies that support democratic processes and improve the efficiency of financial resource allocation. EAPS' efforts to increase cooperation between the SFZP and commercial financial institutions has helped these institutions leverage financing for environmental projects.

EAPS has contributed significantly to substantial institutional changes in the Czech Republic. EAPS:

- Developed a criteria for comprehensive evaluation of potential packaging and financing applicants, including a technical, environmental, and financial analysis.
- Facilitated clear, rational, and independent communication among municipalities, businesses, and financial institutions.

- Developed a methodology for setting regional environmental priorities that was adopted as standard by the SFZP Fund Council. This helped improve transparency and democratic processes.
- Provided training and seminars, important tools to increase effective communication, improve transparency, and democratic processes.

EAPS - Environmental Action Programme Support Czech Republic

EAPS Conference, Budapest, May 7-10, 1997

A. Background

In the Czech Republic, EAPS seeks to meet program objectives by providing technical assistance to high priority environmental projects; enhancing the performance and quality of municipal environmental services and increasing the role of local governments in environmental decisions affecting their communities; and ensuring the sustainability of environmental initiatives by improving the ability of domestic funding sources, principally the State Environmental Fund (SFZP), to efficiently allocate resources among competing projects.

B. Logistic structure

As the work on projects is concentrated in the most polluted parts of the Czech Republic - Northern Bohemia and Northern Moravia, the field offices were established in mentioned regions. Field office Prague was established mainly for technical assistance to the State Environmental Fund.

Field Offices built a network of Czech environmental, financial, technical experts who were periodically hired as needed.

Contact persons:

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C. Overview of the Country Program

C.1. Screening criteria

The work can be divided into three areas:

1. Technical assistance to individual projects

Chosen projects must be generally characterized as:

- the projects placed into the Program of air protection
- small sources (low stack emission sources) of pollution with the greatest impact on the health of population
- smaller towns and municipalities in Northern Moravia and Northern Bohemia

2. Cooperation with the State Environmental Fund (SFZP)

Assistance to the SFZP was based upon the fund's need to leverage financial resources, protect long term solvency and improve public accountability.

Specific assistance focused upon:

- Computer model of long financial planning of SFZP
- Improving the SFZP's credit policies, procedures and analysis
- Analysis and recommendations to not support several large and risky guarantees
- Loan guarantee program and credit enhancements

3. Training

Training will be focused on bringing together:

- representatives of the SFZP
- representatives of District Offices, Municipalities
- banks

C.2. Projects

The first year of EAPS project was focused mainly on identification, screening and packaging of municipal projects. The following table summarizes the results achieved in the first EAPS year in the Czech Republic.

<i>Project Identified in the Czech Republic</i>	<i>Assistance Provided</i>	<i>Submitted to Council</i>	<i>Approved by Council</i>	<i>Signed by Minister</i>
Total Northern Bohemia	6	5	5	4
Total Northern Moravia	9	7	4	3
Total Czech Republic	15	12	9	7

Costs and benefits of Approved Projects

<i>Projects Identified in the Czech Republic</i>	<i>Project Cost</i>	<i>NPOO Assist.</i>	<i>Environmental Benefits (t/y)</i>		
			<i>TSP</i>	<i>SO₂</i>	<i>No_x</i>
Northern Bohemia					
1. Chomutov	14.2	7.1	30	22.3	3.4
2. Bílina	7.8	3.1	12.1	30.2	4.1
3. Liberec	22.9	18.4	56.4	56	13.3
4. Krásná Lípa Gas D. System	30.3	24.3	51	72.8	16.6
5. Krásná Lípa Facilities Conv.	25.7	16	N/A*	N/A*	N/A*
Total Northern Bohemia	100.9	68.9	149.5	181.3	37.4

Northern Moravia					
1. Vratimov	80	N/A**	60.7	46.7	12.9
2. Orlová	5.3	2.1	64.7	29.7	4.9
3. Polanka	14	5.2	74.3	32.8	7.2
4. Petrovice	7.5	6	23.1	15.5	5.6
5. Svinov	6.4	3.29	7.6	3.7	-8.5
Total Northern Moravia	113.2	16.59	230.4	128.6	22.1
Total Czech Republic	214.1	72.19	379.9	309.9	59.5

*) Benefits from conversion of municipal facilities in KL are already included in benefits related to Krásná Lípa gas distribution system.

***) Interest rate on commercial loan will be covered

The second year focused on continuity of packaging of the projects, improvement of local governments and state institutions in environmental decisions, transparency and improvement of the ability to use municipal and commercial financial sources for environmental investments.

Projects that have been or are being implemented in the second year:

<i>Name of the Project</i>	<i>Type</i>	<i>Purpose</i>
Ludgeřovice	Coal/Gas Conversion, packaging for the loan	Improvement municipal skills
Haviřov	Assessment of environmental policy of the City of Haviřov	Improvement municipal skills
Financial and Economic Model for Evaluation of Natural Gas Network	Financial and Economic Model	Mobilizing financial sources, example of two case studies Polanka and Krásná Lípa
Rožnov	Study of sewage system	Example of cooperation between two US AID programs - Municipal Finance Program and EAPS
Tanex Litoměřice	Reconstruction of heating plant in order to comply with new air emission standards	Improvement small business skills
Dolní Poustevna	Reconstruction/change of district heating system incl. Demand side management plus heating plant conversion from coal to gas based cogeneration	Example of joint financing through EAPS and PHARE
Jílové	Technical, economic and environmental assessment of housing estate heating plant - identification of suitable environmental improvements for the municipality to be able to comply with the new air protection act.	Improvement municipal skills

Technical assistance for State Environmental Fund		Improvement of Policies and Procedures, transparency in decision making, cooperation with commercial institutions
Training Activity	<ol style="list-style-type: none"> 1. Training focused on implementation of EAPS recommendations for State Env. Fund 2. Training for Mayors, District Offices' representatives 	Improvement of Municipal and State officials, transparency in decision making, cooperation with State Env. Fund and commercial institutions

D. Conclusions

EAPS has made a big contribution in improving the decision making process at the municipal and state level, increasing transparency in a new policy of the State Env. Fund supporting democratic processes and improving efficiency in the allocation of financial resources. Aiding cooperation between the State Fund and commercial financial institutions to leverage financing for environmental projects.

Institutional change from successful EAPS assistance:

- Selected projects have to be assessed by comprehensive evaluation covering technical, environmental and financial point of view at the beginning of the work.
- Facilitated a clear, rational and independent communication among municipalities, businesses and financial institutions.
- Developed a methodology for setting regional environmental priorities that was adopted by Fund Council as standard.
- Training/seminars are very important tools for effective communication, improving transparency and the democratic process.
- In case of the State Env. Fund it is important to support tools to leverage financing for environmental projects, cooperation with commercial financial institutions, development of new services, enhance credit management, solvency, sustainability and transparency. Also it is necessary to set size limits for loans subsidies and guarantees. To base evaluation of assistance upon credit capacity of clients and commitment to repay a loan.

Appendix 1.

Czech Team Profiles

Břetislav Klíč
Country manager, Ostrava

Recipient of two Master Degrees: in Mechanical Engineering, and Geology and Mining from Technical University Ostrava. Mr. Klíč participated in several training organized by US Environmental Protection Agency (USEPA) focused on Environmental Policy, Environmental Economics, Health Risk Assessment and employing health risk assessment and cost-benefit analysis as tools in risk management. During last four years, Mr. Klíč orchestrated several important environmental projects supported by the Czech Ministry of the Environment and US Agency for International Development (USAID). Mr. Klíč has experience with work on international teams with USEPA and USAID experts solving problems such as a right allocation of environmental investments, employing cost - benefit analysis in assessment of technical options in projects and project packaging for their financing. Recommendations based on cost-benefit analyses (e.g. Czech cooking industry, or remediation of heavy polluted area following a closure of an industrial plant) have been implemented in practice.

Lubomír Paroha
Environmental consultant, Ústí n/L

Born in 1958; RNDr. in theoretical mathematics at Prague Charles University; All 12 years of professional carrier spent in environmental research and consultancy; last four years founder and director of Foundation Project North - fully professional nongovernmental organization dealing primarily with information support for environmental management; project leader of FPN major project: "Decision Support System for Czech Regional Environmental Policy"; fellowships in UK (Cambridge University), USA (German Marshall Fund Fellow) and Austria (Salzburg Seminar); speaks English, Russian, Slovak and a little German; two daughters (Miriam and Irene) and son (Joseph).

Hana Smolková
Field administrator/coordinator, Ústí n/L

A graduate from the Prague School of Economics with a degree in Management and Administration. Fifteen years experience in banking and financial sector as well as in small private business sector, excellent communicative and organizatory skills.

John W. Haines
Senior finance advisor, Prague

Has been the senior finance advisor to EAPS Czech Republic since March 1996. Previously, he worked for six years in corporate lending in Portland, Oregon, and later founded and directed an inner city economic development loan fund in Trenton, New, Jersey. He is a graduate of the University of Wyoming.

Utilizing of waste heat for district heating system of the City of Vratimov

By its area of 14.2 km², Vratimov belongs to medium-sized communities within the district of Frýdek-Místek. However, with 6800 inhabitants Vratimov is located near Ostrava industrial sites and is strongly influenced by adverse industrial impacts both to the land and to residents health. This situation is impacted also by emission from 17 block boiler plants serving as a heat source for a central area of Vratimov, in which 5732 people live. Emissions from obsolete solid fuel based heating plants with low chimneys impact the health status of the residents and their living environment.

The aim of the project was to improve the emission situation in Vratimov by closing down 15 block boiler plants and one industrial boiler plant (supplying, however, also flats), i.e. all central sources in the town. In this case, just one block boiler plant would be left in the whole Vratimov. The connection of this boiler to the central distribution system was not economical, and, therefore, gas will be introduced to this remaining one.

New distribution system supply schools, nursery schools, healthy facilities, shops and offices, and in addition, 612 flats in which about 1840 inhabitants live, i.e. approx. 32 % of the total population of Vratimov.

Heat transfer (exchange) stations are installed within the areas of the liquidated boiler plants, to which secondary central heating and hot water distribution systems in buildings is connected. The transfer stations is heated by 130/70 ° C hot water from a newly built hot water supplying line from the Nová hut' Ostrava - Kunčice. The hot water feeder will be approx. 3 km long and branches to particular exchange stations will be totally long approx. 1.5 km.

The main heat source is a newly built secondary energy source (SES), utilizing waste gases heat from two heating furnaces in the Nová hut' rolling mill, where the heat exchangers are installed into the hot waste gases discharging system.

Potential failures in the SES operation or its insufficient operation depending on the climatic conditions are compensated by heat from the Nová hut' heating plant. The district heating system is supposed to require a performance of 12MW (with potential extension to 16MW) and the heat quantity of 75000 GJ/year. The SES share (waste heat) in a total consumption of 75000 GJ/year will equal 70 to 80 % and a share of the Nová hut' heating plant will equal 20 to 30 %.

Total review of the air emissions reduction:

Emission sort	Total reduction t/year
Solid substances	60.74
SO ₂	46.89
Nox	12.88
CO	21.19
CxHy	6.35
Aldehydes	0.01

For implementation of this project joint venture company Teplo Vratimov was established (50 % the City Vratimov, 50 % Nová Hut' Steel mill). The project is financed from two sources 1) MUFIS (Housing Guarantee Fund) revolving fund from US sources focused on a development of municipal infrastructure, 2) Czech Environmental Fund.

The structure of financing:

Total project cost: 80 mill. Kč (\$ 3 mill)

MUFIS loan: 80 mill. Kč (\$ 3 mill) interest rate 11.5 %, repayment period 14 years

Czech Environmental Fund: Settlement of an interest rate of MUFIS loan in the amount of 7% for the period of the five years

The construction was begun in late 1995 and testing operation was begun in September 15, 1996. At the present time the heating system is in full operation and citizens express their contentment to the City Council.

EAPS role in securing financing was following:

- Legal assistance in establishing Teplo Vratimov firm (joint venture between Vratimov City and Nova Hut Steel mill).
- Creating of the Business Plan for Teplo Vratimov firm including setting optimal price of heat for inhabitants.
- Environmental Assessment.
- Economical/Financial Assessment.
- Application to the State Environmental Fund for support of Vratimov project.
- Assistance during negotiations at the State Environmental Fund.

Improved utilization of the heat having been produced already is the most ecological and economical method of the heat conservation. Because of that, the proposed solution can be considered without any debt to be most efficient, effective and prosperous.

This project implementation should lead to pilot project presentations, indicating how to use current industrial heat sources for the benefit of citizens and living environment, too.

Assistance to the Czech State Fund for the Environment (SFZP)

A. Challenges faced by the SFZP (from a finance perspective)

1. Capital shortage relative to demand for financing; large number of requests for small projects.
2. Politicized, untransparent and risky credit decisions.
3. Limited recognition of potential positive role in the credit markets.

B. EAPS assistance and cooperation with the SFZP

Assistance to the SFZP has centered on the fund's need to leverage its financial resources, protect long-term solvency and improve public accountability. Specific assistance includes:

- Improvement to the SFZP's credit policies, procedures and analysis.
- Analyses and recommendations not to extend guarantees of several large and risky loans.
- Assistance and recommendations in establishing a standardized loan guarantee program.

EAPS remained responsive and adaptable to requests by fund management. As an unbiased and independent advisor, EAPS has been able to draw upon outside resources, banks and other Czech public institutions, perform unbiased project analysis and promote policy changes.

Specific policy changes recently instituted and made public by the Ministry and SFZP: Lengthen loan terms to ten years; assistance limit of 50 mil Kc (\$1.75 mil.); evaluate based upon applicants' ability to self-fund and repay debt; reduce subsidy levels (from 80% of project cost to 60%); charge interest rates on all loans (fund had offered no interest loans); initiate loan guarantee program.

New directions & expanding current direction

A. Expand fund capacity to foster a wider range of national benefits:

- Financial and capital market development/ leveraging greater financing for the environment.
- Public education and participation (environmental education, democracy building).
- Private sector education (capital budgeting to promote pollution prevention/waste reduction).
- Economic and environmental technology development.

B. How EAPS can accelerate fund capacity to meet a wider range of national benefits:

- Leverage, leverage, leverage financing (credit enhancement products, schemes to lengthen loan terms, increase credit uniformity and efficiency with small projects and borrowers, promote long-term and predictable sources and costs of loan capital, standardize and bundle loans for sale in secondary markets).
- Facilitate and mediate bank communication and cooperation (lending consortiums, roundtables/working groups).
- Promote borrower-based cooperation such as borrowing pools, regional and 'watershed' planning and development.
- Inform and link assistance with banking sector reform efforts.
- Tie USAID environmental fund capitalization to specific environmental policy and credit

market development objectives such as capitalizing a guarantee loss reserve or a subordinated debt pool for targeted priority sectors/borrowers/projects.

- Assist with environmental fund public relations efforts and a fund-based community-focussed newsletter and media links.
- Coordinate and link EAPS efforts with USAID democratization, bank reform and public administration assistance.
- Create a regional funds' journal/report (perhaps through cooperation with the REC).
- Guide funds to adjust their financing efforts to the continual economic and market transitions taking place in their countries.
- Advance bank-like policies, procedures and analysis methods.
- *Interest rate by lowering
Interest rate by lowering*

C. How environmental funds benefit from operating more like banks

Funds are different from conventional banks in several ways: environmental mandate, non-interest revenue sources, no deposit liabilities or the associated fiduciary responsibility. But environmental funds are financial institutions that influence and are influenced by the financial markets. Environmental funds can more effectively fulfill their environmental objectives by instituting basic bank-like policies and procedures that help them integrate with the financial markets. Bank oriented practices help funds by:

- Protecting revolving revenue sources by ensuring the recycling of loan repayments.
- Avoiding disruption to the municipal and/or environmental credit markets from loan defaults.
- Instituting financial incentives or disincentives to assure loan repayment and cost-effective applications.
- Evaluating borrowers' capacity to repay, thereby reducing unnecessary subsidies.
- Establishing financial solvency and stability as a foundation for gaining bank cooperation.
- Helping assure a contributory role in economic transitions.
- Helping establish objectivity and increase public accountability and transparency.

EAPS Reports

List of 1996-1997 EAPS advisory documents prepared for the Czech State Fund for the Environment (all are available in English):

- Developing a Loan Guarantee Program: Background, Review and Recommendations
- Fundamentals of Loan Guarantees
- Analysis of Proposed SFZP Guarantee to ECO GALA a.s., with Recommendations
- Analysis of Pending Loan Guarantees by the SFZP, with Recommendations
- A Review of Operations and Procedures of the SFZP
- Guidelines for Credit Policy for the SFZP
- Guidelines for Credit Procedures for the SFZP
- Guidelines for Credit Analysis for the SFZP

CASE STUDY OF KRÁSNÁ LÍPA AND DOLNÍ POUSTEVNA

SIMILARITIES

- located in a valley within a beautiful landscape nearby German borders
- 3.5 thousand inhabitants which is 1 third of prewar population
- local industry in decline, high unemployment rate
- local heating based upon brown coal; consequent air quality problems
- urgency of 1998 deadline in complying with new emission standards
- natural gas as "natural", first priority alternative

DIFFERENCIES

Krásná Lípa	Dolní Poustevna
• started to plan in Spring 95	• started to plan in Fall 96
• EAPS offered TA in Fall 95	• EAPS asked for TA in Fall 96
• EAPS paid for detailed design	• EAPS pays for a feasibility study
• two projects <i>gas distribution system - 30 mil. Kc</i> <i>conversion of 10 boilers - 25 mil. Kc</i>	• one project <i>gas conv. of district heating plant</i> <i>inc. heat distr. system - 40 mil. Kc</i>
• high supply of soft money	• smaller supply of soft money
• received SFZP assistance 22 mil. Kc grant; 18 mil. Kc 0% loan	• low chance for SFZP assistance high chance for PHARE EU grant
• took 7 mil. Kc com. loan will repayed by sale of el. and heat	• have not negotiated any loan yet
• gas line already sold for 21 mil. Kc	• nothing to sell but heat
• lead taken by the townhall	• lead taken by engineering comp.
• excellent mayor and vicemayor	• average management

LESSONS LEARNED

Small Picture

- Krásná Lípa has made at least 9 mil. Kc just on gas line project itself
- Gas utility saved 9 mil. Kc too.
- Krásná Lípa will not have to put any money into the projects.

Broader Picture

- State assistance is not rational

LITHUANIA TEAM

SECTION IV

A. Presentations

Case #1: New Chromium Removal Facility at the Vilkas Tannery in Kaunas City

The installation of a new chromium removal facility at Vilkas Tannery was a demonstration project funded by a USAID grant. Vilkas Tannery was selected for two reasons. First, Vilkas is located in the second largest city in the country, Kaunas City, which until now has been without municipal wastewater treatment facilities. Such facilities are currently under construction (with the European Bank for Reconstruction and Development [EBRD] and other European funding) and are due to be completed next year. The new treatment facilities will not be able to process the high chromium-containing effluent discharged by Vilkas. In addition, the municipality of Kaunas will impose tighter heavy metals discharge standards than currently exist, and these will be considerably lower than the present levels in Vilkas' effluent.

Vilkas was also chosen for this project for its replicability. The second largest tannery in the country, Vilkas has a significant impact on the environment, principally through its discharges into the Nemunas River. Because many other Lithuanian industries discharge heavy metals into the environment, it is hoped that the Vilkas experience will serve as a model for them.

Vilkas' existing wastewater treatment system only treats effluents with high-concentration chromium. The new chromium removal facility will treat both high- and low-concentration chromium effluents. It will treat a wider variety of pollutants than the previous system and also produce effluent with low enough concentrations of heavy metals to be processed by the new municipal wastewater treatment facility. Therefore, it will allow the tannery to operate more cost-effectively because it will treat a greater quantity and variety of wastewater and produce a more acceptable effluent than before for the same cost.

The installation of the new chromium removal facility at Vilkas inspired the tannery's management to contemplate other environmental performance improvements, such as water recycling, chemical substitution, modernization of the dyeing processes, and others. The tannery has begun work on designs to upgrade its facility for the treatment of nonchromium-containing effluent, and is currently seeking funding for this.

When completed, the improvements are expected to give Vilkas a more environmentally friendly public image and lead to an increase in its products' marketability and the tannery's overall viability.

Case #2: The Lithuanian Environmental Investment Fund (LEIF)

The Lithuanian Ministry of Environmental Protection (MEP) established the LEIF to support the achievement of the country's national environmental protection priorities by providing financial support (primarily through low-interest loans) for environmental investments in the public and private sectors.

Until now, most environmental investments in Lithuania have been for the construction of wastewater treatment plants. The system of providing subsidies to municipalities has not encouraged either the implementation of other types of environmental projects or the use of

private or public sector financial resources for environmental protection. Therefore, the MEP decided to create the LEIF to provide soft loans to support private and public environmental investment projects.

The LEIF will begin operations with limited sources of funding; it will have an initial

**Lesson Learned:
Intraregional Cross-Fertilization**

EAPS has simultaneously been able to reduce technical assistance costs and increase the direct relevance of technical assistance by drawing on the expertise and experience of one CEE country to assist another.

capitalization of 2 million ECU, provided by the EU PHARE program. To maintain the value of this initial funding, the LEIF will provide only loans, no grants, in the initial period. It is anticipated that the LEIF eventually will provide grants to support a wider array of activities; however, such grants are expected to be funded from domestic revenue sources.

The Ministry of Environmental Protection is currently drafting a law on pollution charges under which 50 percent of revenues collected would be allocated to the LEIF. In addition, other possible revenue sources such

as product charges are being contemplated for the future.

LEIF's initial focus will be project packaging and project proponent training. The Lithuanians have studied and hope to draw from the experiences of the EAPS/Poland team in this area.

A LEIF operations manual has been drafted and is being reviewed by EU PHARE. A goal of the manual is to standardize application forms and requirements among the three institutions in Lithuania to which EU PHARE has provided funding: the Energy Saving Fund, the Small and Medium Enterprise Fund, and the LEIF.

The EU PHARE and the Government of Lithuania are expected to sign a Memorandum of Understanding concerning the LEIF in July.

In addition, the EAPS Lithuania team is making a major contribution to development of a national environmental finance strategy, being supported primarily by the Organization for Economic Cooperation and Development (OECD). The EAPS team is utilizing the operations of the Krakow Environmental Fund (Poland, assisted by EAPS Poland) as a reference model in its work on the national environmental finance strategy, particularly with regard to project cycles. It is hoped this strategy will provide clarification about possible applicants to the fund and other financing sources for environmental projects.

B. Discussion

- Q. *How are the LEIF's priorities to be determined and what is the relationship between this process and the national environmental action plan, given that the LEIF is expected to be a principal vehicle in the promotion of the national environmental plan?***
- A.** The priorities in the national environmental plan constitute the framework for the LEIF strategy, so LEIF's priorities will be consistent with national priorities. According to the operations manual, LEIF's supervisory board must set and approve priorities that are consistent with those defined in the national environmental strategy. This national strategy was developed in 1995 and 1996 and contains both a long-term and short-term program; it

mentions wastewater treatment, hazardous waste management, solid waste management, and environmental liability as priority areas.

Q. What does the draft law say about how charges on pollution emissions will be distributed to the LEIF; will they go directly to the LEIF or through the national budget?

A. This is addressed in the draft legislation which is currently being reviewed by the Parliament; as currently written, the legislation provides for the distribution of funds by both of these mechanisms.

Q. Please elaborate on the conditions for the loans to be issued by the LEIF.

A. If approved by its supervisory board, the LEIF expects to give 10-year loans at between 3 percent and 12 percent interest with a 1-year grace period. In contrast, bank loans are issued on a relatively short-term basis (6 months to 1 year); thus, it is not feasible for project proponents to undertake environmental projects financed by commercial banks.

Q. What percentage of project cost can be financed by a loan from the LEIF?

A. It is expected that at least 20 percent of the project value will be paid by the project proponent itself, and the maximum value of any loan will probably be Lt. 1.5 million (local currency), or about \$350,000.

Q. What are the principal conclusions to be drawn from the work with both the Vilkas tannery and the LEIF?

A. First, establishment of environmental funds supports the development of financial and capital markets in Lithuania and enables the provision of loans that are not otherwise available (for example, from private banks, whose loans are short-term and not available or appropriate for environmental investment projects).

Second, the creation of the LEIF and the assistance provided to Vilkas should promote private sector development and higher levels of private sector investment in environmental protection. The Vilkas experience, by creating a more economically viable industry, should encourage other private industries to pursue process improvements and pollution prevention measures. This, in turn, should contribute to reducing pollution on a wider scale.

Third, while in the past the Ministry of Finance opposed the creation of the LEIF, now the Minister of Finance is a member of the LEIF advisory board. In addition, initial funding for the LEIF is being provided by international donors. Whether the LEIF will receive additional revenues from pollution charges depends on whether Parliament approves the distribution of pollution charges to the LEIF.

No laws govern the establishment of investment funds in Lithuania, so it was decided to establish the LEIF under the laws governing nonprofit organizations. If, in the future, the government passes laws governing the establishment of investment or development funds, the LEIF can be reregistered on that basis.

It is important that the LEIF be independent of the MEP. From the beginning, the Minister of Environmental Protection pressed hard for the creation of the LEIF and, although the LEIF is officially independent of the MEP, it is still highly influenced by it. The presence of representatives from other entities on the LEIF's supervisory board helps to moderate the influence of the MEP. For example, the LEIF supervisory board has a relatively balanced representation of governmental and nongovernmental institutions. It includes representatives of the MEP, the Ministry of Finance, the Ministry of Economy, the Association of Lithuanian Municipalities, the Lithuanian Manufacturers' Confederation, the Lithuanian Tradesmen's Employer's Association, the Lithuanian Green Movement, and others. Neither PHARE nor USAID is represented on the board.

- Q.** *The technology used at Vilkas was end-of-pipe. Were pollution prevention approaches considered, and if so, why weren't they selected?*
- A.** Because of the nature of its product line, the Vilkas Tannery was unable to utilize other than chromium-based production processes, and these require end-of-pipe approaches.

ENVIRONMENTAL ACTION PROGRAM SUPPORT PROJECT

IMPLEMENTATION OF CHROMIUM REMOVAL FACILITY AT VILKAS TANNERY, LITHUANIA

Background

Vilkas AB is the second largest tannery in Lithuania situated in Kaunas City. The company's most significant impact to the environment is chromium containing wastewater which is currently discharged to the Nemunas River.

Though Kaunas is the second largest Lithuanian city, it still has no municipal wastewater treatment facilities. The construction of Kaunas wastewater treatment plant (WWTP) started several years ago and should be completed next year. Vilkas effluent then will be directed to the new WWTP and Kaunas Municipality is going to impose stricter heavy metal discharge limits which will be considerably below the present levels in Vilkas wastewater.

The main objectives of grant demonstration project in Vilkas were the following:

- Reduce the overall chromium levels in wastewater discharge from Vilkas tannery;
- Reduce the volume of chromium bearing sludge;
- Improve the overall performance of the existing sedimentation process, particularly suspended solids removal;
- Replicate certain components of the Vilkas project in certain Lithuanian industries, particularly those discharging heavy metals to municipal wastewater treatment systems.

Sources of Wastewater

Total flow of chromium containing wastewater in Vilkas is estimated at approximately 100 cubic meters per day. Wastewater is produced in a number of operations. Trivalent chromium concentrations in separate streams range as low as 0.5 mg/l from fatliquoring, to 250 mg/l from black dyeing and 600-800 mg/l from tanning process.

The staining process uses sodium dichromate which is the source of hexavalent chromium. Its concentration on staining effluent can reach as high as 500 to 800 mg/l.

Existing Treatment Systems

Currently, Vilkas operates two wastewater treatment systems: one for chromium removal and one for non-chromium wastewater before being combined with the plant's sanitary wastewater.

Chromium containing wastewater from staining and tanning processes are processed in batches in reaction tanks by acidification with sulfuric acid, reduction of hexavalent chromium to trivalent with thiosulfate and sedimentation of chromium hydroxide following the addition of sodium carbonate.

Chromium removal efficiency is approximately 95 to 98 %. However, as the influent chromium concentrations are very high, the resulting effluent is still unacceptable at 45 to 80 mg/l. This effluent is later combined with the other wastewater diluting chromium concentration to 2 to 3 mg/l for discharge to the river.

Proposed Treatment System

The primary focus of proposed treatment improvements and additions is improved chromium removal from the wastewater stream and reduced chromium sludge volumes. All chromium containing wastewater including currently treated high chromium tanning and staining effluent and low chromium effluents from neutralization, dyeing, rinsing and fatliquoring processes which are currently not treated will be pumped to the equalization tank. Then, all flow will be pumped to the galvanocoagulator for hexavalent chromium reduction and will pass by gravity to a new inclined plate clarifier. Effluent from the clarifier will flow by gravity to the plant sewer. Sludge settled in the clarifier will be pumped to a new filter press.

Implementation

Prior to the final design of the new chromium removal facility, a chemical testing program was performed to evaluate the effects of various chemicals and dosages on chromium removal. The galvanocoagulators for hexavalent chrome reduction were purchased in Lithuania while all other equipment were procured in the USA. Equipment installation was performed by Vilkas. The commissioning and start-up of the chrome removal facility is planned for the beginning of June.

Waste Minimization and Tannery Process Improvements

Additionally to the implementation of new chrome removal facility, Vilkas staff was introduced to various waste minimization and tannery process improvement opportunities including water recycling, chemical substitution, modernization of dyeing processes, etc. Technology transfer workshop was carried out in Vilnius with the participation of leading European and US tannery equipment and chemical suppliers. Following the workshop, Vilkas has started the cooperation with several companies and is gradually improving production processes.

LITHUANIAN ENVIRONMENTAL INVESTMENT FUND

1. Background and objectives of the Fund

After many years of neglect, environmental problems are pressing. Enterprises and households face severe financial constraints, the public sector faces severe budget constraints, the banking system and capital markets are still poorly developed. There is in many cases inadequate information concerning the cost of environmental damage and inadequate information about what can be done to abate pollution.

In Lithuania, as in all other Central and Eastern European (CEE) countries, past and present neglect of the environment has created health risks for citizens, damage to nature and a significant economic challenge for the nation. As Lithuania transforms its political, social and economic systems there is a huge demand for investments of many types in many sectors, including environmental protection. Recognizing that the demands and needs for investments greatly exceed the resources available, the Lithuanian Ministry of Environmental Protection (MoEP) has undertaken efforts to establish a new "Lithuanian Environmental Investment Fund" (LEIF), in order to increase the financial resources available for environmental investments and to use those resources more effectively and efficiently.

The majority of environmental investments are allocated from State Budget, another sources are loans and subsidies from foreign countries and international donor organizations, municipal funds and companies' own resources. Today the major part of environmental investments are directed for the construction of waste water treatment plants. Investments have been envisaged in the Public Investment Program. The current system of granting subsidies to municipal institutions does not encourage environmental projects implementation, therefore, it is necessary to develop a more effective mechanism for granting funds as well as for project implementation control.

To provide incentive for waste and pollution minimization and to accumulate additional funds, it is expedient to establish an environmental investment Fund. It is aimed at providing additional funds to cover economically feasible costs for resource saving or industrial pollution minimization projects. After project implementation, revenues would be used to repay loans to the environmental investment Fund thus revolving and increasing it.

The MoEP envisions the LEIF as a tool for supporting the realization of Lithuania's environmental protection priorities, to increase the volume of environmental

investments and strengthen private sources of environmental financing. More specifically, the LEIF was established by the MoEP as a mechanism for providing financial support, in the most effective and efficient manner possible, to eligible environmental protection activities, with a special emphasis on environmentally beneficial investment projects in the public and private sectors. The main activity of the LEIF is a provision of low-interest loans to public and private sector investment projects which yield significant environmental benefits. The LEIF will also be able to engage in other types of activities, such as the provision of grants to support protection of biodiversity, environmental education, and environmental monitoring and research, however, at this time it is envisioned that such activities will be financed only from domestic Lithuanian sources of revenues to the LEIF.

The LEIF was officially registered according a Law on Public Enterprises as a public enterprise "Lithuanian Environmental Investment Fund" in Lithuanian Republic Vilnius Municipality on December 9, 1996, registration No.VS96 - 10.

The Director of the Fund was hired on March 19, 1997. The Fund doesn't operate yet. The Operational Manual will need to be approved by the Commission in Brussels. Also a Memorandum of Understanding (MoU) should be signed by the Commission and the GoL (Government of Lithuania). This contract should include the following:

- conditions on the use of the capital: this means the Operational Manual and accounting Procedures need to be approved by the Commission and as part of this MoU;
- bank account, acceptable both to GoL and Commission;
- sustainability of the Fund: it should be a revolving Fund, and local intention should be expressed to for example use revenues from pollution charges and environmental taxes will be used to supplement the Fund's capital;
- the Supervisory Board that approves the loans, this might be used to show its independence of the Ministry. The Fund should be set up outside the Ministry. Another option here is to contact a local bank for Fund management;
- other requirements brought forward by both contact partners.

The main goal of the Fund is to support social and private sectors in the implementing of environmentally beneficial projects which meet the environmental priorities. In realization of its goals the Fund can have following kinds of activity:

- issue loans on favorable terms (with low or no interest rate), loan guarantees and interest subsidies to Lithuanian enterprises, organizations and institutions for environmental investment projects;
- provide grants for environmentally beneficial activities and projects;
- prepare investment proposals and evaluations;
- take a part in international investment funds;
- organize conferences, seminars, deliberations and workshops;
- to invest capital and possess purchased shares;
- to be involved in other activities helping to achieve the goals of the Fund and being in accordance with the Lithuanian laws and the Fund's Statute.

2. Management and Administration

The Fund is supervised by the Supervisory Board containing representatives of:

1. Ministry of Environmental Protection - D. Lygis, vice minister
 - A. Dragunas, director of Economics dep.
 - M. Bilkis, director of Environmental Quality dep.
2. Ministry of Finance - G.Kraujeliene, head of Enterprises unit, Budget dep.
3. Ministry of Economy - L.Kalinauskiene, senior specialist, Economy strategy dep.
4. Association of Lithuanian Municipalities - A.Balutis, vice president.
5. Lithuanian Green Movement - L.Vainius, chairman.
6. Lithuanian Tradesmen's Employer's Association - Z.Kabaila, head of Metal processing Factory.
7. Lithuanian Manufacturers Confederation - R.Budrys, chairman of the Environmental Committee.
8. Advisory Board to the Ministry of Environment - A.Matuzevicius, professor
9. Advisory Board to the Ministry of Environment - P.Baltrenas, professor.

Every institution was asked to propose their candidates for the Supervisory Board (SB). The Minister of Environment have approved them.

SB major tasks include

- approval of action plans and lists of priority projects in line with the National Environmental Strategy;
- establishment of criteria and principles of granting loans and subsidies and their limits, as well as their approval;
- approval of annual reports on operation of the Fund submitted by the Director.

The Fund comprises of a Managing Director and his team. Day-to-day activities can be divided according to the technical and financial aspects of the work:

- evaluation of the project applications: planning, design and construction in the context of the environmental priorities of Lithuania.
- administering the complex financial components of the Fund: financial evaluation, structuring documenting and monitoring of long term project loans as well as financial systems and controls needed to manage a financial institution.

The Ministry of Environmental Protection foresees that involvement of a local bank could support the Fund in carrying out the financial activities and at the same time avoiding unnecessary financial risk.

The staff of the Fund will be 5-7 persons. You can see attached organizational Chart of the Fund.

3. Sources of Revenue

The charge system is being revised with the aim of increasing its effectiveness. It is being recommended to introduce changes in the list of regulated pollutants by decreasing their number and grouping them into toxicity categories. Charge rates should be modified to better the environmental protection objectives.

The Ministry is preparing a draft law on pollution charges which suggests that 50% of the revenues will be allocated to the Fund (for 1997 50% accounts for about 20 m Lt. or approx. 4 MECU, this however is expected to increase, due to higher charges and better tax collection practices). This allocation either will go directly from Ministry to the Fund (MoEP's preference) or will go through the National Budget to the Fund and allocated annually upon approval of the Parliament. The draft law will be discussed in May.

Also creation of new sources of revenues (e.g., product charges) are envisioned. This type of charge has not yet received full attention in Lithuania. Application possibilities should be analyzed in nearest future to provide incentives for a reduced use of packaging materials and their collection, for multiple use of packaging; and the use of higher quality fuel, etc.

4. Spending Strategies

The LEIF's financial resources are likely to be very limited in its early years of operation, with initial capitalization of 2 million ECU being provided by EU, and a high priority has been placed on maintaining the value of the donor's contribution, which can only be achieved if expenditures are eventually recovered (hence the use of loans).

Also, at the end of the year, the Supervisory Board establishes priorities for coming year and approves them according to a long term environmental strategy and environmental protection priorities, established by the Ministry of Environmental Protection (MEP).

The following priorities are defined in the Lithuanian National Environmental Strategy:

- air emission reduction;
- protection of surface and ground water;
- improvement of household and hazardous waste management;
- clean-up of polluted areas, including former military sites;
- biodiversity protection and improvement of landplanning.

Environmental priorities for the current year:

- implementation of new low waste technologies and equipment in industries.
- Construction and rehabilitation of waste water pretreatment facilities in industries.
- Hazardous waste collection and disposal.
- Clean-up of contaminated sites.
- Substitution of ozone depleting substances (CFC's) with less harmful substances.
- Protection of biodiversity.

The priorities are not approved by the Supervisory Board as well as all the Operational Manual of the LEIF. The First meeting of the Supervisory Board was on April 10, 1997. The next meeting is expected on May 21, 1997. The priorities should be approved at this meeting.

5. Expenditures

It seems, we will plan them only for 1998.

Domestically registered public and private (small and medium sized) enterprises can apply for funding for projects which demonstrate a clear environmental benefit. Any investment in Lithuania in existing or newly founded enterprises that require long term financing and demonstrate a clear environmental benefit. Initially, the Fund will only provide financing for capital improvements (e.g., purchase of equipment, building expansion and/or renovation, etc.).

The Fund's interest rates are determined on a case-by-case basis, taking into account risk and other factors. It is anticipated that the Fund's interest rates will fall within the range of 3% to 15% per annum. The Fund's interest rates are fixed and will not change during the term of the loan.

As a rule, the loan terms will be up to 10 years. A grace period of up to 1 year can be granted before principal payment begins based upon the individual cash flow condition of the Borrower. Interest payments have no grace period.

The loans can not be financed more than 80% of the project value. In general, the maximum loan amount will be 1,500,000 Lt. (approx. 300,000 ECU).
The grants can not exceed 40% of the project value. Grant for one project has not exceed the amount of 250,000 Lt. (approx. 50,000 ECU).

LEIF address:

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2600 Vilnius,
Lithuania

tel./fax.: (370 2) 224 535
tel.: (370 2) 611 978
(370 2) 250 966

Director: Zilvinas Martinkus
Secretary/accountant: Ausra Sopaite

POLAND TEAM

SECTION V

A. EAPS/Poland Program Goals, Clients, and Approach

See attached handouts.

B. EAPS/Poland History and Future

See attached handouts.

C. Institutional Strengthening Work

See attached handouts.

1. Additional Points on Institutional Strengthening

In providing technical assistance to the environmental funds, EAPS helped the funds enhance their ability to ensure a transparent applications review process based on a scoring system, precise quantity methods, and cost efficiency. EAPS provided assistance at the following levels:

- **Central:** national fund (separate from the Ministry of the Environment)
- **Regional:** 49 regional environmental funds
- **Municipal:** 230 municipal environmental funds

EAPS also provided training for project proponents.

The USAID policy reform project C4EP targeted the national fund, but it became clear that it is more effective to work with regional funds because of their close relationship with proponents, and because it is more important to ensure transparent project evaluation at the regional level.

EAPS/Poland identified a few leading funds with the highest performance quality and committed management, and began working with them.

Working with the funds community has been a challenge and a unique opportunity. Starting this year, EAPS representatives are invited to participate in the annual meeting of 50 fund presidents to discuss common problems, project financing, and policy development.

2. Discussion on Case Studies of Institutional Strengthening

Case #1: Computer-aided System for Cash Flow Planning for Environmental Funds (see attached handouts).

Case #2: Computer-aided System for Measuring Environmental Effects of Investment Projects Supported by the Funds (see attached handouts).

**Lesson Learned:
Work with Borrowers and Lenders**

As in the Czech Republic, EAPS' success in Poland results in large part from working intensively with both borrowers and lenders. In this case, the lenders are municipal, regional, and national environmental investment funds.

**Lesson Learned:
Being Responsive**

It is very important to be responsive to the funds' needs. Thus, EAPS' institutional strengthening technical assistance is being carried out in close collaboration with the funds and ensures their involvement by:

- Creating steering committees that include EAPS representatives
- Encouraging the funds to be involved by sharing project costs (the larger portion of project funding comes from USAID/EAPS)

SP

Q. What is the time frame for the Cash Flow Model?

- A. The funds have requested a two-year financial planning period. Such short-term planning enables daily financial management by being very detail oriented. With this type of tool there is a trade-off: a longer spending period will limit its user-friendly capacity. A model with too many variables becomes too complicated and unmanageable, and its uncertainty factor is higher. However, several funds have requested a three-year limit, and the subcontractor will be asked to come up with a manageable tool with a three-year option.

Q. What evaluation methodology is used in appraising projects through the Evaluation Model?

- A. Emissions, and discharge to the waters. Different methodologies are used for the waste, water, or air sectors.

Q. Is the Cash Flow Model linked more to the obligations?

- A. Yes. The funds have other expected future revenues, including investments and financial markets instruments, repayment of loans, and interest on the loans. All these have rather high probability. Others have a higher risk margin, such as fees and noncompliance charges, and are difficult to predict on an annual basis, let alone a three-year planning period.

Q. Czech Funds are accused of over-committing as opposed to Poland Funds, which are under-committing. What is the total annual revenue of the regional funds in Poland compared to the demand per year?

- A. Noncompliance charges are about \$700 million per year. Share of loan repayment and interest on the loans is becoming a more important source of revenue, as well as income on financial market investments. Environmental investments are actually a better source of revenue than financial markets investments because the interest rates are lower.

In the mid-1990s, it was difficult to disburse fund money because well-prepared projects were few, prices remained high, and loan conditions strict. Since then, the demand and the amount of project proponents have exceeded the amount of available money. In 1995-96, most projects passed the eligibility criteria, and they were all funded because so much money was available. Now that the ranking system is much healthier, only projects that meet the highest criteria get funded.

Q. What is the average environmental loan interest rate?

- A. Twenty percent off the market rate. Municipalities get the best deals, with low interest. Enterprises have the highest rate.

Q. Who will be the user of the Evaluation Model? How will you implement the system?

- A. It will be used by the funds to measure benefits of individual environmental investments they support. Currently, we are working with the most active funds, but later they will share the system free of charge with other funds in Poland and abroad. The model also will be used to

generate national statistics and to evaluate the cost effectiveness of the environmental funds system.

Q. Who will be conducting the research? In Lithuania, for example, the funds cannot publish the data because of the fear of being exposed. In Poland, will it be an independent institution?

A. Polish funds are financed by public money and are evaluated by the Supreme Government Commissions, so it is in their interest to use the Evaluation Model because they can show the results of their work and prove the importance of their role.

D. Environmental Project

Case #3: Military Housing Agency, Gliwice (see attached handouts).

1. Project Components

The project was aimed at replacing coal boilers at military housing with gas boilers or with connections to a district heating system. Activities included:

- Analytical work was carried out by a group of subcontractors, with EAPS' role limited to quality control and developing a general approach.
- Analysis was completed, and solutions were suggested for different buildings depending on the location.
- Financial plan is nearing completion with the following structure: 50 percent grant, and 50 percent loan from the regional environmental fund at 6 percent for 2 years.

The project will be completed within a few weeks, applications will be submitted, and the investment will be made in October 1997.

2. Project Problems

Neighboring buildings should have been included for economic reasons, but they are owned by a different agency that had no money for the project. Because of disagreements between the two owners, the investment was halted.

In addition, the subcontractors could not agree on who was paying for the heating. This was later resolved.

Finally, there were different capabilities for taking loans by different agencies, and delays in loan permit procedures.

3. Discussion on Environmental Projects

Following are key points raised in the environmental project financing discussion.

**Lesson Learned:
Good Working Relationships**

A healthy working relationship with the funds is the key to EAPS' success in environmental project financing through environmental funds. We share the same goals and we are interested in working together to accomplish them. Both EAPS and the funds have money to develop environmental projects, and we place ourselves on the same level as full partners, with no "us" and "them" relationship. The Military Housing Agency case study demonstrates this.

Q. How do you select the projects to which EAPS provides technical assistance?

- A. In the application process, we determine which are the “winning” projects. Three main criteria are considered:
- How interested are the funds in the project?
 - Do we have a partner in the project proponent? Is there a person there who is talking and thinking the same way we are?
 - How advanced is the project, and is there enough information already available?

Q. You don't just pick the projects that you think have no risk. What are the more detailed criteria?

- A. Selecting projects is more complicated than simply choosing a project with no visible problems. Of course, we make sure that the project does not have a lot of problems, but we also feel a responsibility to set a standard for professional consulting services in Poland. Usually, we go through three project screening stages.

First, the proponent sends us the Technical Assistance Request form with general information about the project. Then, the EAPS team meets with the proponent representative to make sure that they are our partners, that they think along similar lines. Lastly, we obtain additional support from the neighbors and local opinion leaders to make sure the community is involved. A thorough analysis is then conducted by our subcontractor.

Q. At which point does the research for the most cost-efficient solution take place—during the initial stages of project screening by the subcontractor, or when the financing has been approved and the work is being carried out?

- A. We make sure the proponent is committed to the most cost-efficient solution, whatever that might be. Once screening is completed and the proponent is committed, we develop a Scope of Work (SOW) that identifies the tasks to be performed. Sometimes the SOW includes estimating energy needs for a facility.

Next, we compare different heat supplying options to make sure that all assumptions used by the consultants are appropriate and approved by the proponent. At this point, we watch the consultants' work closely, and conduct internal reviews to make sure that what the client sees is a state-of-the-art exercise. We try to be practical, but sometimes we request more than necessary from our subcontractors in an attempt to improve consulting standards in the country. At the same time, we try not to overuse the resources.

Some funds are biased due to political reasons, but we represent the most cost-efficient projects. Then we explain to the funds why they should support such projects.

Q. What other products have you produced (publications, models)?

- A. The Manual for Project Appraisal Procedures and Criteria, prepared for several regional funds, includes application forms, description of procedures, scoring systems, and related software. It is available through the EAPS office. We have also produced the Cash-Flow

Model, Evaluation Model, Environmental Effects Methodology and Software, a booklet with guidelines on how to approach environmental investment in the energy and heating sector, and the Environmental Financing Source book (full Polish language version and abbreviated English language version) that will be updated in August.

Q. How does your work relate to the idea of promoting sustainable economic development, the democratic process, and local government efficiency?

A. It depends on the client. In most cases, the stumbling block to sustainable economic development on a company level is lack of basic knowledge of financial and business management, and environmental project evaluation procedures. Twice we were involved in providing consulting services to heating companies aimed at resolving these problems.

For one heating company, we prepared a financing plan that developed their accounting procedures to ensure correct heat pricing, generate resources to pay the loans, and develop the infrastructure.

In another case, a heating company wanted to make sure its environmental investment was viable in terms of company costs. In the course of the work, we learned that the company did not know what cash flow was and could not figure out how prices were determined, what the revenue flows were, and how they were used to compare costs. We developed and introduced a successful revenue-tracking computer. Unfortunately, the project was eventually canceled for external reasons.

<p>Lesson Learned: Strengthening Municipal Government</p> <p>Assisting municipal officials to develop sound environmental projects and apply for financing for them greatly strengthens their performance in other municipal sectors as well.</p>
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We are also very active in the energy sector, where new technology is still being adopted and where introduction of new energy-saving devices does not happen quickly. Our work helps speed this process, which is extremely important to economic development.

We contribute to the democratic processes in the country by offering full information to the public and promoting open communications among professional organizations. In the case of the Financing Source book, we sent copies to municipalities and asked for their input. Fifty municipalities responded, saying that the source book changed the way they worked, and made them more alert and interested in what modern economy has to offer.

EAPS/Poland

LESSON LEARNT AND EXPERIENCE FOR PRACTITIONERS

Schedule of Presentation

1. EAPS role in supporting implementation of Environmental Action Program in Poland
Stanislaw Sitnicki
2. Assistance to institutional strengthening
Grzegorz Peszko
3. Packaging of environmental investment projects
Jacek Podkanski
4. Lesson learnt by the EAPS Team
Stanislaw Sitnicki

*EAPS Regional meeting
Budapest, May 8-9, 1997*

EAPS/Poland

EAPS role in supporting implementation of Environmental Action Program in Poland (1)

Our Goal

- strengthen technical and managerial capacity of a wide range of local institutions to enable them to deliver services and manage local resources more efficiently
- focus on air quality in heavily industrialized areas through improving energy efficiency
- setting standards for consulting services

Our Clients

- local governments, municipalities, companies, individuals
- hospitals, schools, residential quarters, individual housing, municipal companies, etc.

Our approach

- creating understanding, links and cooperation with institutions which finance environmental projects
- identifying projects which contribute the most to improve local air quality and developing their technical and financing analysis in a bankable form
- working closely with local partners so to transfer technical and managerial skills necessary to ensure the efficient use of local resources

*EAPS Regional meeting
Budapest, May 8-9, 1997*

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EAPS/Poland

EAPS role in supporting implementation of Environmental Action Program in Poland (2)

History of the program

- initiated in 1995 to assist environmental funds and to prepare project packages to be financed by international and domestic financial institutions
- evolved towards medium and small size project packaging to be funded mainly by domestic sources
- combining technical assistance in project packaging with necessary assistance to environmental funds

Future of the program

- one year to go (until March 31, 1998)
- 2 projects aimed at strengthening environmental funds to be completed
- revised edition of guide to source of financing
- 25 municipal projects to be assisted in low-stack emissions reduction plus additional 5 projects in other areas of environmental protection

*EAPS Regional meeting
Budapest, May 8-9, 1997*

EAPS/Poland

ASSISTANCE TO INSTITUTIONAL STRENGTHENING

Guiding principles

- only if enhances effectiveness of appraisal of investment projects and helps project packaging
- cooperative process with beneficiaries (joint steering committee, cost-sharing agreements)
- majority role of EAPS in financing, minority role in decision making

Computer-aided System for Cash Flow Planning for Environmental Funds

Problems:

- currently the Funds manage their cash using intuition (at best self-made simple spreadsheets)
- high cash margin and risk-aversion in spending resources
- more than optimal level of resources in the banks instead of financing environmental investments
- allegations of environmental funds of building cash stocks instead financing projects

Solutions:

- forecasting and planning of the cash flows
- support decisions about allocations of financial resources between investments in projects and investments on financial markets
- enable complex scenario ("what if") analysis to determine the future impacts of different allocative decisions.

Computer-aided system for measuring environmental effects of investment projects supported by Environmental Funds

Problems:

- little reliable information about the environmental benefits of investment projects supported by Environmental Funds
- methodologies for quantifying environmental effects are incomparable across funds, difficult to verify
- double counting
- impossible to measure the cost-effectiveness of Environmental Funds.

Solutions:

- harmonize methodologies
- create coherent reporting system and interactive data base

EXPERIENCES

- management and initiative - main value added by EAPS
- trade-off between respect for needs of beneficiaries and professional principles

EAPS/Poland

PACKAGING OF ENVIRONMENTAL INVESTMENT PROJECTS

The case of MILITARY HOUSING AGENCY

Background

- what the project is about
- how it was identified
- how it was screened

Scope of work

- energy audit of 11 buildings
- environmental impact analysis
- conceptual technical and economic design (comparison of options)
- agreements with permitting authorities
- financial plan for the project
- applications to financial institutions
- tender documents to select construction company

*EAPS Regional meeting
Budapest, May 8-9, 1997*

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EAPS/Poland

The case of Military Housing Agency (cont.)

Subcontractor

- division of responsibilities
- quality check and independence
- professional and innovative approach

Advancement of the project

- analysis completed and option selected
- financial plan prepared

Typical problems in project packaging

- clear definition of investment
- willingness and capability to take loan
- local conflicts
- delays in project implementation

*EAPS Regional meeting
Budapest, May 8-9, 1997*

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EAPS/Poland

Lesson learnt by the EAPS Team

The elements of a successful environmental project (1)

Project characteristics:

Identify “winning” projects

- Strict application of project screening criteria
- Strong commitment of project proponent
- Relatively short time frame for implementation

Maximize probability that project financing will be obtained

- Maintain close contacts with funding sources
- Ensure that financing applications are completed correctly, in full, and on time

Avoid conflicts among parties to the project

- Verify up-front that all of the project’s “stakeholders” share the same objectives for the project
- Carefully identify and closely communicate with the ultimate decision-makers

EAPS/Poland

The elements of a successful environmental project (2)

Contract management

Maximize subcontractor's level of commitment.

- Involve subcontractor in project screening stage
- Invite subcontractor's input in drafting scopes of work

Execute a "winning" task order.

- Detailed scopes of work and descriptions of deliverables
- Ensure that subcontractor understands every detail of the contract
- Establish deliverable deadlines that are realistic but tight

Ensure high-quality deliverables.

- Supervise subcontractor's work closely (weekly meetings)
- Review and comment on deliverable works in progress, not just on the final products

ROMANIA TEAM

SECTION VI

A. Overview

Unlike the other EAPS projects in Eastern Europe, the EAPS program in Romania to date has focused on dealing directly with Romanian industries and not municipalities. No environmental fund has yet been established by the Romanian government, though EAPS Romania hopes to play a role in establishing one. Moreover, due to changes within the Romanian government and USAID/Romania, the EAPS Romania program may have to shift its focus away from the industries currently being assisted. At this time, USAID is formulating a new strategy for Romania to provide more synergy and focus among the resources available to USAID/Romania.

USAID and the Romanian government drafted an environmental action plan that identified 14 "hot spots" in need of environmental technical assistance. All were industrial towns, and a few were chosen to receive USAID help via the EAPS project. They included Zlatna, a copper smelting town; Baia Mare, a non-ferrous metal smelting town; and some secondary lead smelting industries in northeast Romania. In many of these factories, the technological equipment dated back to the 1970s or even earlier. Investment for refurbishing the plants with modern equipment was not available through the EAPS project. Thus, other environmental and economic objectives were pursued with various companies with EAPS project assistance (handout has a complete list).

One objective included increasing plant viability by improving industrial performance. This was accomplished by helping draft plant restructuring strategies; assisting in product diversification such as scrap recycling, and recovery of useful metals from waste; and helping with operator training in new copper smelting techniques and business approaches. Another objective was to enhance and improve occupational health and safety (OHS) capabilities in plants, thus providing sustainability and building local capacity. Knowledge, attitudes, and practices (KAP) studies were prepared to develop needs-oriented training activities. In pursuit of the OHS objective, OHS plans were developed to reduce lead exposure through monitoring equipment, training, and technical assistance for the plants.

B. Case Studies

The first case study (see attached handouts) addresses development of OHS plans to control lead exposure, reduce the rate of occupational illnesses, and eliminate lead poisoning among employees in three targeted plants in Baia Mare. The most useful elements of the OHS plan for each site included conducting air monitoring tests to analyze employee workplace exposure to lead (the sampling pumps were provided by USAID/EAPS); conducting KAP surveys that emphasized and encouraged management and employee dialogue; testing employees for blood lead levels; and developing materials for lead exposure reduction plans, based on the findings of those activities. In addition, two EAPS occupational health specialists, with Romanian expert participation, led a three-day training seminar. This case study demonstrates EAPS involvement in training and building the Romanian industry's capacity to remove exposed personnel from hazardous working

**Lesson Learned:
Reducing Lead Exposure of Workers**

The results of this work demonstrate the merits of implementing a preventive approach aimed at removing exposed personnel from hazardous work areas, improving environmental quality in the workplace, and providing adequate protective equipment rather than treating workers after their health has been adversely affected.

conditions, improve working conditions by providing adequate protective equipment, and facilitate management/employee discussion on worker health and safety.

The second case study (see attached handouts) concerns a Technical Business Tour Program of lead smelters and lead-acid battery recycling and manufacturing plants in the United States. The

**Lesson Learned:
Technical Business Tour**

This second case study clearly outlines how EAPS Romania helped to lay the foundation for economic development and future privatization processes for selected facilities. Many on the tour learned the necessity of a preventive approach to environmental and worker health and safety issues, because sick workers will not be productive. In addition, a "cleaner" plant is a more efficient plant, with lower production costs. Also, effective management structures and techniques of U.S. private firms were demonstrated during the tour.

tour was designed to introduce Romanian lead and battery industry personnel to innovative U.S. technologies for lead smelting and battery recycling. Moreover, it increased their knowledge of occupational health, safety, and environmental considerations in these industries. As a result of the tour, most participants committed themselves to implement process or technology improvements at their facilities. For example, at one plant, ROMPLUMB (lead smelter), top management shifted to a more economic and efficient means of battery recycling. At another plant, ROMBAT (automotive battery manufacture), workers became more aware of the necessity of protective equipment and began to provide more active feedback to management on OHS issues. A bonus plan was instituted by management for employees who closely observed OHS measures at ROMBAT.

The EAPS Romania team concludes that a successful environmental project should be of the "win-win" kind, with both environmental **and** economic benefits. A company must be persuaded that the more environmentally sensitive practices it utilizes, the greater the economic benefit to the firm.

EAPS - ROMANIA

1. OVERVIEW

B. OVERVIEW OF THE COUNTRY PROGRAM

Table 1: Concrete Activities - EAPS Romania

Increase viability of the plants	
Activity	Companies
Provide assistance in drafting the restructuring strategy of the plants (advice of an US expert to plants and Romanian consulting companies in developing individual strategies, in the choice of new equipment and organize visits of Romanian specialists to similar industries in the US, both in the copper and lead industry)	Phoenix Ampellum Romplumb Rombat Sometra Acumulatorul IMNR
Product diversification (manufacturing of new products, scrap recycling, recovery of useful metals from waste)	Phoenix Rombat Romplumb
Operators training in new copper smelting techniques and business approaches	Phoenix Cepronef University of Baia Mare
Improve OHS practices	
Preparation of Knowledge, Attitudes and Practices (KAP) studies, in order to develop needs-oriented training activities	Romplumb Rombat
Develop Health and Safety Plan to Reduce Lead Exposure (provide monitoring equipment, training, and technical assistance in developing the plan)	Phoenix Rombat Romplumb Sometra Acumulatorul IMNR CMRC

Table 2: Pending Activities - EAPS Romania

Activity	Companies
National battery recycling study	Romplumb
Joint procurement of acid mist retaining, of waste water treatment plant automation equipment	Rombat
Technical assistance for choosing the recovery technology of metals from sludge	Phoenix
Support development of stack monitoring capability	Rombat
Support in enhancing monitoring capabilities in Baia Mare	Local EPA
Technical assistance to support procurement of a co-generation turbine and a larger oxygen plant	Phoenix

2. CASE STUDIES

A. OCCUPATIONAL HEALTH AND SAFETY (OHS) PLAN FOR REDUCING LEAD EXPOSURE OF WORKERS

- This particular activity, one of the multi-site activities scheduled in the 1996 - 1997 EAPS / Romania Work Plan, stands for the culmination of extensive environmental health work initiated by expatriate specialists during the summer of 1996.
- The achieved ultimate goal of this exercise was to assist the relevant staff of the targeted plants (Rombat - a battery manufacturer, Romplumb - a lead smelter, and Phoenix - a copper smelter) in developing comprehensive and effective plans to control lead exposure, reducing the rate of occupational illnesses and eliminating lead poisoning among employees.

The key elements of the OHS action plan for each site consisted of:

- Conducting air monitoring to characterize employee workplace exposure to lead, using the sampling pumps provided by the USAID/EAPS Project.
- Conducting knowledge, attitude and practices (KAP) surveys.
- Testing employees for their blood lead levels.
- Developing materials for a lead exposure reduction plan, based on the findings of the above activities.

Concrete activities, unfolded under this EAPS exercise, were as follows:

1. At the request of all three assisted plants (Rombat - a battery manufacturer, Romplumb - a lead smelter, and Phoenix - a copper smelter), adequate air monitoring equipment was provided so that they could perform their own sampling surveys. A one-and-a-half-day seminar on the use of the equipment and conduct of an air sampling survey was held at Rombat.
2. A psychologist from the Center of Medical Research in Cluj (CMRC) administered KAP studies at two facilities (Rombat and Romplumb).
3. CMRC was also responsible for the employee blood lead testing. Information gathered from the air monitoring, KAP survey, and blood lead testing was then integrated into a respiratory protection program training.
4. Two occupational health specialists planned and presented in February 1997 a three-day training seminar, entitled "*Developing a Health and Safety Plan for Reducing Lead Exposure*". The seminar was attended by representatives of the non-ferrous metals industry and Romanian regulatory, medical, institutional, and protective equipment specialists. It is worth mentioning that more than half of the topics covered by the seminar were presented by Romanian experts or plant personnel with responsibilities for air monitoring, training, and health and safety. This workshop provided a real forum for addressing industry practices and concerns and specific concerns of the health and regulatory community.

To summarize, the major outcomes and benefits of this EAPS activity read as follows:

- Institutional capacity building, training, and information dissemination
- Purchase of environmental equipment to alleviate workers' health threats
- Deliver pertinent technical assistance through qualified and experienced US specialists (in this case study, industrial hygienists - OHS specialists)
- Implement a preventive approach, aimed at removing exposed personnel from the hazardous workplace, improving working conditions and providing adequate protective equipment, rather than treating them after their health is significantly affected.

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B. PRIMARY AND SECONDARY LEAD SMELTER / BATTERY MANUFACTURING BUSINESS TOUR

- As part of its work in Romania, EAPS conducted a *Technical Business Tour Program* (or a study tour), of lead smelters and lead-acid battery recycling and manufacturing plants in the United States. This study tour was one of the multi-site activities scheduled in the 1996 - 1997 EAPS/Romania Work Plan.
- Participants in the tour included representatives of several Romanian smelters, the main Romanian battery manufacturers, one Romanian consulting company, the Romanian Ministry of Industry, and Chemonics International Inc. The tour was designed to introduce Romanian lead and battery industry personnel to innovative U.S. technologies for lead smelting and battery recycling and manufacturing and to increase their knowledge of occupational health and safety and environmental considerations in these industries.
- The two-week study tour, from December 2 through December 14, consisted of visits to smelters and lead-acid battery recycling and /or manufacturing plants. The visited industries included primary smelters (obtaining lead from concentrates), secondary smelters (obtaining lead by scrap battery recycling) and battery manufacturers. Participants also met with the Missouri Department of Natural Resources in St. Louis to review environmental regulations applicable to the lead industry. Finally, professors of engineering and metallurgy at the University of Missouri at Rolla presented a half-day seminar on advanced lead smelting and refining technologies.

Upon tour completion, the participants were asked to fill in a survey form about their gained experience. The summary of survey responses illustrated that all participants reckoned that their objectives had been met. Among the listed knowledge areas the most referenced were:

- Modern and efficient technologies (primary and secondary smelting, automation, battery recycling and manufacturing)
- Environmental protection and worker safety
- Management and institutional structure issues of U.S. companies

Most participants committed themselves to implement process or technology improvements at their facilities based on lessons learned. Six of the seven industry representatives emphasized worker safety and hygiene as areas that they will improve upon return at their plants.

It is thus apparent that this particular EAPS activity contributed to:

- **facilitating economic development and improving technological process efficiency, by recycling materials which are currently polluting waste**
- **laying solid foundations for future privatization process of the facilities, by demonstrating new management techniques**
- **facilitating direct contacts between the different battery and lead manufacturers, who openly discussed their problems both during the tour and in the follow-up meeting**
- **facilitating a preventive approach to environmental and worker health and safety issues**
- **facilitating provision of incentives to workers observing OHS rules in the contracts negotiated with the trade-unions, as opposed to “hazard payment”**

CONDITIONS FOR A SUCCESSFUL ENVIRONMENTAL PROJECT

- 1. Management commitment and support**
- 2. The project should be the “win-win” kind, having both environmental and economic benefits**
- 3. The project should produce measurable results**
- 4. The project should show results in a short period of time**
- 5. The project should fix a part of a bigger problem, but preferably a smaller problem**
- 6. Involve the staff of the plant in drafting the list of projects and in the preliminary work to choose the project. Make them work on calculating the benefits**
- 7. In case equipment delivery is involved, the choice should be for the most reliable equipment for the allocated budget. Also, make sure that local expertise is available to install and start-up the equipment**
- 8. Ideally, involve the plant in co-financing the project. The plant should be, at least, responsible for the site preparation, erection, installation and start-up**
- 9. Follow-up with the plant on the results obtained from the project. Make them draft their own reports**
- 10. Encourage the plants to publicize results obtained from the project. Make them feel like it is “their” project**
- 11. Print fact-sheets, brochures and progress reports and disseminate them to potential clients, or international donors.**

ENVIRONMENTAL PROJECTS - MEANS OF ADVANCING OTHER DEVELOPMENT OBJECTIVES

- 1. Investors always look for the past environmental liabilities, when taking decisions to invest**
- 2. A “cleaner” plant is a more efficient plant, with lower production costs, a good image in the neighborhood and less liable to pay fines or be shut down due to violation of the environmental regulations**
- 3. The project helps the company staff to adapt and be prepared to coming, more stringent, environmental regulations**
- 4. Concepts, like team work and brain-storming, involving staff at different levels, from floor level to management, also staff from different departments of the plant, contribute to the development of democratic approaches**
- 5. Industries working on their environmental problems are able to show results and are more receptive to democratic procedures, like public consultation.**

Environmental Action Programme Support
Contract DHR-0039-C-00-5034-0
United States Agency for International Development

LIST OF REPORTS

Prepared by Chemonics International Inc.
For U.S. Agency for International Development / ENI / EEUD / ENR
and OAR Romania

1. **"Report on Acid Mist Ventilation for ROMBAT Battery Plant" - Bistrița, Romania.**
2. **"Smelter Operation Practice Evaluation and Pollution Control Improvement" for ROMPLUMB Lead Smelter, Baia Mare - Romania.**
3. **"Data Collection for the Hydro-metallurgical Engineer for PHOENIX Copper Smelter" - Baia Mare, Romania.**
4. **"Investigation of Ways to Reduce Solid Waste and Control Pollution at the ROMPLUMB Lead Smelter" - Baia Mare, Romania.**
5. **"Survey Report on Workers' Occupational Safety Knowledge, Attitudes, and Practices at ROMBAT Plant, Bistrița, Romania".**
6. **"Survey Report on Workers' Occupational Safety Knowledge, Attitudes, and Practices at ROMPLUMB Plant, Bistrița, Romania".**
7. **"ROMBAT Battery Manufacturing Facility: Resource Utilization and Waste Streams Evaluation" - Bistrița, Romania.**
8. **"Investigation into Product Diversification and Equipment Modernization for the PHOENIX Copper Smelter" - Baia Mare, Romania.**
9. **"U.S. Primary and Secondary Lead Smelter / Battery Manufacturing Business Tour".**
10. **"Industrial Hygiene Air Monitoring Survey Training S.C. ROMBAT S.A., S.C. ROMPLUMB S.A., S.C. PHOENIX S.A., Bistrița and Baia Mare, Romania, October 7 - 10, 1996".**
11. **"Activity Fact Sheet - Current Status: for ROMBAT Battery Plant, Bistrița - Romania" (latest updated version dating from March, 1997).**
12. **"Activity Fact Sheet - Current Status: for ROMPLUMB Lead Smelter, Baia Mare - Romania" (latest updated version dating from March, 1997).**
13. **"Activity Fact Sheet - Current Status: for PHOENIX Copper Smelter, Baia Mare - Romania" (latest updated version dating from March, 1997).**

REGIONAL ENVIRONMENTAL CENTER

SECTION VII

A. Overview

The Regional Environmental Center (REC) is a not-for-profit consultancy organization that has adopted a commercial project management approach. Project managers receive thorough training. They fill out detailed time sheets, and their daily rate includes overhead costs.

REC's multistakeholder approach to projects involves nongovernmental organizations, businesses, and government agencies to ensure public participation in the decision making process. REC's project management approach is also multidisciplinary, allowing the organization to consider issues on both regional and national levels.

B. Sofia Initiative

A major component of REC's work is based on the Sofia initiative (1995) (see attached handouts) for economic restructuring, strengthening the leadership of the CEE countries, ownership of environmental programs, and informational strengthening.

The program includes initiatives in biodiversity, environmental impact, air pollution, and economic advancement, each chaired by a CEE country with an appropriate political mandate. Each initiative has a secretariat at the REC. Biodiversity is chaired by Slovenia, environmental impact by Croatia, air pollution by Bulgaria, and economic enhancement by the Czech Republic.

The time frame for this work is through the next European Environmental Conference in Denmark in 1998. Using national experts, the initiatives collect detailed information and statistical data on pollution charges, environmental funds, product charges, tax differentiation and tax exemptions, and import and export opportunities.

The REC will organize workshops on practical implementation issues related to the initiatives, including enforcement issues, incentives for fund revenue raising, environmental financing, and competition policies relevant to CEE countries with Europe agreements. The REC will also support similar initiatives of other international institutions, organizing international conferences and seminars throughout Central and Eastern Europe.

Another important aspect of REC work is increasing public awareness among the decision makers of ecological and "green" tax reform. The REC collects existing information, processes it, puts it into a manageable format for decision makers, and publishes it in local and international trade publications.

C. Sofia Initiative for Air Quality

This program was initiated by six CEE countries: Bulgaria, Poland, Hungary, Romania, Slovakia, and Slovenia. The program objective is to phase out lead in gasoline and to substantially reduce the levels of SO₂ in the air. REC's role is to help the countries implement the activities of this task order; other countries in the region are welcome to join the initiatives. REC provides secretariat support to the process, ensures the activities are taking place, and ensures countries have sufficient support to implement their work.

Most of the work is taking place in Bulgaria under a memorandum of understanding (MOU) with the Bulgarian Ministry of the Environment. To date, the MOU has been signed, U.S. government funding has been secured through the REC, staffing in Sofia is completed, a working group has been established, the first meeting has been organized, and the work plan has been adopted.

The work plan includes the following activities, depending on country needs: development of a questionnaire, synthesis paper, regional workshops for country participants and other countries, and country analyses. The same framework is being used for the lead in gasoline phaseout work. Other activities include demonstration projects, database of best practices, and case studies.

D. Local Environmental Action Project (LEAP)

Audience: local communities with a population of 2,000 or more.

Goals:

- Enhance local government sustainability
- Assist municipalities in fulfilling their roles and responsibilities
- Define municipalities' roles and responsibilities on the local level
- Promote networking between activities and organizations in CEE

Steps:

- Initiate the project
- Establish environmental priorities
- Prepare community environmental action plans
- Implement strategies
- Monitor implementation

Activities:

- Developing manuals
- Offering information and networking services including distribution of the REC reports summaries, reference searches, databases of best practices, organizing special interest forums, preparing customized networking lists, email training, WWW services

Expected outcomes:

- Self-supported, fee-based LEAP network (local governments of CEE counties)
- Stimulus to local communities to undertake LEAP
- Other donor involvement

E. REC's Business Research Service (BRS)

The objectives of the BRS (see attached handouts) are to:

- Assist businesses in adopting eco-efficient practices by promoting timely quality information
- Help build the capacity of CEE countries to provide environmental products and services
- Encourage cooperation with other stakeholders

Major activities and services of the BRS include:

- Demand-driven, fee-based research and information
- Desk top publishing
- Publications
- Workshops and training

BRS products include:

- Directories of environmental product and service providers in eight CEE countries
- On-line database of 1,200 products and service providers accessible via the Internet
- Independent market surveys of the emerging environmental markets in CEE countries
- Tailored market research efforts for independent clients

F. Representative Research Projects

- Survey of the demand for environmental technology (five countries)
- Survey of the waste management market in the Visegrad countries
- Survey of air emission standards in power generation industry
- Market report of municipal wastewater situation in Hungary, assessment of regulations

These surveys covered 700 companies in the Visegrad countries and about 500 in Bulgaria, Croatia, Romania, and Slovenia during 1996. The REC expects that the market in the Baltics will be ready for these surveys in 1997. Survey information was acquired through personal contacts, trade shows, and international conferences.

G. Training

Training is an important aspect of REC's work. Topics include environmental regulations, financing environmental investments, and environmental impact assessments.

H. Conclusion

Modern and successful companies in CEE countries are willing to buy information and consulting services. The demand is high and increasing, and training is much in demand. Further information on the REC is available on the REC website: <http://www.rec.org>.

I. Discussion

Q: *How can EAPS work with REC to mutual benefit? What type of services can our teams provide on a for-pay basis after they establish private firms? In what way can a strong informational support network be established?*

A: There is enormous wealth of expertise here in this room, and there are excellent possibilities for collaboration. A representative from each of your offices should visit the REC to see how we set up information systems, and to exchange ideas on possible ways of cooperation.

When we identify a project, we need to hire people using our professional network throughout the CEE. Together, we can initiate projects that can be funded by international donors. Access to European Union projects is at the top of the agenda, projects that aim at

developing environmental management systems. There are clear opportunities for collaboration here.

In addition to regional managers, we need trained, English-speaking people in Budapest to manage projects and identify funding sources on a broader basis. We want to be able to take a problem, develop a survey, and administer the survey in four to five CEE countries. However, it can be difficult to access information and therein lies the importance of professional networks. Preparing such surveys involves enormous work on a regional basis and we need experienced people to be our partners.

Implementation of the Environmental Action Programme for CEE

Sofia Initiative

Economic Instruments

Proposed work program

**Report to the 7th Meeting of the Task Force for Implementation of the
Environmental Action Programme for Central and Eastern Europe
Szentendre, Feb. 26-27, 1997.**

**Submitted by the delegation of the Czech Republic
in co-operation with the REC**

Chair:

Czech Republic
Vladislav Bizek
Deputy Minister of Environment

Secretariat:

Regional Environmental Center
Jürg Klarer, Project Manager
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1. Objectives

This activity aims to assist countries in CEE and NIS make more effective and efficient use of economic instruments for environmental protection by:

- Facilitating the exchange of experience and information on economic instruments, focusing on practical implementation issues;
- promoting steps which lead to closer integration of environmental and economic policies;
- raising public awareness on the benefits of eco-tax reform and of closer integration of environmental and economic policies.

2. Background

The Environmental Action Programme (EAP) recommends that priority environmental problems be tackled through a mix of policy, institutional and investment measures. In the area of policy measures the EAP underlines the importance of economic instruments, "win-win" solutions and generally better integration of environment and economic policies to complement and/or reinforce regulatory instruments.

Since the Lucerne conference, many countries of the region have made substantial progress in a variety of areas recommended in the EAP. Prior to the 1995 Environment for Europe conference, high level CEE officials met in two Consultation Meetings on setting up the Sofia Initiatives. By intensifying the sharing of positive experiences, the Sofia Initiatives are intended to broaden and deepen successful initiatives in the region. The Sofia Initiatives are also intended to reinforce CEEC leadership and ownership of the process of environmental improvement in the region. The four areas of work identified under the Sofia Initiatives reflect a general consensus among CEEC's and are recommended as priorities for both east-east and east-west cooperation.

One of the four Initiatives is on the use of economic instruments for environmental policies. In the two Consultation Meetings on setting up the Sofia Initiatives the following needs in the area of economic instruments were identified:

- exchange of information - critical in these fields where substantial experience is accumulating which is both similar to and different from that in OECD countries;
- to identify and describe the most useful existing instruments and to disseminate such information; to develop practical guidance on the design and implementation of selected instruments in the context of transition economies, and, to support individual CEEC's in designing and implementing more effective economic instruments;
- balancing charges vis-a-vis fines; finding appropriate levels of charges and revisable/index linked solutions;
- improved monitoring and environmental data from which to develop the instruments and evaluate their effectiveness in reducing pollution;
- national versus municipal control/administration.

The Sofia Environment for Europe conference welcomed the Sofia Initiatives (as stated in the Ministerial Declaration). The Sofia Initiative on economic instruments is chaired by the Czech Government (Ministry of Environment). The secretariat for coordinating the proposed work is at the Regional Environmental Center (REC). Strong participation by CEE/NIS Governments, especially Ministries of Environment, is sought and promoted.

3. Overview of present situation in the region

A variety of economic instruments have existed in the region for years with some instruments being introduced and older instruments being revised more recently. Examples of the instruments include: pollution charges and -taxes (air, water, waste), non-compliance charges ("fines"), product charges (e.g., on gasoline), deposit refund systems, import tariffs (e.g., for old cars), and tax differentiation or exemption (e.g., lower taxes for unleaded gasoline/petrol and tax relief for environmental equipment or investment). Some countries are considering the introduction of tradable pollution permits (Poland and the Czech Republic). In most countries of the region, prices for resources (water and energy) have increased but remain below cost recovery levels and are still far from reflecting environmental externalities. Some countries have introduced economic instruments on an ad hoc basis; others, have consciously adopted the Polluters Pays Principle and Precautionary Principle.

Economic instruments play important roles in environmental policies in CEE and NIS. Most economic instruments in force in the region are seen as revenue raising tools for public environmental expenditure. There are some instruments in place, however, which are meant to be disincentives for polluters and some instruments which are meant to be low cost, win-win tools to move behavior into non-polluting directions. Major problems related to design, revenue collection, enforcement, institutional capacity, etc., remain. These problems partly reflect specific challenges related to economic, political and social transition.

4. Activities

This work program, leading to the 1998 Århus Environment for Europe Conference, was developed by the REC in coordination and consultation with the Czech Ministry of Environment and selected experts. In implementing the work program, full account will be taken of the needs and recommendations expressed by the two high-level Consultation Meetings held for the preparation of the Sofia Initiatives, and of relevant work of OECD, UNECE and REC. In addition, the work program is also shaped and guided by the process of EU accession of CEE countries with Europe Agreements.

4.1. A source-book of information on the use of economic instruments in CEE and NIS countries

A source-book on the use of economic instruments in CEE and NIS countries will be elaborated. Economic instruments introduced in CEE and NIS countries will be described and put in the general context of environmental policy in the respective country by senior local experts. Economic instruments such as pollution charges and -taxes, non-compliance charges, product charges, deposit refund systems, tax differentiation and tax exemptions, import tariffs and export taxes will be covered as well as market creation instruments (tradable emission permits) and liability insurance. Information on resource pricing (energy and water) will also be collected. It is planned that more than 20 CEE/NIS countries will participate in this effort.

The source-book will serve as reference material for supporting experience exchange and discussion on specific issues related to effective implementation of economic instruments (activity 4.2.). The information collected will allow for the assessment of progress made in the application of economic instruments and for the evaluation of major challenges to further improvements. In addition, the source-book will provide valuable reference information for ongoing and future research and other work of various organizations and institutions not directly involved in this work program.

4.2. Experience exchange on specific issues related to design and implementation of economic instruments

Based on the findings from activity 4.1., the REC will organize three workshops addressing practical issues related to the design and effective implementation of economic instruments in the region. Each workshop will involve about 60 experts and decision-makers from CEE, NIS and the West. The following topics are proposed (based on the outcome of activity 4.1., the topics to be dealt with at the workshops might be adjusted):

- *Effective enforcement of charge/fine systems in CEE/NIS.*
 - What are good practices and successful initiatives for effective enforcement of environmental charges and fines in the transition period;
 - An examination of the efficiency of fine and charge systems;
 - What are appropriate levels of charges and fines in the transition period; How to protect them from inflation?;
 - What are effective institutional set-ups to improve compliance with environmental charges and fines?
- *Revenue raising function versus incentive function of economic instruments.*
 - Most economic instruments in CEE/NIS function as revenue raising mechanisms for public environmental expenditure. Will this emphasis change with progress in transition (considering also the changing role of environmental funds in the transition period)?
 - Are incentive based instruments more efficient in allocating resources for environmental financing? Experiences from CEE and the West;
 - Are higher levels of environmental charges implementable in the transition period? Under what conditions? Experience from CEE/NIS.
 - The role of economic instruments in the application of the Polluter Pays and User Pays Principle: what are trends and good practices?
- *EU accession: competition and trade policies that affect the use of economic instruments.*
 - Overview on relevant aspects of EU trade and competition policies (maybe also GATT/WTO policies);
 - Experience from countries that joined the EU recently (e.g., Austria, Sweden);
 - Implications for economic instruments in force in CEE; relevant experience and problems in evolving market economies;
 - CEE and western experience in addressing the perceived barrier of a loss of competitiveness for some industries when introducing certain instruments..

Note: this workshop will focus on CEEC's with Europe agreements.

4.3. Integrating environmental policy with sectoral policies; ecological tax reform

UN ECE in cooperation with OECD, UNEP and the REC have proposed an international conference on the role of economic instruments in integrating environmental policy with sectoral policies, in pursuance to a specific recommendation of the Environmental Programme for Europe. At the invitation of the Government of the Czech Republic the conference will take place in early October 1997 in Pruhonice near Prague. It is planned that the conference will focus on two major issues: 1) the role of well functioning markets as a precondition for the application of economic instruments for environmental policy, and, 2) the policy integration role of economic instruments

in the sectors industry and energy, transport, and agriculture (focusing in each sector on subsidy removal/reform and implementation strategies of the Polluter Pays Principle and User Pays Principle).

The Slovenian Foundation for Sustainable Development "Umanotera" and the Wuppertal Institute for Climate, Environment and Energy, in cooperation with the REC will organize a seminar on "Green Budget Reform / Ecological Tax Reform" near Ljubljana, Slovenia, on April 9-11, 1997. The seminar will discuss opportunities for ecological tax reform in Western Europe and countries in transition (shifting taxes away from value-adding activities such as labor and capital onto value-depleting activities such as pollution and use of natural resources). A case study on Slovenia on possibilities for green budget reform will be presented.

4.4. Translation of key documents into CEE languages

Effective implementation of economic instruments requires understanding and support from economic decision-makers and the general public. This is even more important if policies are pursued which aim at more complex solutions such as ecological tax reform or better integration of environmental and economic policies. While many environmental experts in the region are already well trained on such issues and aware of relevant development and trends abroad and at the international level, not enough efforts have been undertaken to raise the awareness of economic decision-makers and the general public as to the importance and benefits of such integration.

It is therefore proposed to raise this awareness by translating selected key documents into the languages of selected CEE/NIS countries. Material on the following topics is proposed for translation and subsequent publication:

- Summary information on key concepts and barriers to better integration of environmental and economic policies including recent experience in OECD countries in this field, and, if available, relevant CEE/NIS experience;
- Summary information on key concepts of ecological tax reform and the greening of budgets including an assessment of recent progress in OECD countries and the CEE/NIS regions.

The REC has substantial experience in coordinating this type of work through the translation of the Environmental Action Programme for CEE and many other documents into the languages of the region. Wide distribution of the translated documents is possible through REC's network of Local Offices in all capitals of CEE countries.

4.0. Organization and coordination

The Ministry of Environment of the Czech Republic is chairing this Sofia Initiative and will be responsible for providing the link and input to the next Environment for Europe conference in Århus. The Czech Ministry of Environment will provide advice and guidance in implementing the work program.

REC is establishing a Secretariat for coordinating all work and contacts related to the Sofia Initiatives on Economic Instruments. The Secretariat will also coordinate its activities with relevant work being conducted by other organizations, especially work under the EAP Task Forces work program on environmental financing. The Secretariat will administer the funds for implementing the work program. The Secretariat will publish major results in RECs Bulletin and RECs website. If requested, the Secretariat will facilitate bilateral cooperation and experience exchange on the design and implementation of specific instruments.

The Secretariat will be advised by a small Project Committee composed of a representative of the Czech Government, 2 experts from the region, and an expert from OECD. The Project Committee will meet periodically and provide advice and quality control.

5. Inputs to the Århus conference

Background materials published under the work program will be disseminated at the upcoming meetings of the Task Force for the Implementation of the EAP.

The Secretariat will prepare a report to the Århus conference summarizing the main findings and key challenges, and, providing recommendations.

6. Issues for Discussion

- Specific comments on the proposed work are welcome.
- Sufficient funding for conducting the work program has not yet been secured. Contributions to this point include the secondment of the Project Manager by the Swiss Government and an in-kind contribution of approx. ECU 5'000 allocated by the Czech Government. The Czech Government is also co-organizing and co-financing the conference in Pruhonice mentioned under activity 4.3.

**Purposes:**

- ◆ To help build local capacity to solve environmental problems in Central and Eastern Europe in a way consistent with the principles of sustainable development
- ◆ To assist and encourage the business sector to adopt sustainable development practices in Central and Eastern Europe. The service currently covers Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia, and Slovenia, and will be expanded to the Baltic Republics in 1997.

Areas of Operation:

- ◆ *Information and Research Services (fee based)*
 - Information Services (tailored research)
 - Environmental Legislation in English
 - Market Scans and Business Information
 - Partnering Service
 - Technology Information
 - Contacts to environmental experts and institutions in CEE
- ◆ *Publications*
 - The Environmental Business Directory: Environmental Service and Technology Providers
 - The Emerging Environmental Market: A Survey of the Czech Republic, Hungary, Poland, and the Slovak Republic
 - Competing in the New Environmental Marketplace: Proceedings of Workshop for Environmental Professionals (in English and 4 local languages)
 - Government and Environment: A Directory of Governmental Organizations with Environmental Responsibilities for Central and Eastern Europe
- ◆ *Workshop and Training Programs*
 - In-country workshops for the business sector (Topics include: Environmental Regulations and EU harmonization, ISO 14000, and financing environmental projects).
 - Training Courses in conjunction with in-country Environmental Management Training Centers

Information Resources:

- | | |
|--|---|
| <ul style="list-style-type: none"> ◆ Directory of CEE Environmental Companies ◆ Country Environmental Regulations in English ◆ Environmental Guidelines for Investors ◆ Directory of Government Env. Ministries ◆ Project financing information ◆ Local Environmental Market Information ◆ Listing of Conferences or Trade Fairs in CEE ◆ Directory of Western Business Promotion Agencies Operating in CEE ◆ Country Environmental Status Reports in English | <ul style="list-style-type: none"> ◆ Local Environmental Technologies in Use ◆ Information on where to find local partners ◆ Project Opportunities ◆ Environmental Quality Standards (ISO 14000, BS7750, EMAS) ◆ Clean Production Information ◆ European Union Environmental Regulations ◆ Comparative database of CEE Country environmental standards |
|--|---|

Contact Information:

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Representative Projects :

- Survey of the waste management market (waste generated, treatment, recycling, regulations, and active companies) in the Visegrad countries
- Update on priorities of National Environmental Protection funds in CR, PL, and SK
- List of companies providing waste composting services and technologies in CEE
- Collection of regulations dealing with chemical product registration in CEE countries
- Survey of Polish country regulations to determine discharge limits for selenium
- Listing of trade associations related to environmental protection in the Visegrad countries
- Survey of demand for environmental technologies and R&D in the Visegrad Countries
- Review of Croatian, Hungarian, and Polish environmental legislation
- Survey of air emission standards in power generation industry in eight CEE countries
- Survey of municipal wastewater market in Hungary

Selected clients :

- Procter & Gamble, Hungary
- Andersen Consulting, Hungary
- Kodak Kft., Hungary
- Thyssen AG, Germany
- KPMG Norway
- MOL, Hungary
- KAP spol, Czech Republic
- Vaccani, Zweig & Associates, Switzerland
- Energy Environment Inc., England
- PARIS International, Romania
- DREVO, INEM, Slovenia
- EMS-Budapest, Hungary
- U.S. Government / Foreign Commercial Service
- Austrian Government
- Government of Canada

**MARKETS FOR FINANCING
ENVIRONMENTAL INVESTMENTS**

SECTION VIII

A. Statements by Panelists

1. Winston Bowman, REC

A recent REC survey on environmental technology and financing carried out in Poland, the Czech Republic, Slovakia, and Hungary found that most environmental projects are financed by six sources: 1) state budgets; 2) regional and municipal budgets; 3) extrabudgetary funds, such as the state environmental protection funds EAPS has worked with; 4) domestic commercial enterprises; 5) foreign commercial enterprises; and 6) foreign assistance. Experts surveyed expect that there will be a shift in the relative importance of these financing sources from state sources to commercial sources.

A survey of barriers to environmental investments conducted by the OECD among environmental SMEs in the same four countries last year found that the major external barrier to environmental investments is access to credit and finance. This is related to the following three factors:

- The underdeveloped state of banking and financial markets in these countries
- The inability of the governments and businesses in these countries to pay for environmental investments
- The inability of private enterprises to package projects for financing

The OECD survey found that most private enterprises (44 percent of those surveyed) need less than \$100,000 for each environmental investment they wish to undertake; 38 percent need between \$100,000 and \$300,000, 11 percent need between \$300,000 and \$500,000, and only 5 percent need more than \$500,000. Most enterprises prefer long-term loans since the rates are more attractive. Few enterprises surveyed (31 percent) knew what equity funds are and even fewer (5 percent) had ever used them.

Survey respondents said they would rank state environmental funds as the best type of financing institution to work with, followed by commercial banks, government institutions, and lastly private investors. Respondents were leery of working with private investors for fear of losing control of their companies.

It has been noted that foreign assistance is expected to decline as a source of environmental investment financing. However, the EU recently announced a major reorganization and an intent to redirect funds to EU accession, with a particular emphasis on infrastructure investment, SMEs, and assistance for financial institutions and administration. It's not clear how much money will be available for such activities.

2. Stanislaw Sitnicki, EAPS Poland

The Environmental Action Programme (EAP) has had a major impact on markets for environmental financing. It was decided that ECU 25 million would be set aside to support the

implementation of environmental programs in CEE countries; this ECU 25 million was to be channeled through the Project Preparation Committee (PPC) under the Lucerne Agreement.

There has been a very visible engagement on the part of the EBRD and the World Bank/IFC in the region; these institutions have been very active in searching for bankable projects in the CEE. EAPS was also created to support project preparation activities and thereby provide more project financing opportunities.

The EU accession process has raised interest in various approaches to environmental finance in each of the CEE countries, and particularly in environmental funds. It has also spurred the process of setting real environmental protection priorities in these countries, including at the local level (through development of local environmental action plans).

CEE governments had already begun to focus on environmental hot spots before 1993 and to develop lists of the most dangerous polluters; these activities are continuing. There is particular attention paid to improving drinking water quality.

Another important area is the 'polluter pays' principle, whose implementation is still in the early stages in the CEE countries. This principle has been legally established, and there has been some progress in enforcing it (and some companies have their own environmental improvement programs); however, results are not yet very visible. The provision of assistance to polluters in the establishment of such programs to come into compliance with standards will be important.

It is easier to draft environmental laws than to enforce them. However, awareness about legal regulations concerning environmental protection is growing, and it is expected that serious effort will be given to enforcing them, particularly with EU accession now in mind.

3. Jernej Stritih, REC

Discussions are now under way concerning the relationship between the EAP process and EU accession. After the EAP, the next milestone is the European Environmental Ministerial Conference in Denmark in June 1998. Most governments expect that the CEE countries will somehow announce there that they have achieved sufficient progress in environmental policy development, institutional development and capacity building, and the allocation of funding to environmental protection to graduate from the EAP process.

Therefore, major responsibility for improvements in environmental protection in the CEE countries is now shifting from the EAP to the EU through the EU accession process. In addition, the type of assistance provided is changing; the focus on providing emergency assistance for environmental hot spots will shift to the NIS and Russia, where basic preconditions in terms of legal and institutional environmental structures are either nonexistent or nascent.

In the CEE, harmonization of national environmental legislation with EU legislation will be the primary focus over the next 10 years. The EU is requiring that all new members transpose and implement all of its laws and directives, of which there are more than 200 that deal with the environment, and these are constantly evolving. So, harmonization will be a tremendous task.

Another important issue is the cost of EU accession, or the cost of making environmental improvements to bring CEE countries into compliance with EU standards. Although there are not yet firm estimates, this is expected to be in the tens or hundreds of billions of ECUs. The EU is

thinking of allocating funds for this purpose by matching those invested by the host governments. The use of national environmental funds to play the role of the matching funding mechanism is being considered.

All of this means that there is a growing market for environmental services. There is increasing demand for economic and cost analyses, for advice on environmental legal reform, and for developing realistic implementation plans for the new environmental policies. Here, much can be learned from the EAP approach, which emphasized least-cost approaches and a focus on the most pressing environmental problems.

In addition, polluting industries will constitute another major category of clients for the environmental service providers since industries will be responsible for cleaning up their processes and mitigating their impacts on the environment.

Local communities will be another important type of client. Although municipalities are still not very active in environmental protection, they will need to play a more active role in addressing issues related to local infrastructure and utilities if EU regulations and directives are to be implemented.

People are only now becoming aware of the magnitude of the problem of meeting the environmental requirements for EU accession. Based on prevailing cost estimates, this is likely to be the single most costly part of the process (more than the costs of meeting social, agricultural, transportation, and other requirements). Accordingly, the CEE countries are having to give the environment more political priority than they otherwise might.

B. Discussion

Q. For those of us looking at this from the perspective of where the markets will be for our services, it is clear that EU accession will be the driving force in the development of environmental packaging and financing systems. In the coming months the EU Commission will decide upon an allocation of accession funds among different sectors, including what share will be allocated to the environment. Prior to this decision, there will be a demand for many studies on the cost of harmonization with EU directives (which includes both transposition and implementation of those directives). It appears that this will constitute the single greatest market between now and the end of the year.

In 1998, though, it appears that there will be a demand for environmental economists and lawyers to develop and review credible implementation strategies for environmental policies and other activities necessary to meet EU accession requirements. Presumably the clients will be the CEE national governments. Can you comment on who else might be the most important clients? the EU itself? the REC? others?

A. The EU PHARE program (which has recently been reorganized) will be one of the main clients in terms of financing such work, although the exact mechanism isn't clear. Now, accession countries can request that the PHARE approximation facility (which has created a fund of a few million ECUs for this purpose) provide a small amount of money to finance studies. In addition, EU PHARE is compiling lists of experts qualified to carry out such studies.

The REC is developing a set of benchmark indicators, such as the implementation of environmental laws, to monitor the process of meeting accession requirements. Such benchmarks could eventually be used to demonstrate progress when the CEE governments enter into formal accession negotiations with the EU. The REC is also working to establish links between the EU and CEE national and local governments to discuss the accession process. In addition, in the future after many of the costing studies are completed, the REC may then develop a manual or source book on costing for EU accession.

The REC is also undertaking to promote cooperation among the CEE accession countries in coordinating their negotiation strategies; such coordination has not existed to date. The aim is to enable the CEE countries to become 'drivers' rather than 'victims' of the accession process. So, it might be important to contact national governments' accession offices.

The CEE governments lack technical expertise in many areas, so there will be a need to assist them in managing the accession process from their side.

The EU PHARE recently began a project to undertake costing of the implementation of EU regulations on air, water, and chemicals. A Danish-funded program is also expected to start later this year that will focus on the costs of approximating EU waste and eco-management directives. The new enterprise established by the EAPS/Romania staff in Lithuania is making efforts to work with these projects.

Q. Can you elaborate on the challenges to environmental financing systems? What sectors will generate the greatest demand for environmental investments, and how is this demand matched by resources?

A. The most expensive investments will be in wastewater treatment systems, sewerage systems, water works, and energy sector improvements.

Private enterprises will probably have to finance their own environmental investments, either through commercial banks, their own capital, or other means. They will probably require some time to prepare for such investments. Public funds will mainly target environmental infrastructure, such as public utilities. EU PHARE will probably provide investment grants or budgetary subsidies.

One issue is how to manage the transfers of funds from EU PHARE to the CEE countries; EU PHARE grants have been targeted by auditors as among the most wasteful of EU expenditures. In addition, the cost of the environmental investments supported by grants often rises because there is no incentive cost-consciousness as there is with loans. One solution might be to upgrade the national environmental funds to be able to accept and channel soft loans for public investments; this could save from 10 percent to 20 percent of the cost of the investments. However, this raises the question of whether the environmental funds can accommodate this. Would the EU trust their operational and decision-making procedures and ability to meet EU requirements? The institutional capacity of the funds varies significantly among the CEE countries.

Another issue is the role of the EBRD, the World Bank, and the European Investment Bank (EIB). Some people think they have focused too much on CEE at the expense of the NIS. It is likely that the EBRD will remain the major source of financing for private investors. The World Bank is more interested in financing public sector investments, although this raises

the question of whether the CEE Ministers of Finance will be willing to agree to new borrowing. USAID will probably also play a role in supporting public investments.

Another issue is when the interest rates of the domestic banking sectors in the CEE will become comparable to global market interest rates, and when the domestic commercial banks will be able to play a role in financing environmental investments. At present, commercial bank loans are for the most part too expensive for the environmental infrastructure sector.

Q. It appears that many infrastructural investments will be financed through different types of debt. Perhaps the EAPS teams could be helpful in developing cost-recovery schemes in various sectors. However, although the EAPS teams have expertise in cost-recovery mechanisms in the heating sector, they don't really have such expertise in the water and wastewater sector, and perhaps they should try to develop it. Would USAID agree to having EAPS teams pursue project packaging opportunities in the water and wastewater sector (treatment plants, sewerage systems...)?

A. Yes, as long as they are cost-effective and contribute to environmental improvement.

SUSTAINING EAPS

SECTION IX

A. Summary of the Session

The desire to create sustainability for EAPS services has inspired creation of independent environmental consulting firms in each project country. EAPS country teams appointed a member to a panel discussion entitled "Sustaining EAPS Work." The aim was for each country team to outline progress made on thinking about or establishing a "spin-off" enterprise.

The session began with each country team representative outlining the type of organization to be registered, the timelines for start-up, the markets to be addressed, and the services to be provided. The discussion then moved beyond the planning process to challenges, concerns, and ethical issues that might arise.

B. Country Presentations

1. EAPS/Czech Republic

The EAPS/Czech team decided that its "spin off" enterprise will be a partnership between the former EAPS local subcontractor, Foundation Project North, and a new nonprofit organization to be established by EAPS/Czech Republic Country Manager Břetislav Klíč. EAPS and pre-EAPS experiences will be the basis of the new organization's activities. The team sees the following markets for its services:

- **National:** strategic recommendations to the Ministry of Environment, the Czech State Fund for the Environment (SFZP), and the Ministry of Regional Development, and collection of information on the environment (i.e., statistics, data) and on financial and economic development possibilities of each region.
- **State administrations:** support for state policy decision making, and consultation on the allocation of resources.
- **Districts:** A change in SFZP regulations has shifted priorities and responsibilities to the district offices. Districts now function as state bodies so there is less need for needs assessments. Therefore, there will be a smaller market for the new enterprise's services at this level.
- **Municipal:** needs assessments, strategy planning for the future on issues such as air pollution.
- **All government levels:** project packaging, training, financial consulting.
- **Private sector:** An increased need for information on sustainable development has created an opportunity for consulting services.

The post-EAPS/Czech team also plans to provide general services in Environmental Information Services (EIS); consultancy on EC environmental regulations; and environmental information for investors using material and data from market research, logistical support, and environmental

assessments. "Best practices" training in these areas will be a tool in providing consultancy services.

2. EAPS/Lithuania

The EAPS/Lithuania team has registered its new company under the name "ENVAS" with a staff that includes two technical experts, one financial expert, and one environmental economist. The team is hoping that its first contract for project packaging will be a continuation of EAPS work. Other possible markets include:

- Development of Lithuanian institutional and political structure
- Lithuanian environmental regulations
- A partnership with a Danish project/company on environmental auditing, management, and basic financial management
- Eco-management in Lithuania

3. EAPS/Romania

The EAPS/Romania team will form either a nonprofit company, which will incur lower costs, or a limited liability company. There will be an increased fiscal burden associated with a limited liability company, but there would be other advantages. The team foresees its primary markets to be:

- **Environmental funds:** organization and management consulting
- **Requests for permits:** helping companies file applications with the Ministry of the Environment and local EPAs (the Ministry of Environment has already requested assistance in this area)
- **Training:** how to draft requests for permits and how reviewers appraise them
- **Project packaging** with different financial organizations (EBRD, World Bank, private banks) on behalf of industries

The EAPS/Romania team lacks expertise in environmental finance and working with environmental funds. Therefore, networking will be key to its success. Networking with organizations with which the team is already familiar in health risk assessment will also be helpful for training activities and consultation on procurement processes.

4. EAPS/Poland

The EAPS/Poland team is in the most preliminary stages of post-EAPS planning of all the EAPS country teams. The team plans to establish itself as a limited liability company. By the end of calendar year 1997, the team will have a business plan for its new enterprise that will incorporate everyday EAPS activities into more market-based activities.

Using EAPS skills as a marketing tool, the team sees a demand for its services in the following areas:

- **International consulting:** assistance with elements of project packaging, and work with environmental funds.
- **European Union directives:** The political and economic climate has changed with respect to EU directives. The post-EAPS/Poland team will be looking at demand for environmental investment, finance, and institutional reform in light of these directives.
- **Environmental technologies:** trends and constraints.

C. Session Conclusions

An EAPS/Poland team member stated that EAPS is unique because it is the first such project to conduct procurement with "no strings attached." It is the first bilateral activity or aid of its kind. No other European country has competed procurements irrespective of source of equipment (Swiss, German); USAID has done this in the name of saving U.S. taxpayers' money. USAID is to be commended for this.

The EAPS/Poland team also presented challenges it foresees for its spin-off enterprise. All EAPS teams are expected to encounter similar challenges:

- **Business training:** Most EAPS field staff members have neither a real "entrepreneurial bug" nor a strong background in business coordination.
- **Moral conflict:** U.S. public monetary resources have been used to establish a viable and successful project. Now, the products developed from this project will be used to market a private, fee-based company. One EAPS/Poland team member had a personal conflict with this situation.
- **Demand for services:** What will be the demand for EAPS services when they are no longer free? What will be each team's comparative advantage to gain market share? The spin-off teams will be making a transformation from their EAPS role as cofinanciers, or clients of the institutions with which they work, to a competitive role in which they are competing for contracts.
- **Balance of time:** Each team's priority remains carrying out its respective EAPS annual work plans. It is on their own time that teams will attempt launching "spin-off" activities.
- **Business ethics:** It is not uncommon for project packaging applicants to offer bribes to successfully push their applications through the review process. Currently, the EAPS teams are not forced to deal with this because their services are free (funded by USAID). They can select applications solely on the basis of application quality. Once they start charging fees, they will have to face this reality.

Each country team expressed an interest in cooperating with other EAPS teams and with the Regional Environmental Center (REC) on issues facing the entire region. USAID representatives to this conference noted the potential for cooperation in the development of standards for international business and the establishment of a certification process for credible firms with which it is ethically "safe" to work.

D. USAID Response

Gordon Straub, EAPS COTR, and Angela Crooks, EAPS Project Officer, voiced concerns about EAPS spin-off enterprises. They questioned whether Chemonics would be biased toward the EAPS enterprises in subcontracting out potential work, or whether Chemonics would fairly compete its work. They also asked if systems will be in place to deter any possible corruption. EAPS field teams responded that the EAPS staff members are professionals with goals to increase the moral standard of the societies in which they are working. In addition, they wondered about the legality and ethicality of Chemonics' subcontracting work to EAPS spin-offs while the EAPS contract was still in effect. This is an issue that USAID and Chemonics legal experts will be addressing. [Note: It was subsequently clarified that spin-off firms will not be established while EAPS still operates in any country, and the question of any possible linkage between these firms and Chemonics International remains in the distant future.]

NEW DIRECTIONS

SECTION X

A. Overview

As the EAPS countries begin to close out in mid-1997, it is essential that we document our unique contribution to the environmental financing sector in Central and Eastern Europe. The EAPS comparative advantage is its practitioner-level focus, which enables each team to "make things happen," be it reforming environmental funds, refining the project packaging process, or developing financial models. While each EAPS country team has developed as a distinct country program, shaped largely by where environmental financing funds can be found, commonalities exist across the CEE region. By sharing successes and lessons learned, EAPS will not only strengthen its impact as a USAID project, but also move into the future transformed as local private environmental consulting resources.

B. EAPS Involvement with the Private Sector

While the project packaging and financing component of the EAPS project could help the development of private enterprise, conditions in Central and Eastern Europe place constraints on a direct linkage. For example, the Government of Romania has developed lists of factories slated for future liquidation or privatization. Because there is a risk that USAID-supported industries may be liquidated, the Mission believes that investing in this sector is not a wise use of funds. Even in countries with more stable industries, the larger impact of EAPS' private sector activities is questionable: as EAPS supports a particular company in a given sector, it can distort the competitiveness of others in the same sector. This may not be a proper role for a U.S. Government-funded project.

Given these constraints, EAPS should continue working within the USAID Strategic Objective framework that supports strengthening municipalities. There is an indirect linkage between EAPS' support of municipalities and the private sector, as the interests of the two are often interrelated. For example, a risk assessment that is conducted for a municipality will contain information about a plant that resides within it. This assessment, combined with a cost-benefit analysis, can be used as a tool for decision making that can affect the future of the industry. Thus, it is impossible to work with one entity and not affect the other.

When companies improve their environmental performance, they also effectively enhance their profitability. In the long run, this should be a goal of post-EAPS enterprises. For example, an opportunity exists in Lithuania, where the ability of municipalities to take loans from the LEIF will be limited. Thus, the fund's initial clients will be industries that need pollution prevention systems. This situation provides a market niche the new firm ENVAS to target initial project packaging efforts.

C. Networking, Collaboration, and Capitalizing on the EAPS Network

The technical background of EAPS field office staff will affect how country teams develop a post-EAPS enterprise. Staff members with a technical/engineering background are well suited for immediate entry into pollution prevention work. However, staff whose strength is analysis may be more effectively used in the medium to long term because of the time it will take to build a client base of decision makers. Thus, networking and information exchange among EAPS teams is critical to the short-term viability of post-EAPS enterprises.

International contacts will be a valuable asset for post-EAPS enterprises that want to link up with local engineering firms. Many local firms do not have international contacts, nor do they know how to help municipalities or companies attain financing. A relationship with a seasoned environmental finance specialist would benefit both parties. EAPS also has developed a network of contacts from its current work with municipal- and state-level decision makers that will be very useful in the future.

It will be beneficial for EAPS enterprises to represent themselves as part of a larger network for project packaging and training activities. The EAPS network should be utilized whenever the project is suitable, particularly to get funding from international financial institutions to work on transnational issues. Perhaps a coordinating body such as the REC could institutionalize linkages among environmental consulting firms.

D. Links with NGOs

Historically, EAPS has not worked closely with NGOs. While NGOs tend to be advocates, EAPS is an independent entity that provides unbiased, objective analyses for financing sources (advising how funds should be disbursed) and for municipal/private clients (advising how funds should be applied for). However, careful linkages with NGOs can be mutually beneficial. For example, EAPS tends to work with small-scale investments, where the client usually cannot afford to pay for consultants. NGOs can help raise money to hire consultants, or to provide background research. At the same time, it may be in the interest of NGOs to push some of EAPS' policy suggestions and experiences. Finally, it is important for EAPS teams to foster a good relationship with the local NGO community. By working with NGOs, both the Poland and Czech teams have improved EAPS' reputation in the region and provided a means to increase EAPS' local contacts.

E. Training and Income Generation Opportunities

Virtually every EAPS country has implemented or is planning to implement a training program:

Czech Republic:	Mayor's Project Packaging Training, May 1997
Lithuania:	Project Packaging, expected late 1997
Poland:	Low Stack Emissions Project Packaging training, completed
Romania:	Occupational Health and Safety training, completed

Each training session was provided free of charge to recipients, but fees will have to be instituted if post-EAPS enterprises organize additional sessions in the future. This may be difficult in many EAPS countries, where training centers and specialists already exist. In Poland, for example, two training centers are already well established. In fact, EAPS used one of these organizations to conduct the Low Stack Emissions workshop. The Czech Republic is virtually flooded with subsidized training programs. Given this, EAPS staff are planning to capitalize on the upcoming mayors' training by using it to advertise post-EAPS services. The future Czech enterprise will need to distinguish itself by promoting its uniqueness as an independent entity. For the Czechs and Poles, training is not expected to be a large part of post-EAPS work, but rather be provided on an ad hoc basis.

An important issue will be how to convince clients who are accustomed to receiving free assistance to pay for it. Now that EAPS is moving toward the client side, it must work under new logic. The Czech team has considered preparing municipal project packaging applications for

a nominal fee. If financing was achieved, a "success fee" would be charged. While it was pointed out that this type of fee cannot be included in the price of assistance because it creates a conflict of interest, it would only be used initially to gain a client base, followed by implementation of a standard rate.

F. Accessing Alternative Financing

EAPS teams in the Czech Republic, Lithuania, Poland, and Romania have successfully accessed alternative financing for environmental projects. A brief listing of alternative source financing follows:

- In Lithuania, the Akemenes Cementas Plant received monies from the Baltic Enterprise Fund. While the BEF's primary focus is helping small private companies, it could cofinance future projects with the LEIF.
- In the Czech Republic, the mayors' project packaging training will be attended by representatives of the SFZP, municipal funds, MUFIS, and commercial banks. Two projects—Krasna Lipa and Teplo-Vratimov—are outstanding examples of successful alternative financing.
- EAPS/Poland currently prepares packages for competition among several funds, and is exploring investment funds. They have also had one successful vendor financing at Tarnow.
- In Romania, EAPS helped the ROMBAT Battery Plant gain financing from the World Bank and the Romanian Post-Privatization Fund. Additional possible funding sources include Equity Funds, Romanian American Enterprise Fund (\$50 million), Romanian Post-Privatization Fund (44 million ECU), and the Danube Fund.

With the current dearth of knowledge in this field, post-EAPS enterprises can capitalize on their experience and fill a market niche by providing advice to newly privatized companies about possible financing sources.

G. Looking for Opportunities in the NIS

There are currently two environmentally oriented USAID projects in the NIS region: the ETP project, whose EAPS-like activities will be closing out in the near future; and the C4EP project, whose mandate is policy reform.

The body of knowledge amassed by the EAPS project fills a unique gap: the practitioner gap. EAPS combines an analysis of the policy environment with data analysis to provide sound investment alternatives, helping to bring otherwise untenable projects to fruition. The benefits of EAPS work are exponential. By helping an environmental fund, for example, we improve the borrowing future for many. By reducing environmental health risks, we help future generations. We also have created innovative products and tools that provide great good for communities and countries in which we work.

To determine whether there is interest in EAPS in the NIS, we must learn about mission priorities and funding. Once we have a solid knowledge base, we can approach the missions that are most amenable to our work, and find the means for sharing our experience and lessons learned.

FEEDBACK SURVEY

ANNEX A

1. *Please comment on the meeting's objectives in terms of usefulness for a future conference. Namely, which objectives should be included, which should be deleted, and what, if anything, should be added?*

SS They are good, but too broad. It would be enough to exchange information on approaches and achievements of different EAPS teams. This could be a good start for a discussion on actual EAPS work programs. Also, we forgot to talk about the EAPS Regional Program.

RP Under the heading "For the meeting as a whole:"

- In principle the objectives should tackle similar generic issues (i.e., to exchange experience-based information among EAPS teams and to foster a network of CEE professionals and small firms engaged in environmental project development and financing).
- Alongside with USAID and REC, invite representatives of other prominent international donors (e.g., WB, IFC, EBRD, EU-PHARE, DANIDA, UNDP, etc.) aimed at acquainting those outstanding organizations with the capabilities of the CEE experts and hence facilitating the establishment of future solid and fruitful professional and business relationships.

LI I think the meeting objectives should be, generally, kept the same, including inviting an organization, external to Chemonics, to make presentations in the meeting.

An additional objective for the session "Sustaining the EAPS network" should be: "Discuss concrete business opportunities existing in the different countries, to see how expertise gained in one country can be applied in other countries; The role of Chemonics in networking of the "spin-off" enterprises."

An additional objective for the session "The EAPS and other markets....." should be: "The kind of support Chemonics is able to provide in finding funding sources/contracts for the "spin-off" enterprises and ways to cooperate with Chemonics."

RL/RB As environmental and economic conditions in separate countries are different, more emphasis could be placed, especially in country team presentations and discussion on new directions, on adapting developed methods and experiences depending on economic and environmental priorities in separate countries.

DI The following objectives should be included and further developed:

- To exchange experience-based information, share tools, products, methods, approaches
- To establish working relationships between EAPS professionals and important institutions in CEE

- To share plans and approaches for establishing small enterprises
- To identify new dimensions and new ways of utilizing the expertise of products developed

The following objectives should be emphasized:

- To develop a network of CEE professionals and small firms engaged in environmental project development and fund raising
- To identify opportunities for exchanges/working visits to the teams that have many things in common to teach the others (e.g., Cz, Poland)
- To identify future opportunities for common projects for groups of countries

JWH I thought the topics were comprehensive and adequate, particularly given that this was our first meeting together. Had we met earlier and were more familiar with each country program, then a focus could have been good—such as a session on EU membership issues, public participation. Some sessions giving outside, wider perspective would be valuable (rather than the inside focus of this conference). Again, this would only make sense if we had additional meetings together. For our first meeting, the context and format were good and sufficient.

BK Objectives were OK.

2. Which topics or themes would you like to see included in a future meeting?

- SS
- Internal arrangement of the work of EAPS (plans, procedures, problems). What should be added or changed to make EAPS more effective.
 - Business plans or feasibility studies for the groups which are starting out as private consultancies.

RP In addition to the topics approached in our last Regional Meeting, I reckon that it may be worthwhile to include the following themes as well:

- With a view to strengthening our managerial, business, and organizational skills as CEE professionals working with small private firms engaged in environmental project development and financing, it will be instrumental that prior to or as an integral part of a future Regional Meeting to conduct a short-term training session on essential tips for developing a successful consulting business. This training session could be delivered by relevant experts drawn from the very pool of specialists of Chemonics or from outside competent experts (e.g., from the Egypt branch, and so forth).
- If the above-referenced suggestion will not be feasible, then organize a session in which managers of already “up and running” private environmental consultancies from CEE countries will advise the participants on several valuable hints in terms of managing a successful and profitable consulting business.

- LI "Sample of networking agreement; Cases of similar experiences in another networking activity".
- RL/RB The topics were well selected.
- BK Brief information about last development in an environmental field in each country (legal and financial conditions, attitude of people, etc.)
- JWH 1. Issues driving national and regional policy, such as EU approximation.
2. Linking our efforts with other AID, NGO, PHARE or other assistance providers.
3. ***Some comments have been received that the meeting entailed the transmission of a lot of information over too short a period of time, and did not allow sufficient time for small group discussion.***
- a. Do you agree? If so, do you think a future meeting should be longer?***
- SS It doesn't need to be longer. Rather, we need to be more focused and better guided. We also should try not to allow participants to talk too much.
- RP Probably, a future 4 or 5 day Regional Meeting could be more convenient and effective in terms of lessening the likelihood of time constraints and allowing for sufficient time for small group discussions whereby sharing experiences and replicating "success stories" and lessons learned from one country to another might be a smoother process.
- LI I think a future meeting should be 4 days' meeting time.
- RL/RB Yes. The discussions focusing on separate specific problems and involving only the persons interested in these topics could be useful. For this purpose, the discussions in separate sections could be arranged. The meeting in Budapest could be longer but it was the first meeting in EAPS history. The duration should depend on the frequency of the meetings.
- DI I think the future meeting should be longer. There is no sense to bring so many people together from such long distances for such a short period. At the same time, there was too much information and formal work that the participants really missed the time they needed for personal discussions, work in small groups, and free informal exchange of information. These are going to be absolutely necessary if we plan to work in a network and do mutual projects.
- BK Yes, I do, longer.
- JWH No, the length was good. I believe we could have benefitted from earlier meetings. If people were overwhelmed by information, it was because we had a lot to cover. So, longer meeting—no. More meetings or exchanges—yes.
- b. What changes in the structure of the presentations do you recommend to enable more informal discussion?***
- SS Small discussion groups, an overhead projector, availability of other technical materials.

RP As emphasized above (under para. 3. a.), planning several small group sessions spanned over one day during the Regional Meeting could strengthen the networking and professional cooperation among EAPS "spin-off enterprises".

The topics to be addressed during the small group discussions should be devised as concrete "case studies" pertaining to the prevailing problems encountered in the day-to-day operations of the CEE private consulting firms.

By the end of the future Regional Meeting, again for one day, organize a wrap-up and evaluation session that will clearly outline the key findings and recommendations.

LI Eventually, present some case studies and ask the participants to discuss them in small groups.

RL/RB The presentation could be more focused on the problems and solutions which could have similar background in various countries rather than on case studies which in most cases are very specific and cannot provoke a discussion.

DI It might be useful that participants receive written presentations in advance to get acquainted with them before the meeting.

BK To include also analysis of failures into a presentation as a lesson for EAPS team.

JWH I felt it was open and informal. Our small size gave it a loose feel.

c. Should a future meeting incorporate a similar scope of topics, or cover a more narrow range of topics?

SS A more narrow range of topics.

RP See the above recommendations as regards a broader scope of more tangible topics.

LI A future meeting should be focused more on following topics:

- Discuss specifics of networking (arrangements, role of Chemonics, examples of similar cases)
- Discuss the kind of support Chemonics is able/willing to supply to the "spin-off" enterprises and the conditions of such support
- Presentation of formats for funding requests by an international financing institution working in the area

RL/RB The topics are good.

DI The wider, the better.

BK Similar, it is necessary to have an opportunity for discussion of all EAPS activities.

JWH Future meetings could deal with similar issues and challenges faced by all countries: public participation, accountability, democratization, cooperating with NGOs, etc.

Maybe issues surrounding our future directions discussion: water and transboundary cooperation (we are well situated to facilitate transboundary projects and policy). Maybe some outside speaker (REC was great) that deals with a wide environmental perspective.

4. What, in your opinion, were the three most important benefits/accomplishments of the meeting?

SS Meeting EAPS field staff members and learning more about their activities.

Learning about problems in financing environmental projects in CEE countries.

RP It provided a real forum to share the insights, approaches, methods, and outcomes triggered by EAPS activities in CEE countries.

Meeting other EAPS specialists in the region and launching a process of professional and business networking.

Identifying practical means of cooperating with REC, in particular knowing that a major shift of approach in the work of REC will happen in the near future, i.e., the REC itself will gear its operations toward more consultancy-like activities.

Sharing plans and approaches for establishing EAPS "spin-off enterprises" based on the human resources, expertise, and acquired experience of the current FO teams.

LI

- Met colleagues from other EAPS offices in the CEE
- Found out about the pool of expertise available in the other CEE countries
- Laying the ground for a network

RL/RB

- Acquaintance with the EAPS activities and experiences in separate CEE countries
- Meeting representatives of separate countries and direct discussions

DI

- Getting in touch with each other after working together for so long
- Learning about the experience and problems of the others from EAPS projects in CEE
- Finding solutions I have been looking for a long time from the experience and work of the other EAPS teams

BK

- Experience with elements of successful environmental projects
- Learning that methods, approaches are similar in all EAPS countries and that is why there is a possibility for cooperation in the future
- Personal contacts with all EAPS staff in HO and FOs

JWH

1. Meeting everyone. Realizing how many great people there are in this project.
2. Shared information. Seeing parallel problems and challenges.
3. Establishing a context for future work/step towards a wider vision.

5. ***Has this conference provided adequate networking opportunities both among EAPS teams and between EAPS staff and the REC? How can the EAPS home office staff assist with continuing communication/collaboration/contacts among the EAPS teams?***

SS Yes, there could be bilateral meetings arranged to help develop an approach to particular issues (i.e., creating an environmental fund in Romania, selecting and managing subcontractors in Poland).

RP

- Unfortunately, this conference succeeded to provide only incipient networking opportunities both among EAPS teams and between EAPS staff and the REC.
- Assistance from EAPS home office is and will be needed in supplying the field offices with pertinent and experience-based advices in terms of managerial and business tips aimed at enabling the successful establishment and operations of the future "spin-off" enterprises. Furthermore, the HO should disseminate relevant information and facilitate the replication of "success stories" regarding the operations of similar private consulting companies in other regions (namely the Egypt branch and the Moscow branch, etc.)

LI The conference provided only some initial networking opportunities. The EAPS HO should still act as a "central hub" in distributing available documents to the FOs. Further efforts of the EAPS HO are required to act as a "catalyst" in building the network and, for some time, to keep it together. EAPS HO should, as an objective, independent, prestigious entity, work on networking documents, provide advisory support etc.

RL/RB Yes.

DI I think that we, in Bulgaria, need further assistance for a while because the ideas of networking and starting small enterprises were completely new for us, though they are wonderful. Some training in project packaging and fund-raising will be very useful for me.

BK

- I missed more time for informal discussion with REC staff (see also point 6)
- To keep us informed about EAPS activities, participation in new projects, new potential opportunities in an environmental field, but not only. We can provide (based on our information from EAPS work) commercial services for investors for abroad (environmental, energy conservation and marketing information, support in negotiation with state/municipal bodies, etc.)

JWH We needed a system to tap into each others work. I'm actually amazed at the opportunities we could have had in simply sharing documents. No matter how much HO might have facilitated our contacts between countries, the face-to-face meeting was an essential step. The activity tracker, also, is good for this. I think the country manager a year ago could have done much more to integrate things. Poland and Czech Rep have so much in common and should have met long ago. I can't imagine why we didn't link some of our efforts or see the parallel opportunities. In the future, more meetings, earlier. Simple as that.

6. We welcome any additional comments on how you feel the meeting could be improved in the future.

- SS
- 1) Articulate problems which should be solved during the meeting
 - 2) Arrange the meeting to be more in the style of a workshop
 - 3) Do not allow participants to spend more time on a topic than initially planned
 - 4) Allow an EAPS field team to plan a meeting
- LI
- I think it would be fair to bring the participants who need adjustment to the local time zone into the region over the previous weekend. The meeting should start on the first following Monday.
- DI
- Such meetings could become a regular practice in order to stay in constant touch, exchange ideas and start mutual initiatives of EAPS teams.
- BK
- I would recommend for better informal discussion and networking to finish daily program sooner, let us say at 3 p.m. and then organize some social program during which discussion can continue in a natural way. For example, an EAPS/REC boat trip with dinner on the deck (no one can leave!).
- JWH
- I thought the meeting was great. We had fun and learned a great deal. It was inspiring to meet and hear of the projects. You all did a wonderful job with it all. Thanks.

CONTACT LIST

ANNEX B

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