

ENVIRONMENTAL ACTION PROGRAMME SUPPORT PROJECT  
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

MACEDONIA FINAL REPORT

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## ACRONYMS

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CEE	Central and Eastern Europe
EAP	Environmental Action Programme
EAPS	Environmental Action Programme Support
EBRD	European Bank for Reconstruction and Development
FARA	Fixed Amount Reimbursement Agreement
FO	Field office
HO	Home office
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IR	Intermediate Result
JSP	Skopje Public Transportation Enterprise
LEAP	Local Environmental Action Plan
NEAP	National Environmental Action Plan
NGO	Nongovernmental organization
TIR	Technical inception report
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	United States Agency for International Development
WWTP	Wastewater treatment plant

# EAPS Macedonia Final Report

## I. Introduction

### A. EAPS Background

Endorsed by Eastern European and Western governments at a conference of environmental ministers in April 1993 in Lucerne, Switzerland, the Environmental Action Programme (EAP) helps introduce market-based solutions and practices in environmental protection in the countries of Central and Eastern Europe (CEE). An important part of the program's mandate is local and national policy development. The program has sought to lay a strong foundation for consistent and effective environmental protection by involving the public in identifying environmental problems and prioritizing environmental protection activities. The program also focuses on strengthening environmental protection institutions and ensuring that environmental investments are properly selected and designed. In the 1993 EAP document, creating environmental policy, strengthening institutions, and implementing investments were identified as the most important elements of what would become a strong market-based environmental protection system.

Turning EAP objectives into reality has been a primary goal of the USAID-financed Environmental Action Programme Support (EAPS) project since 1995. EAPS has been instrumental in improving environmental project development and investment packaging, and in strengthening the institutions responsible for environmental improvement and policy implementation in CEE countries.

### B. EAPS in Macedonia

The republic of Macedonia faces numerous environmental problems accumulated over decades of industrialization and urban development. The most crucial problems are poor air quality, polluted surface water, and inadequate solid and hazardous waste management. Environmental problems are most serious in the larger towns and cities, where they threaten human health and impede economic development.

In 1997, experts from the World Bank helped Macedonia prepare a National Environmental Action Plan (NEAP) to address its environmental problems. NEAP outlines a coordinated, nationwide environmental policy and recommends immediate steps to protect the environment. In addition, several municipalities have developed Local Environmental Action Plans (LEAPs) to guide environmental recovery at the municipal level. Most LEAPs were prepared by municipal citizen associations, with help from outside experts, so they represent a full range of locally desired environmental improvements, not just a list of feasible projects.

Macedonia approved the framework for an environmental law in December 1996. It serves as a basis for environmental impact assessment requirements and municipal waste management regulations. It also provides for establishment of the Fund for Environment and Nature Protection and Promotion (the Fund). The role of the Fund is to provide financial support to priority environmental investments in Macedonia.

The EAPS Macedonia program was initiated in 1998 to help develop the Fund as an effective, transparent financing institution capable of providing grant and loan funds to local administrations and industries for environmental protection and pollution prevention investments. In 1998-1999, the EAPS Macedonia program consisted of (1) identification and packaging of bankable environmental investment projects and (2) assistance in developing the Fund as an effective, transparent financial institution.

In 1999-2001, EAPS Macedonia built on the previous year's program and also began to focus on the provision of financial assistance for environmental infrastructure projects through a co-financing facility, with an emphasis on municipalities affected by the 1999 Kosovo refugee crisis. The program was organized into five major components:

1. *Development of the Fund's project pipeline.* EAPS and the Fund identified and screened environmental projects suitable for financing by the Fund .
2. *Co-financing of environmental projects.* EAPS and the Fund jointly identified, screened, co-financed, and implemented environmental projects to local governments affected by the 1999 Kosovo refugee crisis.
3. *Institutional strengthening of the Fund.* EAPS helped the Fund develop as a transparent, effective financial institution with a sustainable source of revenue. Assistance was provided in drafting a new Fund Law and lobbying for its adoption. EAPS also prepared the Fund to begin operating independently as a lending and grant-giving institution.
4. *Developing industrial environmental project case studies.* EAPS conducted case studies in two major industrial sectors to identify key opportunities for environmental investment as a basis for attracting funding from donors, international financial institutions, and private commercial entities.
5. *Recycling project feasibility study.* EAPS conducted a feasibility study for the collection and recycling of plastic containers and aluminum cans for the Pivara Skopje brewery. The study evaluated the potential for recycling and developed an initial plan for recycling plastic bottles and aluminum cans.

## **B1. Program Goals and Objectives**

Goals of the EAPS project included: (1) identify, develop, and help secure financing for environmental projects and (2) assist in development of the Fund. These interrelated goals both contribute to sustainable economic growth. An additional goal established for the second year of the project was to provide EAPS/Fund co-financing for environmental infrastructure projects, particularly in regions affected by the Kosovo refugee crisis.

## **B2. Strategic Objectives**

The EAPS project supports USAID Strategic Objective 2.3: More effective, responsible, and accountable local government. The Intermediate Results (IRs) under Strategic Objective 2.3 include IR 2.4: "Local Government has access to complementary source of funds for

environmental capital improvements” and IR 4.1: “Local Government has capacity to manage environmental infrastructure.” In Macedonia, local administrations are largely responsible for financing investments in environmental protection and pollution prevention. However, they lack the budgetary resources to do so, as well as the know-how to identify and prepare environmental projects for outside financing. The Fund was established to help local governments and private industries leverage domestic and foreign resources to improve the environment. EAPS directly supported capacity-building of the Fund as an institution and helped local entities identify and prepare projects that met the Fund’s criteria for financing.

### **B3. EAPS Approach to Providing Technical Assistance**

EAPS assistance in Macedonia focused on developing the Fund for Environment and Nature Protection and Promotion (Fund) as a viable financial institution with the goal of financing environmental projects. The approach had two basic components. First, EAPS helped to identify and package environmental projects for financing. Second, through a range of activities, EAPS supported the Fund’s capacity to operate as a financial institution.

Development of an environmental fund was first considered in the 1996-1997 Macedonia Act for the Environment. Three articles in the Act contemplated a source of funding for environmental investment projects. The Fund was created in April 1998 within the Ministry of Environment (which became the Ministry of Environment and Physical Planning in July 2000). In July 2000, the Fund became an independent agency within the newly reorganized Ministry.

Working with both the Fund and project proponents, EAPS helped identify and screen potential environmental investment projects as candidates for financing. Many of the projects under consideration were previously identified during preparation of the NEAP and LEAP action plans. The identification and screening process guided several projects from initial concepts to clearly defined, bankable projects. Since most project proponents were municipalities, project packaging helped them gain a practical understanding of how to access grant funding for environmental infrastructure projects.

Strengthening the Fund to improve its capacity to function as a viable financial institution was essential for long-term sustainability. This was accomplished by developing a financial strategy, introducing a law to establish the Fund as an independent entity with the ability to provide loans, developing procedures and appraisal methods for applicants, and training the Fund staff in loan management through exposure to other funds operating in the region and hands-on practical training.

## **II. Summary of Activities**

### **A. Project Packaging**

EAPS staff, working in collaboration with the Fund, developed a pipeline of potential environmental investment projects in wastewater treatment and air protection. These projects met the criteria established by NEAP, as well as project selection criteria established by the Fund. EAPS worked with project proponents (local government and industry) to help them prepare projects for financing. Local consulting firms provided assistance with technical design, tender

document preparation, and financing applications. Projects receiving preliminary approval from the Fund proceeded to the stage of preparing agreements for project financing and implementation. EAPS support to the Fund focused on identifying and packaging projects for municipalities and other public entities. The Fund considered a few grant applications from the private sector, but since the projects proposed would have been profitable investments, the Fund decided to consider them again later once it was authorized to extend loans.

EAPS helped the Fund identify and screen more than 20 environmental investment projects. Of these, four projects received more than \$285,000 from the Fund. More detailed information on screened projects is contained in Annex A.

## **B. Project Co-Financing**

The Kosovo crisis had a dramatic impact on Macedonia's economy and infrastructure. Western Macedonia experienced an influx of Kosovar refugees into refugee camps and local communities. USAID provided additional assistance to communities most affected by the crisis.

EAPS helped to identify, screen, and co-finance five environmental projects for potential investment by USAID (through EAPS) and the Fund. EAPS also helped project proponents (principally local governments) and the Fund provide co-financing to selected projects.

Local governments with eligible projects submitted letters of intent to EAPS and applications to the Fund for grant financing. Technical assistance was provided through EAPS to prepare project design and documentation. Detailed operation and maintenance plans had to specify how projects would be maintained after implementation and the level of revenue required to maintain assets. USAID funding was arranged through Fixed Amount Reimbursement Agreements (FARAs). This contracting approach helped strengthen the Fund as an institution, accelerate the development of environmental infrastructure, and build the experience of municipalities in identifying and developing environmental projects. EAPS gave preference to local government entities that met both USAID and Fund criteria, had developed LEAPs, and were willing to contribute financial and/or in-kind resources to their projects. Local governments were encouraged to involve their communities in environmental investment.

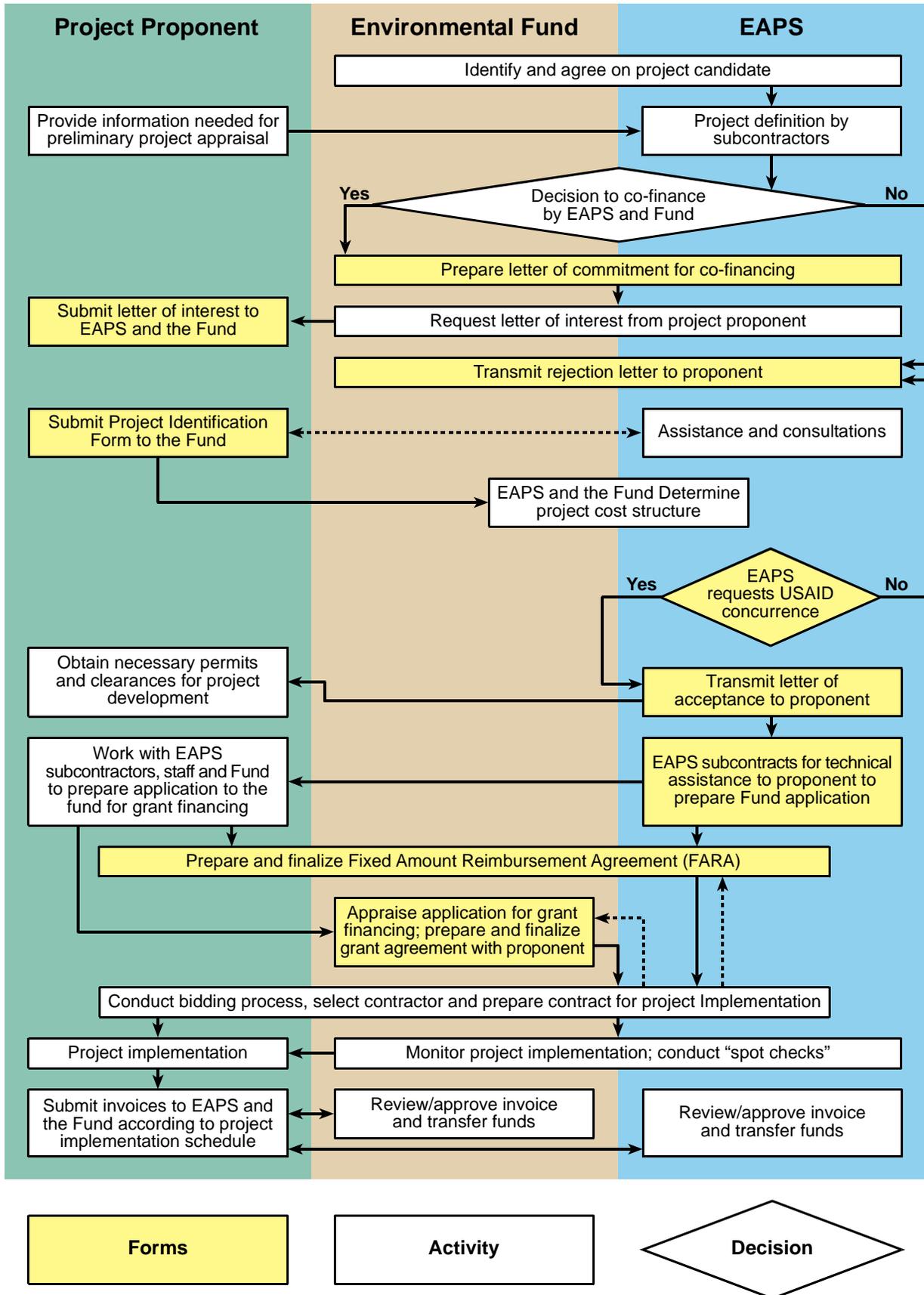
The process of identifying, selecting, approving, and developing co-financing projects is shown in the flow chart on the following page. A description of specific projects included in the co-financing facility is contained in Annex B.

## **C. Institutional Strengthening**

The institutional development component of the EAPS project was designed to develop the Fund as a transparent, efficient, effective, and reputable source of environmental financing for local governments and industry. EAPS activities addressed the Fund's legal framework and its operational capacity to respond to local needs for environmental infrastructure development, including direct training for municipal and local officials.

In the following section, we discuss specific institutional strengthening activities.

### Exhibit I-1. EAPS Environmental Project Co-Financing Process



## **C1. Development of a Fund Financial Strategy**

EAPS helped the Fund prepare a financial strategy that defined three stages of development. In the first, short-term stage, the Fund is limited to its basic revenue source – insurance fees on motor vehicles – and is limited by its status as an entity within the Ministry of Environment and Physical Planning to providing grant-only financing.

The second, or medium-term, stage will begin when Parliament passes the law making the Fund an independent entity with a sustainable and increased revenue base (estimated at \$3.3 million annually).

The third, or long-term, stage envisions the Fund not only as a financial intermediary, but also as an agency for strategic investment planning, working with other ministries and international donor agencies for environmental protection in Macedonia. This stage would commence when pollution charges are established in Macedonia. Pollution charges will provide the Fund with a substantially increased revenue base and the capability to cooperate with the concerned ministries and industry to define pollution abatement targets and work toward their achievement. The Fund financial strategy is contained in Annex C.

## **C2. Creation of an Independent Fund**

EAPS helped the Fund draft a legislative proposal that, when passed by Parliament, will establish the Fund as an independent legal entity capable of lending funds. It will provide the Fund with a sustainable, medium-term revenue source derived from taxes on tobacco products, leaded gasoline, and diesel fuel. The law was under review and consideration by the government of Macedonia at the time this report was prepared. A draft text of the law, dated January 2001, is included in Annex D.

## **C3. Fund Applications and Computer Software Development**

Under contract to Chemonics International Inc., prime contractor for the EAPS project, CityProf Consulting of Krakow, Poland (CityProf) developed application forms and procedures for the Fund. These forms and procedures provide the means for proponents of environmental investment projects to apply for financing from the Fund. CityProf was subsequently asked to provide the Fund with two types of computer software similar to that used by other environmental funds in the CEE region for application appraisal and documentation of projects.

The packages provided by CityProf include: (1) software to enable the Fund to track and evaluate applications for funding and (2) software to calculate the environmental effects of projects when they are submitted to the Fund for consideration and after project implementation. This software was installed on the Fund's computers, and CityProf provided five days of training to the Fund and EAPS staff to familiarize them with it.

In developing the software packages, CityProf adapted project appraisal software used by Polish environmental funds to fit the needs of the Fund in Macedonia. CityProf translated the software from Polish to English, and case studies of current projects under review by the Fund provided relevant examples to use in training sessions. Training was conducted during the week of July

12, 1999, in Skopje. CityProf trainers focused on the development of case studies for a hands-on approach. A summary describing the software and manuals for using it is available on request.

#### **C4. Loan Management**

Passage of the new Fund Law will enable the Fund to be independent and provide loans to industry and government for environmental investments. EAPS trained the Fund staff in basic loan management, including business planning, understanding financial statements, and credit analysis. Training emphasized the development of a banking relationship, and EAPS helped the Fund evaluate and select a bank. When the Fund is able to provide loans, it will be working with local banking institutions on loan administration.

#### **C5. Development of Pollution Charges**

EAPS' long-term strategy for the Fund envisions the introduction of pollution charges to augment the Fund's revenue base. The long-term strategy – which is expected to be in place by 2004 – will phase in pollution charges under the “polluter-pays” principle, where the polluter pays fees and fines used to help mitigate environmental degradation. Besides being part of the Fund strategy, pollution charges are an environmental economic instrument in line with European Union requirements. Implementation of pollution implies increased investment in environmental protection. Such charges are currently in effect in other CEE countries. Pollution charges represent a major component of the Fund's future revenue base. In establishing the magnitude of pollution charges, decision makers consider:

- The ability of industry and others to pay without undue adverse affects on production and profitability
- The incentives pollution charges would provide industry to abate pollution
- The need to generate funds for investment to attain target reductions in pollution

A system of effective pollution charges is based on identifying specific sources and levels of pollution, designing and implementing a reasonable system of pollution charges, and establishing a monitoring and enforcement network led by the environmental inspectorate. EAPS helped the Fund and the Ministry of Environment and Physical Planning develop an inventory and a computer database of major industrial polluters, propose a system of pollution charges, and prepare a strategy to introduce charges through the “polluter-pays” principle.

The first step in the process is identifying and quantifying the sources of pollution. EAPS' approach to preparing an inventory of polluters and developing a system of pollution charges assumed that EAPS would initiate the inventory, which would be completed by a working group comprising the Fund, the ministry, and engineering subcontractors after the EAPS project ends. The initial focus of the inventory was to identify the 100 to 150 largest industrial polluters in Macedonia and incorporate this information into a computerized database developed by EAPS.

Simultaneously, EAPS evaluated the financial impact of pollution charges on a cross-section of industrial subsectors within Macedonia through extensive research, interviews with government officials, and industry visits. Together with an analysis of pollution charges and methodologies employed in the region for calculating and applying pollution charges, EAPS proposed a system

of air and water pollution charges as a starting point for implementing the “polluter-pays” principle in Macedonia.

EAPS assistance has enabled the Fund to develop a long-term strategy and has brought the ministry and the Fund closer to introducing a system of charges to reduce pollution in Macedonia.

### **C5. Training and Workshops**

EAPS provided the Fund with opportunities to participate in various training sessions, and to present itself as a financial institution in various workshops and seminars. The Fund director and staff visited funds in Poland and Slovenia in 1998-1999 to gain a better understanding of the structure and operation of similar funds in the region. In late 1999, Municipalities were introduced to the Fund in workshops focusing on potential municipal applicants.

In 1999, the Polish consulting firm CityProf presented seminars on the process of applying to the Fund and the Fund’s evaluation criteria. Software versions of application and evaluation documentation were loaded on the Fund’s computers, and CityProf trained Fund staff to use it.

During the second half of 2000 and in early 2001, EAPS trained Fund staff in various subjects related to applicant financial evaluation, loan management, and loan administration. In 10 weekly sessions, Fund staff were given basic guidance on various financial topics, including business planning, financial and credit analysis, and working with the banking system for loan administration.

In addition to formal training, EAPS provided Fund staff with ongoing informal training through one-on-one discussions and cooperation in project development, project finance, and environmental fund development.

### **D. Industrial Environmental Project Case Studies**

To develop as a solid financing agency and strategic promoter of industrial pollution abatement projects, the Fund needs to have a pipeline of projects to attract donor funding. Identifying large industrial pollution reduction projects and defining them as case studies will enable the Fund to approach outside sources of financing as a serious investment promoter. These case studies can serve as a basis for training industry representatives and providers of environmental services. As pollution charges are implemented and enforced, industrial polluters will have more of an incentive to undertake and seek financing for pollution abatement projects. This, in turn, will create a demand for case studies, and for the project preparation and financing proposals they may generate.

EAPS conducted case studies on two major polluting industrial enterprises in Macedonia. The studies assessed the type, source, and quantity of pollution generated, analyzed the financial situation of each enterprise, and recommended solutions based on modern pollution abatement technologies. The specific enterprises were selected in coordination with the Fund and the Ministry of Environment. The selected enterprises represented the textile industry (Teteks, located in Tetovo) and chemicals (OHIS, located in Skopje). These enterprises were willing to

work cooperatively to prepare the studies and were considering projects for future outside financing. One project under consideration at Teteks was a major boiler rehabilitation to eliminate the use of coal as a fuel and replace it with light oil. The OHIS chemical plant was considering conversion of a new chlor-alkali plant to a less polluting and more efficient technology, eliminating the use of mercury in the process.

An EAPS expert team comprising an experienced expatriate engineer and local counterpart engineers prepared the case studies. The team visited each enterprise to review pollution problems, discussed alternative technical solutions, and developed pollution abatement scenarios for each alternative. The financial team discussed financial and market prospects with each enterprise. The entire team worked together to write case study reports on each enterprise. The reports discuss pollution generation, proposed technical solutions, the financial status of each enterprise, and its readiness to undertake any of the proposed pollution abatement projects.

The industrial case studies provided a first cut on environmental issues and priorities for each industry and analyzed the needs of these two major industrial polluters. The case studies provided a training aid on environmental finance and helped the Fund develop a pipeline of major projects to attract outside sources of commercial and donor financing to the Macedonian environmental market.

### **E. Recycling Project Feasibility Study**

EAPS prepared a feasibility study for Pivara Skopje, a brewer, bottler, and distributor of soft drinks. Pivara Skopje requested a study on establishing a recycling program for plastic and aluminum beverage containers, using its existing distribution system to haul materials and its facilities to process materials. The company's objectives were to improve environmental conditions and reduce waste disposal costs for rejected containers.

Pivara Skopje is in a unique position to implement a recycling program in Macedonia because of its transportation system and existing facilities, but needs help to maximize recycling through promotional activities. Many organizations and individuals in Macedonia are concerned about the litter problem and are ready to help with recycling efforts. The final study recommends a recycling system operated by an independent Pivara Skopje venture to collect, transport, process, and sell recycled materials. At the same time, it envisions creation of a Macedonian recycling network comprising municipalities, nongovernmental organizations, and other public and private organizations (e.g. schools, stores, media, etc.) to develop and implement a public education and promotional program and to help establish drop-off centers for recyclable materials.

The proposed recycling program represents a unique opportunity to foster public-private partnerships to address an issue that is of great public concern in Macedonia.

### **III. Accomplishments and Constraints**

The EAPS Macedonia project has achieved many of its objectives, but its progress was not without limitations. The following constraints may reduce the future effectiveness of efforts by the Fund to reduce pollution in Macedonia:

- Limited sources of funding are likely to be available in the foreseeable future to address the magnitude of Macedonia's environmental problems.
- Antiquated government structures limit the ability of municipalities to address pollution issues.
- The changing political situation results in delays, inaction, and lack of continuity, which in turn affects the sustainability of proposed environmental solutions. Over an 18-month period, creation of the Ministry of Environment, its restructuring into the Ministry of Environment and Physical Planning, a presidential election, and local elections all slowed progress on the EAPS project, and similar developments are likely to affect the Fund in the future.
- Environmental regulations are inadequately enforced due to political considerations and lack of manpower within the ministry.
- The lack of local environmental consulting firms limits the ability of government and industry to identify and implement cost-effective environmental solutions.

The EAPS Macedonia project has a number of achievements to its credit since it began in the fall of 1998. These are described below.

#### **A. Project Packaging**

*EAPS assistance to the Fund resulted in the financing and completion of the first project financed by the Fund.*

The Fund was established in April 1998 by three articles in the Macedonia Act for the Environment. These articles gave the Fund a small source of revenue and the ability to provide grant funding for environmental investments. Since that beginning, with only a director and no staff, the Fund has grown to employ several staff members. Assisted by EAPS, it has been able to identify and finance environmental investment projects for the first time in Macedonia.

*EAPS developed and implemented unique contracting and payment methods incorporating Macedonian procurement requirements and USAID requirements for co-financing environmental infrastructure projects. The projects attracted qualified contractors that successfully implemented projects under terms and conditions employed for the first time in Macedonia.*

Chemonics employed a Fixed Amount Reimbursement Agreement (FARA) as the mechanism to disburse funds for co-financing projects. EAPS devised a three-way contracting system whereby each project proponent signed agreements with Chemonics, the Fund, and the implementing contractor. Payments were made directly to the contractor based upon the proponent's approval of completion of fixed-price tasks. The bidding process was conducted in accordance with the Macedonian public procurement process.

The concept of a fixed-price arrangement was unique in the Macedonian contracting environment. The contracting method, though complex, was understood by project proponents and contractors, with direction provided by EAPS. As a result, bids were received, and work progressed effectively and efficiently.

*EAPS, in cooperation with the Fund, completed five environmental infrastructure projects within a one-year time frame and mobilized more than \$1 million in funding to implement the projects.*

USAID/Macedonia requested a co-financing program to develop environmental infrastructure projects within a very tight time frame. The projects addressed environmental problems aggravated by the influx of refugees from Kosovo in 1999. The EAPS approach was to involve the Fund and municipal proponents in the project development process. For each approved project, USAID contributed 80 percent of the financing, the Fund contributed 12 percent, and the project proponent (municipality or public enterprise) contributed 8 percent. EAPS and the Fund jointly identified two wastewater treatment projects, two sewage collection projects, and one fuel conversion project that met the co-financing criteria. Project costs ranged from approximately \$140,000 to \$ 337,000. Proponents of the selected environmental investments had to confirm their willingness to contribute to the financing effort and their ability to operate and maintain the environmental infrastructure created or improved by the investment.

To meet the deadline, EAPS established a process for project documentation, approval, tendering, and contractor payments that took into account USAID requirements and the Macedonian public procurement process. EAPS worked very closely with the Fund, project proponents, bidders, and contractors to explain what needed to be done, emphasizing timely completion of the work. The program resulted not only in infrastructure improvements and pollution reduction, but also in improved municipal capacity to prepare projects for financing, conduct a transparent and competitive tendering process, select and supervise contractors, and work effectively with foreign financing sources.

*EAPS introduced municipalities to a source of financing previously unavailable and helped municipalities access project funding.*

Municipalities in Macedonia are increasingly willing to address local environmental infrastructure problems, but they have little or no access to financial resources to get the job done. Visits to municipalities by EAPS and Fund staff exposed these municipalities to a potential funding source that addresses environmental concerns. Workshops conducted jointly by EAPS and the Fund broadened exposure of the Fund to municipalities in Macedonia. All 124 municipalities in Macedonia were invited to attend workshops, with approximately 80 municipalities sending representatives, mostly mayors and directors of public enterprises. The workshops were one-day training courses, held twice to accommodate nearly 200 participants.

As a result of the workshops, municipalities learned of the Fund's existence and were introduced to the specific requirements they had to meet to obtain Fund financing. Within two months of the workshops, municipalities submitted approximately 50 environmental project concepts to the Fund for consideration. The Fund created a project database that contributed to understanding the scope and status of environmental problems around Macedonia. Several municipalities were invited to submit applications for Fund financing. Others identified by EAPS and the Fund were invited to apply for financing through the USAID co-financing facility.

*EAPS demonstrated the feasibility of a program to recycle aluminum cans and plastic bottles by a major bottler in Macedonia.*

Solid waste is an ongoing problem throughout Macedonia. Through the combined efforts of USAID, Pivara Skopje, and the EAPS project, a step was taken to evaluate the feasibility of recycling aluminum cans and plastic bottles. The study showed that Pivara Skopje was in a unique position to implement a recycling program because of its transportation system and existing facilities, but that it needed help to maximize recycling through promotional activities. The EAPS team found that many organizations and individuals were concerned about the litter problem and were ready to help implement recycling efforts. The study recommends that Pivara Skopje set up an independent venture to collect, transport, process, and sell recycled materials. It envisions the creation of a Macedonian recycling network comprising municipalities, nongovernmental organizations, and other public and private organizations (e.g., schools, stores, media, etc.) to develop and implement a public education and promotional program and help establish drop-off centers for recyclable materials.

## **B. Institutional Development**

*EAPS prepared and introduced a financial strategy for the Fund that was incorporated into a proposed law for creating an independent Fund and significantly increasing available levels of revenue.*

The Fund, as a new organization within the Ministry of Environment, lacked a formalized financial strategy to transform it from a loosely structured ministerial agency with a minimal source of revenue into a viable financial institution with a substantial sustainable source of funding. EAPS prepared a strategy based on short- medium-, and long-term time frames covering an approximately three-to-five-year period. This strategy will allow the Fund to develop as a financial institution through a very logical progression. The principles of this strategy were incorporated into a draft Fund Law that will enable the Fund to operate as an independent agency with defined sources of revenue and the ability to provide loans.

*EAPS developed and formalized a structure for application submission and evaluation of project funding.*

Using the experience gained through the EAPS programs in Poland and Lithuania, EAPS Macedonia developed a structure to enable environmental project proponents to apply to the Fund for financing, and for the Fund to consider project proposals. EAPS drew upon the expertise of Polish consultants with recent experience in developing application and evaluation forms and procedures for the Environmental Fund in Krakow. These consultants adapted that experience to Macedonia. The result was a series of application and evaluation forms and software affording the Fund in Macedonia a similar level of sophistication that has proved successful in Central Europe.

*EAPS contributed to significant progress in developing pollution charges in accordance with the “polluter-pays” principle as a future source of revenue and an industry incentive to reducing pollution.*

The long-term strategy of the Fund envisions pollution charges as a sustainable source of revenue. Pollution charges applied in accordance with the “polluter-pays” principle applies pollution charges in proportion to the quantity of pollutants discharged to the environment and provides an incentive to industry to develop pollution abatement projects. EAPS was able to help organize a working group consisting of the Fund, Ministry of Environment officials, a ministerial laboratory, and consultants to the ministry to begin developing realistic pollution charges. EAPS helped prepare an inventory of the largest industrial polluters in Macedonia, developed a computerized database for pollution data and charges, determined the financial impact of pollution charges to industrial subsectors, and prepared a methodology to determine pollution charges. This work will contribute significantly to the formalization of pollution charges in Macedonia.

*EAPS formalized Fund policies and approaches to loan management and provided requisite training to Fund staff.*

Establishment of the Fund as an independent agency creates both opportunities and challenges. An independent Fund, managed by a board of directors and with the ability to provide loans, requires an appropriate structure, policies, and management systems. The Fund Law provides a legal structure allowing for independent operation. EAPS also provided the written policies and training to enable the Fund to operate independently and gain an understanding of loan management and business practices.

Through a training program and materials, EAPS presented and discussed the principles of providing loans and grants to enterprises and municipalities for environmental projects. EAPS training focused on reviewing application and evaluation materials, accounting principles, legal issues, business planning, and credit and financial analysis.

#### **IV. Operational Management**

EAPS/Macedonia was managed by a team of Chemonics International home-office (HO) and field-office (FO) staff members. As chief of party, Avrom Bendavid-Val, located in Washington, D.C., held primary management responsibility for the project. Chemonics operated and maintained a field office in Skopje to manage the EAPS Macedonia project on a day-to-day basis. The principal technical staff of the project were:

*Henry Koner, FO expatriate team leader.* Led all work plan tasks, with an emphasis on providing technical expertise to the Fund and overseeing the co-financing of projects.

*Jennifer McGuinn, FO expatriate project packaging specialist.* Helped identify co-financing projects, draft and negotiate FAR agreements with co-financing recipients, and implement the agreements.

*Simon Avramovski and Vladimir Grozdev, FO local environmental technical advisors (replacing Jacek Podkanski and Danco Uzanov in January and July 1999 respectively).* Evaluated the technical aspects of projects for co-financing and worked with the Fund on technical evaluation.

*Gordan Kovacki, FO local financial analyst.* Conducted financial analysis of projects considered for Fund financing and Fund/EAPS co-financing. Provided analytical support for a pollution charge methodology related to the “polluter-pays” principle.

*Andrej Avramov, FO local technical assistant.* Developed an inventory of polluters and a computer database. Helped develop a pollution charge methodology related to the “polluter-pays” principle.

*Miroslav Trajanovski, local legal advisor.* Assisted with legal issues related to project activities, including legislative proposals, government procurement, and financing agreements.

*Paul Dax, expatriate finance advisor.* Prepared overall financial strategy for the Fund and a model for calculating and applying pollution charges that would accrue to the Fund.

*Bradford May, expatriate financial institution advisor.* Helped the Fund develop the fundamental skills of loan management.

*Subcontractor personnel.* EAPS employed qualified local consulting companies to conduct project design and packaging for the Fund pipeline and co-financing projects, and to develop Fund application procedures.

EAPS/Macedonia staff profiles are included in Annex E.

### Annex A. Project Packaging Activity Tracker

PROJECT	DESCRIPTION	COMMENTS
	<ul style="list-style-type: none"> <li>• Summary</li> <li>• Estimated environmental impact</li> <li>• Total financing mobilized</li> </ul>	
<i>Investment Preparation</i>		
<b>Category I:</b> Environmental investment projects identified and screened for financing by the Fund	<b>Method:</b> Site visits, technical screening, financial screening	<b>Outcome:</b> <ul style="list-style-type: none"> <li>• Total projects identified: 36</li> <li>• Projects selected for technical assistance: 4</li> <li>• Projects screened and submitted for Fund financing: 12</li> <li>• Projects considered and rejected: 20</li> </ul>
1. Skopje, Evropa Chocolate Factory	<ul style="list-style-type: none"> <li>• Boiler conversions (to gas)</li> <li>• Improve air quality</li> <li>• \$190,000</li> </ul>	<b>Completed:</b> Detailed engineering design; financing applications; tender documentation, tendering, and grant agreement signed. Project construction and start-up completed at the end of October 2000.
2. Lozovo municipality	<ul style="list-style-type: none"> <li>• Modernization of wastewater treatment plant</li> <li>• Improve water quality</li> <li>• \$66,000</li> </ul>	<b>Completed:</b> Financing applications; tender documentation; geotechnical investigation of lagoon soil. Municipality's ability to pay operation and maintenance costs has been analyzed. For Fund action.
3. Resen municipality	<ul style="list-style-type: none"> <li>• Modernization of wastewater treatment plant</li> <li>• Improve water quality</li> <li>• \$97,000</li> </ul>	<b>Completed:</b> Engineering design for reconstruction and modernization; financing applications; tender documentation. Contractor selected and grant agreement finalized with EAPS assistance. Municipality's ability to pay operation and maintenance costs has been analyzed. For Fund action.
4. Veles, Blagoj Gjorev Cooking Oil Factory	<ul style="list-style-type: none"> <li>• Modernization of wastewater treatment plant</li> <li>• Improve water quality</li> <li>• \$165,000</li> </ul>	<b>Completed:</b> Engineering design. Awaiting decision for future financing action by new plant management and Fund.
5. Textile Factory Kimico, Struga	<ul style="list-style-type: none"> <li>• Installation of exhaust gas filter</li> <li>• Improve air quality</li> <li>• \$50,000</li> </ul>	<b>Completed:</b> Project screening. Project is suitable for loan financing. Technical assistance is on hold pending passage of the Fund Law enabling the Fund to provide loans.
6. Hotel Makedonija, Tetovo	<ul style="list-style-type: none"> <li>• Heating plant fuel conversion (to gas)</li> <li>• Improve air quality</li> <li>• \$20,000</li> </ul>	<b>Completed:</b> Project screening. Project is suitable for loan financing. Technical assistance is on hold pending passage of the Fund Law enabling the Fund to provide loans.
7. OHIS Chemical Factory, Skopje	<ul style="list-style-type: none"> <li>• Boiler conversions (to gas)</li> <li>• Improve air quality</li> <li>• \$100,000</li> <li>• Fund contributed \$30,000 as a grant</li> </ul>	<b>Completed:</b> Project screening and evaluation by Fund. Project considered as model for loan/grant combined financing with a commercial loan and small grant from the Fund. Fund undertook project as its first solo project with minimal EAPS input.
8. Struga and Ohrid municipalities – public enterprise Proakva	<ul style="list-style-type: none"> <li>• Sludge treatment at wastewater treatment plant in village of Vraniste</li> <li>• \$60,000</li> </ul>	<b>Completed:</b> Project screening. Project submitted to the Fund for future financing consideration.
9. Resen municipality, Turisticka naselba, Otsevo	<ul style="list-style-type: none"> <li>• Modernization of 3 compact water treatment plants</li> <li>• Improve water quality</li> <li>• \$30,000</li> </ul>	<b>Completed:</b> Project screening. Project submitted to the Fund for future financing consideration.

PROJECT	DESCRIPTION	COMMENTS
	<ul style="list-style-type: none"> <li>• <b>Summary</b></li> <li>• <b>Estimated environmental impact</b></li> <li>• <b>Total financing mobilized</b></li> </ul>	
10. Municipality of Bitola, Dihovo	<ul style="list-style-type: none"> <li>• Construction of sewer system and wastewater treatment plant</li> </ul>	<b>Completed:</b> Prescreening phase; letter of interest submitted to EAPS and the Fund. Project for future Fund action.
11. Labunishta municipality	<ul style="list-style-type: none"> <li>• Extension of sewage collection system</li> </ul>	<b>Completed:</b> Project screening. Project submitted to the Fund for future financing consideration.
12. Municipality of Probishtip, Lesново village	<ul style="list-style-type: none"> <li>• Water treatment plant</li> <li>• \$6,000</li> </ul>	<b>Completed:</b> Project screening. Project submitted to the Fund for future financing consideration.
13. Obednik village	<ul style="list-style-type: none"> <li>• Water treatment plant</li> <li>• \$5,300</li> </ul>	<b>Completed:</b> Project screening. Project submitted to the Fund for future financing consideration.
14. Municipality of Stip	<ul style="list-style-type: none"> <li>• Expansion of sewer system</li> </ul>	Project on hold due to large magnitude and uncertain project definition.
15. Municipality of Strumica	<ul style="list-style-type: none"> <li>• Construction of wastewater treatment plant</li> </ul>	Project on hold due to large magnitude and uncertain project definition.
16. Municipality of Bitola, Social Services Center	<ul style="list-style-type: none"> <li>• Fuel conversion (lignite to light oil)</li> </ul>	Project on hold pending resolution of government ownership issues.
<b>Category II:</b> Environmental investment projects identified and screened for potential EAPS assistance and USAID co-financing with the Fund	<b>Method:</b> Site visits, technical screening, financial screening	<b>Outcome:</b> <ul style="list-style-type: none"> <li>• Total projects identified: 12</li> <li>• Total projects accepted for co-financing: 5</li> <li>• Total projects rejected for co-financing: 7</li> </ul>
1. Struga and Ohrid municipalities – public enterprise Proakva	Sewer collection system development for Lagadin Village Total cost: \$139,957 USAID contribution: \$104,423 Fund contribution: \$17,187 Proponent contribution: \$18,347	<b>Completed:</b> Project selected for co-financing. Project design and tender completed in July and August. Contracts between Proakva, the contractor, the Fund, and Chemonics prepared and signed in September 2000. Installation of collector system completed in December 2000.
2. JSP, Skopje (public enterprise for public transportation)	Boiler conversions (to gas) Improve air quality Total cost: \$151,700 USAID contribution: \$140,100 Proponent contribution: \$11,600	<b>Completed:</b> Project selected for co-financing. Engineering design completed by Energo Sistem. Tender documentation completed by EAPS staff in coordination with the Fund and JSP. Contractor selected and agreements signed in December 2000. Project construction completed in February 2001.
3. Municipality of Star Dojran	Modernization of wastewater treatment plant Total cost: \$270,523 USAID contribution: \$262,644 Proponent contribution: \$7,879	<b>Completed:</b> Project selected for co-financing. Engineering design completed by EMO Ohrid. EAPS staff in coordination with the Fund and municipality completed tender documentation. Contractor selected in late November 2000. All agreements completed; project construction began in December 2000. Construction completed in early March 2001.
4. Municipality of Sveti Nikole	Modernization of wastewater treatment plant Total cost: \$337,049 USAID contribution: \$327,232 Proponent contribution: \$9,817	<b>Completed:</b> Project selected for co-financing. Fluid Proekt completed engineering design in October 2000. Tendering process and selection of contractor completed in November 2000. Construction commenced in November 2000; project completed in late February 2001.

PROJECT	DESCRIPTION	COMMENTS
	<ul style="list-style-type: none"> <li>• Summary</li> <li>• Estimated environmental impact</li> <li>• Total financing mobilized</li> </ul>	
5. Municipality of Zelenikovo – sewer system	Construction of sewer system for the village of Stanica Zelenikovo Total cost: \$200,581 USAID contribution: \$192,522 Proponent contribution: \$8,059	<b>Completed:</b> Project originally selected for co-financing. In accordance with November 2000 revised co-financing agreement, sewer system was financed 100% by USAID/EAPS and WWTP was to be financed 100% by the Fund. Because of delays in execution of the WWTP, EAPS added a pumping station to the sewer system to direct effluent to the Vardar until the WWTP is completed. Engineering design for sewer system was completed by Energo Sistem. EAPS staff, in coordination with the Fund and the municipality, prepared tender documentation. Contractor was selected in November 2000; construction began immediately. Construction of sewer system completed in late January 2001.
6. Municipality of Zelenikovo – wastewater treatment plant	Construction of wastewater treatment plant for the village of Stanica Zelenikovo Total cost: \$164,000 Fund contribution: \$164,000	<b>Completed:</b> Project originally selected for co-financing. In accordance with November 2000 revised co-financing agreement, the sewer system was financed 100% by USAID/EAPS and WWTP was to be financed 100% by the Fund. Energo Sistem completed engineering design in early December 2000. Tendering process and selection of contractor will be conducted by the Fund in mid-2001. This project is to be financed entirely by the Fund.
7. Skopje Military Hospital (Ministry of Defense)	Boiler conversions (to gas) Improve air quality \$100,000	<b>Completed:</b> Project definition report completed. Project rejected due to unavailability of gas supply.
8. Skopje public schools and dormitory (Ministry of Education)	Gas pipeline extension and boiler conversions \$243,660	<b>Completed:</b> Project definition report completed; gas company contacted. Project rejected for co-financing due to high gas company cost for gas connection, limited funds, and low interest level of Ministry of Education.
9. Clinical Center Skopje (Ministry of Health)	Boiler conversions (to gas) Improve air quality	<b>Completed:</b> Project definition report completed. Project rejected due to lack of gas pipeline to serve project.
10. Municipality of Jegunovce	Expansion of sewer system and wastewater treatment plant construction \$400,000	<b>Completed:</b> Screening phase completed. Project rejected for co-financing due to lack of specific definition and preparation and high estimated cost.
11. Municipality of Kondovo	Construction of sewer system and wastewater treatment plant for the village of Dolno Svilare \$210,000	<b>Completed:</b> Project rejected for co-financing because the municipality has received a large amount of donor financing for environmental activities relative to other communities in Macedonia. Project placed in the Fund's pipeline for future financing consideration.
12. Municipality of Sopotnica	Extension of sewer system and construction of wastewater treatment plant for the Municipality of Sopotnica \$270,000	<b>Completed:</b> Project rejected for co-financing due to higher priority of other projects considered. Project placed in the Fund's pipeline for future financing consideration.
13. Municipality of Cucer Sandevo	Wasterwater treatment for villages > \$1,000,000	Project rejected for co-financing due to magnitude of the project.

## **ANNEX B**

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### **Co-Financing Project Descriptions**

#### **A. JSP Boiler Conversion, 2000-2001**

In the fall of 1999, USAID/Macedonia asked EAPS to work with the Macedonian Environmental Fund to identify and co-finance a series of environmental infrastructure projects to address the environmental problems aggravated by the influx of refugees from Kosovo earlier that year. One of the projects financed by USAID through EAPS was a boiler conversion at the Skopje Public Transportation Enterprise (JSP).

JSP is a public enterprise fully owned by the city of Skopje. It operates 80 percent of public transportation in the city. Prior to implementation of the project, JSP used three heavy oil (mazut)-fired boilers to generate heat for its bus maintenance and administrative buildings. Heavy fuel oil is relatively expensive and emits significant levels of greenhouse gases to the air when burned for heating. The project converted the primary fuel used to generate heating power from heavy oil to natural gas, installed a central control system for the boiler house, and replaced blower heaters in the vehicle repair buildings with infrared radiant heating.

Implementation of this project resulted in reduction of emissions of SO<sub>2</sub>, NO<sub>2</sub>, CO, and fly ash to the air by as much as 99 percent in some cases. The reduction was derived from (1) conversion to natural gas, a cleaner-burning fuel, (2) a reduction in consumption of heating fuel, and (3) a reduction in consumption of electricity. Reduction in consumption of heating fuel was achieved by (1) a central control system that automatically regulates the temperature of the boiler water and (2) installation of infrared heating at each work station that directs heat where it is most required. Since the heavy fuel oil must be preheated with electric power before it can be used for heating, the conversion to natural gas resulted in a reduction of consumption of electricity at JSP. The project also generated cost savings to JSP, not only from the reduction in consumption, but also because natural gas is a less expensive fuel. Total project cost was \$156,650; JSP provided an in-kind contribution valued at \$14,600.

In addition to identifying and providing USAID financing for this project, EAPS provided technical assistance to JSP to prepare a final technical design for the project, negotiate an agreement with the natural gas distribution company, prepare tender documentation, select a contractor, and work within the requirements of USAID. The project resulted in a reduction of air pollution in the city of Skopje and gave JSP the opportunity to manage its resources more efficiently by consuming lower quantities of a less expensive fuel.

## **B. Lagadin Sewer System, 2000**

In the fall of 1999, USAID/Macedonia asked EAPS to work with the Macedonian Environmental Fund to identify and co-finance a series of environmental infrastructure projects to address the environmental problems aggravated by the influx of refugees from Kosovo earlier that year. One of the projects financed through this mechanism was the construction of a sewer system for Municipal Public Enterprise Proakva. Proakva manages water and wastewater systems in the region around Lake Ohrid, one of the largest lakes in the Balkans and a UNESCO world cultural and natural heritage site.

A top priority for Proakva is developing the sewer network around Lake Ohrid to collect wastewater from the many surrounding towns and villages, as recommended in a feasibility study conducted by the World Bank. This project connected the village of Lagadin, located on the shore of Lake Ohrid, to a sewer collector pipe along the lake that transports sewage to the Vranishta wastewater treatment plant. Implementation of this project resulted in significant reduction of emissions of BOD<sub>5</sub>, TSS, nitrate, and phosphorous to Lake Ohrid. The total cost of the investment was approximately \$140,000: \$105,000 was provided by USAID, the Macedonian Environmental Fund provided \$17,000, and Proakva provided an in-kind contribution valued at \$18,000.

The project was selected not only for its environmental benefits, but also because it helped alleviate an environmental problem in Macedonia that was brought on in part by the Kosovo refugee crisis. The Vranishta wastewater treatment plant was used for the treatment of wastewater from the refugee camps located throughout Macedonia during March-July 1999. As a result, resources from Proakva that would otherwise have been devoted to development of the regional sewer system had to be devoted to maintaining the treatment plant.

In addition to identifying and providing USAID financing for this project, EAPS provided technical assistance to Proakva to prepare a final technical design for the project, prepare tender documentation, select a contractor, and work within the requirements of USAID. The project resulted in a reduction of water pollution to Lake Ohrid and gave Proakva the opportunity to improve its management of the Lake Ohrid watershed.



*View of sewer line installation and manhole adjacent to Ohrid Lake*

### C. Reconstruction/Upgrading of Wastewater Treatment Plant in Star Dojran, 2000-2001

In the fall of 1999, USAID/Macedonia asked EAPS to work with the Macedonian Environmental Fund to identify and co-finance a series of environmental infrastructure projects to address the environmental problems aggravated by the influx of refugees from Kosovo earlier that year. One of the projects financed through this mechanism was reconstruction and upgrading of the municipal wastewater treatment plant in Star Dojran.

The municipality of Star Dojran is situated on Lake Dojran, one of three natural lakes in Macedonia. Conservation and protection of this lake is a national environmental priority in Macedonia. Prior to implementation of the project, the wastewater treatment plant and the 10 pump stations that serve it were oversized in capacity. Because the municipality could not afford to operate and maintain the system properly, the plant was barely operational. EAPS hired a local consulting firm to redesign the plant to reduce its overall capacity by 25 percent, as well as provide for additional treatment capacity during the tourist season. The treatment technology was upgraded from the energy-intensive extended aeration method to a more cost-effective system using rotating biological contactors. Additionally, the 10 pump stations were revamped to serve the reduced capacity more efficiently, resulting in a significant decrease in electricity consumption. The reconstructed plant reduces emissions of BOD<sub>5</sub> and suspended solids to Lake Dojran by 94 percent, as well as significant amounts of nitrate and phosphorous. The total project cost was \$277,707: USAID provided \$262,616 through the EAPS project and the municipality provided an in-kind contribution valued at \$15,091.

In addition to identifying and providing USAID financing for this project, EAPS provided technical assistance to the municipality of Star Dojran to prepare tender documentation, select a contractor, and work within the requirements of USAID. EAPS engaged an expatriate wastewater operations and maintenance expert to review the project, the manuals provided by the equipment supplier, and the plant's overall operation and maintenance process. The expert conducted an informal training session for municipal personnel and compiled the recommendations into a maintenance manual.

The project resulted in a reduction of water pollution to Lake Dojran and gave the municipality the opportunity to manage its services more efficiently.



*Preparation for installation of rotating biological contactors*

#### **D. Rehabilitation/Upgrading of Wastewater Treatment Plant in Sveti Nikole, 2000-2001**

In the fall of 1999, USAID/Macedonia asked EAPS to work with the Macedonian Environmental Fund to identify and co-finance a series of environmental infrastructure projects to address the environmental problems aggravated by the influx of refugees from Kosovo earlier that year. One of the projects financed through this mechanism was the rehabilitation and upgrading of the municipal wastewater treatment plant in Sveti Nikole.

The town of Sveti Nikole, situated on the Svetinikolska River, is the commercial and administrative center of this region in central Macedonia. The wastewater treatment plant that serves this region was built in 1978. When EAPS and the Fund identified this project, the capacity of this wastewater treatment plant was inadequate to treat the total household wastewater produced in Sveti Nikole due to an unanticipated increase in population. In addition, lack of proper maintenance over the past 20 years reduced the operational efficiency of the facility. To address these problems, EAPS contracted a team of Macedonian wastewater treatment experts to design a project that would preserve the existing structure of the plant, upgrade the technology, and expand the capacity of the plant to meet projected requirements for the next 20 years. Implementation of this project resulted in reduced emissions of BOD<sub>5</sub>, suspended solids, nitrate, and phosphorous to the Svetinikolska River. Total project cost was \$350,000: the municipality of Sveti Nikole provided an in-kind contribution valued at \$21,800.

In addition to identifying, designing, and providing USAID financing for this project, EAPS helped the municipality of Sveti Nikole establish a cost recovery program for wastewater treatment. Part of the reason the municipality allowed the original plant to decline was that it never collected fees from citizens for wastewater treatment. EAPS experts analyzed the cost of maintaining the upgraded wastewater treatment plant, the amount of wastewater expected, the number of users of the system, and expected collection rates to help the municipality establish fees for wastewater treatment that would represent the real cost of the service. Additionally, EAPS engaged an expatriate wastewater operation and maintenance expert to review the project, the manuals provided by the equipment supplier, and the overall process of operating and maintaining the plant. The expert conducted an informal training session for municipal personnel and compiled the recommendations into a maintenance manual.

Implementation of this project in Sveti Nikole resulted in reduction of water pollution and improved municipal capacity to provide services to citizens and efficiently manage resources.



*Excavation of new secondary settling tank*

## ANNEX C

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### Fund Financial Strategy

#### A. Background and Introduction

This Strategy Paper for the Macedonian Fund for the Environment and Nature Protection (the Fund) builds on the EAPS Technical Inception Report (TIR) dated May 17, 1999. The TIR outlined alternatives and proposed an approach towards a strategy for the Fund. This paper has been reviewed and discussed with the management of the Fund, Ministry of Environment officials, and other stakeholders. In developing this Financial Strategy, three separate concept papers were prepared:<sup>1</sup>

Concept Paper 1: Establishment of an Autonomous Environmental Fund with a Lending Facility, Concept Paper 2: Proposal for Augmenting the Fiscal Revenue Base of the Fund for Environment and Nature Protection of the Republic of Macedonia, and Concept Paper 3: Proposal for the Introduction of Industrial Pollution Charges in the Republic of Macedonia

These concept papers are available in a bound final report and form an integral part of the Financial Strategy at its present stage of definition.

The first paper deals with the financial instruments that the Fund will deploy in supporting investment projects. In particular, it discusses the rationale of loan versus grant funding (and mixed funding) in different kinds of projects and with different kinds of clients.

The second paper proposes concrete eco-taxes that the Ministry of Environment intends to submit to the Government in the short run.

The first two papers served as the basis of draft legislation prepared by EAPS in consultation with the Director of the Fund. It is expected that The Ministry of Environment will submit the legislative proposal to the Government before the end of 2000.

The third concept paper deals with the introduction of industrial pollution charges in accordance with the polluter-pays principle. While both the second and the third papers deal with endowing the Fund with a sustainable resource base, the two papers differ in that (i) the paper on eco-taxes already contains concrete proposals for the magnitude of the taxes, while the paper on pollution charges deals with qualitative issues, (ii) the paper on eco-taxes is not directly related with the polluter pays principle, and (iii) the eco-taxes proposed are expected to constitute the bulk of the Fund's revenue base in the short and medium term, while pollution charges are expected to be phased in gradually and will not significantly augment the Fund's revenues in the short term. Converting an analytical framework for introducing industrial pollution charges into concrete

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<sup>1</sup> This is not the chronological order in which these papers were written

quantitative proposal will require thorough analyses, as well as political judgments.<sup>2</sup> This work is expected to be carried out under continued EAPS support for the Fund.

Following the reasoning of the TIR, the Financial Strategy falls into short-, medium- and long-term time dimensions. In what follows, the “uses of funds” will be discussed separately in each of these time dimensions. The time dimension itself may be defined with reference to the passage of proposed laws to augment the resource base of the Fund, as discussed below.

## **B. Sources of Funds over Time: Summary**

In the *short run*, the Fund is limited to its present funding source from the basic insurance on vehicles (see TIR, pp. 8-9). This revenue source is projected at about US\$ 900,000 p.a. The inflow of these funds is continuous and is received by the Fund on a monthly basis. In addition, the Fund now receives budget allocation for staff salaries.<sup>3</sup> The short run thus defined will end with the passage of the proposed Law, which would augment the Fund’s annual revenues to an estimated US\$ 3.3 million p.a. This is then the projected resource base of the Fund during the *medium term*. The *long-term* can be defined to start when revenues from pollution charges will further augment the Fund revenue base. The law introducing pollution charges is expected to be introduced toward the end of the year 2000. However, according to the proposals contained in Concept Paper 3, pollution charges will be imposed in a graduated manner phased over time, and with possibilities of waivers. Thus pollution charges will only gradually augment the revenue base of the Fund. Thus the *medium term* can be defined as an approximately three-year period, starting with passage of the proposed law, during which the Fund’s revenue base will be at least US\$ 3.3 million but not much more. A quantitative target for the *long-term* revenue base of the Fund has not yet been set; this is to be established under proposed EAPS assistance during the year 2000.

In addition to pollution charges discussed in Concept Paper 3, other environmental charges and fees may be considered for the long run. For example, landfill taxes and product charges applicable in solid waste management are possible future sources of revenue. Differential landfill taxes (on landfills that do or do not comply with environmental standards) have successfully been implemented in Slovakia, where they served as a major incentive for the modernization of landfills. Product charges have to do mainly with solid waste management; for example, in Hungary, revenues from product charges on tires, car batteries, packaging materials, and refrigerating equipment went into the National Environmental Fund and were earmarked for pollution abatement investments with respect to the same products. The system of earmarking and allocation of funds was managed by the Fund. A similar system could be considered in Macedonia at a later date as an instrument to reduce solid waste pollution and in pursuit of harmonization with EU policies. However, it is deemed premature at this stage to introduce such charges in Macedonia, and the topic is beyond the scope of this report and the accompanying concept papers.

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<sup>2</sup> In addition, it will also require a massive institution-building effort, which, however, for the time being is outside the scope of the EAPS project, as funding for the purpose is provided by Phare and other donors.

<sup>3</sup> After the passage of the proposed Law, salaries would no longer be financed from the budget, but from the Fund’s own resources from eco-taxes and fees.

### C. Uses of Funds in the Short Run

Funds available for investment projects in the short run, that is, until mid-2000, are roughly projected at about US\$ 1.0 million, including balances accumulated to date.

These moneys are expected to be spent mainly on the project pipeline developed by EAPS, which is detailed elsewhere. These are generally small projects ranging between US \$25,000 and US \$250,000, and with a concentration on municipal projects.<sup>4</sup>

In the short run, the Fund is constrained to grant funding. This justifies the short-term strategy of focusing on municipal projects, and more generally on the kinds of projects that would also be funded on a grant basis in the medium and long run (according to the criteria proposed in Concept Paper 1).

The Fund is at present also processing a couple of projects that by rights should be financed as loans, e.g., energy efficiency projects that pay for themselves and are undertaken by commercial enterprises. These projects will be small and serve a pilot/demonstration purpose. The Fund does not intend to finance such projects as grants after passage of the Law.

Given the modest amount of available funding in the short and medium term, it is all the more important that the Fund leverage its resources from the very start.

A principal means of leveraging is expected to take the form of co-financing under a proposed co-financing facility of USAID. The amount is expected to be up to US\$ 1.5 million, to be committed by March 2001. The USAID co-financing facility is to be implemented through the EAPS project. It is expected that the funding will be targeted to municipalities and in the form of grants.<sup>5</sup> Further, it is expected that USAID will require counterpart funding from the Fund. Hypothetically, if the Fund is to finance matching counterpart funding (i.e. 15 percent of USAID contribution) co-financing with the USAID facility, a significant amount of Fund resources would be tied down to the USAID co-financing facility as long as the new Law is not passed (assuming the present levels of revenue to the Fund from the car insurance).

The implication of this is that until the new Law is passed, the Fund, which wishes to avail itself of the proposed USAID co-financing facility and will benefit from it, has limited “free funds” with which to finance projects independently. Thus until it is assured of the passing of the proposed Law, the Fund should be very circumspect in financing projects on its own, without co-financing.

At the same time, the Fund is exploring other opportunities for co-financing projects through other donors and preferential credit lines. Co-financing a recently established Austrian

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<sup>4</sup> The Director of the Fund will have a discretionary fund at his disposal for small grants, mainly to NGOs, for which the approval of the Board of Directors will not be required. Internal procedures for the appraisal and disbursements under such discretionary funding will be contained in the Rules of the Fund. The total amount of such discretionary funding, as well as the limits on individual project size, may increase in time. The small grants will support mainly nature conservation, studies, training and education, conferences, and the like, which are not the subjects of this Financial Strategy. Only in exceptional cases would the Fund support small investment projects, as such projects would dissipate the managerial time of the Fund.

<sup>5</sup> More strictly speaking, the funding will be used for reimbursement of goods and services procured under USAID-approved procedures, but this topic is outside the scope of this strategy.

Chancellery facility supporting village potable water and wastewater treatment projects appear promising. The Fund's Director and the EAPS Chief of Party are exploring other opportunities with bilateral donors as well. These include a Spanish credit line through Banco de Bilboa (see Weekly Report dated May 27, pg. 5), and a Japanese financing facility through the Ministry of International Trade and Industry), with a 0.7 percent rate of interest and a 20-30 year repayment period, including a 10-year grace period.

Other than co-financing with foreign donors, cost-sharing with the beneficiaries is important to leverage Fund resources (see Concept Paper 1, page 4). At this point the Fund has not formulated firm guidelines on cost-sharing. These, however, will be expressed as maximum percentages of project costs that the Fund will be permitted to finance for different types of clients and for different types of loans. Under the EAPS project pipeline, cost-sharing is negotiated on a case-by-case basis in the first financial packages that are being put together now (see "Notes on the Financing of Initial Projects in the EAPS Project Pipeline," appended to the Weekly Reports.)

#### **D. Uses of Funds in the Medium Term**

Passage of the proposed Law will increase the Fund's revenue base nearly fourfold, and also permit it to give loans.

Concept Paper 1 discusses criteria for financial packaging for different kinds of projects and clients, and only the main recommendations will be repeated here:

The Fund will essentially have three instruments: grants, interest-free loans, and loans with commercial rates of interest. However, projects could be financed by a mix of these instruments (according to criteria as discussed in Concept Paper 1) so that in fact the Fund would have latitude in determining the effective interest rate of a total financing package.

Grant funding will be reserved essentially for municipally sponsored projects, where the citizens' capacity to pay will be taken into consideration in determining cost-recovery targets and the share of counterpart funding in project costs. (Interest-free loans to municipalities may substitute for municipality counterpart funding as a last resort in cases where the municipality is unable to come up with counterpart funding of its own.) Lending at commercial interest rates will essentially go to commercially viable pollution abatement projects, such as gas conversions. Interest-free loans are in the first instance aimed at commercially non-viable industrial pollution abatement projects (the rationale for this structure is discussed in Concept Paper 1).

The Fund will have flexibility in other financing conditions as well. The Rules of the Fund, however, will limit this flexibility by prescribing appropriate maxima and minima, including for:

- The maximum percentage of project costs that the Fund may finance as commercial loan, interest-free loan, grant, and in total for different types of projects and clients as described in Concept Paper 1
- The minimum level for beneficiary counterpart funding for commercial loans, interest-free loans, and grants respectively
- The maximum repayment period for commercial loans and interest-free loans

- The maximum grace period on capital repayments for commercial loans and interest-free loans
- The maximum grace period on interest for commercial loans
- The minimum collateral on loans, and forms of acceptable collateral

The Rules will also limit the Fund's discretion in its total portfolio by prescribing:

- The maximum financing for any single project and for any single client
- The maximum and minimum shares of the total portfolio that may be devoted to grants and loans respectively, expressed as the minimum ratio of loans to grants in the Rules
- The minima and maxima for the share of the total project portfolio that may be devoted to municipal environmental services versus industrial pollution abatement projects, expressed as the minimum ratio of investments in industrial pollution abatement to municipal investments in the portfolio

Such limits are intended to ensure that the Fund diversifies its portfolio with respect to the kinds of projects, as well as to the client base. There are examples of Funds in transition economies that have taken "the easy way out" in devoting almost all their funds to noncontroversial municipal services (sewerage, wastewater treatment plants, and landfills) while avoiding the promotion of industrial pollution abatement projects. This is to be avoided in Macedonia, where industrial pollution abatement is a paramount priority.

Discussions on these matters of strategic importance are ongoing with the Fund's Director. The subject is well understood, and the final figures on limits will be incorporated into the Rules of the proposed Law, soon to follow.

The above maxima and minima will refer to the total cumulative portfolio and will not be overly restrictive to any single year's operation. The Director of the Fund will have significant flexibility for structuring the year's annual program of financial commitment. He will also be required, under the Statutes of the proposed Law, to prepare an annual financing plan to the Board of Directors for their approval. EAPS will assist the Fund with the preparation of the Annual Plan. The first Annual Plan for the Fund, which will be prepared in the final two months of 1999, still will not have a lending component in it.

#### **D1. Project Size in the Medium Term**

With an annual revenue base of some US\$ 3.3 million, the Fund will still not be in a position to undertake large pollution abatement projects. (Large projects may be defined as projects of about US\$ 5.0 million, which is about the threshold for soliciting requests from the major multilateral financial institutions.) The maximum financing the Fund will extend to a single project will probably be below US \$1.0 million. In the medium term, the Fund's annual lending program is expected to consist of some 10 to 20 financing commitments, between US \$50,000 and the upper limit.

Thus in the medium term, it is expected that large projects will remain in the domain of direct Government requests (through line ministries of Government) to multilateral and bilateral financial institutions and donor agencies. At the same time, this should not mean that the Fund should exempt itself from involvement with major industrial or municipal pollution abatement projects. The following paragraphs outline such a role that will be initiated in the medium term, but is expected to mature in the long-term time dimension.

First, the Fund could assume the role of the designated agency of Government for channeling international funding to major environmental projects. The Fund being the principal specialized financial agency of Government for environmental investments could, once it has demonstrated experience with project finance, appear as the preferred counterpart agency for foreign donors. Such a role has been assumed by other environmental funds in transition economies. For example, Phare grants to the Government have been channeled as soft loans to industry through environmental Funds. Such a role is entirely consistent with the mandate of the Fund.

Secondly, in such cases, the Fund could also appear as a co-financier, up to the maximum exposure stipulated in the Rules. Such a role would give added credibility to the Fund vis-a-vis the international lending community.

Thirdly, and by extension of the above, the Fund could become the vehicle of credit lines such as the pollution abatement funds, such as have been variously sponsored by multilateral financial institutions in other countries.

## **D2. Development of a Planning and Project Preparation Capability for the Long Term**

All this postulates, however, the development of the Fund not just as a financial intermediary but also as an agency for strategic investment planning for pollution abatement. Such planning capability will not be built overnight and will require close collaboration with Ministries of Government. The first step toward strategic investment planning will be taken in conjunction with the Inventory of Polluters, which will identify the major polluters. In close collaboration with the Environmental Inspectorate, the Fund will determine the priority industrial sectors (and companies) for pollution abatement. (It is expected that the metallurgical industries will be a first priority, followed by agroprocessing industries including wineries, breweries, tanneries, and the meat processing industries.) The Fund will not be able to launch intensive sectoral investment strategies simultaneously in all priority sectors. The approach recommended is to formulate at least one or two subsectoral studies each year – e.g., for a subsector of the metallurgical industry or for the tannery subsector – and then to follow up these sectoral studies by company-specific feasibility studies for pollution abatement investments.

This approach to planning implies that the Fund will in its Annual Plan earmark funds for sectoral studies and for project preparation. The Fund, as a financial intermediary, will not develop an in-house engineering capability for feasibility studies. However as a strategic planning agency, it will (i) commission and fund sectoral and feasibility studies to be carried out by local engineering firms, with or without assistance from foreign firms as may be appropriate, (ii) nominate its own staff or consultants to supervise the financial and economic aspects of sectoral and feasibility studies, and (iii) appoint a panel of outside experts who will serve as advisors on the technical quality of sector and feasibility studies.

## E. The Long Term

Thus equipped, the Fund will be well positioned to be the principal national funding agency for environmental investments, as well as a strategic planning agency for environmental enhancement. The long term, defined above, will commence when pollution charges will significantly augment the revenue base of the Fund. According to this admittedly loose definition, the long run will start some three or more years from now, depending on the time frame that will be adopted for phasing in the charges.

Pollution charges are expected to provide the major portion of the Fund's revenue base in the long run. A preliminary projection of this revenue base will be made as soon as the data for the Inventory of Polluters are assembled, and after a quantitative proposal is made for the level of pollution charges. As stated in Concept Paper 3, the magnitude of the charges will be related to pragmatic criteria:

- The ability of industry and others to pay, without undue adverse affects on production and profitability
- The incentives they would provide industry to abate pollution
- The need to generate funds for investment so as to attain target reductions in pollution

As discussed in Concept Paper 3, the increases in Fund revenues from pollution charges would be phased in over time according to the gradualist approach in the proposals. They would reach a maximum in about three to five years after the introduction of the charges, after which they gradually decrease as pollution levels are reduced. (Reductions due to decreasing pollution could be offset by increasing the level of the charges or by stricter environmental standards as they evolve over time, as has been the experience in some other countries, for example, Poland).

With project development capability fully developed during the mid-term as outlined above, the Fund will be able to manage an increasingly greater and more diversified portfolio. In the long term, the Fund will, together with the concerned ministries and industry, define pollution abatement targets in selected industries over a five-to-ten-year period and work toward their implementation.

With project development capability fully developed during the midterm as outlined above, the Fund will be able to manage an increasingly greater and more diversified portfolio. With a more ample resource base, the upper limit for financing projects may be raised, and the Fund may become a partner in financing large environmental projects which otherwise could only be financed from international or budgetary sources.

Finally, it may be worth while to give a thought, premature as it may be, to the question of whether the Fund is intended as a temporary or as a permanent institution. At the St. Petersburg Conference sponsored by OECD in 1994, when nascent environmental funds were first being discussed in an international forum, it was pointed out that specialized funds receiving earmarked revenues were in the long run fiscally undesirable, and their existence was only temporarily justified as long as market imperfections that keep investment in the environment

below the socially desirable level warrant. It now looks like these market imperfections are persistent enough in most transition economies. Also there are a number of success stories where healthy funds are leading the environmental progress in their countries and there is no thought of abolishing them. However, in some countries, for example, Hungary, environmental funds are being phased out. Before the Macedonian autonomous Fund is born, it is not appropriate to consider its death. However, as markets change and the economy progresses, the Fund will need to evolve with the times and adapt itself to changing needs if it is to remain a vital development institution. Its focus and activities will change in directions that would be premature to think about now (for example, as with regard to landfill taxes or product charges mentioned above, or with regard to fostering emerging markets in environmental services). At this stage, the paramount priority is to establish the Fund on a simple but robust institutional basis, and with an adequate financing base so that it can tackle the pressing environmental priorities in abating industrial pollution and improving local environmental services in Macedonia.

**ANNEX D**

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Independent Fund Law Draft

**MINISTRY OF ENVIRONMENT AND PHYSICAL PLANNING**

PROPOSAL FOR ENACTMENT  
OF  
LAW ON ENVIRONMENTAL FUND  
WITH  
PROPOSED LAW

SKOPJE, JANUARY 2001

## **I. REASONS FOR PROPOSING THE NEW LAW**

According to the Constitution of the Republic of Macedonia, one of the fundamental values of the constitutional order is the protection and promotion of the quality of the environment and nature. Considering this and the provisions which require the state to create conditions for exercising the rights of the citizens with respect to the environment, the new law proposes the establishment of an Environmental Fund as an institutional framework for the financing of environmental protection and promotion.

The basis for establishing an independent Fund is also provided in article 66 of the *Law for public administration reform* (Official Gazette of the Republic of Macedonia No. 58/2000). According to this article, the existing Fund for Protection and Promotion of the Environment and Nature, as established by the *Law on protection and promotion of the environment and the nature* (“Official Gazette of the Republic of Macedonia” No. 69/96) loses its status as a body within the Ministry of Environment and Physical Planning and will operate as an independent fund. Article 66 also states that organizational structure and activities of the Fund are to be set forth in a separate law.

Under the new law it is proposed that the Environmental Fund operate as an autonomous national organization with the status of a legal entity. This would ensure the operation of the Fund as an independent entity, that is, a financial intermediary through which funding would be channeled for purposes of protection and promotion of the quality of the environment.

One of the main reasons for passing the proposed law is to substitute the Fund’s budgetary revenues with new sources of funding for environmental protection and promotion, as a key prerequisite for the realization of the National Environmental Action Plan for protection and promotion of the quality of the environment.

## **II. KEY PRINCIPLES INCORPORATED IN THE LAW**

1. The principle of protection and promotion of the environment and nature and creating conditions for exercising the rights of the citizens with respect to the environment
2. The principle of independent raising and disbursement of funds for environmental projects and programs

## **III. PROVISIONS OF THE LAW**

The draft text of the law is contained in the proposal for enactment and it deals with the main issues that need to be regulated with this law.

**IV. REASONS FOR PROPOSING ENACTMENT OF THE LAW THROUGH THE SHORT PROCEDURE**

Because the proposed Law is limited in scope, according to clause 316 in Statute of the Parliament of the Republic of Macedonia, it is recommended that the proposal for enactment of the Law on Environmental Fund and the proposed law itself should be discussed during the same Parliamentary session.

Law on the Fund for Environment in Macedonia  
Draft Proposal January 2001

**I General Provisions**

**Article 1**

This law shall regulate the status, organization and authority of the Fund for Environment in Macedonia (Hereinafter: the Fund), securing of financing, and the manner and terms of approval of funding for the protection and promotion of the quality of the environment and nature.

**Article 2**

The Fund for Environment in Macedonia is established for the purpose of financing environmental protection projects and programs.

**Article 3**

The Fund shall have the status of a legal entity, and shall be independent in its operation.

**Article 4**

In this Law, "environmental protection projects and programs" shall mean, in particular: preparation of investment documentation, feasibility studies, procurement of equipment, construction, training, education and other activities (Hereinafter: the projects and programs).

**Article 5**

The principal sources of revenue for operation of the Fund shall be raised from:

1. charges imposed on oil derivatives, tobacco products, motor vehicles and vessels, and other products having a direct or indirect environmental impact;
2. charges collected from enterprises, sole proprietors, and other individual entrepreneurs and legal entities, who - according to the registry and the map of polluters of air, waters, protected natural areas, soil contamination and degradation, and the registry of waste and harmful substances - operate sources releasing polluting substances into the environment and nature.
3. donations and credits from domestic and foreign legal entities and individuals;
4. interest on loans provided by the Fund and interest on deposited and invested funds;
5. charges imposed on other products which have a direct or indirect environmental impact;

6. other revenue sources as provided by law.

The revenues in paragraph 1 of this article shall be paid to the account of the Fund.

### **Article 6**

This Law shall determine the charges for oil derivatives, tobacco products, motor vehicles and vessels.

The charges applying to other products, referred to in Article 5, items 2 and 5 of this Law, shall be determined under a separate law.

### **Article 7**

The Fund may provide financing for the development of environmental projects and programs in the form of grants, loans, mixed loans and grants, and loan and payment guarantees.

The Fund may deposit available funds with commercial banks or invest in securities issued by the Republic of Macedonia according to the Law on issuance and trading of securities.

### **Article 8**

Eligible beneficiaries of financing from the Fund are: enterprises, sole proprietors, public companies, local self-government authorities and other legal entities (Hereinafter: Investors).

## **II Organization, Operation, and Management Bodies of the Fund**

### **Article 9**

The structure of Fund Management includes the Board of Directors and the Director of the Fund.

### **Article 10**

The Board of Directors shall consist of nine (9) members, who are appointed and removed from office by the Government of the Republic of Macedonia.

They shall serve for a term of four (4) years.

One representative from each of the Ministry of Environment and Physical Planning, the Ministry of Agriculture, Forestry and Water Management, the Ministry of Finance, and the Ministry of Economy shall be appointed as members of the Board of Directors. The other five Board members shall consist of non-government experts.

The Board of Directors shall elect a Chairman and Vice Chairman from its body of membership. They shall serve for a term of four (4) years.

### **Article 11**

The functions and responsibilities of the Board of Directors of the Fund shall include:

1. Adopt an Annual Plan and Work Program;
2. Adopt an Annual Financial Plan of the Fund;
3. Approve the budget and final annual financial statement of the Fund
4. Approve the placement of funds for projects and programs unless otherwise prescribed under this Law;
5. Adopt the Statute and other internal acts of the Fund;
6. Adopt Rules of the Fund to govern the manner, terms and procedures of awarding financing from the Fund;
7. Approve an Annual Report on the Fund's work and disbursement of funds; and
8. Decide on other issues as stipulated by Law and the Statute of the Fund.

### **Article 12**

The Annual Plan and Work Program for the Fund shall be prepared in accordance with the National Environmental Action Plan of the Republic of Macedonia for Environmental Protection.

The Annual Plan and work program and the Financial Plan for the following calendar year shall be adopted not later than 31 December in the current calendar year.

The operating costs of the Fund shall be covered from the revenues of the Fund and disbursed in accordance with the budget contained in the Annual Financial Plan.

### **Article 13**

The Director shall manage day to day operations of the Fund and represent the Fund and will approve the placement of funds for projects and programs under the terms and conditions described in the Statutes.

The Board of Directors shall select the Director of the Fund through open competition.

### **Article 14**

In its operation, the Fund may engage qualified consultants and experts from within Macedonia and from abroad.

### **Article 15**

The financial, technical, administrative and other activities stipulated in this Law and the Fund Statute shall be implemented through the various departments of the Fund.

### **Article 16**

The Fund shall have a Statute.

The Statute of the Fund shall regulate the following:

- the structure of the Fund and its operation;
- the rights, obligations and responsibilities of the management of the Fund;
- the professional, administrative, and other activities of the Fund:
- powers of representation and agency;
- public transparency in the operation of the Fund and its management; and
- other issues of importance for the operation of the Fund.

### **Article 17**

The Fund shall submit an annual report on its work and the disbursement of funds to the Government of the Republic of Macedonia.

## **III Sources of Revenue**

### **Article 18**

The charges for oil derivatives, tobacco products, motor vehicles and vessels is paid in accordance with the following rate schedule:

#### **1. Oil Derivatives:**

- Motor Petrol – MP – 86	0.0385 denars/liter
- Motor Petrol – MP – 98	0.0356 denars/liter
- Diesel Fuel – D – 1	0.0240 denars/liter
- Diesel Fuel – D – 2	0.0250 denars/liter

## **2. Tobacco Products:**

- for all types of cigarettes, cut tobacco, cigarillos, pipe tobacco, chewing tobacco, and snuff.

1 denar/package or other type of commercial packaging for retail customers.

## **3. Motor vehicles and vessels:**

- for motor vehicles and vessels, at the rate of 4% of the principal insurance, payable during registration of such vehicles or vessels;
- for motor vehicles with a device for the clean up of exhaust gases –catalyst, at the rate of 2% of the principal insurance, payable during the registration of such vehicles.

### **Article 19**

The producer or importer of the goods pays the charges for oil derivatives and tobacco products.

The charges for motor vehicles and vessels are paid by the owner of a motor vehicle and vessel.

### **Article 20**

The obligation for payment of the charges for oil derivatives and tobacco products from article 18, items 1 and 2 is effective at the time of obligation for payment of the excise tax.

The obligation for payment of the charge for motor vehicles and vessels from article 18, item 3 is effective at the time of annual registration of the vehicle and vessel.

Charge from paragraph one is calculated and assessed by the producer or importer.

Charge from paragraph two is calculated and assessed by the authority in charge of vehicle registration.

### **Article 21**

Charges from article 18, item 1 and 2, are to be paid to a separate account according to the terms determined for excise tax payment.

Charges from article 18, item 3 are due and payable on the each 15<sup>th</sup> (fifteenth) of the month and at the end of the month. The transfer shall be made within five (5) days from the end of each payment period.

## Article 22

For each payment, a summary shall be provided which shows the calculated and paid charges for environmental protection and improvement for the current year period. This summary will define the product and quantities, the amount of the charges based on adequate units of measurement and total amount of payment. This summary will also indicate the current total amount of calculated charges due from the obligated institution or person.

## Article 23

The enforcement of the charges from article 18 shall be carried out according to the *Law on Public Revenues* of the Republic of Macedonia. This law shall also govern the statute of limitations for unpaid charges, interest rates, refunds, and payment errors with regard to the charges from article 18.

## IV Criteria for the Approval of Funding

### Article 24

The sources of revenue in this Law may be awarded by the Fund as grants only in cases of financing of projects and programs for municipalities, other not for profit organizations and agencies, and commercial non financially viable investment projects with significant environmental benefits.

### Article 25

The Fund shall provide financing for environmental protection projects that yield savings for the investor, and generate profit (financially viable investment projects) through loans.

The entities mentioned in article 24 can be loan beneficiaries for financially viable projects.

The amount of funds allocated for lending purposes will be determined in the Fund's Annual Plan.

### Article 26

In cases where funding raised from domestic or foreign creditors is only channeled through the Fund and does not represent a source of revenue to the Fund, such funding shall be distributed in the manner and under the terms set forth by the creditors.

### **Article 27**

Projects and programs that promote the quality of the environment and nature may be financed by the Fund wholly or in part.

### **Article 28**

In the financing of projects, the Fund shall consider projects with observable and measurable environmental effects, and shall, in particular, take into consideration the technical and financial justification of such projects.

### **Article 29**

In the cases of investments by private companies, Investors are required to solicit competitive offers for the selection of a project contractor and for procurement of goods and services.

Funds are committed on the basis of an agreement concluded between the Fund and the Investor.

Financing in the form of loans shall be channeled and administered through commercial banks.

### **Article 30**

The Fund shall supervise the restricted use of the funds approved for projects.

For the above purpose, Investors are required, over the course of the project and upon its completion, to report on the progress of the project, as stipulated in the agreement between the Fund and the Investor.

## **V. Penalty Provisions**

### **Article 31**

A fine of 50,000 to 200,000 denars shall be charged to any legal entity for an infringement, if:

1. Charges are not calculated or calculated incorrectly, i.e. calculations are not in accordance with the Law (Article 18), or
2. The entity does not pay the charge to the appropriate account (Article 21).

For actions described in this article, a fine of 5,000 to 50,000 denars shall be charged to the person in charge for the enterprise or other legal entity, as well.

### **Article 32**

A fine of 10,000 to 50,000 denars shall be charged to physical persons/entrepreneurs if:

Charges are not calculated or calculated incorrectly, i.e. calculations are not in accordance with the Law (Article 18), or the entity does not pay the charge to the appropriate account (Article 21).

## *VI. Transitional and Final Provisions*

### **Article 33**

The assets, the employees and the other rights and obligations of the Fund for Environment and Nature Protection and Promotion, will be undertaken by the Fund.

1. The Fund will commence operation when the members of the Board of Directors are appointed by the Government.
2. The members of the Board of Directors will be appointed within 30 days from the date this Law enters into force.
3. The Statutes of the Fund will be enacted within 60 days from the date this Law enters into force.

### **Article 34**

Articles 30, 31, 32 of the Act on Environment and Nature Protection and Promotion are repealed, as of the effective date this Law enters into force.

### **Article 35**

This Law shall be in force on the eighth day as of the date of its publication in the “Official Gazette of the Republic of Macedonia”, and shall apply from the 1<sup>st</sup> of the month following the eighth day of notification.

## EXPLANATION

### **1. CONSTITUTIONAL BASIS**

The constitutional basis for the adoption of the law is provided by article 68, paragraph 1, line 2 and 3 of the *Constitution of the Republic of Macedonia*, pursuant to which the Parliament passes laws and determines taxes.

### **2. ASSESSMENT OF THE GOALS TO BE ACCOMPLISHED BY THE LAW ON THE ENVIRONMENTAL FUND**

The *Law on protection and promotion of the environment and the nature* (“Official Gazette of the Republic of Macedonia” No. 69/96) in accordance with the constitutional provisions for protection and promotion of the environment and the nature, regulates the rights and the obligations of the Republic of Macedonia, of individuals and legal entities, in creating conditions for the protection and promotion of the environment and the nature for the purpose of exercising the rights of the citizens pertaining the environment.

The above-cited law establishes the general regime concerning the protection and promotion of the quality of the environment and nature, and in particular:

1. The establishment of an Environmental Information System and an Environmental Data Processing Center
2. The adoption of a National Environmental Action Plan of the Republic of Macedonia for Environmental Protection and corresponding Local Environmental Action Plans of the local self-government authorities
3. Development of a cadastre and a map of polluters, and a registry of waste and hazardous substances
4. Prohibition of the import, use and disposal of waste, dangerous, hazardous, and radioactive waste substances
5. Authority to prohibit the production of and trade with products that may pose hazards to the environment.

The specific requirements for the protection and promotion of the environment and nature are subject to regulation with separate laws on the waters, air, waste substances etc.

The financing of activities for protection and promotion of the quality of the environment is regulated by articles 30-32 of the above-cited law. Pursuant to article 30 of the Law, for the purpose of securing of funds for the undertaking of preventive and remedial measures for environmental protection, the Fund for protection and promotion of the environment was established as a body corporate, within the Ministry of Urban Planning, Construction and Environment. This article has been effectively superseded by article 66 of the *Law for public administration reform* (Official Gazette of the Republic of Macedonia No. 58/2000). However, the fact remains that the existing legal status of the Fund is not fully adequate, because the Fund does not provide the financing itself; instead, a portion of this financing is raised in the form of taxes, which are collected on the basis of articles 31 and 32 of the Law on protection and promotion of the environment.

The Fund is only a government agency that manages the financing secured on the basis of the law and disburses such aid to beneficiaries, on the basis of a program adopted by the Government of the Republic of Macedonia and in accordance with the National Environmental Action Plan.

As authorized by Articles 31 and 32 of the above-cited law, which are still in force, the Fund realizes revenues through the Budget of the Republic of Macedonia, from donations, the polluters (“eco-tax”), credits, registration fees for motor vehicles and vessels, in the amount of 4% of the principal insurance, or 2% for the vehicles that contain a catalytic converter for exhaust gases.

Because of the current status of the Fund and the mechanism of financing the Fund, it is not possible to put in practice the constitutional provisions concerning the environmental protection, nor the provisions of the existing law. For this reason, a new law is proposed. The new law is also required by article 66 of the *Law for public administration reform* (Official Gazette of the Republic of Macedonia No. 58/2000), which states that the Fund operates as an independent institution, whose organizational structure and activities must be set forth in a separate law.

Under the proposed legislation, the Fund would operate as an autonomous national organization with the capacity of legal entity through which environmental funding would be channeled. As opposed to the existing legislation, the Fund would be authorized to make loans, (besides grants), as well as finance certain projects by combining those instruments (articles 2 and 7). The Fund would also be in position to act as a guarantor for certain projects and programs, i.e. to issue guarantees for mortgages, as a security for commercial loans obtained by companies for the realization of their projects.

The funding raised in accordance with proposed law would be used to finance environmental projects and programs, and in particular, the preparation of investment documentation, feasibility studies, acquisition of equipment, construction, employee training and education and for other activities (article 3).

The “eco-tax” would be the principal source of financing of projects and programs (article 4). An “eco-tax” is a charge levied on oil derivatives, tobacco products, motor vehicles and vessels and on other product with direct or indirect impact on the environment and the nature (article 4, paragraph 1, item 1), as is the charge collected from trade enterprises, sole traders, craftsmen and other individuals and legal entities, who, according to the cadastre and the map of polluters of the air, waters, the protected parts and objects of the nature and the registry of waste and hazardous substances, operate sources of pollution to the environment and the nature (article 4 paragraph 1 item 2).

The amount of the charge levied on oil derivatives, tobacco products, motor vehicles and vessels would be determined with the proposed law (Articles 17 – 23). Expected revenues from the charges are as follows:

1. Oil derivatives

- Motor Petrol – MP – 86      22,242,915 l \* 0.0385 denars/liter = 779,352 denars
- Motor Petrol – MP – 98      161,943,320 l \* 0.0356 denars/liter = 5,765,182 denars

- Diesel Fuel – D – 1	88,807,786 1 *	0.0240 denars/liter = 2,331,387
denars		
- Diesel Fuel – D – 2	140,986,890 1 *	0.0250 denars/liter = 3,524,672 denars

The total expected revenues from the charges on oil derivatives amount to 12,200,593 denars, and are calculated according to projected requirements for each oil derivative and the Total Energy Consumption for year 2000 in Republic of Macedonia.

2. According to the average annual consumption of tobacco products the revenues amount to 150,000,000 denars.
3. The estimated annual revenues from registration fees for motor vehicles and vessels amount to 45,000,000 denars.

The amount of the charges on products with direct or indirect impact on environment and nature (car batteries, tires, batteries etc.) and the charge referred to in article 4, paragraph 1, item 2 would be determined with a separate law, as the existence of a registry and inventory of polluters is a prerequisite for determining the amount of the said charge. It should be pointed out that this charge would be paid only by entities operating sources of pollution to the environment, when such pollution is within the permissible levels. Otherwise, the penalty provisions of the environmental law would apply and such entities would pay the respective fines.

Article 5 specifies the additional sources of revenues, to be raised through donations and credits from domestic and foreign legal entities and individuals, fines collected in accordance with the Environmental Law, and revenues from interest on approved loans and deposits with commercial banks. In this way, revenues for the Fund would be generated from additional sources, instead of the budgetary sources.

With regard to the organization and the powers of the Fund, it is proposed to have a Board of Directors consisting of 9 members appointed by the Government of the Republic of Macedonia, for a term of office of 4 years (articles 9 – 12). Required members of the Board of Directors include representatives of the Ministry of Environment and Physical Planning, the Ministry of Agriculture, Forestry, and Water Management, the Ministry of Finance and the Ministry of Economy. The remaining 5 members would be non-governmental experts. The appointment of 5 non-governmental experts would mean a greater independence in the operation of the Fund and competence and an unbiased decision-making in the preparation of the Annual Business Plan of the Fund, the Financial Plan and in the process of approval of financing for certain projects and programs. The foremost authority of the Board of Directors would be the decision-making power, that is, approval of the Fund's financing of projects and programs, upon the recommendation of the Director of the Fund.

The Director of the Fund would act on behalf of and in the name of the Fund. The Director will carry out and obey the guidelines given by the Board of Directors. Their day to day operation of the Fund would be a responsibility of the expert team, whose organization and powers are to be regulated with the Statute of the Fund.

The Fund would be required to submit to the Government of the Republic of Macedonia an Annual report on its work and disbursements of funds (article 16).

The funds representing revenues of the Fund would be disbursed in the form of grants and loans to commercial entities, sole traders, public companies, local self-government authorities and other legal entities (investors). In the cases of financing of commercial projects, the above-cited entities would be eligible to receive loans; grants would be made only to local self-government authorities, that is, non-profitable organizations and agencies, for the financing of non-commercial projects with significant environmental effects (article 24 and 25).

Commercial projects, within the meaning to this Law, are defined as environmentally friendly projects and programs that anticipate cost savings in the production and realization of profit (article 27).

The specific criteria for the approval of funding and the approval procedure would be defined with Rules and Regulation, to be passed by the Board of Directors (article 29).

By exception to the provisions of articles 24 and 25, funding obtained from domestic and foreign creditors would be awarded under the terms stipulated in advance by such creditors (article 26).

After the Board of Directors has approved funding, a contract is to be concluded between the Fund (the director) and the investors.

In the cases when funding is awarded to private companies, such companies are required to carry out a public tender, before the signing of the contract, in order to select the best contractor, that is, the best supplier of equipment (article 30). In the cases of funding being awarded to entities with budgetary revenues, that is, public companies, such companies are required to carry out a procedure set forth in the *Public Procurement Law*, before the signing of the contract. The Fund would monitor the realization of projects and the spending the approved funds. For that purpose, contracts will stipulate, among other things, the funds are to be disbursed according to a schedule and subject to the fulfillment of certain criteria and under the supervision of the Fund in each phase of the implementation of a project.

### **3. FUNDS REQUIRED FOR ENFORCEMENT OF THE LAW ON THE ENVIRONMENTAL FUND**

Enforcement of this Law does not require funds from the Budget of the Republic of Macedonia.

## ANNEX E

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### Staff Profiles

Henry Koner served as team leader in Skopje for the project over the past two years. He had overall field responsibility for the program and supervised all activities of the field staff. He provided technical expertise to the Fund and oversaw the co-financing of projects. Mr. Koner has a background in engineering and finance and has more than 30 years of experience in the analysis and development of energy and environmental projects.

Jennifer McGuinn was the project packaging specialist residing in the field for over one year and was previously at the Chemonics home office in Washington serving as EAPS senior project administrator. She participated in the identification of co-financing projects and the drafting and negotiation of FAR agreements with the co-financing recipients and implementation of the agreements.

Bradford May served as financial institution advisor from June 2000 through the end of the project. He assisted the Fund by training its staff to develop the fundamental skills of loan management, including business planning, accounting standards, and credit analysis. Mr. May served in Moscow for five years, where he managed an investment company and a USAID-funded banker training program. He has an extensive background in the U.S. banking system and worked for major U.S. banks for 15 years.



*Bradford May, Jennifer McGuinn, and Henry Koner*

Simon Avramovski served as senior environmental technical advisor for more than two years. He evaluated and provided project management support related to the technical aspects of air and water protection environmental investment projects proposed for financing by the Fund and for the USAID-funded co-financing program. Projects for consideration were identified, screened, planned in detail, packaged for financing, and implemented in coordination with the Environmental Fund. Mr. Avramovski has a background in mechanical engineering and more than nine years of experience.



*Vladimir Grozdev and Simon Avramovski*

Vladimir Grozdev was senior environmental technical advisor for more than one and a half years. He provided technical and project management support for water protection environmental investment projects proposed for financing by the Fund and for the USAID-funded co-financing program. Mr. Grozdev managed project screening, evaluation, and all elements of engineering, tendering, and implementation of wastewater collection system and wastewater treatment projects for the co-financing facility. He Maintained liaison with counterparts, including government offices, NGOs, and beneficiaries. Mr. Grozdev previously operated and maintained his own engineering design firm and spent over six years in Zimbabwe designing and developing water and wastewater facilities. He has a background in civil engineering and has more than 14 years of professional experience.

Paul Dax served as finance advisor from February 1999 through the end of the project. In the early stage of his assignment, he developed the financial strategy for the Fund and later focused on incorporating elements of the financial strategy into the legislative proposal to establish the Fund as a full-fledged financial intermediary. He assisted in developing proposals to introduce pollution charges in Macedonia in accordance with the “polluter-pays” principle. Mr. Dax has a doctorate in economics, a master’s degree in business administration, and long experience serving on the staff of international financial institutions: the IBRD, the IFC, and the EBRD.



*Andrej Avramov, Paul Dax, and Gordan Kovacki*

Gordan Kovacki has served as the local financial analyst since May 2000. He conducted financial analysis of projects considered for financing from the Fund project pipeline and projects under consideration for co-financing. He also performed financial analysis to support the pollution charge methodology related to the “polluter-pays” principle. Mr. Kovacki was previously employed by the city government of Skopje. He has a background in economics and programming and more than 17 years of experience.

Andrej Avramov has served as local technical assistant for the project since May 2000. He developed an inventory of polluters, a computer MS Access database, and assisted in the development of the pollution charge methodology related to the “polluter-pays” principle. He coordinated a working group comprising Ministry of Environment officials and consultants working on a detailed illustrative model of water and air pollution charges and identification of chargeable pollutants. He helped optimize the level of pollution charges and provided training to the ministry on the polluter database. Mr. Avramov has a master’s degree in environmental sciences and policy, with a background in physics and more than 12 years of environmental experience. He was a research assistant at CEU on an IFC-funded energy efficiency project in Hungary.

Sonja Mishkovska was office manager for the EAPS project from October 1998 through March 2001. She was responsible for field accounting, working with the local bank, financial record-keeping, payroll, calculation and payment of local employee benefits, local procurement, and general office management. She held several positions in accounting and finance prior to her work on the EAPS project. Ms. Mishkovska has a background in accounting and finance and more than seven years of experience.

Irena Lozana served as administrative assistant for the project from February 2000. She was responsible for

establishing and maintaining project documentation files, procuring and maintaining office supplies and materials, document production, and making logistical and hotel arrangements. She was instrumental in the procurement and maintenance of the EAPS office vehicle. Ms. Lozana's prior experience includes marketing computer equipment for a local computer supplier.



*Irena Lozana and Sonja Mishkovska*

Miroslav Trajanovski served as local legal advisor to the project from February 1999 through completion of the project. He provided services on a half-time basis. Mr. Trajanovski provided assistance and guidance on a number of legal issues related to project work activities. He played a leading role in the development of legislative proposals, including the proposed new Fund Law, and provided legal assistance regarding Macedonian government procurement and financing agreements. Mr. Trajanovski was legal counsel to the Macedonian Privatization Agency and spent several years drafting Macedonian legislation. He is currently maintains a private law practice.



*Miroslav Trajanovski*