



PROJECT EXECUTIVE SUMMARY

GEF COUNCIL WORK PROGRAM SUBMISSION

AGENCY'S PROJECT ID: GE-P081950/
 PE-P075163
COUNTRY: Romania
PROJECT TITLE: Hazard Risk Mitigation and
 Emergency Preparedness Project
GEF IMPLEMENTING AGENCY: World Bank
OTHER EXECUTING AGENCY(IES): None
DURATION: 5 1/2 years
GEF FOCAL AREA: International Waters
GEF OPERATIONAL PROGRAM: OP 8
 (Waterbody-Based Operational Program)
GEF STRATEGIC PRIORITY: IW-1 Catalyze
 financial Resources for Implementation and IW-3
 Undertake innovative demonstrations for reducing
 contaminants
ESTIMATED STARTING DATE: September 1, 2004
IA FEE: \$1,110,000

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	7,000,000
PDF A	n/a
PDF B	350,000
PDF C	n/a
Sub-Total GEF	7,350,000
Co-FINANCING*	
IBRD	5,637,000
Government Contribution	3,835,000
Austria, USTDA and beneficiaries	1,706,000
Sub-Total Co-financing:	11,178,000
Total Project Financing:	18,528,000
FINANCING FOR ASSOCIATED ACTIVITIES IF ANY**:	
US\$11.7 million	
LEVERAGED RESOURCES IF ANY: US\$10.2 million	
In addition, at least US\$5.0 million will be leveraged from the FY05 IBRD Second Mine Closure and Social Mitigation Project for further replication throughout Romania.	

* Direct support to GEF operation.

** See details in Annex A, Incremental Cost
Analysis

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: Increased waterbody representation by catalyzing transboundary cooperation in the Tisza Basin and piloting mitigation and prevention measures to reduce pollution from mines to the Danube and Black Sea basins.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT(S):

Mr. Ion Bazac
 Secretary of State
 Ministry of Waters and Environmental
 Protection

Date: 07/17/03

Approved on behalf of the *World Bank*. This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for work program inclusion

For Steve Gorman,
 Executive Coordinator, The World Bank
 Date: 01/09/04

Ms. Rita E. Cestti
 Project Contact Person
 Tel. and email: ext. 33473,
 rcestti@worldbank.org

1. PROJECT SUMMARY

a) OBJECTIVES

The overall objective of the project is to assist the Government of Romania in reducing the environmental, social, financial and economic vulnerability to natural disasters and catastrophic mining accidental spills of pollutants through: (i) strengthening the institutional and technical capacity for disaster management and emergency response; (ii) implementing risk reduction measures for floods, landslides and earthquakes; (iii) improving the safety of water-retention dams; and (iv) improving the management and safety of tailings dams and waste dumps facilities.

The project global environmental objective is to demonstrate and provide for replication for the reduction of catastrophic accidental spills of transboundary pollution loads from mine operations flowing into the Danube and Black Sea basins. In support of this objective, the project through a proposed GEF co-financed component will assist in piloting and replication of hazards prevention and remediation activities for improving the management and safety of tailings dams and waste dumps facilities; and in catalyzing transboundary cooperation on integrated water resources management of the Tisza Basin. The successful implementation of the GEF co-financed component will serve as a model for replication for reducing mining accident risks to human and aquatic ecosystem health throughout Romania and other parts of the Tisza and Danube basins.

b) OUTPUTS

The overall project consists of the following five components:

- Component A: Strengthening of disaster management capacity
- Component B: Earthquake risk reduction
- Component C: Flood and landslide risk reduction
- Component D: Risk reduction of mining accidents in the Tisza Basin (GEF-Supported Component)
- Component E: Project management

The objective of the GEF-supported component is to reduce the risk of water and soil contamination and loss of human and aquatic life from catastrophic mining accidental spills of pollutions. This component will identify, pilot and replicate cost-effective, efficient and innovative methods for tailing facilities management; contribute to improvement of capacity at both the national and local levels to conduct risk assessment and identify risk-based priority actions; establish comprehensive management guidelines to improve the performance of tailings management facilities by Romanian companies; strengthen capability to develop a long-term tailings dams risk/hazard mitigation strategy; strengthened environmental monitoring program to assess performance of the mining industry; establish a regional emergency preparedness and response system linked to the

Danube Accident and Emergency Warning system; and strengthen further regional collaboration on integrated water resources management.

The GEF-supported component will accomplish “on-the-ground-fixes” under Sub-component D.2. About US\$13.85 million will be devoted to physical hazards prevention and mitigation measures such as upgrading water management systems and water treatment plants, structural improvements and the upgrading of the geotechnical stability of retaining tailings dams and waste dumps, improvements of accessibility and communication. A detailed implementation plan has been prepared for this component and will be part of the PIP. This component will consist of the following activities:

D.1: Establishment of a Baseline and an Environmental Monitoring System. The project would assist in the establishing of common baseline indicators for water, sediment and air quality monitoring as well as the improvement and harmonization of Romanian environmental monitoring system with those of the other riparian countries of the Tisza Basin. The improved system will allow to monitor mining related impacts on streams and aquatic ecosystems, air and soil. The specific baseline values and methods would meet international standards and would serve as benchmark values in evaluating spill response and effectiveness of tailing dams remediation/reclamation activities for maintaining surface and groundwater quality in key catchments in the Tisza basin. Since EU requirements for dangerous substances discharged to water have been transposed into Romanian legislation and approximation with the EU Water Framework Directive has been completed, the environmental monitoring system will meet EU standards. Apele Romane and the Regional Environmental Inspectorates of Alba Iulia and Baia Mare will be responsible for implementing the environmental monitoring system and to maintain it after project completion. The project will also support in strengthening institutional capacity.

D.2: Hazard Prevention and Remediation Interventions. This activity will support the identification of a risk-based priority investment program for the Tisza River catchment area and the implementation of efficient and cost-effective hazard prevention and remediation measures in identified high-risk and high-priority hot spots in the Tisza Basin, aiming at improving the safety and management of tailing and waste facilities, thus reducing the risk for catastrophic release and the introduction of contaminants into surface waters contributing to the Tisza and Danube.

During the preparatory phase, two sites have been identified as high-risk and high-priority sites for which immediate and emergency remedial works are required during the first phase of project implementation: (i) tailings dams and waste facilities associated with the Rosia Poieni mine; and (ii) tailings dams facilities associated with the Baia Borsa mine. Additional high priority candidate sites for remediation works will be identified during project implementation on the basis of a comprehensive risk assessment of all tailings dams facilities in the Tisza Basin.

D.3: Engineering and Environmental Guidelines for Tailings Dams and Waste Facilities. On the basis of the results of Sub-component D.2, the project will support technical assistance and training for developing engineering and environmental

guidelines for tailings facilities and waste dumps in the mining sector that minimize environmental risks during operation and after closure. Key features to consider during the development of the guidelines include: geotechnical stability, seismic strength, resistance to flood events, capacity to collect runoff water, etc. It is anticipated that the guidelines will cover the following topics: design and construction of new tailings dams facilities and waste dumps; safe operation and upgrading of existing tailings dam facilities and waste dumps; planning ahead for closure and safe rehabilitation of tailings facilities; and decommissioning and closing tailings facilities. Training and awareness of mine operators and design institutions are required for effective implementation of new guidelines. Training schedules will be established during project implementation and handbooks and training material will be developed.

D.4: Regional Mine Spill Disaster Response System. This activity will improve the effectiveness of the current system for contingency planning, emergency response, awareness, preparedness and communication and will support the development of a regional mine spill disaster response system to deal in an incremental manner with the risks posed by accidental mining spills of selected mining companies located in the Tisza basin. The regional mine spill disaster response system will integrate the emergency response plans of targeted mines. Mechanisms will be put in place to assess the hazards posed by the spills as well as for reporting information to those responsible for taking action at the local, national and regional level (through the International Commission for the Protection of the Danube River and the regulatory entities). This system will complement activities proposed under the HRMEP, namely, Component 1, which focuses on strengthening and upgrading the emergency response capacity, and Sub-Component B.2, which among other things will focus on upgrading the flood forecasting and dissemination systems.

D.5: Promoting Transboundary Cooperation on Integrated Water Resources Management for the Tisza Basin. Recognizing that it is only through regional dialogue between riparian countries that sustainable management of the Tisza basin can be achieved, during the preparation phase, Romanian authorities with the support of the World Bank organized a Regional Workshop on the management and safety of tailing dams facilities to start dialogue on the formulation of policies and programs geared to specifically address tailing dams and mining safety. Participants at Workshop agreed to foster and promote transboundary cooperation on the management of tailings facilities within the context of overall integrated water resources management. A proposal was put forward during the workshop to establish a Regional Task Force to review and harmonize the Failure Mode and Effects Analysis process and standards. The task force will be conformed by representatives from the riparian countries of the Tisza Basin, who will have the support of national policy makers. The project will support a first concrete step towards a basin-wide cooperation among the riparian countries.

During project implementation other efforts will be supported to promote integrated river basin management, building on existing transboundary and bilateral initiatives. The project will provide financial support to allow Romania experts and institutions to further advance and promote dialogue on basin-wide cooperation with other riparian countries and facilitate the development of a regional policy of cooperation in the management of

tailings and waste facilities in the Tisza and Danube basins as well as the drafting of a proposal for a regional water resources project for the Tisza Basin (i.e., to support implementation of the EU WFD). The project will strengthen recent and ongoing bi-lateral environmental agreements as well as basin-wide initiatives directed towards integrated water resources management. The project will provide financial assistance to cover the cost associated with keeping the Regional Task Force, the participation of Romanian experts and decision-makers in regional events that promote transboundary cooperation on a broad range of topics and issues, and organization of meetings and workshops with the participation of upstream and downstream countries.

E.4: Project Management for Component D. The GEF-supported Component will be implemented by the NAMR through an existing PIU, currently in charge of implementation of a component of the Bank-financed Mine Closure and Social Mitigation Project (MCSMP). The NAMR will retain the MSCMP PIU staff (Project Director, Accountant and Procurement Expert) to form the new PMU for Component D once the implementation phase begins. The current staff of the PMU will be supplemented by a Financial Manager, Communication, Technical and Environmental specialists as well as support staff. The PMU will also hire experts/advisors on-demand. The PMU will be in charge of procurement of works, goods and consulting services, management of contracts, supervision of works through site supervisors, management of project funds received from the Bank and state budget, record keeping on component implementation, and monitoring and evaluation.

c) KEY PERFORMANCE INDICATORS

The following are expected outcomes of the activities supported by the project, achievement of which will indicate its ultimate performance.

- strengthened institutional and technical capacities for disaster management and emergency response through upgrading communication and information systems;
- increased earthquake risk mitigation with key, prioritized public facilities retrofitted;
- increased level of flood protection with high priority investments implemented;
- improved dam safety of the selected priority structures; and
- gradual reduction in number and negative impacts of mining accidental spills of pollutants into the Tisza Basin and in the volume of toxic releases from mines.

Identified output indicators for the GEF-supported component are as follows:

- Cost-effective, efficient and innovative methods are identified and piloted for at least three tailings management facilities that can be replicated throughout Romania and the Danube Basin.
- Funding for replication of activities supported under the project are leveraged from public (and private) sectors.

- An agreement among the Tisza riparian countries to improve the management and safety of tailings dams is adopted.
- Capacity for conducting risk assessment and identification of risk-based priority action is improved.
- Comprehensive management guidelines to improve performance of tailings management facilities is established in at least three mines.
- Environmental monitoring system of the Tisza basin is strengthened by increasing the density of the network.
- Environmental and engineering guidelines for tailings dams and waste facilities are developed and adopted.
- Regional emergency preparedness and response system is established.
- Regional mechanism for addressing tailings dams issues are developed, e.g., establishment of a Regional Task Force to review failure mode and impacts analysis.
- Regional meetings/workshop on water resources management are documented.
- A draft proposal for a regional water resources project for the Tisza Basin is prepared and endorsed by riparian countries.
- Identification and dissemination of lessons relevant to other riparian countries is documented.

2. COUNTRY OWNERSHIP

a) COUNTRY ELIGIBILITY

Romania is eligible for World Bank and UNDP assistance.

b) COUNTRY DRIVENNESS

The Government of Romania has demonstrated a very strong commitment to the overall project's objectives. The Bank's assistance in efforts to mitigate the costs of damage from disasters was specifically requested by the Romanian government. The risks are widely recognized by both the scientific community and the authorities. Notable is the amount of work completed by number institutions in conceptualizing emergency management issues, and the level of scientific and technical knowledge available in Romania.

There have been many valuable efforts to enhance institutional capacity of the Government, academia and private sector in this field. The governmental organizations have made substantial steps in setting up an institutional framework for coping with disasters by creating central, sectoral, and local level commissions with a mandate to coordinate response to the emergencies.

Authorities at both, central and local levels demonstrate remarkable initiative when seeking international assistance, e.g., from the European Investment Bank (EIB), US ExIm Bank, US Trade and Development Agency (TDA), UNDP, EU PHARE, Japan International Cooperation Agency (JICA), and the German Research Foundation.

Romania has also entered into several cooperative agreements with countries in the region, including Moldova, Bulgaria, Hungary, and Serbia and Montenegro resulting in programs for exchange of information, and mutual assistance in the area of disaster response and mitigation.

During the project preparation, the team has received full endorsement from the government on the conceptual framework, activities to be supported, implementation structure, as well as the project time table.

3. PROGRAM AND POLICY CONFORMITY

a) FIT TO GEF OPERATIONAL PROGRAM AND STRATEGIC PRIORITY

The proposed GEF-supported component is fully consistent with the GEF's Operational Strategy in that it supports long-term protection of international waters and complies with the long-term objective of the GEF "Waterbody-Based Operational Program" (Operational Program No. 8), which is to "undertake a series of projects that involve helping groups of countries to work collaboratively with the support of implementing agencies in achieving changes in sectoral policies and activities so that trans-boundary environmental concerns degrading specific waterbodies can be resolved." The GEF-supported component is also fully consistent with two of the GEF strategic priorities on international waters, namely, catalyzing financial resource mobilization for implementation of agreed actions and reforms in Strategic Action Programs; and undertake innovative demonstrations for reducing contaminants. In addition, the GEF-supported component is in line with the objectives of the Programmatic Approach to the Danube and Black Sea Basin, namely, Danube and Black Sea basin countries (i) adopt and implement policy, institutional and regulatory changes to reduce point and non-point source nutrients discharges, restore nutrient sinks and prevent and remediate toxic hot spots; and (ii) gain experience in making investments in prevention and remediation of toxic "hot spots."

The GEF-supported component will: (i) enable the development of a more integrated knowledge base about transboundary impacts of mine-induced pollution in the Danube and Black Sea basin; (ii) provide capacity building to increase the opportunity for adoption of best mine waste management practices throughout the Tisza and Danube basins; (iii) pilot techniques for prevention and remediation of toxic mining hot spots; (iv) provide for lessons learned that could be replicated to other parts of the Tisza and Danube basins (v) leverage support from the mine operators to replicate measures to manage the risks associated with tailings and waste disposal facilities; and (vi) foster transboundary cooperation.

The project also directly supports the goals of the International Convention for the Protection and Sustainable Use of the Danube River. The 1994 Danube Strategic Action Plan under the Convention on Cooperation for the Protection and Sustainable Use of the Danube River is concerned with transboundary water issues and includes provisions to protect the Black Sea and Danube Delta against pollution by nutrient and hazardous.

Until recently, most of the attention on the Danube and Black Sea basins has been concentrated on reduction of nutrient loads to address the problem of eutrophication in the Black Sea. The recent mining accidents in the Tisza catchment area, however, have pointed out that additional priority should be placed to address mine-induced water pollution and mining accidents.

The 2001-2005 Joint Action Environmental Program for the Danube River Basin has identified key priorities areas including mining-induced pollution, i.e., pollution and potential accident pollution caused by waste deposit sites and mining tailing dams. The proposed GEF component will enable to implement some of the recommendations of the Action Plan.

b) SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

One of the key factors for the long-term sustainability of the benefits of the GEF-supported component is the commitment of the Romanian authorities to implement the activities included under the project. Since the project is being prepared at the request of the Romanian Government, and Romanian counterparts at the central and local levels are involved in its preparation, it is very likely that their support will continue to sustain the benefits derived from the project, namely the reduction of the vulnerability to water pollution accidents from mining activities. Romania is also committed at the international level to clean up and protect the Danube and Black Sea basins, and efforts are being made to integrate interventions that addresses transboundary water pollution with efforts that help Romania to meet EU environmental directives. Thus, it is very likely that the project benefits will be further advanced in the future.

Capacity building in the area of public awareness and preparedness for emergencies from the mining industry at the local level is also a critical element of the project. Local stakeholders will demand adoption of environmentally sound tailings management practices at the end of the project.

Capacity building and capacity enhancement at the level of the mine operators and local environmental authorities in the area of environmental monitoring is another critical element of the project. If the project is successful in achieving this goal, environmental monitoring should continue with no external support once the project is over. Commitment will be sought from the Government to provide the necessary funding to operate and maintain the monitoring system on the long-term. There is some assurance that budget resources will be made available to operate and maintain the system since Romania is moving forward with EU accession and the country needs to demonstrate compliance with EU environmental requirements.

c) REPLICABILITY

The GEF-supported Component D will help demonstrate and provide for replication of the reduction of catastrophic accidental spills of transboundary pollution loads from mine operations flowing into the Danube River and Black Sea basins. It would begin

addressing the safety of tailings dams facilities in the Romanian part of the Tisza Basin in a systematic manner – by supporting physical improvements, strengthening the institutional framework on tailings dams safety, and enhancing local capacity. The successful implementation of Component D would then serve as a model for replication throughout Romania and other parts of the Tisza and Danube basins to address problems related with the safety and management of tailings dams facilities. Funds would be provided for dissemination of project activities and benefits at the national and regional levels in order to achieve replication of project interventions.

A follow-up Bank-supported project scheduled for FY05, Second Mining Closure and Social Mitigation Project, which would earmark at least US\$5 million from the Bank loan for improving the management and safety of tailings dams facilities, will allow to scale-up the activities supported under the GEF-supported component in other critical mine sites located through out Romania.

d) STAKEHOLDER INVOLVEMENT

The identified stakeholders relevant to GEF-supported component objectives are the following: mining operators; local communities; international and local NGOs (e.g., WWF); environmental, mineral resources, and civil protection agencies; the International Commission for the Protection of the Danube River (ICPDR); and the European Commission and donors with interest to co-finance project activities.

The table below summarizes a preliminary Public Participation Involvement plan. This plan will finalize during Project appraisal.

Stakeholder	Identification / Preparation	Implementation	O&M/Monitoring
Mining operators	IS/CON/COL	IS/CON/COL	IS/CON/COL
Local communities	IS/CON	IS/CON	IS/CON
NGOs	IS/CON	IS/COL	IS/COL
Environmental, mineral resources, and civil protection agencies	IS/CON/COL	IS/CON/COL	IS/CON/COL
ICPDR	IS/CON	IS/CON/COL	IS/CON
EC and other donors	IS/CON	IS/CON/COL	IS/CON/COL

Legend: IS=Information sharing; CON=Consultation; COL=Collaboration; O&M=Operation and Maintenance

e) MONITORING AND EVALUATION

Monitoring and evaluation is one of the activities to be carried out under Component E of the project. It will include the establishment and implementation of a monitoring and evaluation system to monitor project progress and impacts as well as conduction of impact evaluation studies over the life of the project. Outcomes and output indicators are presented in Annex 2.

4. FINANCIAL MODALITY AND COST EFFECTIVENESS

Direct support to the GEF-supported activities is US\$18.18 million, with US\$5.64 million IBRD financing, and US\$3.84 million financed by the Government of Romania, US\$0.26 million finance by the Austria Government, US\$1.01 million financed by USTDA and US\$0.44 million (in-kind) financed by beneficiaries. The requested GEF co-financing is US\$7.0 million. The co-financing sources for the overall project are as follows:

Co-financing Sources				
Name of Co-financier (source)	Classification	Type	Amount (US\$ million)	Status
IBRD	Implementing Agency	Loan	5.637	Subject to Board approval
Government of Romania	Government	Counterpart funds	3.835	Confirmed in principle
Government of Austria – MoFA	Donor	Grant	0.260	Agreement ready to be signed
US Trade and Development Agency	Donor	Grant	1.006	Confirmed in principle
NAMR and mine operators	Beneficiaries	In-kind	0.440	Confirmed
Sub-Total Co-financing			11.178	

Associated activities to the GEF-supported activities totaling US\$11.7 million will be conducted in parallel: Government of Romania (\$7,600,000 owned resources and \$200,000 through IBRD loan); US government (\$2,300,000); EU (\$1,500,000); Norway and Finland (\$100,000). At least US\$5.0 million for further replication of the GEF activities throughout Romania will be leveraged from the proposed World Bank FY05 Mine Closure and Social Mitigation Project, currently under preparation.

5. INSTITUTIONAL COORDINATION AND SUPPORT

a) CORE COMMITMENTS AND LINKAGES

The project supports institution building and governance reform, as one of the main CAS objectives. The CAS states that the proposed project would assist in Romania's efforts to mitigate the costs of damage from earthquakes, floods, toxic waste, and other natural, and man-made disasters, which taken together, regularly plague the country. The project is included in the CAS lending program in both low, and high case scenarios.

The proposed GEF-supported component is consistent with priorities of the country as identified in the following documents:

- National Environmental Action Plan.
- Mining sector strategy.
- Sector Environmental Assessment of the Mining Sector of Romania.
- The 2001-2005 Action Plan of the International Commission for the Protection of the Danube River, approved by all Danube riparian countries.

As shown in Annex 1, there are a large number of government programs that provide important linkages to the proposed GEF-supported component. The project will also contribute to the UNDP/GEF Danube Regional Project.

b) CONSULTATION, COORDINATION AND COLLABORATION BETWEEN IAS, AND IAS AND EXAS, IF APPROPRIATE.

There has been consultation and coordination with UNDP, the Austrian Government, European Commission, Phare, DFID, USTDA, ICPDR and other donors with presence in Romania. The design of Component D has benefited from suggestions and recommendations that emerged from a regional workshop on the management and safety of tailings facilities in October 2003 that took place in Romania. Regulators, mine operators, local and international experts and donors provided very useful suggestions, including technical aspects, which were incorporated in the project design. The regional workshop provided an excellent opportunity for future collaboration and coordination with other riparian countries of the Tisza basin.

c) PROJECT IMPLEMENTATION ARRANGEMENTS

The implementation structure for the overall project will have a multi-sectoral character. Each project component will be implemented by a respective ministry/agency which will be responsible for all aspects of the implementation, monitoring, financial management, as well as procurement. The PMUs for the respective project components will be located in the following four agencies: Ministry of Administration and Interior (MAI), responsible for the component A; Ministry of Transport, Construction and Tourism (MTCT), responsible for the component B; the Ministry of Agriculture, Forestry, Water and Environment (MAFWE), responsible for the component C; and the National Agency

for Mineral Resources (NAMR), responsible for the component D (GEF-supported component).

Since the implementation of Component D involves several sectors, namely water resources, environment, and mining, its implementation requires close cooperation between the Ministry of Economy and Commerce, NAMR, mine operators, MAFWE, Romanian Waters, the National Environmental Protection Agency, Regional Environmental Protection Agencies, and local authorities. In order to ensure smooth implementation and that the project builds on existing structures, procedures and systems, the Government of Romania has agreed to establish an high-level Inter-sectoral Steering Committee (ISC) for Component D for addressing inter-sectoral issues relevant to project implementation. The ISC will comprise representatives from the entities listed above, and will be chaired by the State Minister for Water (MAFWE). The NAMR-PMU will provide secretarial support to the ISC.

In addition, regular coordination meetings will be organized during project implementation among the PMUs for Components C and D in order to create synergies between the various project components to build a common knowledge base, particularly in the areas of flood management and water-retention and tailings dam safety. International experts on dam safety funded under the project would facilitate some of the coordination meetings.

ANNEX A: INCREMENTAL COST ANALYSIS

Global Environmental Objective

The global environmental objective is to demonstrate and provide for replication for the reduction of catastrophic accidental spills of transboundary pollution loads from mine operations flowing into the Danube and Black Sea basins. Proposed project activities are in line with the objectives of the Programmatic Approach to the Danube and Black Sea Basin, namely, that Danube and Black Sea basin countries: (i) adopt and implement policy, institutional and regulatory changes to reduce point and non-point source nutrients discharges, restore nutrient sinks and prevent and remediate toxic hot spots; and (ii) gain experience in making investments in prevention and remediation of toxic “hot spots.”

Regional Context and Broad Development Goals

International Convention for the Protection and Sustainable Use of the Danube River. The 1994 Danube Strategic Action Plan under the Convention on Cooperation for the Protection and Sustainable Use of the Danube River is concerned with transboundary water issues and includes provisions to protect the Black Sea and Danube Delta against pollution by nutrients and hazardous substances. Until recently, most of the attention on the Danube and Black Sea basins has been concentrated on reduction of nutrient loads to address the problem of eutrophication in the Black Sea. The 2000 mining accidents in Baia Mare in the Maramures region in Northern Romania within the Tisza catchment area, however, have pointed out that additional priority should be placed to address mine-induced water pollution and mining accidents. According to field investigations, the two reported accidents could have been avoided if adequate quality assurance, technology and material used in the construction of the tailings dams, a proper forecasting system linked to existing rainfall and snow pack gauge stations, a continuous monitoring system, and proper emergency preparedness and response procedures by the mining companies and local authorities would have been in place.

Mining sector in Romania. The Romanian mining sector has a long tradition and is important to the country. It has a good future in terms of reserves and potential exploitation. Currently, the sector faces difficult challenges in relation to economic, social and environmental requirements. Total direct employment in the mining industry is about 10%, and is higher than in any other European Union country. Long-term impacts on the environment and human health have occurred as a result of diffuse pollution from sites subject to mining activities over centuries. The Government has launched a restructuring of its mining industry, and efforts are underway to close uneconomic mines. This undertaking is supported by the FY99 Mine Closure and Social Mitigation Project (MCSMP). Privatization is also part of the restructuring of the sector, which poses additional challenges related to environmental liabilities from past mining operations.

The Government is committed to improve the environmental performance of the mining sector, and has recently completed a comprehensive Mining Sector Environmental

Assessment (MSEA), which provides a baseline evaluation of the mines throughout the country. The MSEA identifies the main environmental issues arising from ongoing mining activities, as well as priority areas for future environmental remediation/mitigation efforts. The MSEA has identified that a large number of operating mining sites require urgent environmental rehabilitation of their tailings dams and waste storage facilities to avoid catastrophic and continued releases of highly persistent toxins, thus reducing the risk of mining accidents with long-term environmental consequences.

Accidental pollution threats. According to available information, there are 264 facilities constructed to store mine tailings throughout the country, out of which about 40 pose a severe threat to the surrounding human population and the environment. A recent inventory in the Tisza Basin has identified 17 tailings dams and waste dumps facilities as potential risk spots. Romania has a large number of abandoned tailings storage facilities and mine waste rock dumps, which are also sources of contamination. As proven by the two accidents in northwestern Romania in 2000, the failure of tailings storage facilities can have serious and devastating consequences.

(a) *Aurul S.A. Mine Accident.* A spill of about 100,000 cubic meters of wastewater, containing about 40 tons of cyanide and other heavy metals (lead, cadmium, copper, manganese, zinc and arsenic), took place on January 30, 2000, at the Aurul S.A., an Australian-owned gold and silver producing mine located in Baia Mare in the Maramures region in northern Romania. The spill was caused by a combination of a break of the Aurul dam as a result of the heavy rains and the melting snow, and design defects in the facility. The polluted wastewater traveled into the Somes River, the Tisza River in Hungary and Serbia and Montenegro, and the Danube River before entering into the Black Sea about four weeks later. The initial cyanide concentration was reported to be between 325 and 700 times permissible levels. This incident resulted in severe deleterious impacts on the aquatic life of the Tisza River, 1,200 tons of fish were reported dead, and threatened people's health and livelihoods as well as drinking water sources for about 2 million inhabitants. The total quantifiable damages were estimated at about US\$3.5 million.

(b) *Baia Borsa Mine Accident.* A second mining waste spill in the Maramures region of Romania took place five weeks after the earlier accident at the Baia Borsa Preparation Enterprise mining company. A section of the dam built with sediments from the mine failed on March 10, 2000, as a result of the heavy rainfall and melting snow from the slopes surrounding the mine. As a result of this incident, approximately 20,000 tons of mineral waste containing minerals and heavy metals (lead, copper and zinc) were discharged into the Viseu River, the Vasar River and Tisza River.

Uncontrolled discharge of polluted waters. The Environmental Assessment of the Mine Sector (conducted recently by the Government of Romania) points out that the continuous release of toxic substances from mine operations is caused by the poor management, operation and maintenance of tailings dams facilities, including monitoring, operational control and risk/environmental awareness of the water management systems and the retaining dam structures. This is also the reason for the high level risk of failure at tailings dams facilities. Field surveys have also revealed that a large amount of the

contaminated water is actually seeping through the dam body or escaping from dilapidated pipes. Risk mitigation measures, which are the core of the GEF-supported component, will indeed cause a drastic reduction in the amount of continuous discharge in addition to a reduction in the number of catastrophic and massive emission of contaminants, which as we all know have serious negative effects downstream.

Transboundary impacts of mining accidental spills. Mining accidental spills in one country can have huge transboundary impacts in other riparian countries of the Danube River and Black Sea basins. Communities and ecosystems located far away from the mining region where the accidents take place are at risk of pollution exposure. The above-mentioned mining accidents have increased public awareness of the environmental and safety hazards of the mining industry and have shown that risk assessment and prevention of tailings dams accidents have to improve. The long-term protection of Danube and Black Sea's water quality thus calls for addressing ongoing degradation of mine tailings dams and continuous erosion of contaminants into surface waters of the area.

Bank Strategy. The World Bank strategy is to support the riparian countries of the Danube River and Black Sea to reduce pollution, protect fragile ecosystems, and improve environmental management. Consistent with this approach, the Country Assistance Strategy for Romania includes activities for helping Romania increase the focus on reducing pollution from non-point sources as well as mining accidental spills and move towards compliance with EU environmental directives as well as international conventions and protocols in a cost-effective and efficient manner.

Project Development Objective. The development objective of the proposed project component is to complement Romania's efforts to reduce the risk of water and soil contamination and loss of human and aquatic life from catastrophic mining accidental spills of pollutants by: (i) identifying and piloting cost-effective, efficient and innovative methods for tailings facilities management, which include environmental and safety criteria and could be replicated throughout Romania and the Danube Basin; (ii) improving capacity at both the national and local levels to conduct risk assessment and identify risk-based priority actions; (iii) establishing comprehensive management guidelines to improve the performance of tailings management facilities by Romanian companies; (iv) strengthening capacity and capability to develop a long-term tailings dams risk/hazard mitigation strategy, which can be established for the whole country; (v) strengthening environmental monitoring program, including establishment of credible baseline and measures to assess performance of the mining industry; (vi) establishing a regional emergency preparedness and response system linked to the Danube Accident and Emergency Warning system; and (vii) furthering and promoting regional collaboration on integrated water resources management.

Baseline Scenario

The international waters of the Black Sea and Danube River are subject to a number of pressures from human activities. Risks involved in mining activities, particularly those

located in the Upper Tisza Basin, are threatening the ecological sustainability and integrity of these transboundary ecosystems.

In the absence of GEF assistance for addressing long-term protection of international waters, Romania would continue to support the restructuring of the mining sector, given particular attention to mitigation of social impacts resulting from mine closure programs. Although attention for environmental rehabilitation of (closed) mines is expected, existing government resources and international financing support will not be sufficient to address environmental issues associated with tailings facilities of active mines. While the Romanian government remains prepared to launch a country-wide program on tailings dams safety, serious short-term financial constraints may preclude such ambitious undertaking. Without international assistance, Romania is unlikely to guarantee in the short-term adequate protection of the Danube River and Black Sea.

Romania is undertaking a number of domestically and externally funded programs and activities to reduce the risk of mining accidents in the Tisza Basin. The Baseline Scenario consists of the following investments during the project life:

- *Environmental rehabilitation of the mining sector.* The Government has allocated US\$800,000 in the 2003 budget to address issues related to tailings dams facilities associated with the closure of mines. Approximately US\$150.7 million are being planned for the period 2004-10 for investments on environmental rehabilitation of mines that will be closed and privatized, including improving the safety and management of tailings facilities. About US\$7.6 million (5%) would relate to GEF-project objective and GEF-project area.
- *Prevention of accidental pollution.* Norway and Finland governments are providing financial support for establishing a remediation plan and a prevention/response plan for accidental pollution in the Somes Basin and Barcau Basin, respectively. Total contribution amounts to US\$100,000 over the life of the project.
- *Emergency preparedness.* Component A of the project will focus on strengthening and upgrading the national emergency response capacity. One could estimate that about US\$200,000 would relate to GEF-project objective and GEF-project area.
- *Flood forecasting system.* Approximately US\$46 million will be invested to establish a flood forecasting system for Romania (DESWAT). The new flood forecasting system will complement the US\$55 million National Integrated Meteorological System (SIMIN), which implementation started in 20002. Both systems will help alert the population and authorities in case of potential floods. Real-time hydro-meteorological data will improve forecasting capabilities of severe hydrological events and will reduce the risk of mining accidents. One could estimate that about US\$2.3 million (5%) would relate to GEF-project objective and GEF-project area.

- *Water management plan and monitoring equipment.* A project supported by EU PHARE aims at piloting the implementation of the EU Water Framework Directive in the Somes River basin. The project will include the procurement of monitoring equipment. About US\$1.5 million relates to GEF-project objective.

GEF Alternative

With GEF assistance for addressing international waters objectives, the Government of Romania would be able to undertake a comprehensive program for improving the safety and management of tailings facilities, which would generate both local and global benefits. The GEF Alternative would include the baseline scenario augmented with activities at the Tisza Basin to address priority mining accidental spill risks. The GEF Alternative will: (i) enable the development of a more integrated knowledge base about transboundary impacts of mine-induced pollution in the Danube and Black Sea basins; (ii) provide capacity building to increase the opportunity for adoption of best mine waste management practices throughout the Tisza and Danube basins; (iii) pilot techniques for hazard prevention and remediation for improving the management and safety of tailings dams and waste dumps facilities; (iv) provide for lessons learned that could be replicated in other parts of the Tisza and Danube basins (v) leverage support from the mine operators to replicate measures to manage the risks associated with tailings dams and waste dumps facilities; and (vi) foster transboundary cooperation on integrated water resources management in the Tisza Basin.

The total cost of the GEF Alternative is estimated at US\$30.23 and will catalyze additional resources beyond the baseline scenario, totaling US\$18.53 million, including the GEF contribution of US\$7.35 million (US\$0.35 million preparatory grant and US\$7.0 full grant) and an additional US\$11.18 million from other sources. There is commitment from the Government of Romania to allocate funds from the FY05 Second Mine Closure and Social Mitigation Project, which preparation is scheduled to start shortly, for further replication of the GEF activities throughout Romania.

Incremental Cost

The difference in cost between the Baseline Scenario and the proposed GEF Alternative is estimated at US\$18.53 million. Of this amount, it is expected that US\$3.84 million would be contributions from the GoR, US\$5.64 million from a IBRD loan, US\$0.26 million from the Austrian Government, US\$1.01 million from USTDA and US\$0.44 from NAMR and mine operators. An incremental cost of US\$7.35 million will be incurred to achieve global benefits through the improved management and safety of tailings dams and waste dumps facilities. This amount would be eligible for GEF support, US\$0.35 million from a PDF-B preparatory grant and US\$7.0 million from the full GEF grant. The table below summaries the project components and proposed financial plan of the incremental cost.

Incremental Cost Matrix

Activity	Cost Category	US\$ Million	Domestic Benefits	Global Benefits
Establishing a baseline and an environmental monitoring system	Baseline	3.80	Improved flood forecasting and flood dissemination capabilities. Improved local capacity of national monitoring institutions, which will result in improved monitoring and assessment capacity.	
	With GEF Alternative	4.81	Same as above.	Integrated knowledge base about transboundary impacts of mine-induced pollution in the Danube and Black Sea basin and improved understanding of mining accidental spills impacts.
	Increment	1.01		
Piloting and replicating hazard prevention and remediation interventions	Baseline	7.60	Some improvements in the management and safety of tailings facilities. Limited reduction on the risk of local water and soil contamination and loss of human and aquatic life downstream project sites.	
	With GEF Alternative	21.80	Significant risk reduction of local water and soil contamination and loss of human and aquatic life from catastrophic mining accidental spills of pollutants. Improved environment for local communities. Enhanced knowledge of tailings dams hazard mitigation by strengthening local capacity through specific training and information dissemination and access.	Accelerate significant risk reduction of degradation of the Black Sea and Danube River through identification and implementation of an effective remediation and prevention program in the Tisza basin. Establishment of a model for replication for reducing mining accident risks to human and aquatic ecosystem health throughout other parts of the Tisza and Danube basins. In the long-term, reduced pollution into the Danube River and Black Sea basins --improved water quality from reduced toxic and dangerous waste and protection of sensitive aquatic ecosystems.
	Increment	14.20		

Incremental Cost Matrix (Continuation)

Activity	Cost Category	US\$ Million	Domestic Benefits	Global Benefits
Developing environmental and engineering guidelines for tailings and waste facilities	Baseline	0.00		
	With GEF Alternative	0.22	Strengthened institutional and human capacity in Romania for proper management of tailings dams and waste dumps facilities.	Accelerate adoption of best tailings dams and mine waste management practices throughout the Tisza and Danube basins.
	Increment	0.22		
Developing a regional mine spill emergency response plan	Baseline	0.30	Limited improvements in the level of preparation and protection of a few communities within the Tisza catchment area.	
	With GEF Alternative	1.72	Significant improvements in the level of preparation and protection of communities within the Tisza catchment area. Increased technical level of mine operators and local authorities to develop and maintain emergency response plans.	Increased regional capacity for mine accidental spills prevention. Increased collaboration among the Tisza basin riparian countries.
	Increment	1.42		
Promoting transboundary cooperation on integrated water resources management for the Tisza basin	Baseline	0.00		
	With GEF Alternative	0.37	Improved local awareness of integrated water resources management.	Improved regional cooperation among the riparian countries and increased awareness for sustainable management and development of the Tisza River.
	Increment	0.37		
Monitoring and evaluation and project management	Baseline	0.00		
	With GEF Alternative	1.31	Improved local project implementation capacity	Identification and dissemination of lessons from project implementation relevant for projects elsewhere in the Danube and Black Sea basins.
	Increment	1.31		
Totals	Baseline	11.70		
	With GEF Alternative	30.23		
	Increment (GEF)	18.53 (7.35)*		

Note: * US\$0.35 million from the PDF-B preparatory grant and US\$7.0 million from the full GEF grant.

ANNEX B: PROJECT LOGICAL FRAMEWORK

Hierarchy of Objectives	Key Performance Indicators	Data Collection Strategy	Critical Assumptions
Sector-related CAS Goal: Improved national preparedness for natural disasters.	Sector Indicators: Improved hazard mitigation and emergency preparedness.	Sector/ country reports: Country reports (CEM Retrospective, CAS Updates, EU reports).	(from Goal to Bank Mission) Romania maintains its commitment to reduce natural hazards risks and to bring up the emergency preparedness to the EU standards.
GEF Operational Program: International Waters Operational Program No. 8, Waterbody Based Operational Program: Improve water quality of the Danube and Black Sea Basin.	Outcome / Impact Indicators: Integrated knowledge base about transboundary impacts of mine-induced pollution in the Danube and Black Sea basin. Increased adoption of best mine waste management practices throughout the Tisza and Danube basins. Increased transboundary cooperation for integrated water resources management.	 Annual Reports of the International Commission for the Protection of the Danube River (ICPDR). Danube Accident and Emergency Warning System maintained by ICPDR. Danube and Black Sea water quality monitoring reports prepared by ICPDR and the Black Sea Commission.	 Romania maintains its commitment to GEF and international community in adopting measures to reduce pollution to Danube and Black Sea.

Project Development Objective:

The overall objective of the project is to assist the Government of Romania in reducing the environmental, social, and economic vulnerability to earthquakes and floods, and demonstrate approaches to risk reduction of catastrophic mining accidental spills of pollutants.

Global Objective:

Demonstrate and provide a model for replication for the reduction of catastrophic accidental spills of transboundary pollution loads from mine operations flowing into the Danube and Black Sea.

Outcome / Impact Indicators:

Strengthened institutional and technical capacity for disaster management and emergency response through upgrading communication and information systems.

Increased earthquake risk mitigation with key, prioritized public facilities retrofitted.

Increased level of flood protection with high priority investments implemented.

Improved dam safety of the selected priority structures.

Gradual reduction in number and negative impacts of mining accidental spills of pollutants into the Tisza Basin and in the volume of toxic releases from mines.

Project reports:

Project Supervision Reports.

Project mid-term review.

Water quality reports.

Monitoring activities of the implementing line ministries and agencies.

(from Objective to Goal)

Government sustains its commitment to the project objectives and continues to give an appropriate attention to disaster mitigation and management.

Hierarchy of Objectives Output from each Component:	Key Performance Indicators Output Indicators:	Data Collection Strategy Project reports:	Critical Assumptions (from Outputs to Objective)
A. Improved emergency preparedness and management system; completed groundwork for subsequent public policy decisions in the area of financial risk transfer.	Modernized communication and information management systems are designed, procured, and implemented with a daily use, national coverage, and sufficiently staffed. Conceptual and legal framework for the catastrophe financial risk transfer is formulated.	Progress reports provided by MAI. Supervision mission reports. Project evaluation.	Organizational changes in the government do not adversely affect emergency response system in the country. Political and technical commitment of the Romanian government is maintained.
B. Improved earthquake risk mitigation measures.	High-priority public infrastructure is retrofitted to a level which allows for functioning after an earthquake of up to 7.5 magnitude.	Progress reports provided by MTCT. Supervision mission reports based on independent expert reports. Project evaluation.	Institutional framework for public buildings retrofitting is maintained.
C. Improved risk mitigation measures related to floods and dam safety.	Nine flood mitigation schemes are upgraded or rehabilitated. Three critical Danube River areas are rehabilitated. Eight selected large and five small dams are rehabilitated. Landslide risks are mapped and used for land management and planning.	PMU progress reports Supervision mission reports Project evaluation.	Government maintains already demonstrated commitment and capacity to implement the measures supported by the project.

Output from each Component:

D. Hazards prevention and mitigation measures implemented in the Tisza Basin to reduce risk of mining accidental spills of pollutants as well as emergency preparedness and effective environmental monitoring capacity established and transboundary collaboration on water resources management is strengthened.

Output Indicators:

Cost-effective, efficient and innovative methods are identified and piloted for at least three tailings management facilities that can be replicated throughout Romania and the Danube Basin.

Funding for replication of activities supported under the project are leveraged from public (and private) sectors.

An agreement among the Tisza riparian countries to improve the management and safety of tailings dams is adopted.

Capacity for conducting risk assessment and identification of risk-based priority action is improved.

Comprehensive management guidelines to improve performance of tailings management facilities is established in at least three mines.

Environmental monitoring system of the Tisza basin is strengthened by increasing the density of the network.

Environmental and engineering guidelines for tailings dams and waste facilities are developed and adopted.

Regional emergency preparedness and response system is established.

Regional mechanism for addressing tailings dams issues are developed, e.g., establishment of a Regional Task Force to review failure

Project reports:

International and government reports.

PMU progress reports.

Supervision mission reports.

Project evaluation.

(from Outputs to Objective)

Sustained interest in replicating the results throughout the country and the region.

mode and impacts analysis.

Regional meetings/workshop
on water resources
management are
documented.

A draft proposal for a
regional water resources
project for the Tisza Basin is
prepared and endorsed by
riparian countries.

Identification and
dissemination of lessons
relevant to other riparian
countries is documented.

E. Project management

Timely, cost efficient and
technically sound
implementation of the
project.

Progress reports
Supervision mission reports
Project evaluation

Administrative and political
obstacles do not interfere in
implementation of the
project.

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
Component A: Strengthening of Disaster Management Capacity		Quarterly progress reports	Counterpart funds are available in a timely manner
Component B: Earthquake Risk Reduction		Quarterly disbursement reports	Implementation structure is put in place with a capable staff
Component C: Flood and Landslide Risk Reduction		Supervision mission reports	
Component D: Risk Reduction of Mining Accidents in Tisza Basin		Annual audit reports	
Component E: Project Management			

ANNEX C: RESPONSE TO PROJECT REVIEWS

a) Convention Secretariat

b) Review by expert from STAP Roster

STAP Review was conducted by:

Professor Brian Wilkinson
4 Lacon Court Childe Road
Cleobury Mortimer
Shropshire
UK DY14 8PB

The STAP Reviewer recognizes the importance of the proposed GEF-component of the Hazards Risk Mitigation and Emergency Preparedness Project in terms of transboundary cooperation to reduce mine pollution risks and promote integrated water management. He also acknowledges that the recent mining incidents in the Tisza catchment give urgency to the formulation and implementation of the Project.

The STAT Reviewer provides very useful suggestions and recommendations to enhance the quality of the project. These recommendations are presented below (*italic text*). A brief explanation on how the team is planning to incorporate the recommendations in the revised version of the PAD is also included below.

Activity D.1: Establishing a Baseline and an Environmental Monitoring System.

Under this sub-component, two recommendations were made:

- *Make a clear commitment to establishing for the project, water and soil quality sampling and analytical methods that meet international standard; and*
- *Extend the monitoring period beyond 2008 and secure appropriate funding for this.*

Harmonization of standards and approaches. The revised PAD will make explicit reference that the project will support the setting of common baseline indicators for water and sediment quality monitoring as well as improvement and harmonization of Romanian monitoring systems with those of the other riparian countries of the Tisza basin. It should be noted that EU requirements for dangerous substances discharged to water have been transposed into Romanian legislation and approximation with the EU Water Framework Directive is expected to be completed at the end of 2003. Thus, the monitoring system will have to meet EU standards.

Sustainability beyond 2008. We would like to point out that one of the objectives of the project is capacity building and capacity enhancement at the level of the mine operators and local environmental authorities. If the project is successful in achieving this goal, environmental monitoring should continue with no external support once the project is over. Commitment will be sought from the Government to provide the necessary funding

to operate and maintain the monitoring system on the long-term. There is some assurance that budget resources will be made available to operate and maintain the system since Romania is moving forward with EU accession and the country needs to demonstrate compliance with EU environmental requirements.

D.2 – Hazard Prevention and Remediation Intervention. *Under this sub-component the following recommendations were made:*

- *Explicitly identify at the start of the project the need to review fully international experience and guidance manuals in the design and remediation of mine waste systems;*
- *Avoid outcomes influenced by strong vested interest, e.g., by establishing an independent expert international review group;*
- *Limit the number of sites for protection/remediation so that a sound understanding of processed and procedures can be obtained; and*
- *Ensure that strong scientific/technical links are established between scientific/engineering teams working on Components and D Sub-components.*

International experience. A review of international experience was performed during the preparatory phase, followed up by the participation of Romanian experts on a NATO-Sponsored Pilot Study on Prevention and Remediation Issues in Selected Industrial Sectors, and the organization of a Regional Workshop on the Management and Safety of Tailings Dams in Sinaia, Romania, in October 2003. Two documents, A Guide to the Management of Tailings Facilities and Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities, developed through coordination of the Mining Association of Canada were found very relevant to the Romania situation. The review of international experience will continue through out project implementation.

Independency. The project envisages the involvement of two international experts to strengthen the National Commission on Dam Safety (CONSIB). One of the experts will focus on the safety of tailings facilities and mine waste dumps, and the second one will focus on failure modes and effects analysis. Both experts will be recruited, under terms of reference satisfactory to the World Bank, to act as independent experts. They will provide an independent and high level technical evaluation of the proposed measures to reduce the risk of dam failures during project implementation. They will undertake review of the hazards prevention and remediation activities twice a year, participate in failure modes and effects analysis workshops, participate in the development of the risk assessment methodology, and identify implementation issues and develop recommendations for the consideration of the Government. The project also envisages the establishment of a Regional Task Force (conformed by representatives from the riparian countries of the Tisza Basin) to review the failure modes and effects analysis to be conducted under the project.

Scope of remediation. Given the large number of mine sites that require improvement, the project will try to strike a balance between being cost-effective and technically and

scientifically comprehensive, detailed and sound. The Regional Task Force mentioned above will assist in getting the right balance so the project can maximise risk reduction within a reasonable timeframe and with tolerable cost, and bring the residual risk to an overall sustainable and acceptable level.

Synergies between project components. The revised PAD will provide concrete suggestions for making sure synergies are created between the various project components to build a common knowledge base, particularly in the areas of flood management and water-retention and tailings dams safety. Regular coordination meetings between PMUs will be organized during project implementation, some of which will be facilitated by the two international experts on dam safety.

D.3 – Engineering and Environmental Guidelines for Tailings Dams and Waste Facilities. Under this sub-component the following recommendation was made:

- *Clearly identify organizations(s) responsible for the preparation of guidance manuals and training.*

While the project envisages the National Agency for Mineral Resources to coordinate activities under Component D, the NAMR will coordinate the development of manuals, guides and training activities very closely with CONSIB, the Ministry of Agriculture, Forestry, Water and Environment, and the Ministry of Economy and Commerce. CONSIB will gradually take responsibility for the elaboration of dam-safety related manuals and training activities.

D.5 – Promoting Transboundary Cooperation on Integrated Water Resources Management for the Tisza Basin. Under this sub-component the following recommendation was made:

- *Arrange regular meetings/contacts between transboundary parties for the duration of the project and beyond.*

Participants at the Sinaia Regional Workshop agreed to foster and promote transboundary cooperation on the management of tailings facilities within the context of overall integrated water resources management. A proposal was put forward during the workshop to establish a Regional Task Force to review and harmonize the Failure Mode and Effects Analysis process and standards. The task force will be conformed by representatives from the riparian countries of the Tisza Basin, who will have the support of national policy makers. The project will support a first concrete step towards a basin-wide cooperation among the riparian countries. During project implementation other efforts will be supported to promote integrated river basin management, building on existing transboundary and bilateral initiatives.

Finance. Under this heading the following recommendations were made:

- *Allocate additional funds to extend monitoring program; and.*
- *Re-examine opportunities to involve the mining industry in funding some elements of the project.*

GEF funding. The revised PAD will increase the size of sub-component D.1 by US\$0.2 million to extend the duration of monitoring program to 7 years, similar to the duration of the other project components. Thus the total contribution from GEF towards the project will be US\$7.0 million.

Additional internal resources. At present, all non-metal mines in Romania are state-owned. So far, there is agreement that the Government will finance 50% of the cost of component D, which demonstrates the commitment of the Government to address environmental concerns in the mining sector. A second World Bank Mining Closure and Social Mitigation Project (under preparation) is expected to address environmental aspects of closed mines, including those related to tailings dams and waste facilities.

Timelines. Under this heading the following recommendation was made:

- *Prepare a timeline flow diagram identifying key outputs and the essential links between Components and D Sub-components.*

A detailed project implementation plan will be prepared as part of project appraisal.

c) Response to comments from Secretariat and other Agencies

GEF Secretariat's recommendations for Work Program Entry received at Pipeline Entry (underlined text) and Task Team Response (*italic text*)

Results of a Bank dialogue with the countries on a multi-country Tisza basin project that may complement this Romania project should be provided to GEFSEC by time of work program inclusion.

Fostering transboundary cooperation on the Tisza basin was discussed at the Sinaia Regional Workshop on the Management and Safety of Tailings dams in October 2003. Consensus was reached on the need to address tailings dams facilities at the basin level. Participants from Hungary, Ukraine, and Serbia and Montenegro agreed to foster and promote transboundary cooperation on the management of tailings facilities within the context of overall integrated water resources management.

A proposal was put forward during the workshop to establish a Regional Task Force to review and harmonize the Failure Mode and Effects Analysis process and standards. The task force will be conformed by representatives from the riparian countries of the Tisza Basin, who will have the support of national policy makers. The project will support a first concrete step towards a basin-wide cooperation among the riparian countries. During project implementation other efforts will be supported to promote integrated river basin management, building on existing transboundary and bilateral initiatives.