

**Standard Summary Project Fiche – IPA decentralised National programmes**  
**(maximum 12/15 pages without the annexes)**

**1. Basic information**

- 1.1 CRIS Number:TR080205
- 1.2 Title: Mining Waste Management
- 1.3 Sector: 27-Environment
- 1.4 Location: Turkey

**Implementing arrangements:**

1.5 Implementing Agency:

The CFCU will be Implementing Agency and will be responsible for all procedural aspects of the tendering process, contracting matters and financial management, including payment of project activities. The director of the CFCU will act as Programme Authorizing Officer (PAO) of the project.

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1.7 Overall cost: 4,600,000.00 Euro

1.8 EU contribution: 4,085,000.00 Euro

1.9 Final date for contracting: 2 years after the signature of the Financing Agreement

1.10 Final date for execution of contracts: 2 years following the end date for contracting

1.11 Final date for disbursements: 3 years following the end date for contracting

## 2. Overall Objective and Project Purpose

### 2.1 Overall Objective:

To prevent or reduce any adverse effects upon the environment, in particular for water, air, soil, fauna and flora and landscape, and any resultant risks arising to human health as a consequence of waste management from the extractive industries.

### 2.2 Project purpose:

The purpose of this project is strengthening the Waste Management Capacity of Turkey in the Field of Extractive Industries by transposition of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries to the national legislation. The characterization of waste, classification of waste facilities, guidance upon waste management, and inventory of active, closed and abandoned mining waste facilities will be introduced.

### 2.3 Link with AP/NPAA / EP/ SAA

Link with AP

Council Decision [2008/157/EC](#) of 18 February 2008

According to “Turkey: 2008 Accession Partnership Document For Turkey ”, under the heading “3.1. short term priorities” and “ability to assume the obligations of membership”, under “Environment” sub-heading:

- Adopt a comprehensive strategy for the gradual transposition, implementation and enforcement of the *acquis*, including plans for building up the necessary administrative capacity at national, regional and local level and required financial resources, with an indication of milestones and timetables,
- continue transposition, implementation and enforcement of the *acquis*, in particular horizontal and framework legislation, such as the environmental impact assessment, including transboundary aspects, as well as strengthening of administrative capacity,
- adopt the National Waste Management Plan.

Under the heading “3.2. medium term priorities” and “ability to assume the obligations of membership”, under “Environment” sub-heading:

- Continue to transpose and implement the *acquis* related to the framework legislation, international environmental conventions and legislation on nature protection, water quality, chemicals, industrial pollution and risk management and waste management,
- pursue integration of environmental requirements into other sectoral policies.

Link with NPAA

(TR) Council of Ministers Decision No: 2003/5930 dated 23/06/2003

Improvement of waste management has been defined as a priority, since, starting transportation and implementation of the *Acquis* related to waste management is a

short term priority, and completing the transportation of the Acquis and strengthening the institutional, administration and monitoring capacity, including data collection, to ensure environmental protection is a medium term priority of the Accession Partnership document.

The scope of this project involves “PRIORITY 22.2 Increase Effectiveness of Waste Management” in the NPAA. The NPAA states that, “as the implementation of the legislation under this priority requires heavy investment for both the public and private sector, it is deemed necessary to make infrastructural investment and to strengthen technical capacity”.

According to Turkey's Programme for Alignment With the Acquis (2007-2013) Implementing Regulation on Mineral Waste Disposal is envisaged to be enacted in year 2008.

#### 2.4 Link with MIPD

### **Turkey Multi-annual Indicative Planning Document (MIPD) 2007-2009**

#### **2.2 Multi-annual planning by component**

#### **Component I – Transition Assistance and Institution Building**

##### **1. Main priorities and objectives**

Environment: Adoption of a revised programme for transposition and implementation of the acquis; Transposition of framework legislation, international environmental conventions, and legislation on nature protection, water quality, air quality, Industrial Pollution Control and waste management, environmental impact and strategic impact assessment, chemicals and GMOs, climate change, strengthening of the relevant institutions

#### 2.5 Link with National Development Plan (where applicable)

(TR) Grand National Assembly Decision No:877, dated 28.06.2006

**Ninth Development Plan, 2- Vision of the Plan and Basic Principles; 2.2. Basic Principles:** Natural resources, cultural assets and the environment will be protected considering the future generations, as well.

#### **7- Main Objectives: Development Axes; 7.1. Increasing Competitiveness, 7.1.6- Protecting the Environment**

453. Conditions for protection and utilization of natural resources will be determined by taking the needs of the future generations into consideration. Environmental management systems will be established in order to ensure equitable utilization of natural resources by everyone.

471. Production of non-domestic wastes will be reduced and collection, transportation, recycling and disposal systems that are suitable for the type of the waste and conditions of the country will be established.

The strategy of Ninth Development Plan, IV Development Axes, IV.1 Increasing Competitiveness, Protecting Environment and Improving the Urban Infrastructure

While environmental protection is counted as a cost item in the short run, it enhances competitiveness and makes it sustainable in the long run. In this context, it will be ensured that the environmental infrastructure will be completed in a well planned time

horizon and guaranteeing cost-effectiveness as a requirement of the harmonization process with the international standards, including mainly those set by the EU.

### **7.1.10. Ensuring the Shift to High Value-Added Production Structure in Industry and Services**

544. In the mining sector, compliance with the environmental legislation will be improved,...

2.6 Link with national/ sectoral investment plans(where applicable)

NA

## **3. Description of project**

### **3.1 Background and justification:**

The main strategy of the mining sector is to provide raw material requirements of the industry economically and safely and to increase the value added to the county's economy by processing mining products within the country.

Turkey possessing one of the biggest mine resources in the EU, has a diverse and dynamic mineral resources. Hence, Turkey has a diverse and dynamic mineral industry. Turkey is the world's largest producer of boron, accounting for half of world output, and is known to be a significant producer of certain industrial minerals such as barite, celestite (strontium), clays, emery, feldspar, limestone, magnesite, marble, perlite, pumice, and trona (soda ash). Other minerals which are actively exploited and marketed include copper, chromite, iron ore, sulfur, pyrite, manganese, mercury, lead, zinc, and meerschaum. According to the official statistics, in 2002, mining sector (coal, chromite, copper, and boron) has been recorded as Turkey's fourth-leading industry, followed by steelmaking, petroleum, and construction. The mining industry in Turkey makes a significant and important contribution to the national economy through royalties and taxes and as well as generating employment.

Extractive industries for resources to satisfy energy and raw material requirements may alter the composition of the landscape, disrupting land use and drainage patterns, contaminating soil and water resources, removing habitats for wildlife, and generate huge amounts of waste. This particular waste must be managed in specialized facilities in accordance with specific rules. Because of the special nature of the management of waste from the extractive industries, it is necessary to introduce specific application and permit procedures in respect of waste facilities used to receive such waste. In accordance with Directive 2004/35/EC, operators of such facilities are subject to liability in respect of environmental damage caused by their operation.

Some of these wastes are inert and hence not likely to represent a significant pollutant threat to the environment save for smothering of river beds and possible collapse if stored in large quantities. However, other fractions, in particular those generated by the non-ferrous metal mining industry, may contain large quantities of dangerous substances, such as heavy metals. Through the extraction and subsequent mineral processing, metals and metal compounds tend to become chemically more available, which can result in the generation of acid or alkaline drainage. Moreover, the management of tailings is an intrinsically risky activity, often involving residual processing chemicals and elevated levels of metals. In many cases tailings are stored on heaps or in large ponds, where they are retained by means of dams. The collapse of dams or heaps may have serious impacts on environment and human health and safety.

These impacts can have lasting environmental and socio-economic consequences and be extremely difficult and costly to address through remedial measures. Wastes from the extractive industries have therefore to be properly managed in order to ensure in particular the long-term stability of disposal facilities and to prevent or minimise any water and soil pollution arising from acid or alkaline drainage and leaching of heavy metals.

Because Turkey possesses diverse mineral resources which should be exploited where they are, in many areas mining activities have been carrying out. This may cause adverse effects on the environment, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human who lives near mining areas.

Directive 2006/21/EC on the management of waste from extractive industries is published by the European Parliament and Council on 15 March 2006. This Directive applies to waste resulting from the extraction, treatment and storage of mineral resources and the working of quarries. In Turkey, the By-law on Hazardous Waste Control (Official Gazette: 14 March 2005, no 25755) and the By-law on Permission of Mining Activities (Official Gazette: 21 June 2005, no 25852) address issues regarding mining waste. Article 48 of the By-law on Hazardous Waste Control states that the Ministry of the Environment and Forestry will determine the principles of collection, transportation, treatment and disposal of mining waste. Article 91 of the By-law on Permission of Mining Activities states that mining waste is covered under the specially treated waste. This article states that the By-law regarding the management of mining waste will be prepared in collaboration between the Ministry of Environment and Forestry and the Ministry of Energy and Natural Resources.

MoEF (Ministry of Environment and Forestry) is the responsible institution on implementation of Environment Law No: 2872 (amended by Law No: 5491 in 2006) and related legislations. Main responsibilities of MoEF are the determination of principles and policies for protecting the environment, pollution prevention and remediation, research and projects about these subjects etc. MoEF has the main implementing at national level related to all waste management as well as special waste streams. These responsibilities are carried out by General Directorate of Environmental Management in MoEF.

MIGEM (General Directorate of Mining Affairs) is the responsible institution on implementation of Mining Law No 3213 (amended by Law No: 5177 in 2004), By-Law on the application of the Mining Law (2005) and By-Law on Mining Activities Permission (2005). As an executive institution, MIGEM grants mining licenses, admits and inspects projects prepared for production area of licenses and control the mining activities in-situ according to afore-mentioned legislations on act and applied projects with regular periods. MIGEM also demand permissions (access to land, EIA and business opening and others if necessary) required by mining law and by-laws in order to designate production license.

Because the MIGEM is granting mining licenses all kind of data about the licenses like extension of validity of license, license area, mineral type, production amount, amount of mineral storage in license area etc. are stored. But archive study has to be done in this project in order to define state of closed and abandoned licenses accurately. Because abandoned and closed licenses are licensed again by tender if there is still mineral that could be exploitable.

As mentioned above transposition of EU legislation about mining waste will be done with collaboration between the MoEF and MIGEM. After transposition both institution will be worked together in concordance.

The General Directorate of Mineral Research and Exploration (MTA), a governmental organization which is an affiliated institution of the Ministry of Energy and Natural Resources, is an investigator institution who produces any information that is necessary for the development of mining sector. MTA makes studies on geological, mineralogical, geophysical and technological researches and, feasibility and geotechnical studies. MTA conduct scientific and technical studies to develop environmentally friendly approaches for the investigation and utilization of natural resources, while studying processes that effect environment, and to combine the obtained results with environmental planning, resource protection and management are undertaken. Furthermore, joining studies and meetings of Environmental Impact Assessment (EIA) and site selection for Organized Industrial Zone Commissions, doing related researches and studies and developing and dispatching institution's views are amongst the main duties of the department.

According to the Directive on Mining Waste (2006/21/EC Management of Waste from Extractive Industries), Article 20 imposes on the member states that **“they shall ensure that an inventory of closed waste facilities, including abandoned waste facilities located on their territory which cause serious negative environmental impacts or have the potential of becoming in the medium or short term a serious threat to human health or the environment is drawn up and periodically updated.”**

It is well known that transposition of Directive (2006/21/EC). into national law and implementation of that will mean a huge technical work including especially;

- Classification of waste facilities depicted in category A,
- CEN standards for characterization of wastes such as:
  - Acid generation behavior,
  - Sampling and analysis of cyanide in tailings pond,
  - Suitability of existing standards.
- Definition of inert waste,
- Guidance note on Financial Guarantees,
- Guidance on Inspections,
- Methodology for risk-based inventory of abandoned mine sites.

It is known that there are some projects supported by EC, some of them has been finished and some of them continues. For example, SAFEMANMIN (Safe Management of Mining Waste and Waste Facilities) is a Coordination Action financed by the European Commission under the Sixth Framework Programme (FP6). Details about this project are given in 3.6 Linked Activities.

It can be easily seen that results of this project will be very beneficial for all EU member states and countries that is in the state of accession. Results of other related projects or studies will be evaluated during the project and project team will adapt guidance and methodologies adopted by EC and also develop appropriate ones. For example, methods for the characterization of mining waste will be determined by project team, because there are different practices in EU members. Also during the

preparation of methodologies, guidance and etc., country situations will be taken into account.

It has been known that the Commission has stipulated an appropriate exchange of technical and scientific information between member states. Therefore exchange of information and more importantly transfer of information undertaken by the Committee, which is stated in Article 23 of the Directive 2006/21/EC, into Turkey is important. As stated above Turkey has not experience in this field so by carrying out this project, lack of information and experience will be compensated by exchange of information.

As stated in Directive, The EC should ensure an appropriate exchange of scientific and technical information on how to carry out an inventory of closed waste facilities at Member State level and on the development of methodologies to assist Member States in complying with this Directive when rehabilitating closed waste facilities. Moreover, an exchange of information should be ensured within and between Member States on the best available techniques.

3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact (where applicable)

**Project Impact:**

The project is expected to produce mainly two outcomes:

1) Waste management capacity of Turkey in the field of extractive industries was strengthened:

- National legislation about mining waste management will be adapted to EU legislation
- Institutional capacity will be increased about waste management in the field of extractive industries.
- Information transfer from EU Committee (mentioned in 2006/21/EC numbered Directive, Article 23) to Turkey about technical work leading to the preparation of guide books
- Awareness on mining waste management will be created with workshops, seminars and guidance, etc. in the mining sector

2) Inventory of active, closed and abandoned mining waste facilities was prepared.

- Environmental risks of closed and abandoned mining waste facilities will be determined and required measures will be taken.
- Rehabilitation of mining waste facilities will be performed according to EU legislation.

**Catalytic Effect:**

- Effective management of waste from the extractive industries will be carried out and adverse effects of these wastes will be minimized.
- With regard to the public concern, mining sector will change its negative image and carry out activities in the line with the principle of sustainable development.

**Sustainability:**

Sustainability of the project outcomes will be provided by the Regulation on Management of Waste from Extractive Industries. Furthermore Regulation and

prepared guidance, handbooks during the project will be improved for better waste management. The prepared inventory will be base for further periodically updating. Furthermore this inventory will include active waste facilities.

**Cross-border Impact: NA**

3.3 Results and measurable indicators:

<b>Results</b>	<b>Objectively Verifiable Indicators</b>
<p>1)Waste management capacity of Turkey in the field of extractive industries was strengthened.</p> <p>2)Inventory of active, closed and abandoned mining waste facilities was prepared.</p> <p>3)Capacity of instrumental facility was improved.</p>	<p>1.1) The Directive 2006/21/EC was transposed in 24 months.</p> <p>1.2) Guidance on financial guarantees, inspections, minimization, treatment, recovery of mining waste was prepared in 24 months.</p> <p>1.3) Requirements for the construction of waste facilities were determined in 24 months.</p> <p>1.4) All mining wastes characterized in 18 months.</p> <p>1.5) Training :</p> <ul style="list-style-type: none"> <li>- 25 central staff of MoEF and stakeholders (who is directly responsible for the implementation of the legislation i.e. training of trainers) in 24 months.</li> <li>-80 central staff of MoEF and stakeholders (who is responsible for the implementation of the legislation) in 24 months.</li> <li>- 81 local staff of MoEF (who is responsible for the implementation of the legislation) in 24 months.</li> <li>- 120 people from mining sector in 24 months.(2 workshops)</li> <li>- 2 study visits to EU member states were performed about implementation of legislation in 24 months.</li> </ul> <p>2.1) Methodology report for risk-based inventory of closed and abandoned mining waste facilities was prepared in 6 months.</p> <p>2.2) 80 % of the waste facilities were classified in 36 months.</p> <p>2.3) 80 % of active, closed and abandoned mining waste facilities determined according to methodology developed by project activities were taken in the computer based inventory in 36 months.</p> <p>2.4) Preparation of rehabilitation plan for two mining waste facility as a sample in 36 months.</p> <p>2.5) Training:</p> <ul style="list-style-type: none"> <li>- 25 central staff of MoEF and stakeholders about closure and rehabilitation of mining waste facilities in 36 months.</li> <li>- 1 study visits to EU member states were performed about mining waste facilities (active, closed, abandoned and rehabilitated) in 36 months.</li> </ul> <p>3.1) Purchase of required equipments and software will be carried out in 12 months.</p>

3.4 Activities:

Co-financing funding for the project activities will be met from the budgets of MoEF, MTA, MIGEM and is available in the budget of these institutions.



**Activity 1** will be achieved under a **Twinning Contract**. The activity will focus on the *acquis* implementation capacity of both Ministries; the Ministry of Environment and Forestry and the Ministry of Energy and Natural Resources.

The activity will focus on the exchange of technical and scientific information for the implementation of the directive such as;

- 1.1) Reviewing of existing institutional, technical and legal structure and establishment of required structure through gap analysis.
- 1.2) Determination of requirements for the classification of waste facilities
- 1.3) Preparation of guidance on minimization, treatment, recovery of all types of mining wastes.
- 1.4) Preparation of procedure for the closure of waste facilities and monitoring after the closure.
- 1.5) Determination of requirements for the construction of waste facilities
- 1.6) Characterization of wastes.
- 1.7) Preparation of waste management plan format.
- 1.8) Action plan for the prevention of major accidents and minimization of affects.
- 1.9) Preparation of licensing procedure.
- 1.10)Preparation of guidance on financial guarantees
- 1.11)Preparation of guidance on inspections (methods, sampling, etc.)
- 1.12)Transposition of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries to the national legislation.
- 1.13)Study visits and to mining waste facilities in the EU countries implementing the Directive 2006/21/EC. Training and information exchange activities will comprise of two study visits and to EU countries with the aim of gaining experiences about implementation of legislation.
- 1.14)Training ministry staff who is responsible for the implementation of the legislation at the central and local level, and also staff of stakeholders. Four training seminars will be organized to raise knowledge about the mining waste management and implementation of regulation to the central and local staff of MoEF, stakeholders and mining sector.
- 1.15)Workshops with mining sector and other related intuitions. To provide the participation of the mining sector into the decision making procedure, at least two workshops will be organized among the sector and policy makers, discussing technical subjects on mining waste management.
- 1.16)Preparation of implementation and financial strategy for the implementation of Directive.

**Activity 2** will be achieved under a Technical Assistance Contract. The activity will focus on the computer based inventory of the active, abandoned and closed mining waste facilities.

The activity will focus on the exchange of technical and scientific information for the implementation of the directive such as;

- 2.1) Preparation of methodology for risk-based inventory of closed and abandoned mining waste facilities. As regards establishing methodology, an inventory will be prepared by a team. Required information according to the methodology will be collected from the field (i.e. geographical location, quantities, etc.). Samples will be taken to identify technical characteristics of

- waste such as types (mineralogical and chemical analysis), potential environmental impacts (i.e, acid mine drainage) and recycling possibilities. Samples will be analyzed both in laboratories and in situ.
- 2.2) Data collection about mining sites and waste facilities especially from MIGEM archives. All mining registries will be examined to point out active, closed and abandoned mining waste facilities in Turkey and all related data will be collected and this will be an ongoing process throughout the project.
  - 2.3) Site visits to the mining waste facilities (active, abandoned and closed,) and sampling and measurement of waste amount to determine the environmental risks.
  - 2.4) Study visits to mining waste facilities in the EU countries implementing the Directive 2006/21/EC (active, abandoned, closed and rehabilitated waste facilities) Training and information exchange activities will comprise of a study visit to EU countries with the aim of gaining experiences about closure and rehabilitation of mining waste facilities. And also two sample rehabilitation plan for two mining waste facilities will be prepared.
  - 2.5) A technical and scientific support for the improvement of existing laboratory facility for the establishment of test and methods for the waste characterization, prediction of AMD, including a need assessment and set-up.
  - 2.6) Training of staff about tests and methods used for prediction of AMD
  - 2.7) Classification of waste facilities
  - 2.8) Preparation of computer-based inventory of active, abandoned and closed mining waste facilities. 80 % of the active, closed and abandoned mining waste facilities determined according to methodology developed by project activities were taken in the computer based inventory and would be completed at the end of the project. Computer-based inventory database interface would be prepared for the computer based inventory which work under existing environmental database of MoEF
  - 2.9) Preparation of rehabilitation plan for two mining waste facility as a sample.
  - 2.10) Trainings for the staff and workshops with mining sector and other related intuitions. One training seminars will be organized to raise knowledge about closure and rehabilitation of mining waste facilities to the central and local staff of MoEF, stakeholders and mining sector.

**Activity 3** will be achieved under a Supply Contract. The activity will focus on the improvement of laboratory facilities and preparation of inventory. GPS's (Global Positioning System), topographic measurement instruments (Total Station) and mobile in-Situ waste sampling equipment will be purchased for in-situ studies. ICP – MS, XRF, mercury analyzer, Chromaflex Columns, humidity Cell, Soxhlet Device will be purchased for the determination of acidic mine drainage potential and waste characterization. Also Upgrading of Existing Database and GIS Software of MIGEM for archive studies. A modelling program will be purchased for the evaluation of environmental pollution risk. All details are given in Annex VII.

### 3.5 Conditionality and sequencing:

#### Conditionality:

The signature of supply contract is conditional to the readiness of the existing laboratory infrastructure. Beneficiaries of the supply component shall take all necessary measures to prepare the laboratory conditions prior to signature of the supply contract/s

Sequencing:

Twinning, Technical Assistance and Supply Contracts will be carried out will be carried out simultaneously after contracting.

### 3.6 Linked activities

- Support to Turkey in the Field of Air Quality, Waste Management and Chemicals / TR 0302.03

The purpose of this project was to establish the necessary capacity within MoEF and MoH to transpose and implement two EU Directives on air sector and six EU directives on waste sector. To achieve this purpose, a number of workshops and trainings were carried out to develop the capacity of the personnel of the MoEF.

- Strengthening the Ministry of Environment and Forestry in the Field of Special Waste Management and Noise Management / TR 0402 09

This project constitutes on two components. Within the first component “waste”; besides transposition of the directives and establishment of a special waste inventory, a training needs analysis was carried out and according to that gap analysis training programmes were composed and delivered to related staff of MoEF at central and local level. Second component “noise” is being carried out and by the same way with the first component, trainings are being composed and planned to be carried out based on the training needs analysis.

- Capacity Building Support to Turkey for the Water Sector / TR 06 03 05

This project aimed to assist Turkey in the water management in line with the EU water legislation in order to enable the full implementation of the EU water acquis by the date of Turkey’s accession to the EU. Trainings on the implementation of the water acquis requirements delivered to the staff from central level.

- Developing Capacity in Implementation and Enforcement of environmental law through ECENA and IMPEL; Budget: 2005 Phare Multi Country Programme on Environment and Enlargement

The project aims to improve the ability of the subject countries to implement and enforce the environmental acquis through their participation in ECENA and IMPEL. Its activities are focusing on capacity building and exchange of best practice in the field of implementation and enforcement of environmental law.

- Improvement of Industrial Hazardous Waste Management in Turkey; LIFE Third Countries Project TCY/TR/000292

The LIFE ‘HAWAMAN’ PROJECT aims to improve hazardous waste management in order to reduce the negative impact of hazardous waste on human health and environment in Turkey. The overall objectives of the LIFE ‘HAWAMAN’ PROJECT are Optimization of hazardous waste management, Support to policy and strategy making, Capacity building, Improvement of inventory, reporting and control. Project will be finished in December 2008.

- SAFEMANMIN (Safe Management of Mining Waste and Waste Facilities) is a Coordination Action financed by the European Commission under the Sixth Framework Programme (FP6).

The purpose of the project is to collect and review information that the operators and the environmental authorities will require for the implementation of the Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from the extractive industries and amending Directive 2004/35/EC, and to disseminate this knowledge as widely as possible.

It addresses particularly Article 9, which provides for the classification of waste facilities with respect to the possible consequences of an accident, and respectively the Annex II – Waste characterization and Annex III – Criteria for determining the classification of waste facilities.

The activities of the project are divided into four major work packages as follows:

- Review of Methods for the Characterization of Mining Waste
- Collect Relevant Information for the Risk Assessment of Mining Waste Facilities including Old/Abandoned Mining Waste Facilities
- Review of Techniques for the Prevention and Abatement of Pollution Generated by Mining Wastes
- Development of a Decision Support Tool for Minimizing the Impact of the Mining

### 3.7 Lessons learned

There has not been any project on waste from the extractive industries in Turkey. This project will be the first for the sector. Previous projects in the field of waste, especially the above mentioned “Analysis of Turkish Environmental Legislation” and “Sector Approximation Strategy for the Waste Sector” have highlighted that effective transposition will require, first, an understanding of implementation and enforcement practices and capabilities; and secondly that the actual legal text properly takes into account the obligations relevant to effective implementation and provide for real and effective enforcement.

Taking this into account, both components will include the need to establish a clear strategy with a well planned and well-thought out legal programme, for transposition and implementation of the Mining Waste Directive relevant for the project fiche.

Currently it is clear that effective implementation of the strategy and legal programme will require:

- Reliable data collection systems;
- Effective systems and institutions for monitoring and reporting and environmental quality and inspection;
- Procedures and tools for raising the environmental awareness of industry and the public in order to secure understanding, co-operation and support for environmental measures;
- Administrative and judicial recourse in relation to (actual and threatened) violations of environmental laws accompanied by appropriate systems of adequate and dissuasive fines and penalties and including provision for liability under criminal jurisdiction for serious violations;
- Training of staff and affected sectors of society;
- Adequate funding of implementing and enforcement institutions.

#### 4. Indicative Budget (amounts in EUR)

			SOURCES OF FUNDING										
			TOTAL EXP.RE	TOTAL PUBLIC EXP.RE	IPA COMMUNITY CONTRIBUTION		NATIONAL PUBLIC CONTRIBUTION					PRIVATE CONTRIBUTION	
ACTIVITIES	IB (1)	INV (1)	EUR (a)=(b)+(e)	EUR (b)=(c)+(d)	EUR (c)	% (2)	Total EUR (d)=(x)+(y)+(z)	% (2)	Central EUR (x)	Regional/ Local EUR (y)	IFIs EUR (z)	EUR (e)	% (3)
Activity 1													
Twinning	X	–	1,300,000		1,235,000	95		5	65,000	-	-	-	–
Activity 2													
Technical Assistance	X	–	2,500,000		2,250,000	90		10	250,000	-	-	-	–
Activity 3													
Supply	–	X	800,000		600,000	75		25	200,000	-	-	-	
TOTAL IB			3,800,000		3,485,000	91.7		8.3	315,000				
TOTAL INV			800,000		600,000	75		25	200,000				
<b>TOTAL PROJECT</b>			<b>4,600,000</b>		<b>4,085,000</b>				<b>515,000</b>				

NOTE: DO NOT MIX IB AND INV IN THE SAME ACTIVITY ROW. USE SEPARATE ROW

Amounts net of VAT

(1) In the Activity row use "X" to identify whether IB or INV

(2) Expressed in % of the **Public** Expenditure (column (b))

(3) Expressed in % of the **Total** Expenditure (column (a))

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## 5. Indicative Implementation Schedule (periods broken down per quarter)

Contracts	Start of Tendering	Signature of contract	Contract Completion
1. Twinning Contract	3 <sup>rd</sup> 2009	1 <sup>st</sup> 2010	1 <sup>st</sup> 2012
2. Technical Assistance Contract	3 <sup>rd</sup> 2009	1 <sup>st</sup> 2010	1 <sup>st</sup> 2013
3. Supply Contract	3 <sup>rd</sup> 2009	1 <sup>st</sup> 2010	1 <sup>st</sup> 2011

Duration of the project: 36 months

All projects should in principle be ready for tendering in the 1<sup>ST</sup> Quarter following the signature of the FA

## 6. Cross cutting issues (where applicable)

### 6.1 Equal Opportunity

Equal participation of women and men will be secured through appropriate information and publicity material, in the design of projects and access to the opportunities they offer. An appropriate men/women balance will be sought on all the managing bodies and activities of the programme and its projects.

### 6.2 Environment

This project will be carried out under environment sector. With this project it is aimed to prevent or reduce any adverse affects on the environment as far as possible, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human health by the management of waste from the extractive industries.

### 6.3 Minority and vulnerable groups

According to the Turkish Constitutional System, the word minorities encompass only groups of persons defined and recognized as such on the basis of multilateral or bilateral instruments to which Turkey is a party. This project has no negative impact on minority.

Because Turkey posses diverse mineral resources which should be exploited where they are, in many areas mining activities have been carrying out. This may cause adverse affects on the environment, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human who lives near mining areas. These project is aiming to prevent or reduce any adverse effects upon the environment, in particular for water, air, soil, fauna and flora and landscape, and any resultant risks arising to human health as a consequence of waste management from the extractive industries. Finally, positive effect of project will be realized by the people living near to mining sites.

## ANNEXES

- 1- Log frame in Standard Format
- 2- Amounts contracted and Disbursed per Quarter over the full duration of Programme
- 3- Institutional Framework
  - \* Role and responsibilities of the SPO
  - \* frequency of project management meetings,
  - \* who chairs, who attends and in what role
  - \* coordination mechanisms for multi-beneficiary projects
  - \* monitoring (roles, responsibilities of all actors)

- 4 - Reference to laws, regulations and strategic documents:

Reference to AP /NPAA / EP / SAA

Reference to MIPD

Reference to National Development Plan

Reference to national / sector investment plans

- 5- Details per EU funded contract (\*) where applicable:

For *TA contracts*: account of tasks expected from the contractor

For *twinning covenants*: account of tasks expected from the team leader, resident twinning advisor and short term experts

For *grants schemes*: account of components of the schemes

For *investment contracts*: reference list of feasibility study as well as technical specifications and cost price schedule + section to be filled in on investment criteria (\*\*)

For *works contracts*: reference list of feasibility study for the *constructing works* part of the contract as well as a section on investment criteria (\*\*); account of services to be carried out for the *service part* of the contract

(\*) non standard aspects (in case of derogation to PRAG) also to be specified

(\*\*) section on investment criteria (applicable to all infrastructure contracts and constructing works):

- Rate of return
- Co financing
- compliance with state aids provisions
- Ownership of assets (current and after project completion)

- 6- Justification for Project Duration and Study Visits

- 7- Need Assessment for Supply

## ANNEX 1: Logical framework matrix in standard format

<b>Logframe Planning Matrix for:</b> Mining Waste Management	<b>Programme name and number:</b>	Contracting period expires: 2 years after the DATE signature of the Financing Agreement	Disbursement period expires: 3 years following the end date for contracting
		<b>Total Budget:</b> EUR 4,600,000.00	<b>IPA Budget:</b> EUR 4,085,000
<b>Overall Objective</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	
To prevent or reduce any adverse affects on the environment as far as possible, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human health by the management of waste from the extractive industries.	Medium term priority of the Accession Partnership document is satisfied in 3 years after the project start.	EU Regular Report	
<b>Project Purpose</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
The purpose of this project is strengthening the waste management capacity of Turkey in the field of extractive industries by transposition of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries to the national legislation.	Transposition of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries to the national legislation and inventory of active, abandoned and closed mining waste facilities were completed in 3 years after the project start	1) Publication of Regulation on Management of Waste from Extractive Industries in Official Gazette. 2) MoEF website about inventory.	1) Turkey will continue to meet requirements of EU for accession
<b>Results</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
1) Waste management capacity of Turkey in the field of extractive industries was strengthened. 2) Inventory of active, closed and abandoned mining waste facilities was prepared. 3) Capacity of instrumental facility was improved.	1.1) The Directive 2006/21/EC was transposed in 24 months. 1.2) Guidance on financial guarantees, inspections, minimization, treatment, recovery of mining waste was prepared in 24 months. 1.3) Requirements for the construction of waste facilities were determined in 24 months. 1.4) All mining wastes characterized in 18 months. 1.5) Training : - 25 central staff of MoEF and stakeholders (who is directly responsible for the implementation of the legislation i.e. training of trainers) in 24 months. -80 central staff of MoEF and stakeholders	1) Publication of Regulation on Management of Waste from Extractive Industries in Official Gazette. 2) Guidance books 3) Inspection reports of stuff attending study visit. 4) MoEF web site about inventory of waste facilities. 5) Seminars attended list, certificates 6) Invoices	1) Cooperation between the Institutes and stakeholders will be continued. 2) All supplies will be delivered on time. 3) Guides and other documents mentioned in Directed will be prepared by EC.



	<p>(who is responsible for the implementation of the legislation) in 24 months.</p> <ul style="list-style-type: none"> <li>- 81 local staff of MoEF (who is responsible for the implementation of the legislation) in 24 months.</li> <li>- 120 people from mining sector in 24 months.(2 workshops)</li> <li>- 2 study visits to EU member states were performed about implementation of legislation in 24 months.</li> </ul> <p>2.1) Methodology report for risk-based inventory of closed and abandoned mining waste facilities was prepared in 6 months.</p> <p>2.2) 80 % of the waste facilities were classified in 36 months.</p> <p>2.3) 80 % of active, closed and abandoned mining waste facilities determined according to methodology developed by project activities were taken in the computer based inventory in 36 months.</p> <p>2.4) Preparation of rehabilitation plan for two mining waste facility as a sample in 36 months.</p> <p>2.5) Training:</p> <ul style="list-style-type: none"> <li>- 25 central staff of MoEF and stakeholders about closure and rehabilitation of mining waste facilities in 36 months.</li> <li>- 1 study visits to EU member states were performed about mining waste facilities (active, closed, abandoned and rehabilitated) in 36 months.</li> </ul> <p>3.1) Purchase of required equipments and software will be carried out in 12 months.</p>		
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Activities	Means	Costs	Assumptions
<p><b>Component I: Transposition of Directive 2006/21/EC</b></p> <p>1.1) Reviewing of existing institutional, technical and legal structure and establishment of required structure through gap analysis.</p> <p>1.2) Determination of requirements for the classification of waste facilities</p> <p>1.3) Preparation of guidance on minimization, treatment, recovery of all types of mining wastes.</p> <p>1.4) Preparation of procedure for the closure of waste facilities and monitoring after the closure.</p> <p>1.5) Determination of requirements for the construction of waste facilities</p> <p>1.6) Characterization of wastes.</p> <p>1.7) Preparation of waste management plan format.</p> <p>1.8) Action plan for the prevention of major accidents and minimization of affects.</p> <p>1.9) Preparation of licensing procedure.</p> <p>1.10) Preparation of guidance on financial guarantees</p> <p>1.11) Preparation of guidance on inspections (methods, sampling, etc.)</p> <p>1.12) Transposition of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries to the national legislation</p> <p>1.13) Study visits and to mining waste facilities in the EU countries implementing the Directive 2006/21/EC</p> <p>1.14) Training ministry staff who is responsible for the implementation of the legislation at the central and local level, and also staff of stakeholders.</p> <p>1.15) Workshops with mining sector and other related intuitions.</p> <p>1.16) Preparation of implementation and financial strategy for the implementation of Directive.</p>	<p>1) Twinning Contract for Transposition of Directive 2006/21/EC.</p> <p>2) Technical Assistance Contract for the Inventory of Closed and Abandoned Mining Waste Facilities.</p> <p>3) Supply Contract for the Improvement of Laboratory Facilities.</p>	<p>1) Twinning Contract: EUR 1,300,000</p> <p>2) Technical Assistance Contract: EUR 2,500,000</p> <p>3) Supply Contract: EUR 800,000</p> <p>Total Cost: EUR 4,600,000.00</p>	<p>1) Information about number and place of abandoned, closed and active mining waste facilities can be reached easily.</p>

<p><b>Component II: Inventory of Active, Abandoned and Closed Waste Facilities</b></p> <p>2.1) Preparation of methodology for risk-based inventory of closed and abandoned mining waste facilities.</p> <p>2.2) Data collection about mining sites and waste facilities especially from MIGEM archives.</p> <p>2.3) Site visits to the mining waste facilities (active, abandoned and closed,) and sampling and measurement of waste amount to determine the environmental risks.</p> <p>2.4) Study visits to mining waste facilities in the EU countries implementing the Directive 2006/21/EC (active, abandoned, closed and rehabilitated waste facilities)</p> <p>2.5) Laboratory studies to determine the waste characterization and environmental risks.</p> <p>2.6) Set –up laboratory especially for testing prediction of acid mine drainage of mine waste and training about methods used for prediction AMD</p> <p>2.7) Classification of waste facilities</p> <p>2.8) Preparation of computer-based inventory of active, abandoned and closed mining waste facilities.</p> <p>2.9) Preparation of rehabilitation plan for two mining waste facility as a sample.</p> <p>2.10) Trainings for the staff and workshops with mining sector and other related intuitions.</p> <p><b>Component III: Supply</b></p> <p>3.1) GPS's (Global Positioning System) and a Mobile In-Situ waste sampling equipment purchase for the in-situ studies.</p> <p>3.2) ICP–MS, XRF, mercury analyzer, colons purchase for the determination of acidic mine drainage potential and waste characterization.</p> <p>3.3) A modeling program purchase for the evaluation of environmental pollution risk.</p> <p>3.4) Scanner and OCR software purchase for digitizing of the mining archives.</p>			
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