

Regional project "Strengthening capacities in the Western Balkan countries to address environmental problems through remediation of high priority hot spots"

National component "Sustainable mining clean up and pollution management in Bucim and Lojane Mines" (00054814)

HOT SPOTS Project

Purpose: Briefer for the Main Project Activities for the Second Half of 2008

Date:

1. BRIEFING NOTE:

Lojane Mine:

The company concessionaire - Farmakom MB Zajaca decided to utilize the materials stored at the dump between villages of Vaksince and Lojane (in the immediate vicinity of the school). The plan is to transport the materials - 10.000 tons - containing Antimony (and Arsenic) to their plants in Serbia and process the ore there.

To this end, Farmakom MB Zajaca has begun procedure to get all necessary permits from the responsible authorities (primarily Ministry of Economy, but other line ministries, who need to issue a consent, as well).

A meeting was organized on 5th of June 2008 in the Hot Spots Project Office premises between the company representatives and the responsible authorities in the Ministry of Environment and Physical Planning (MEPP) in order to harmonize the next steps and to plan Hot Spots Project involvement and activities. It was emphasized by MEPP that a full Environmental Impact Assessment (EIA) Study needs to be made prior to getting a consent for the activities. With a slight delay due to elections, official information from the MEPP is that Environmental Study (lower level than full EIA) would suffice which will significantly shorten the procedures.

As of Sept 1st, 2008 the Environmental Study has been prepared (According to Farmakom MB) but not yet submitted to the MEPP for approval/consent. It is not clear when the Permit will be received.

Bucim Mine

Several activities are ongoing at the moment, the main being:

- Feasibility Assessment and Main Technical Design Water Protection Measures Bucim Mine:
 - PFP 21/2008 published in April 2008, offers received in May.
 - Selection of consultant (international, two-stage) completed & CAP approved.
 - Contract with Consultant BT-Engineering was signed on July 18th, 2008, and the activities begun is planned on July 28th, 2008. Contract amount : 165.500 ^ (VAT excluded, equivalent to 257,788.16 USD as per UN rate 1\$ = 0.642EUR in May 2008)
 - Draft Feasibility Assessment Report is expected in early September;
 - Completion deadline: 15 Nov 2008
- Fugitive Dust Control and Irrigation System Tailings and Tailings Dam Bucim Mine
 - Technical design – Part 1, comprising Intake, pumping station, pipeline and new water reservoir V=300 m³ has been completed. The design has been financed in parallel by Bucim Mine (part of co financing). The Project will cover the expenses for technical review of the design and expert validation of BoQ. Currently the review of project

documentation is ongoing and ToR and tender documents are under preparation for construction works/procurement of equipment.

- The design received did not cover the irrigation and sprinkling. Therefore Part 2 of the design comprising stable and mobile irrigation equipment, water cannons for wetting of the dry surfaces, and connection of the existing pipeline and equipment with newly designed equipment/reservoir has been tendered. Consultant has been selected and is pending approval by CAP. The design is planned to last 1 month – expected in early October.
- Afforestation of 10 ha of the tailings dam
 - Tender published (RFP 17/2008) no offers have been received. The tender had to be repeated (due to unfavourable climate conditions/season for planting) with reduced scope
 - Procurement of fertile soil for 10 ha of tailings dam (RFP23/2008) -published. Only one offer has been received. The tender was cancelled as non responsive because the offered amount exceeded the limit of 100,000 US\$. ToRs are under preparation for re advertisement of the tender.
 - Procurement of fertile soil for 10 ha of tailings dam (RFP35/2008) -published. Three responsive offers were received, and Contractor selected. Pending CAP approval. The completion of the task planned for second half of October.
- ToR for expert consultant on mining/mining waste remediation has been developed and the process of selection is completed. Doc. Dr Dejan Mirakovski has been engaged as expert consultant.

Demonstration & Information Sharing

- Preparations for the first study tour, planned for October 2008 are ongoing. It is planned for stakeholders from all 6 countries – namely representatives of municipalities/beneficiaries. The topic of the tour shall be either IPPC or mining waste management, depending on the availability of possible hosts;
- First announcement and brochure published for the regional Ministerial Conference (November 2008) on the topic of Addressing Global Warming Through Adaptation, Pollution Prevention, Reduction and Control. A consultant/reporteur has been selected. Preparation activities ongoing.
- A programme visual identity has been developed;
- Video clips for all remediation locations have been prepared & posted on the web;
- A company for production of a documentary movie (all 9 locations) has been selected, first round of shooting completed in August 2008;
- Advocacy strategies have been prepared;
- Hot Spots Programme (officially Regional Environmental Programme) web site is close to completion and already posted at the web. Staff training for web site management completed. All national projects will have also pages with specific texts in English and local languages;
- ToR Needs Assessment developed
- ToR for Assessment of environmental management mechanism and practices has been developed.

Strengthening Of The Professional Consultancy Services

- Database of environmental practitioners:
 - Questionnaires for individual practitioners and for companies/institutions /organizations developed;
 - Call for expression of Interest published in July, deadline for applications Sept 15th (papers & UNDP web site – CEI 40/2008)
- ToR for Market survey has been developed.

Main Project activities planned for second half of 2008:

Main Technical Design – Water Protection Measures (RFP 21/2008) - Bucim Mine:

- completion expected in November 2008
- preparation of tender & announcement for construction works.

Technical design dust control measures for irrigation and sprinkler system-Bucim mine:

- Preparation of ToR for construction & procurement of equipment
- Tender announcement (Oct 2008) – upon finalization & approval of Technical design – Part 1 and Part 2
- Estimated expenditures (Part 1) according to design – approx 12,8 Million MKD or 222.000 ^ - subject to change in the tendering procedure. Part 2 yet to be estimated.

Afforestation 10 ha of the tailings dam – late Autumn 2008

- Procurement & application of fertile soil for 10 ha of tailings dam (RFP35/2008) - completion of the task planned for second half of October. Value of Contract cca 85.000 US\$;
- Bucim Mine shall execute the role of Supervising Engineer with own staff. Soil Quality Control will be contracted – offers received and selection process ongoing;
- Tender on afforestation – procurement and planting of 35.000 nursery trees shall be announced in October 2008 – in order to be executed in planting season November – March.

Lojane Mine

- Follow – up of activities and steps taken by Concessionaire – Farmakom MB Zajaca.
- Elaboration of Action Plan of the Hot Spots project upon stipulations in Operational Permit, Environmental Impact Assessment (EIA) and the plan of site remediation.

Database of environmental practitioners:

- Compilation of applications (CEI 40/2000);
- Elaboration of Market Survey – completion October 2008.

Needs Assessment Study

- Announcement & tendering/selection procedure – September 2008. Study expected by November 2008;.
- Trainings and workshops to be organized based on the Study and other existing relevant documents – EAR Hot Spots Feasibility Report, MEPP Communication and Awareness Raising Strategy and others.
- Pilot projects - 3 capacity building projects implemented by local communities and NGOs (Announcement, selection, implementation, follow-up and dissemination of information)

Assessment of environmental management mechanism and practices

- announcement & selection of consultant

Ministerial Conference – November 2008

- Support & participation

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Annex I

Funds planned by the end of 2008 for Project implementation:

Description of goods, services or works	Estimated Total Price in USD	Start of Activity	Completion of Activity	Status as of 01.Sept 2008
Setup of expert roster & database	7.500	Jul 2008	Sep 08	In progress
Market Survey of professional services	10.000	Sep 2008	Oct 2008	
Air protection measures- re-vegetation - procurement of soil for cca 10 ha of the tailing dump	85.000	Jun 2008	Oct 2008	Tender proc. Completed Contract prepared –to be signed
Air protection measures - fugitive dust control system TECHNICAL DESIGN	20.000	Jun 2008	Aug 2008	Final stages of preparation
Market survey - consulting companies, experts, institutions	20.000	Sep 2008	Oct 2008	ToR prepared – to be tendered
Shooting of the documentary movie	20.000	Jul 2008	Jun 2010	(Regional Activity)
Air protection measures - fugitive dust control system REVIEW of TECHNICAL DESIGN	-	Oct 2008	-	Made by PMU
Air protection measures - fugitive dust control system CONSTRUCTION – Part 1	330.000	Oct 2008	Dec 2008	Design not completed yet
Air protection measures - fugitive dust control system CONSTRUCTION - Part 2	100.000	Oct 2008	Dec 2008	Design not completed yet
Assessment of environmental management mechanisms and practices	30.000	Oct 2008	Dec 2008	ToR prepared – to be published in September
Measures for protection of waters - technical design	258.000	Jul 2008	Nov 2008	Consultant selected – work in progress
Measures for protection of waters - REVIEW of Technical Design	18.000	Oct 2008	Nov 2008	Consultant selected ToR under preparation for Review
Air protection measures - fugitive dust control system SUPERVISION of CONSTRUCTION	5.000	Oct 2008	Dec 2008	Design elaboration in progress – tender
Measures for protection of waters - LOT 1 Construction	?	Sep 2008	Nov 2008	Probably not in 2008
Training courses/ seminars/ and workshops for local stakeholders organized	10.000	Oct 2008	Mar 2009	
Pilot projects	13.500	Nov 2008	Feb 2009	
Media campaign and awareness raising	10.000	Sep 2008	Mar 2009	
Air protection measures- re-vegetation - Re-cultivation of cca 10 ha of the tailing dump	50.000	Nov 2008	Jan 2009	To be executed in planting season Nov-Mar
Air protection measures- re-vegetation - SUPERVISION of Re-cultivation works	4.000	Nov 2008	Jan 2009	- -
Total:	991.000			

2. HOT SPOTS PROJECT

Programme Period: 2005 - 2009
CPAP Programme Component: Sustainable development, environment protection and management of natural resources
Project Title: Sustainable mining clean up and pollution management in Bucim and Lojane Mines
Atlas Award ID: 00054814
Start date: October 2007
End Date: September 2010

PAC Meeting Date 4 January 2008

Estimated annualized budget: _____
Total resources required: _____
Total allocated resources:
• Duch Government \$US 2.118.840
• Regular _____
• Other:
○ Bucim Mine ^ 573.000
○ Government MKD 6.000.000
○ Unfunded budget: _____
In-kind Contributions:
• Bucim Mine ^ 397.000

Project objectives

The umbrella programme "Strengthening capacities in the Western Balkan countries to address environmental problems through remediation of high priority hot spots" focuses on environmental clean up and remediation of polluted industrial hotspots that have been identified as high priority but have seen limited progress so far due to complexity of issues and the costs involved. The programme will contribute to the achievement of the overall objectives in the region:

- Increased capacity of the national and local governments in the Western Balkan to implement sustainable environmental policies in accordance with EU standards;
- Strengthened regional cooperation in the Western Balkan to solve problems of cross border contamination due to industrial and mining activities.

In line with the overall objectives of the regional component, specific objectives of the national component are:

- Securing significant progress in mitigation of negative impact of the mining operations to the environmental media (air, water, soil) in Bucim and Lojane Mine;
- Enhancing capacities for good environmental management at local and national level;
- Increasing public awareness/knowledge on issues related to environmental hotspots;
- Contributing to regional cooperation through improved information sharing and supply of professional consultancy services regarding good environmental management.

Expected outputs and activities

The overall programme that is implemented in the participating countries is organized in three components: 1) Clean up and remediation; 2) Demonstration and information sharing; 3) Strengthening supply of professional consultancy services;

Component 1. Clean up and remediation

The clean up and remediation is the main component of the project. Bucim and Lojane Mine were selected as a pilot locations in Macedonia based on the previously agreed criteria.

Project funds will be provided to each site in accordance with the needs identified in the preparation period of the project, contribution of own resources and absorption capacity.

The project intervention in Bucim will consist of measures for protection of waters and air protection measures.

1) Measures for protection of waters

In order to ensure complete solution for treatment and control of the effluent and mine drainage water a system for collection and treatment of the waters will be constructed. It will be comprised of the following independent water collection systems:

a) water collection system for waters from open pit which will include pumping stations and pipelines to remove and pump the waters from the open pit to the tailings pond where this waters will be recycled and used in the ore processing processes;

b) water collection system for drainage waters from waste rock dump that will include: drainage channels surrounding the dump drainage well for collection of shallow ground waters; collection pond; system for primary water treatment including columns with absorption material; system for secondary water treatment (passive) including settling ponds and alkalinity producing lake; pumping stations and pipeline for transportation of the water to the tailing pond.

2) Air protection measures- re-vegetation

The new mine operators inherited the tailing dam that was left almost unprotected and prone to wind erosion. In order to prevent the airborne pollution as well as to contribute for stabilization of the dam, the surface of app. 20 ha of the tailing dump will be re-cultivated with a method of direct re-vegetation on biologically inactive materials. This method is much more efficient, less costly and provides better results in comparison to the classical methods that include covering the tailings with soil and manual planting of the vegetation. As part of their air pollution prevention measures the company has applied this method at the dam and the results have been very positive.

3) Air protection measures - fugitive dust control system

In order to prevent fugitive dust emission from the tailing dam a comprehensive system with fog canons will be used. The system consisting of four fog canons and the necessary accompanying equipment (water pipes and pumps) will cover the dry tailings area, generating artificial fog thus preventing the air erosion. This system could be designed to work automatically which will reduce the needs for manpower and maintenance.

This component shall also concentrate on:

- Securing sustainability through stakeholder involvement
- Evaluation and dissemination

Component 2. Governance & Policy Integration/Demonstration and Information sharing

This component will aim to promote access to information related to the state of the environment and to demonstrate benefits of good environmental management through concrete small demonstration projects.

The demonstration Pilot Projects intend to strengthen capacities of local communities, NGOs and other entities for good environmental management and implementation of environmental projects in the project region. These projects, selected in an open public competition shall be later used as examples of good environmental practices nationwide.

The examples of the clean up projects in Lojane and Bucim will be used as case studies on environmental management policies and practices in the mining industry. The studies will focus on current practices, existing bottlenecks and opportunities for improvement.

Specific activities will be organized to promote data collection and free access to information in order to create an enabling environment for enforcement the environmental policies and laws in an effective and efficient manner.

Output 2. Good environmental management in the mining industry integrated in the main policy documents on national and local level and enforcement capacities strengthened.

Indicative activities:

- Assessment of environmental management mechanism and practices
- Pilot projects - at least 3 capacity building projects implemented by local communities and NGOs (Announcement, selection, implementation, follow-up and dissemination of information)
- Promoting access to information and environmental data collection
- Promoting information sharing between governments and stakeholders in the region
- Capacity building activities

Component 3. Professional Consulting Services

In order to meet the objectives and secure sustainability and multiplication of its results, the implementation of the project will be based on involvement of domestic/regional professionals as much as possible (individuals, private sector and public institutions) in project demonstration activities at the local and national level.

In the beginning of the project a market survey will be conducted of domestic experts from business and NGO sector already working in the field of policy development, with particular emphasis on those experienced in environmental management and sustainable development. CVs of potential experts and profiles of companies will be collected and presented in a database. This database will facilitate the identification and selection of experts for specific project activities. It will also be made available to local/national authorities for use in their own procurement procedures, as well as to other donors.

Output 3:Enabling environment for promotion of environmental consulting services created.

Indicative activities:

- Market survey of professional environmental services
- Establishment of a roster of qualified experts
- Promoting environmental governance practitioners network