



Learning from Slovak experience in environmental management and remediation of priority mine sites

Slovak Republic, 25th – 31st October 2009.

UNDP Montenegro organized in frame of the Western Balkan Environmental Programme for 2009 a study tour to Slovak Republic from 25th- 31st October. The subject of the study tour was “Learning from Slovak experience in environmental management and remediation of priority mine sites” and the main topics of the study tour were:

- To observe the methods by which common mining problems have been identified and addressed in Slovakia and which can be applied within the Western Balkans on similar problems
- To network with the Slovak mining and environmental protection community and to facilitate information exchange between Slovakia and the countries of the Western Balkans in order to improve the situation on the mine sites and related industries
- To observe the full range of environmental problems that has occurred in Slovakia and learn about the specific management approaches and technologies that have been applied with a special focus on acid mine drainage and heavy metal management/ treatment
- To learn about the legislative framework and policy framework, capitalization costs of works and breakdown of responsibilities that are used within Slovakia as a reference point for managing mine remediation and environmental management within the Western Balkans.

Participants on the study tour were mining experts from six countries/ territory: Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, UNATSCR1244 Kosovo and Serbia. The host organization in Slovakia was the Comenius University in Bratislava, with Mr. Peter Sottnik and Mrs. Bronislava Lalinska acting as project manager and project assistant from their side.

During the study tour, the participants had in the first day a presentations session with the emphasize at a) the legislative framework and policy framework of mining waste management, identification and prioritization process of mining waste, and b) at application of remediation technologies.

In the next four days the participants have visited next sites:

- Pezinok – Kolarsky vrch, Trojarova and Augustin adits. These are abandoned Sb, Au and pyrite deposits. The participants could see the acidification of the small creek, the natural oxyhydroxides wetland, tailings impoundments. The acid drainage represent the largest source of Sb and As contamination in the area
- Dubrava – is the biggest Sb deposit in Slovakia that was closed in 1991. The closed adits, mining dumps and large tailing impoundments are the source of Sb and As contamination of waters, soils and stream sediments in the whole valley.
- Rudnany – is a mine site with Fe, Cu, Hg and other metals, Ba deposit with hydrothermal siderite-sulfides mineralization. The participants have visited Porac mine area, the last active part of mining area with barite exploitation, and tailing impoundments. Approximately, 12 million tones of tailing material is deposited there.
- Smolnik – abandoned and overflowed volcano-sedimentary Cu deposit. The participants could see the acid mine drainage from the drainage shaft, with high mineralization directly flowing out to the Smolnik creek. They could see the effect of the acid mine water to the Smolnik creek catchment, transport of contamination in form of solid phase to the Hnilec river and consequently to the water reservoir Ruzin.
- Jelšava – the participants have visited the metasomatic magnesite deposit “Dubravsky masiv”, the biggest magnesite mine in Slovakia exploited at first from surface (old quarry) and from 1965 by underground mining. New (actually used) mining method utilizes the material from the old waste dumps as a fundament and material from dumps is transported back to the mine.
- Hodrusa – Hamre – the participants have visited the historical gold (and Pb-Zn) mine from 14th century “Vsech svatych”, the actual gold processing factory and tailing impoundment.
- Sobov – locality Sobov near Banska Stiavnica became famous due to an environmental accident, related to strong acidification of the environment. There is an open pit used for exploitation of metasomatic quartzite and heaps with waste material from the pit.