

**Meeting Summary of the NATO CCMS pilot study on  
"Prevention and Remediation Issues in Selected Industrial Sectors"  
Baia Mare, Romania on Sept. 7 – 10, 2003**

This was the first meeting of the newly formed, three year Pilot Study on Prevention and Remediation in Selected Industrial Sectors. It continues and elaborates upon work done in a previous CCMS project involving emerging and demonstrated technologies for contaminated soil and groundwater. This meeting involved twelve countries on the subject of non-ferrous mining. Additional countries expressed interest in the Pilot Study as other sectors are considered in subsequent years.

Presentations involved work being done at large scale mining projects in Romania, Canada, and other countries to reprocess existing tailings and wastes as well as to control mine run off. In addition, World Bank representatives outlined plans for a \$250M project to protect and improve mining waste conditions in the Tisza Basin (mostly in Romania) and the EU representative presented information on an inventory and assessment of mining issues in Central and Eastern European countries planning to join the EU. Abstracts of the powerpoint presentations and the slides will be available on the NATO web site ([www.nato.int/ccms](http://www.nato.int/ccms)) and on TIP's web site [www.cluin.org](http://www.cluin.org) by late fall. Copies of most of the powerpoint presentations and abstracts are currently available for downloading at [www.cluin.org/romania](http://www.cluin.org/romania).

### **Highlights**

- Baia Mare was the site in 2000 of a massive cyanide lagoon dam collapse which killed fish in both Romania and in Hungary and caused international focus on the integrity of tailings dams in Central and Eastern Europe. Thus, hosting this venue for the Pilot Study was an important statement for the Ministry of Agriculture, Forests, Waters and Environment, the Prefecture, the County, and the Mayor of the city to showcase advances in environmental protection. Mining has been conducted in this region since Roman times, so the economy and environment are vitally connected here.
- The EU Joint Research Centre representative presented an overview of mining waste issues in the future EU accession countries at the meeting. Thirty three of Romania's counties have mining activity with extensive coal and non-coal mining. There are 109 tailings dams, of which 50 are operational. Between 1990 and 2002, over 200 mines have closed at an estimated cost of 300M\$US. The Centre has piloted a web based database to describe the emissions and potential from mining sites in CEE.
- The UK Tour de Table outlined the UK contaminated land issues in the context of the EU. With 300k - 1.5 million sites in the EU, the UK estimates it has about 100,000 sites of which 5-20,000 are problems. The market for cleanup in the UK is estimated at 1.1B\$US, while the EU is estimated between 59 - 109B Euros. Much of the UK discussion of its program development cited EU current and projected directives as drivers. For example, the Landfill Directive in 2005 will cause separation of haz and non-haz waste and drive up the price of land disposal. The Water Framework Directive, and its groundwater "daughter", will cause the classification of water bodies, while the Environmental Liability Directive will recognize land damage as "creating serious potential or actual damage to public health of soil or subsoil"; however, land will only

need to be restored to cause no further harm, not restoration per se—as in the case of biodiversity. There is also a working group on a European Soil Strategy which has one subgroup on contaminated land. So, there will be much new activity on this topic over the next two years both for current EU members and the new accession countries.

- The Canadian Tour de Table cited 10,000 abandoned mining sites with strict new requirements on new mines for reclamation bonds. Sites owned by the Federal government are receiving extra appropriations this year with a doubling of the budget from \$30M for management of mining sites.
- The U.S. presentation highlighted the various estimates by Federal agencies of the number of abandoned mining sites on Federal land and pointed to three sets of resources for information on mine waste and tailings remediation—the joint EPA/DOE Research Center at Butte, MT, the HSRC led by Colo. State Univ., and the survey of full scale acid mine drainage technology projects conducted this summer by an EPA intern. In addition, a World Bank consultant who attended was a mining expert and member of the faculty at Univ. of Nevada–Reno. He outlined some other international and national resources on acid mine drainage control and the new sustainability approach to mining that are available on the university’s web site and elsewhere—especially at [www.unr.edu/mines/adti](http://www.unr.edu/mines/adti)—and one other web site <http://ecorestoration.montana.edu>.
- Another U.S. expert speaker from NIOSH (former Bureau of Mines) discussed a recently completed RAND study on the Future of Mining and trends in mining technologies.

Outputs from the meeting will include a book of abstracts and a CD containing all meeting presentation materials (i.e. powerpoint slides); they will be NATO publications. Multiple copies of the CD and the book of abstracts are sent to each country representative to assure broad dissemination. In addition, all the meeting presentation materials are mounted on the CLUIN web site at: [www.cluin.org/romania](http://www.cluin.org/romania)

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