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Classification and assessment of abandoned mining waste facilities of the Czech Republic

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An Act on mining waste management, which implemented the provisions of “Directive 2006/21/EC of the European Parliament and of the Council on the Management of Waste from Extractive Industries” came into effect in the Czech Republic (CR) in 2009. In connection with meeting the provisions of this Act, the Ministry of the Environment (MoE) charged the Czech Geological Survey (CGS) with identifying closed and abandoned mining waste facilities and with maintaining an Inventory of Hazardous Mining Waste Facilities. In order to fulfill these tasks, the CGS prepared the project “Investigation of closed and abandoned mining waste facilities posing a serious risk to the environment or human health” as part of its Operational Programme Environment. The project was carried out in 2010–2012 and involved three basic objectives that were fulfilled:

- to collect relevant material for the creation of the Mining Waste Facilities Inventory in the CR;
- to develop a methodology for the assessment of abandoned mining waste facilities;
- to create a Register of Hazardous Mining Waste Facilities in the CR.

The first step was to review and supplement the existing Mining Waste Database which had been developed in 2001 and contained a total of 6,647 entries. The next step was to identify 300 potentially hazardous mining waste sites which were selected according to criteria of a newly developed methodology of risk assessment based on the recommendations set out in a document for the preliminary screening of mining waste sites in EU countries. At all 300 identified localities field investigations were carried out and the results were compiled in detailed final reports for each of these mining waste facilities.

Finally, the Inventory of Hazardous Mining Waste Facilities was created. This included those sites which had attributes corresponding to waste facilities of Category I as defined in the Act on mining waste management. This inventory is publicly available on the CGS website as a web-based mapping application. Users can view the location of each site on various map layers (topographic, satellite and historical maps), including basic information on the type and level of risk. As of January 2015, the inventory contained a total of 14 hazardous sites.

