

REGION OF BAIJA MARE: INVENTORY OF AREAS AFFECTED BY MINING ACTIVITIES

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The activities of geological research and exploitation of base metal ores contribute in a certain way to the degradation of the environment. Among the positive results of geological exploration and mining activities on the Neogene hydrothermal ore deposits of the Baia Mare area, we could also consider the fact that 14 new mineral species as well as several mineral varieties were identified here. The famous „mineral flowers” from this zone are also present in mineral collections all over the world. Some base metal ore deposits contribute extensively to the national economy, which defines the state of Baia Mare as a mining region, providing about 60% of the base metal production of Romania.

Exploitation and mineral processing are the principal pollutants in this zone. Pollution and degradation are caused by:

A. Mining wastes – they represent sterile deposits resulting from the mining works done outside the ore. When talking about these deposits we must take into consideration the following aspects: water pollution by leaching and the washing out of fine grains. Mining waste heaps can slide and block the valleys, can cause floods, not to mention marring of the landscape. In the region of Baia Mare there are 60 mining waste deposits among which 6 are still active, having a volume of 1,047,892 m³ in an area of 7.22 ha, and the rest of them are abandoned, covering a surface of 38.98 ha and having a total volume of 1,863,272 m³.

B: Tailing ponds – these represent waste deposits resulting from mineral processing. The depositing technology is realized by hydro-transport, therefore the wastes are found as submillimetric fine grains. The problems associated with tailing ponds are the pollution of rivers, phreatic water, and soil, pollution of villages and towns with dust from the surface of tailing ponds, and again, the marring of the landscape. In the region of Baia Mare there are 8 such tailing ponds, stretching on a surface of 308.7 ha. The quantity of their waste was estimated to be 77,026,944 t on 31 December 1997.

C. Quarries – from economical reasons, the exploitation rate of quarries is constantly increasing, because considerably bigger productivity is realized compared to those obtained in underground works, now that the exploitation of low content ores has become possible. But these, after having been exploited, are deserted and raise great environmental problems: they cause landslides, block valleys, pollute waters and mar the landscape. In this region there exist 6 quarries of a total surface of 53.6 ha, out of which only 10.3 ha have been re-integrated in the economical cycle.

D. Underground works affect the physical stability of the soil surface. Especially the deserted galleries raise problems because of their susceptibility to collapse and the implicit danger to cause accidents (zones of Baia Sprie and Suior Mining Exploitation).

References

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