

Legacy Issues in Armenia's Mining Sector, in particular, Old and Improperly Closed Abandoned Mines

Policy Brief

Positioning of the problem

Legacy issues of the Armenian mining industry, in particular, old and improperly abandoned mines are associated with immediate risks to the environment and human health (for example, collapses due to instability of underground or open-pit mine workings, the occurrence of acid mine drainage, etc.), long-term environmental risks, as well as the feasibility of their further use.

Not all residual mineral reserves can have sufficient value, and their recycling may be economically unprofitable, so the obligations to implement measures to restore the territories of these mine areas and mitigate disasters remain with the state.

The implementation of works related to the preservation of abandoned/ownerless industrial landfill and closed objects of subsurface waste formed as a result of the extraction of metal minerals and geological research, as well as the assessment of the impact on the environment and public health, the prevention of disasters and the elimination of their consequences, also remains with the state.

Previously conducted research in the mining industry included legislative and institutional regulation and their analysis, and proposals were made to eliminate the identified omissions.

The main legislative and institutional issues and gaps identified

The reserves of old and improperly abandoned mines can be provided for use only after their revaluation and reapproval by the authorized body. The information required by the legislation for revaluation, obtained during the operation of mines, is submitted to the authorized body after the expiration of the subsurface use right or in case of refusal. Therefore, complete geological information about previously partially exploited mines should be available to the public, otherwise, the work on revaluation of their residual reserves is unrealistic.

The possibility of safe use of mountain excavations or their replacement, the environmental and social consequences resulting from the previous mining, as well as measures to eliminate them play a key role in the further exploitation of previously exploited mines.

Work on the development of safety measures for further operation is time-consuming and requires large financial resources. However, the RA legislation does not provide permits to conduct such important research.

As a result of geological studies carried out in the mines of the Republic of Armenia in different years (pre-Soviet, Soviet and post-Soviet), subsurface waste generated during the passage of underground excavations, the empty rocks in the mines that enclose the ores on the sides and cover them, minerals classified as non-balance reserves are placed on the territories of study or mines, on the surface of the earth as subsurface waste without recultivation of their surfaces in order to develop a technological scheme for extracting metals. The restoration of the above-mentioned facilities, as well as the implementation of long-term environmental monitoring programs in the facilities after the rehabilitation works was inherited by the state.

In the Republic of Armenia, the law prohibits the construction of an upstream tailings storage facility, but it becomes an obstacle to obtaining the right to subsurface use, since there are no standards and rules established by law for the construction and operation of downstream tailings.

Preliminary recommendations for policy development to improve the current situation

In order to solve the environmental problems that have been inherited, as well as the installation and protection of the tailings generated as a result of ore processing for new subsurface use, it is proposed to **urgently** implement legislative changes.

1. Prior to the commissioning of partially exploited mines, provide economic entities with the opportunity to assess the possibility of further safe operation or their replacement of previously excavated mines. In order to assess the environmental and social impact resulting from the (formerly) operation of the mine, as well as measures to eliminate them, in particular, carry out the *cost-benefit* calculation necessary for the reassessment of the mine resources.

2. Establish preferential conditions in the process of granting the right to subsurface use and extraction of minerals for partially exploited mines, if the economic entity undertakes to eliminate the consequences of the negative impact on the environment that arose in the past as a result of mining from this field, and to preserve the former subsurface waste facilities.

3 . In case of providing the mines with the approved reserves as a result of the geological studies carried out before 2017, establish in the concluded contracts the obligations of protection of the subsurface waste objects arising as a result of the geological study.

4 . Establish appropriate standards for the construction and operation of tailings to eliminate obstacles to the granting and realization of the right to subsurface use.

5. Make primary geological materials on partially exploited mines and detailed information on the residual reserves of the field available to the public, as well as increase online access to already digitized geological stock materials, especially in the context of COVID-19 pandemic.

Non-urgent recommendations

1. Establish a legislative framework for not passing on to the state the problems of protecting the territories extracted by minerals in the case of the denial of the right to extract subsurface minerals.

2. Take measures to fulfill the requirements of Part 10 of Article 80 of the RA Code on Subsurface Resources.

International best practice

Previously exploited mines in Albania are provided for subsurface use as a result of negotiations with the Government. The basis for the latter is the principle of distribution of obligations between the state and the future subsurface user on taking on obligations related to the solution of environmental problems inherited by the state.