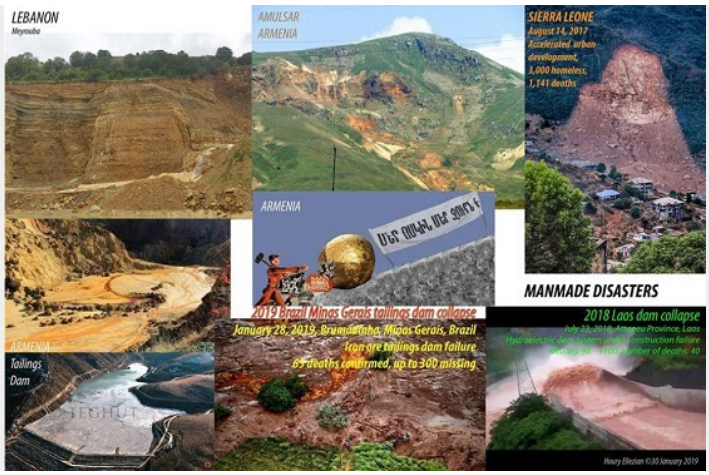
HAZARDS AND THE HIGH HUMAN COST OF MINING IN ARMENIA

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With special message to investors

Houry Ellezian, Montreal, May 2020

When I recently read "If a disaster occurs, will cleanup be possible?" by Dr. Joseph Dagdigian in Keghart.org, my first response was in a comment, so lengthy, that I later decided to write a separate article about it. I can confidently say that the answer is a painful NO.

Indeed, if a disaster occurs, cleanup will not be possible, and consequences will not be controllable or governable for the next hundreds of years. Recovery both economic and ecologic will be much more expensive than the 'profit' itself. Furthermore, one must wonder, has the mining sector made the ordinary citizens any richer?

Even without a disastrous event, we are witnessing long term and slow damage to the environment: a much faster rate of erosion that would normally take millions of years to happen; mountains will never come back. Increasing number of mines, both legal and illegal, metallic and non-metallic cause irreversible damage. Most importantly, the exploited resources are not renewable, EVER.

Thus, we observe that whole mountains have been removed during the lifetime of one generation alone, changed the landscape forever, with utter disrespect to the laws of nature, and disregard to the existence of entire villages, their livelihoods, ancestral artifacts, monuments, and more importantly, the legacy that will be left to future generations. For example, you will not be able to sing «Սիւնեաց Սարեր» anymore!

Myths: We often hear phrases like "we will monitor" or "responsible mining" or "modern technology"; all are marketing words and promises with pinkish diagrams and beautiful presentations - comically, by the interested parties themselves. Most are very far from reality and not applicable on the ground. No matter how well one's monitoring capabilities are for example, they can only indicate how bad things are, but cannot stop an irreversible process and prevent a developing catastrophe. We have live examples of already existing mines, whose actors have said the same things before. But really, how responsible have they been? Companies have constantly changed owners, partners, directors, with eventual bank takeovers, who do not understand and do not care, only take the valuables and leave the republic with the dire consequences, and citizens with the poisons.

Chemicals: very dangerous chemicals have been introduced into the environment; each day we learn about something new and shocking, like the cyanide basins in the Ararat plain. The latest news was about the huge numbers of birds, which thought they were landing on clean water, but dying and buried secretly there. The open mines with chemically active heavy metals threaten with the risk of acid drainage -- already happening in older mines -- that will ultimately seep into water systems, both underground and above ground, and will poison the environment and corrode any existing construction; e.g. water pipes, tunnels and dams. These chemicals do contaminate drinking

and irrigation waters, hence the soil and the food chain - already reported in the past. There is even a speculation that uranium -- a radioactive element -- has already been released into the air from older mines, since uranium occurs in association with gold. In Amulsar, uranium was already discovered in the past, and no doubt people will be exposed to it, if the designated mine starts operating there. See YouTube video Ամուլսար - Ի՞նչ ակնկալել

Stability: one cannot ignore the importance of stability, which is a delicate balance between load, slope angle, geologic structures and seismicity. There is a high possibility of landslides due to explosions, and impending failure of dams full of poisonous tailings. More so with the continuous addition of load in tailings. Environmentalists also report not up to standard base linings under these dams. Destabilization can occur steadily with time, or worse, triggered by an earthquake of magnitude 5 degrees Richter scale and above.

Agriculture: mining is the antithesis of agriculture, it destroys the soil quality by enriching it with heavy metals, which burn and kill trees and plantations, poison irrigation water, kill cattle and fish. Mining converts a green area, much larger than itself, into a desert. See; "Artsvanik Village - Tailing Dump Instead of Agricultural Land Areas".

Health: the deteriorating health of citizens living near these mines and resultant voluminous tailings dams with their terrible odors, is obvious and proven. People living in the vicinity of tailings, report headaches and fatigue; children who were tested, showed very high amounts of heavy metals in their hair samples. Mine workers have become used to getting sick and dying early, they report about dying of cancer. They live there with their families, desperate, with no other option and no voice. These are the kind of jobs promised to be created.

Uprooting of endangered flora and fauna: according to the U.N. FAO report, between 1990 and 2010, Armenia lost 24.5% of its forest cover. In 1990 Armenia's total forest cover was 347,000 ha (12.3%), whereas in 2010 it became 262,000 ha (9.3%). Logging, cutting entire forests and fruit orchards to build mining facilities and excavations has become the norm, both in Armenia and Artsakh. They have uprooted near-extinct plants with their entire ecosystems of insects and butterflies, coupled with the disappearance of wild animals, like the Caucasian Leopard, all registered in the Red book of Armenia.

Archaeology and monuments: are other casualties of mining, with already established sites disappearing silently, and still undiscovered traces of humanity disappearing forever … and this is also a proven fact.

Tailings are the materials left over after the process of separating the valuable fraction from the uneconomic fraction (gangue) of an ore.

Houry Ellezian is a geologist/sedimentologist with work experience in seismology. She is an environmental activist.

(**Forthcoming articles will provide environmental damage in pictures and Amulsar**)

There are no comments yet.