

mm&P
mines, minerals & PEOPLE

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Impact of Mining on Environment - 4th August 2016

**Memorandum submitted to Department related to Parliamentary Standing Committee on
Science & Technology, Environment and Forests**

This written representation is in relation to the request by Department-related Parliamentary Standing Committee on Science & Technology, Environment and Forests which is examining the subject "Impact of Mining on Environment".

About mm&P

mm&P (mines, minerals & PEOPLE) is a growing alliance of individuals, institutions and communities who are concerned and affected by mining. The isolated struggles of different groups have led us to form broad national alliance for combating the destructive nature of mining. mm&P network is present in 16 states across the country. It has been found that there are nearly 1,00,000 illegal mines operating in our country and only 10,000 mines that are licensed. In this context the environmental impacts can be grossly underestimated. We request the committee to take stalk of the situation and take measures to stop illegal mines.

Environmental Impacts of Mining

The problem of mining is manifold. The destruction of the habitat by the mining industry undermines the possibility of any other use of the resources in the area. The Mining Industry is wide spread and severe adverse impacts are visible from small scale rat hole mining and stone quarrying to large open cast and deep underground mines. Broadly three main types of environmental impacts are distinguishable as a result of mining vis-à-vis change in the natural topography which results in restrictions for other possible uses of land, changes in hydro-geological conditions with consequences for both ground and surface water, air pollution due to dust and changes in the geotechnical conditions of the rock. The impacts vary with local conditions of the mining site. These changes caused by mining can give rise to various impacts on the geo-environment described below-

- Depending on the type of mining and the site of mining there are several types of impacts on land (physical and chemical). These range from formation of ridges, depressions, pits and subsidence on the surface as well as underground

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cavities affecting the stability of the ground. Furthermore, both the mine site and the area used for storing and dumping waste degrade land that could have been used for farming, agriculture etc.


- Impact on water resource is quite profound which includes lowering of the groundwater table. Water discharge into rivers, lakes and streams; leakage of tailing ponds etc alter the chemical composition of water rendering them unusable for other uses. Furthermore, depending on the chemical composition of the rock, the drained water usually becomes highly acidic resulting from accumulation of toxic and heavy metals.
- Atmospheric emissions during mining occur not only from internal combustion of engines but also from dust and gases released from blasts. Smelters are commonly used for mineral purification and emissions from these processes include particulate matter and gases such as sulphur dioxide, carbon monoxide and carbon dioxide. Although some mineral processing plants have flue gas purifications, these are never completely effective. The transportation of ore is mostly done in Lorries or rail wagons or on conveyor belts. While transportation, blowing wind carries the dust and particulate matter impacting the ambient environment and human well being polluting not only air but also water, soil and other property.
- The biosphere in general is affected by mining, mainly by pollution and degradation of land and vegetation resulting in loss of biodiversity. Mining has found to adversely impact the movement of wildlife especially those situated around wildlife sanctuaries and national parks.
- Mining causes deforestation and degradation of forest which impacts the hydrological cycle of the region. Destruction of forests leads to scarcity of other resources like edible plants, herbs etc which the local communities depend on.

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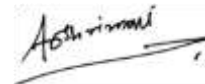
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- After exhausting the mine, the tailing ponds and over burden leach toxic chemicals into the ground water, rivers, streams and lakes. This has found to have adverse long term impact on the local ecosystem. The concerned authority should have a mine closure plan in place making it mandatory for the mining company to comply with the norms.
- Major minerals like coal, bauxite, iron etc are mined on a larger scale and the impacts are not only found in the vicinity of the mine but also downstream over longer distances.
- An environmental audit of operational mines needs to be done to understand the impact in detail on the ecosystem and ecology.

In view of the above impacts of mining, mm&P alliance requests the department related to parliamentary standing committee to take cognizance of the severity of the problems due to mining and initiate suitable measures to minimize the same.



Rebbapragada Ravi
mm&P Chairperson



Ashok Shrimali
mm&P Secretary General