

Environmental Issues in And Around Mine Areas of Iron Formations- A Study of Bellary District

Dr.Basavaraj S Sajjan

Guest Faculty, Dept of Economics, Post-Graduation Centre Sindhnur, Akkamahadevi University
Vijayapura.

Abstract:

The endless dust pollution has created a trauma on the psyche of the local inhabitants. And the mining related activities have become a nightmare for the longer population of this region. The welfare of the laborers employed in the mining works and their families are hardly looked after, while the mine owners make enormous wealth. If this kind of mining is continued for another 50 years, the area would be reduced a desert like region causing irreparable damage to the social, economic and ecological fabric several viable remedial measures have been suggested to improve the prevailing situation and to ensure a sustainable mining activity.

Keywords: mining, environment , health

Introduction:

Importance of mines for the welfare of human was recognized ages ago and they have played a very important role in the metamorphosing of hunter- gatherer human to become civilized. Accordingly, even in the ancient knowledge regarding the mining has been promoted to a very high level of sophistication, as manifested in the Ashokan pillar in Delhi. In addition, mineral resources contribute significant share in revenue generation in the form of exports, employment to thousands in direct and indirect manner. Minerals, however valuable they are, but finite in nature and are vital raw materials for many basic industries and essential ingredients for development.

India is endowed with significant mineral resources. India produces 89 minerals, 11 metallic, 52 non-metallic, and 22 minor minerals. The total value of mineral production was Rs.568, 070million in 200-2001. And in this production the Bellary mining area contributes the major portion. Bellary district is fairly well graced with the wide variety of minerals. Out of which iron ore deposits, manganese, lead ore, satellite, talk soapstone, graphite and gold deposits, yellow and red orches deposits, quarts, molding sand, ornamental stones.

Mineral production is vital for the economic and industrial growth of the country. But in a developing country like India the impact of mining, especially open cost mining is causing grave damage to people, society, and environment. Though the Indian mineral and environmental relations have clear- cut and stringent rules to prevent environmental degradation and distress to the local communities.

There is a serious lapse in the implementation of the laws, which has resulted in a kind of free for all situations especially in recent years, in the wake of the enhanced demand for iron ores. And the consequent step rise in price. Nowadays Bellary district having major environmental loss and welfare of the peoples. This mining activity posed a big threat to the entire ecosystem. Here the rain forests have been ravaged by mining.

The endless dust pollution has created a trauma on the psyche of the local inhabitants. And the mining related activities have become a nightmare for the longer population of this region. The welfare of the laborers employed in the mining works and their families are hardly looked after, while the mine owners make enormous wealth. If this kind of mining is continued for another 50 years, the area would be reduced a desert like region causing irreparable damage to the social, economic and ecological fabric several viable remedial measures have been suggested to improve the prevailing situation and to ensure a sustainable mining activity.

Indian mineral policy supports entrepreneurs, both public and private, to venture in to the development of mineral resources within the framework of environmental and societal welfare. India has a welfare concept in its administrative rules. The welfare means well- being of the people. Though the country has witnessed a fluctuating trend of investment in the mineral sector since independence, there is a steady growth of activity in exploration and mining of metallic and non- metallic minerals since the last decade, thanks to globalization influence. However the side effects of this growth are alarming largely due to adverse impact on the directly balanced ecology. Thus mining necessary, has become an unwelcome activity in India due to its multifarious impacts on environmental and human pollution.

Impacts of mining on society in mine areas:

Mining is a one of the major occupation in the country like India. And also it promotes the growth of the economy. In Karnataka, Bellary district have endowed with natural resources, and for this mining is a major once. And it promotes the more impacts on the local lively hoods of the area. As many reports says that mining impacts adversely on the human, wildlife, forest issues, rainfall etc.

Many mines in the country are beset with problems related to land acquisition. to sustain the present rate of mining and cater to the expanding needs, new mines have to be opened up on a regular basis.

A mine has to come up where the mineral deposit lies, be it below agricultural, follow, homestead, grazing or forest land. Already mining is not permitted in many areas, such as national parks, wildlife sanctuaries, coastal regulation zones and ecologically sensitive areas and such restrictions are likely to increase in future. Mine leasehold may consist of three different types of land, namely,

- 1) Forest land
- 2) Government owned land (other than forests)
- 3) Tenancy (or raiyati) land.

As the easily accessible mineral deposits get exhausted, new deposits in relatively in accessible terrains are being opened. Many of these remote locations are in forest areas and hence the mining industry needs an increased area of forest land from year to year.

Effects of mining:

A mining project not only affects the people whose lands and houses have been taken over, but also people living in the surrounding areas. The villagers are affected by the deterioration in

environmental quality of the region through water, air, and noise pollution and from ground vibration due to blasting and increased traffic on the roads. The mine becomes a competing user of the surface and ground water resources and may cause a reduction in water availability for the villagers.

However the impact on socio-economic environment is generally more severe than the other impacts. Most mines in India are located in remote forests or hilly regions with a significant part of the inhabitants being tribal or marginal farmers living on subsistence agriculture or animal farming. The start a new mine brings in a few jobs for the land owners and other villagers but for a vast majority of the villagers of the surrounding areas, hardly any benefit is accrued. On the other hand, influx of a large number of outsiders with a different life style and a much higher earning capacity give rise to social tensions.

The mining colony becomes an island of prosperity in the surrounding sea of poor villages. The price of consumables produced by the local farmers, such as, milk, fruit, egg, fish, vegetable, etc., goes up and sometimes beyond the reach of the villagers. In many cases, therefore, local villagers feel resentment towards the mining company and even simple incidences sometimes turn in to bitter relationships. Obviously, this is not a congenial way to carry out the business of mining plan for its growth.

To win the trust of the surrounding community and to maintain a cordial relationship with local inhabitants, most large mining companies these days carry out community development (CD) work in villages located near the mine either through the creation of a separate trust or through their own organizations.

In India some examples for this community development work were – TATA steel rural development society (TSRDS), Ambuja cement foundation (sponsored by GACL), VIKASH(of L&T cement plant at Awarpur), Birla cement works, HINDALCO, HZL, Neyveli lignite corporation(NLC), etc., are praise worthy.(1)

The study points out that Bellary district popular with minerals, forests wildlife and water sources are home to its poorest people. Mining in India has, contrary to government's claims, done little for the development of the mineral-bearing regions of the country (2). It has, in fact, triggered severe environmental and social consequences in the Bellary district. (3) As per the CSE report, take the case of Bellary in Karnataka, the hub of the state's iron mining sector. Uncontrolled, unscientific mining has devastated the region's agriculture, increased air and water pollution, and destroyed forests. Human health has been a casualty as well, a victim of the pathetic working conditions – the area has high incidence of lung infections, heart ailments and cancer. While on one hand the place lays claim to having the largest collection of private aircrafts in the country, it also suffers from acute poverty on the other.

CSE's 'State of India's Environment' reports have been widely acknowledged as the most comprehensive and authoritative series of publications on the subject of environment and development in India. The report on mining lives up to the reputation and the promise of using knowledge for change. Extensively researched and richly illustrated, Rich Lands, Poor People detail the issues of mining in different states of the country, impacts on environment and people, and policy reforms that are essential to practice more 'sustainable' mining.

As per the CSE report finds that "if India's forests, mineral-bearing areas, regions of tribal habitation and watersheds are all mapped together, they will overlay one another on almost the same

areas". Mining in India, therefore (it says), is bound to severely impact the land and the people – as is exemplified by most Indian states, including Karnataka.

The report paints a horrific picture of the devastation that has been wrought by mining in the country. The statistics are shocking:

1. Between 1950 and 1991, mining displaced about 2.6 million people – not even 25 per cent of these displaced have been rehabilitated. About 52 per cent of these displaced were tribal.
2. For every 1 per cent that mining contributes to India's GDP, it displaces 3-4 times more people than all the development projects put together.
3. Forest land diversion for mining has been going up. So has water use and air pollution in the mining hotspots. An estimated 1.64 lakh hectare of forest land has already been diverted for mining in the country. Iron ore mining in India used up 77 million tonne of water in 2005-06, enough to meet the daily water needs of more than 3 million people.
4. Mining of major minerals generated about 1.84 billion tonne of waste in 2006 – most of which has not been disposed of properly.

The report quotes extensively from the Karnataka government's publications to make its point. One of these is the state government's 2006 Human Development Report, which says that in Karnataka, forests in the Western Ghats and the Bellary-Hospet area bear minerals. Between 1980 and 2005, around 7,558 hectare (ha) of forest land in Karnataka was diverted for mining activities – this was about 8 per cent of the total forest land diverted for mining in India.

Another report pointed out that 38 per cent of the mine leases in Chitradurga, 66 per cent in Bellary and 96 per cent in Chikmagalur are in forest areas. Bellary, in fact, is one of the most severely affected areas. Karnataka has the largest reserves of high-grade iron ore in India – most of which is in Bellary. Fueled by international – especially Chinese – demand, the district witnessed a three-fold jump in iron ore production in the period 2001-06.

Bellary's bane has been its rampant illegal mining, says the report. "These mines are responsible for some of the most egregious violations of labor and environmental laws, including child labor and failure to manage waste or soil erosion," the report points out.(4)

Impact of mining on water resources:

Some studies point at situation in the Tungabhadra reservoir due to mining activities, "the total capacity of the reservoir was 133 thousand million cubic meter (TMC) but now it is only 99 TMC, the rest has been destroyed by silt. Another problem is that the clamor for exports leaves a very small percentage of iron ore for the domestic market. "Even Jindal, Kalyani and Kirloskar steel plants are beginning to feel the pinch, because they are getting adequate raw material".

Mining has also negative impacted the Vysanakere forest and Bellary reserve forest by fragmenting them. The dumping of waste material has caused a loss of top soil in Bellary forest, but the forest department is not too ruffled. This is a dry zone forest. With god's grace, we have lots of iron. We are compensated for the land and given money for afforestation, but many in the area still remember the mining belt as a forest area. And points out that while the district is dry; this area receives the highest rainfall of around 900 millimeters. Mining and development:

Mining is being promoted in the country for the wrong reason – employment. All state governments justify mining arguing that the sector will provide employment, but this is a chimera. The

formal mining industry in India employs just 5.6 people and this number is coming down. Has fallen in the mining sector as a whole.

It says the modern mining industry does not require people. Between 1991 and 2004, the value of mineral production in India increased four-fold – at the same time, employment plummeted by 30 per cent.

In fact, says Chandra Bhushan, CSE’s associate director and one of the writers of the report: “Modern industrial growth requires resources of the region — minerals, water or energy. It does not require people. Neither does it necessarily provide local benefits. If it provides employment benefits, it is outside the poor region in which it is based. It degrades the land and uses up local water, but does little to return back the wealth. Worse, the royalty on minerals goes to state exchequers, not to local communities. This will have to change.”(5)

Take the case of Karnataka. While the value of minerals produced in the state has continuously increased over the years, revenues from mining has remained a bare 0.7-0.8 per cent of the state’s total revenues. Moreover, illegal mining has been a huge drain on the state exchequer –Karnataka lost an estimated Rs 3,000 crore to it between 2004 and 2006. In comparison, the government’s royalty from iron ore in 2005 was a paltry Rs 80 crore³

How aware about mining-by the people of the area:

The people of the area are expressed their views about mining. They aware about mining because they basically living since from birth or long years ago. But because of environmental damage or mainly dust from the mining they are depressed. Mainly in the mining are there is a problem of maintenance of the mining dust. It irritates and severe loss to the people of the area. As per the Lokayukta report (2008) the people expressed their difficulties from mining in front of lokayukta. ”because of the mining and transportation of iron ore according to them, they are unable to keep their doors and windows of their house open even for few minutes during the day or night. And drinking water sources as well as vegetation have been covered by mineral dust. Consequently, the populations of the area have been suffering from various ailments and the people who are indulging in mining activities have absolutely no concern for the welfare of the local people.”(6)

As per the B.C.Prabhakar et al, sept (2007), opinioned that – the people of the area suffered by mining impacts, local people ask in disgust one pertinent question – why should they do mining? While there is a clear answer to their question in the mineral legislation of the country. And also the B.C. Prabhakar,et al, July(2008) in another opinioned that “hit by the mining impact and sensing the future dangers, and no remedies in the offing either from law enforcing authority or from the mine owners, local people ask in disgust one pertinent question – why should they do mining? It is not that the people are ignorant of the necessity of mining and mineral products in the modern day living, but effects of mining have driven them to such a frustration and agony. The mineral legislation of our country has stipulated very strict laws from the point of environmental conservation and the human health and safety during mining. But the question is who cares for them? In Sandur –Hospet- Bellary sector alone, barring NMDC.(a central government concern) and a very few private companies , majority of the private companies exercise callous attitude towards implementing environmental and mining regulation. While the pollution preventive measures, undertaken by them, as they show on records are rosy, the reality is disgusting. This speaks on the failure of law enforcing authority in minimizing impacts on local people and to keep a constant vigil on environmental conservation.”(7)

The ruins of Vijayanagara, the former capital of the Vijayanagara Empire flourished between the 14th and the 16th centuries in Hampi, Karnataka, they are listed as a UNESCO World Heritage Site. Only eight km away from this holy and peaceful place the hell of the Indian iron ore rush is taking place.

In India, the shift to privatization and open market economy after the new economic policies has pushed women and children into the informal labor force. Especially in sectors like mining where the deregulation of laws is common to attract direct and private investments. Meanwhile the collapse of agriculture due to recurrent drought and mechanization forced the landless agricultural laborers to look for other means of wage earnings.

The migrants from the decimated agricultural sector started floating from mining plot to mining plot searching for sustenance in an informal system of contract labor in the mining triangle.

By 2005, the hectic scramble for iron ore led to an uncontrollable social and ecological chaos in the Bellary – Hospet – Sandur district. Most of the mining operations are done by small illegal mining companies, which do not follow any environmental or social regulation.

The working and living conditions of the workers are highly exploitative, inhuman and do not have even the very basic amenities either for work safety or for minimum human living needs. Lack of even basic facilities has led to high level of insanitation, ill health and social chaos. Bellary has the highest incidence of HIV in Karnataka.

The mining dust, a suffocating rust-colored cloud coats everything in and around the mining triangle. Mine workers are developing more serious and chronic illnesses like tuberculosis, silicosis, cancers and respiratory illnesses so they became unable to perform any labor and have to push their children earlier into this hazardous industry.

Around 60,000 daily wage laborers work in the district in the iron ore mines, half of them children under the age of 14 and around 20,000 women. The daily wages paid for men is around 1, 20 euro, for women around 0, 76 euro and for children 0,53 euro, a family earns about 15-22 euro a week during the peak period.

Once famous for its sandalwood forests and abundant wildlife, the area now trembles with the blasting of ore-laden hillsides and the rumble of lorries transporting rock from the mines to ports around India. The uncontrolled mining has had serious consequences, from the illegal exploitation of forestlands to widespread pollution, rampant corruption and exploitation of child labour.(8)

In what could have a profound long-term impact on the State's fragile eco-system and endanger the tiger population, the Cabinet has approved large scale mining not only in the reserved forest in Bellary, but also in the Bolegoudankatte forest under the Bandipur Tiger reserve and Jedikatte reserve forest in the Western Ghats region. Apparently not considering or assessing the pros and cons, including the social and environmental costs of unchecked mining, the State government found it prudent to steamroller its decision, throwing even the Karnataka Lokayukta recommendations to the winds.

The cabinet threw open nearly 5,000 sq km of mineral rich, reserved forest area in Bellary (four blocks), Shimoga (one block) and Mysore (one block) for private sector mining. A majority of mining firms operating in the State have set their eyes on mainly four blocks in Bellary, which contains very high value iron ore.

district	Name of reserved blocks forest
Bellary	Ramghd, joga, gunda, hospet and donimalai,
shimogga	Jedekatte reserve forest in western ghats.

mysore	Bolegoudanakatte tiger reserve.
--------	---------------------------------

Nearly 5000 sq.kms of reserved forest area covering 6 blocks in 3 districts. In these four blocks in bellary has high value iron ore. And nearly 3000 applications pending seeking leases here. And government wants to allot captive mines to arcebr mittal and posco out of four blocks in bellary.

as per the CEC report “Take the case of Bellary in Karnataka, the hub of the state’s iron mining sector. Uncontrolled mining has devastated the region’s agriculture, increased air and water pollution, and destroyed forests. Human health has been a casualty as well, a victim of the pathetic working conditions – the area has high incidence of lung infections, heart ailments and cancer. While on one hand the place lays claim to having the largest collection of private aircrafts in the country, it also suffers from acute poverty on the other,” said Sunita Narain, director, CSE, speaking at the release function.

CSE’s ‘State of India’s Environment’ reports have been widely acknowledged as the most comprehensive and authoritative series of publications on the subject of environment and development in India. The report on mining lives up to the reputation and the promise of using knowledge for change. Extensively researched and richly illustrated, Rich Lands, Poor People details the issues of mining in different states of the country, impacts on environment and people, and policy reforms that are essential to practice more ‘sustainable’ mining.

Narain said: “The report acquires added significance in the light of the recommendations of the National Mineral Policy-2008 (NMP) – in fact, the report’s analysis and conclusions discount what the policy recommends.” Rich land, ravaged land

The CSE report finds that “if India’s forests, mineral-bearing areas, regions of tribal habitation and watersheds are all mapped together, they will overlay one another on almost the same areas”. Mining in India, therefore (it says), is bound to severely impact the land and the people – as is exemplified by most Indian states, including Karnataka.

The report paints a horrific picture of the devastation that has been wrought by mining in the country. The statistics are shocking:

1. Between 1950 and 1991, mining displaced about 2.6 million people – not even 25 per cent of these displaced have been rehabilitated. About 52 per cent of these displaced were tribals.
2. For every 1 per cent that mining contributes to India’s GDP, it displaces 3-4 times more people than all the development projects put together.
3. Forest land diversion for mining has been going up. So has water use and air pollution in the mining hotspots. An estimated 1.64 lakh hectare of forest land has already been diverted for mining in the country. Iron ore mining in India used up 77 million tonne of water in 2005-06, enough to meet the daily water needs of more than 3 million people.
4. Mining of major minerals generated about 1.84 billion tonne of waste in 2006 – most of which has not been disposed of properly.

The report quotes extensively from the Karnataka government’s publications to make its point. One of these is the state government’s 2006 Human Development Report, which says that in Karnataka, forests in the Western Ghats and the Bellary-Hospet area bear minerals. Between 1980 and 2005, around 7,558 hectare (ha) of forest land in Karnataka was diverted for mining activities – this was about 8 per cent of the total forest land diverted for mining in India.

Another Karnataka government publication quoted by the CSE report – the State of Environment Report 2003 – has pointed out that 38 per cent of the mine leases in Chitradurga, 66 per cent in Bellary and 96 per cent in Chikmagalur are in forest areas.

Bellary, in fact, is one of the most severely affected areas. Karnataka has the largest reserves of high-grade iron ore in India – most of which is in Bellary. Fueled by international – especially Chinese – demand, the district witnessed a three-fold jump in iron ore production in the period 2001-06.

Bellary's bane has been its rampant illegal mining, says the report. "These mines are responsible for some of the most egregious violations of labour and environmental laws, including child labour and failure to manage waste or soil erosion," the report points out (10).

The area of Bellary having a major mining area as per the iron ore is concerned. And this is cleared that there is no application of sustainable mining and cause for the severe environmental issues surrounding area. And this is affecting flora and fauna. The unscientific mining cause for the serious problems on human health also. Forest and wildlife also decreasing day by day.

References

1. Publication from new delhi- based centre for science and environment (CSE)- its 356 page 6th state of India's environment report, titled rich lands, poor people – is sustainable mining possible
2. One of the report published in August 4, 2008, India's richest lands – New Delhi-based Centre for Science and Environment (CSE) – its 356-page 6th State of India's Environment Report, titled Rich Lands, Poor People – Is Sustainable Mining Possible?
3. CSE report – the State of Environment Report 2003 –Karnataka.
4. Problems from mines in mining areas of Bellary: www.downtoearth.org.in/node/10230
5. Lokayukta report (2008)
6. Prabhakar et al, journal of applied geochemistry. July 2008, vol -10. No - 2A, page 686.
7. Centre for science and environment. Industry and environment, mining and environment. <http://www.cseindia.org/node/393>
8. Areas to be exploited are in bandipur tiger reserve fast- track mining nod may speed forest demise. P.M.Raghunandan Feb 22, Bangalore DHNS.
9. <http://www.deccanherald.com/content/54316/fast-track-mining-nod-may.html>
10. CSE report 2008.