
SOCIAL AND ENVIRONMENTAL IMPACTS OF MINING ACTIVITY ON TUMKUR DISTRICT – A SOCIOLOGICAL STUDY

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Abstract:

Mining is a major economic activity in many developing countries. Operations, whether small or large-scale, are inherently disruptive to the environment producing enormous quantities of waste that can have deleterious impact for decades. The environmental deterioration caused by mining occurs mainly as a result of inappropriate and wasteful working practices and rehabilitation measures. Mining has a number of common stages or activities each of which has potentially –adverse impacts on the natural environment society and cultural heritage, the health and safety of mine workers, and communities based in close proximity to operations. Several authors have commented on the potentially-adverse impacts of mining, which include displacement of people from ancestral lands, marginalization, and oppression of people belonging to lower economic classes.

Social impacts are in general understood as ‘the consequences to human populations from any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society’ (Burdge and Vanclay 1996, p.59). Mining activities are generally accompanied by a variety of environmental disturbances. Among much else, process includes environmental degradation which starts with extraction of minerals resulting in land-degradation and addition of pollutants to air, water and on vegetation continues as the mineral is split and further processed. The noise and vibration problems are also the other effects of mining on people living nearby.

Keywords: Mining Activity, Environmental, Degradation, Impacts.

1.1 Introduction

Environmental degradation takes place due to dynamic interplay of socioeconomic, geographic and technological activities. It has become a major social challenge affecting people in all possible ways. Attempts are being made world over to check this, but it is not enough given the magnitude of the problem. Lot of research material has gathered around the causes and consequences of environmental degradation. Lot of evidence has emerged that this has been principally due to anthropogenic changes. Overtaken by greed economically and politically powerful people have recklessly exploited natural resources to the detriment of the common people such as, peasants, tribal people, artisans, agricultural labourers and a host castes and classes which have been almost exclusively dependent on natural resources – forest resources, ground water resources for their survival.

Mining in Karnataka in particular and other parts of the country in general provoked lot of controversy and contention. What is conveniently ignored but indeed causes of concern is the impact of mining on people – their sources of livelihood, their culture, social and cultural institutions and economic life – This, among much else constitute the hard core of the thesis. It has been observed that contemporary forms of environmental degradation present one of the most, if not the most, complex and catastrophic dilemmas of modernity. The phenomenon of environmental degradation in the form of pollution of air, water, soil and noise due to enormous increase in vehicular traffic, discharge of effluents by mining industrial units and generation of unlimited

unwieldy solid waste, not to speak of rapid depletion of resources due to rapid growth of population in particular has become a stark reality.

1.2 Relevance of the study

The study mainly concerns with the impacts of mining activity on surrounding environment in the Chikkanayakanahalli and Gubbi taluk region of Tumkur district, Karnataka State. The distribution of metallic and non-metallic minerals over mining leased area and its impact on the environment is the main focus of the study. It deals with the spacio-temporal growth of mining activity and its impact on land, vegetation, water, air, noise pollution, agricultural land, common property resources and how exactly some of these parameters are affected as mining is the main focus of study. To understand the exact impact of mining activity, a sample population was drawn from the villages of Tumkur region, particularly the iron ore mine site of Shivasandra, Musakondti, Gollarahalli, Bullenahalli and Honnebagi of Gubbi and Chikkanayakanahalli taluks

1.3 Methods and tools of research

Primary data from a sample of population drawn from the five villages had been collected by means of interview-schedule by the researcher in the villages. Interview schedule was prepared keeping in mind the main objectives of the study. Special attention was paid to include questions which concern the nature, magnitude of the environmental changes. Secondary source material includes, district Report, historical records, District gazetteer, records of the department of Mining and Geology, Karnataka-Lokayukta reports to mention but a few. Questions include mining activities particularly how the mining activities deprive the people of the main sources of livelihood apart from the long term impact in terms of pollution of natural resources. As already mentioned the universe of the study spread around five villages located around the border of Chikkanayakanahalli and Gubbi taluks of Tumkur district. Mining activities on large scale seems to be going on in these areas. The purpose is to examine the impact of these activities on the sources of livelihood food crops, animals, plants and trees, housing, drinking water, roads, transport and communication, education and health.

Table no 1. Name of the village Sample population

Sl.No	Name of the Village	Sample population	Total population	Percentage of total population
1	Shivasandra	48	365	13.15
2	Musakondli	72	545	13.21
3	Gollarahalli	30	250	12.00
4	Bullenahalli	69	505	13.66
5	Honnebhagi	81	1102	07.35
	Total	300	2767	

A sample of three hundred persons was chosen out of the total population of all the five villages. Exact portion of the sample taken from each of the sample villages differ depending upon the extent of the involvement of people with the mining activities. Respondents were chosen at random from the sample five villages.

1.4 Objectives of the study

1 To enumerate the kind of human activities whether organized or unorganized like quarrying and mining and a host of other activities which extensively damage destroyed the natural resources.

2 To identified the nature of health risks that villages are exposed to due to the impact of these activities.

3 To identify they extent of loss of common property resources like Gomala's, lakes and tanks forest resources etc.

4 To identified loss of sources of livelihood of local people who were dependent totally on forest resources.

1.5 Theoretical Framework

Given the paucity of the Environmental studies the proposed study will contribute to the development of Environmental sociology. Lot of already existing empirical studies shows that environmental destruction in rural India is due to misuses and abuse of natural resources, Declining agricultural productivity, crop failures, in the face of erratic monsoon rains drought conditions have become the common feature of village life.

The proposed study intends to make an assessment of the impact of the ruthless exploitation of environmental resources particularly focusing on mining industry in Tumkur District. Village population particularly farmers have been exposed to grave health-risks and loss of sources of livelihood. The field work of the study was conducted in the villages of Chikkanayakanahalli and Gubbi Taluks 31 where extensive mining and quarrying have been going on. Primary data had been collected from sample households which have suffered due to these activities.

1.6 Profile of the sample villages

Profile of the five villages from Shivasandra, MusakondliGollarahalliBullenahalli and Honnebagi from Gubbi and Chikkanayakanahalli taluks has been attempted in the following pages.

1) Shivasandra:

The Shivasandra village is located in Nitturhobli and Kondli Grama Panchayat of Gubbi taluk Tumkur district. This village has 1877.01 acres of land. This lies at a distance of twenty-six kilometers from taluk headquarters, and it is forty-five kilometers away from district headquarter. This village is well connected by roads. According to 2001 census it has had a population of 365. In this population 178 are males and 187 are females. The total eligible voters are 276. Females are more than males in this village. There are thirty two males and twenty two females of scheduled castes. And there are thirty seven males and thirty five females of scheduled tribes.

There are no rivers or lakes in the village. There will be some water in the rainy season. This water will dry out in the summer. The weather is usually dry and balanced. The soil is red and black and a little bit of sand mix. To the East of the village is Badavanapalya, to the west it has got Mudalapalya, to the north Bommarasanahalli and to the south it has got Emmedoddi village.

There are 222 workers in the village, 121 male workers and 101 female workers. There are 243 literate people in the village. Among these literate people 134 are males and 109 are females. Mining activity is taking place around the village. Canara Mines Company is working in 45 acres of land in Survey 32 number 45. Channakeshava Reddy Mines is working in 150 acres in survey number 44 and 45. Allamveerabhadrapa Mines is working in survey number 45 and 46. This company is working in 100 acres of land. Many villagers eke out their livelihood in these mines as daily wage workers.

According to Karnataka Lokayuktha's Report unauthorized mining is going on in 512 acres of land. The village has got 1287.28 guntas of pasture land. This land has been encroached upon by mining lobbies. One could see that the land beyond the mined area is full of greenery, but contains iron ore. If prevailing activity is allowed to continue,

this greenery is not likely to last long. The survey number of the area that has been illegally mined is stated to be Sy.No.45 of Shivasandra Village which measures about 512 acres. The manner in which the road is constructed and the equipment used for mining indicates even illegal mining in this area has been done in a systematic manner and the same is not sporadic.

Obviously large quantity of iron ore has been excavated and transported causing not only revenue loss to the State, but also damage to the ecology, life and property of the villagers.

The main crops that are growing in the area are coconut, areca nut, ragi and Jower. Some pulses are also grown in the area. There is Kempamma temple and Kalleshwara temple in the village. There is water shortage in the village. Because of mining ground water table has gone down. Mining activities seem to have adversely affected the population this issue. Forty eight persons mostly the head of the house hold have been selected for collecting data.

2) Musakondli:

This village comes Gubbi taluk in Tumkur district. This will come under Kondli Grama Panchayath. This village has 363 square kilometers of land. That means it has got nearly 1000 acres of land. The village is 50 kilometers away from district head quarter, and twenty eight kilometers from taluk headquarter. According to 2001 census it has got 1001 population. There are 494 males and 507 females in that population. 272 males and 273 females belong to scheduled castes, and four males and six females belong to Scheduled Tribes. Female population is more in this village than male population. There are too many small and marginal farmers. There are wage laborers who belong to scheduled castes and scheduled tribes.

To the east of the village Kondli village is there to the west comes the border of Chikkanayakanahalli taluk, to the north it has got Mavinahally village to the south it has got Honnenahally village. There are more people who live below the poverty line (BPL) in the village. Mining activity is going on two kilometers away from the village. Economically backward people have got jobs in these mines. Some families have obtained loans from Nationalized Banks and Co-operative Banks and have purchased Lorries and Tippers. They are engaged in transporting mineral ore. There is a main road in the village. There is a drinking water tank, primary school, shops; some dwelling houses are there by the side of the road. Ore loaded Lorries have to move in this road only. Hence, people are facing many problems.

There are many people in the village who protest against mining. One Nanjundaiah has dug ditches in the road to avoid Lorries entering the village road. He has given application to Tahsildar, police station, environment department, pollution control Board (PCB) and others to check the mining activity in the village. The village does not have any lakes or rivers as water source. Transport facility is also not there for the village. The village has got 56 acres 17 guntas of pasture land. The rich people have encroached upon this land. People have to walk to Kondli cross or Doddaguni for Banking, hospital, Co-operative and other services. The Patel of the village Jayanna is running Rudreshwara Mines. Apart from this many mining companies are working here.

People in this village have been facing poverty, unemployment, shortage of infrastructure, drinking water problem, and a host of other scarcities. The ground water table has gone down in the village. People are exposed to a wide-range of health risks. Since mining activity is intense this village has been selected for the study.

3) Gollarahalli:

This village is in Chikkanayakanahalli taluk, Jogihalligramapanchayat circle. This village has got 1445.03 acres of land, this village is eight kilometers away from taluk headquarters and it is 78 kilometers away from district headquarters. According to 2001 census it has got a population of 250. In this population 132 are males and 118 are females, there are 6 SCs people and 26 STs People in the village.

There are no rivers, lakes in the village; there will be some water in the rainy season. This water will dry out in the summer; the weather is usually dry and balanced. The village soil is red and black, to the East of the village or place is mining hills, to the west it has got Durga tank, to the North Hosahalli and to the South it has got Honnebagi village. The village has got a drinking water tank and a small lake (katta). The people's main occupation is agriculture; they usually grow coconut arecanut, ragi jowar and other pulses. All the farmers are dependent upon rain water only for their farming activity.

There is one lower primary school, a water tank and two temples are there in village. The village has also got 651.33 acres of pasture land. Permission has been granted for mining in 200 acres of land in Sy.No.12. The nearby lands have been encroached by mining companies. People are very much affected by mining dust, the iron ore loaded Lorries pass in the village. Hence, people are suffering with many ills. Animals are also not getting good fodder. Hence, they are also suffering with many diseases. In this background people have protested mining activity severely. Even they have checked the Lorries in the village road. Since mining activity is more in the village surroundings it has been selected for the study.

4) Bullenahally:

This village located in Chikkanayakanahally Taluk of Tumkur district. This village is 82 kilometers away from district headquarters and its is 7 kilometers away from taluk head quarters. Bullenahally has got 772 acres and 28 guntas of land (that is 292 square kilometers). According to 2001 census there were 505 people in the village. Among them 273 are males and 232 are females. There are four scheduled caste people and ninety five scheduled tribe people in the village. Totally there are 250 literate people in the village, among them 137 are males and 113 are females. There is one primary school, a water tank, and two temples are there in the village. The village has also got 366 acres and 22 guntas of pasture land.

To the East of Bullenahally a mining hill is there. To the west of it Honnebagi village is there. To its North Gollarahalli and to the South Manchekatte villages are there. The village does not have any river or lake or any canal. All the farmers are dependent upon rain water only for their farming activity. The people below poverty line (BPL) are working as daily wage labourers in the mining companies.

Permission has been granted for mining in 58 acres of land in survey number 8. The nearby lands have been encroached by mining companies. People are very much affected by mining dust. The ore loaded Lorries pass in the village. Hence, people are suffering with many ills. Animals are also not getting good fodder. Hence, they are also suffering with many diseases. In this back ground people have protested mining activity severely. Even they have checked the Lorries in the village road. Some farmers have gone to jail also Police have booked many cases on farmers. Hence, they are wandering to courts. The mining activity is taking.

5) Honnebagi:

This village comes in Chikkanayakanahally taluk of Tumkur District. The village is 80 Kilometers away from district headquarters and 5 kilometers away from taluk headquarters. The village has got 2099 acres and 8 guntas of land. (Which means 850

square kilometers)? According to 2001 census the village population is 1099, among them 573 are males and 529 are females are there in the village.

The scheduled caste population is 322, among them 208 are males and 114 are females. Scheduled Tribe population is 203, among them 104 are males and 99 are females. There are 737 literate people in the village, among them 423 are males and 314 are females. The village has got a middle school, village Panchayath, a milk dairy, three temples etc. There is a main road in the village. The village has got a drinking water tank and a small lake (katta). The people's main occupation is agriculture. They usually grow coconut, arecanut, ragi, Jowar and other pulses. Yet there is no proper water facility in the village.

To the East of the village Bullenahally is there. To the West Jogihally border is there. To the North Bhavanally and to the South Siddapura is there. The village has got 452 acres and 22 guntas of pasture land. This land has also been 37 encroached by the rich people of the village. In the survey number 130 of the village Latha mining company, Karnataka Mining company, and Balaji productions company are carrying Mining activities.(Source – Village Accountant information's)

There had been many protests against the mining activity in the village. There is a hill called Abbigge - gudda in the village. There is a temple called Malleshwara Swamy in the Abbigegudda. Mining activity is going on here also. Farmers of the village and the people of nearby villages joined together and protested against this mining activity. Some anti-social elements burned the machinery of the mining companies. Hence, there was a fearful atmosphere in the village. There is a court case against the farmers regarding this matter. Since mining activity is more in the village it has been selected for research study.

1.7 Findings of the study

An attempt has been made in this chapter to describe the socio-economic background of the sample population. Two types of question have been asked : questions which elicited opinions on observations and comments made by the respondents. These are necessarily qualitative and contained lot of information regarding the nature of impact, magnitude, causes and consequences of mining and people but also the manner in which people tried to respond and the strategies by means of which cope with the negative effects. These things have to do with the social economic and cultural aspects of the sample population.

Theoretical interests of the relationship between growth of population and environmental pollution is by no means new in sociology. Karl Marx recognized the dynamic relation between human being and the surrounding natural resource. Humans used various instruments to harness natural resources in order to produce economic goods. Machine technologies damaged nature and thus what Malthus called 'Positive Checks' operated in terms of natural calamities, industrial disasters causing lot of suffering. Population growth, if unchecked, has become heavy burden on the earth. Classical sociologists though did not explicitly recognize environmental hazards due to rapid growth of population, yet the impending doom was implicit in their theories. Attempts will be made in the study to examine the entire ongoing environmental debate interims of mainstream theoretical discourses in sociology.

Population and changing in different aspects like the size, composition and distribution have been extensively examined not only in the context of economic development and social change but also in terms of changes in the character, structure of human society. Besides population, depletion of natural resources has driven farmers in to lot of distress. So much so, farmers taking recourse to voluntarily taking away their has raised serious moral and social challenges.

Many studies have been conducted on the relationship between, population growth and environmental pollution. Anil Agarwal (1986), Radhakamal Mukerjee (1926 and 1930), Madhav Gadgil & others (1976), N.S. Jodha (1986), R. Sukumars (1989), Varun Vidyarthi (1984) and A.K.N. Reddy (1979).

1.8 Conclusion

Taking a clue from these studies, attempt was made in the study to examine population growth, and environmental destruction. It is proposed to explore whether increase in the size of population has led to lot of pressure on natural resources and whether decline in the moral values and concern for the nature can also be attributed to population pressure. Whether increase in the greed of on the part of people who are responsible for recklessly exploiting natural resources is due to the lack of opportunities for them in non-agricultural sector-like industry, business, and cultural spheres. On the whole the proposed study would address the question: why environmental destruction?

Environmental impact Assessment studies have sufficiently recorded the possible adverse effects of development projects including mining and this has been well known and has often made the basis for disfiguring a wide-array of interventionist strategies to check the adverse effects. What has, however been not taken seriously is how people living in and around mining activities are affected, particularly that population which has been dependent almost wholly on nature and natural resources.

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