ORIGINAL ARTICLE   **OPEN ACCESS**

Impact of Mining on Socio-Economic Status of Local People of Pur, District Bhilwara, Rajasthan

Anita Bhati and Preeti Mehta
Department of Chemistry, Sangam University,
Bhilwara-311001,
Rajasthan- India
E-mail: anisingh06@gmail.com

ABSTRACT
Mining is an important activity which contributes in economy of developing countries. Mining is very advantageous to the industrial sector and helps in the economic growth of a country but it has unfavourable impacts on environment and health of the people located nearby. This research paper presents the results of a research conducted in Bhilwara, Rajasthan to analyse the socioeconomic and environmental consequences of mining. Some productive results of mining are job opportunities, development of roads and health care centres. The purpose of this study is to provide an overview of the influence of mining operations on the socioeconomic conditions of the local population living around the Bhilwara iron ore mines. The people working in the mine are on the higher risk of respiratory diseases. The key findings reveal that poor educational status and low income workers have a lower socioeconomic and overall quality of life. So, the authority should give emphasis on improving the economic status of the people thus enhancing the quality of life.
Key words: Mining, development, employment, socioeconomic.

INTRODUCTION
Human society and the natural environment interact and have an essential influence in social well-being. Mining is necessary for the country's economic prosperity. Mining on the other hand, has a negative impact on the natural environment, on land and natural forest areas. As a result, human rehabilitation is required in the mining industry to strengthen social systems [1] .The mining industry has a direct impact on the economy by building infrastructure, providing employment, and developing rural areas. India's economy is based on enormous mineral reserves and small to large scale mining. Mining is lead to the economic benefits. Socio-economic benefits such as the growth of social and economic infrastructure, the manufacturing and construction industries as well as commercial and public sector operations, have all improved [2].The level of employment is an essential indicator of a country's economic development. Unfortunately for India, almost all of the country's minerals are found near the country's greenest forests and most abundant water systems. The scheduled tribes and scheduled castes, India's poorest and most marginalised populations, rely on the same forests and watersheds for survival. As a result, mining in India is not as simple as the business depicts. It is, in fact, a hugely complex socioeconomic and environmental problem, involving both natural resources – forests, animals, water, environmental quality, and livelihoods – and humans [3]. In recent decades, a more negative attitude toward mining has emerged, diminishing the beneficial relationship between mineral extraction and economic advancement [4].
In Rajasthan, Bhilwara is known for its textiles, and there is large-scale mining of sandstone, soap stone, Feldspar, quartz, mica, china clay, granite, and metallic minerals such as iron ore, lead, and zinc. The Pur region of Bhilwara developed a huge iron ore mining. Iron ore is available in Tiranga hill, Dhulkhera and Suras hill [5]. The specific objective of this study is to analyze the socio-economic condition of the people living surrounding the mining area. To make suggestions for initiatives that can help mitigate mining's bad consequences.

STUDY AREA
Bhilwara district is situated in the Mewar region of Rajasthan, India. It is situated almost in the centre of Rajasthan covering an area of 10,455 sq. kms. The latitudes of Bhilwara is $25^0 01'$ to $25^0 58'$ and longitudes $74^0 01'$ to $75^0 28'$. The Pur region of Bhilwara was selected for study.

MATERIAL AND METHODS
The study for socio-economic status was based on primary data collection. Data was collected from the people are working in mines and residing in Pur village of Bhilwara District. The field survey for this study has been carried out during January – March 2021. The case study's data was collected from both primary and secondary sources. [6] The data for the present study has been collected using structured questionnaire from mining workers and villagers residing nearby the mining site. A sample of 100 respondents was purposively selected for the study. A structured questionnaire was developed in keeping view the objectives of the study to assess the socio-economic status and health problems of the respondents. The study covers two aspects that are, socio-economic profile of the people and assessment of quality of life, with regard to educational status, occupational structure, facilities available in the area and living condition and income distribution. The parameters used for the assessment of socio-economic status are presented in table 1. The parameters used for scoring are gender, age group, educational status, employment status, occupation category, income, health problems and types of disease, infrastructure development, working hours, wages, medical facilities and working conditions.

RESULT AND DISCUSSION
Table 2 depicts the demographic profile of the respondents who fall under different age group, gender, educational qualification, occupation, and it also describes the economic status in terms of monthly income and social status. It also reflects the impacts of mining on the livelihood of the local people. Result of the survey shows the brief profile of the respondents in the mining area. There are a higher number of respondents that is 86% were males and the rest 14% were females. It reflects that jobs in mining area are gender oriented. A.G.N. Kitula discussed in his paper that only 25% of the workers in mine jobs are gender-oriented. [7] Literacy status is noticed that 34% of the total surveyed population have primary education, 19% people are illiterate that means they are unable to read and write and in 14% population the majority is of women that show that the women literacy rate is low in this area. Only 7% respondents have college education whereas only 17% respondents have secondary and 4% respondents have higher secondary education. Only 22% respondents have fixed job whereas 78% people are not at fixed basis and they worked on daily wages basis. The survey data disclose that most of the people are engaged in labourer category in mines, very few are in officer's category and 23% of surveyed population are engaged in other segments like agriculture, business and other fields. It reveals that most of the people in mining area are dependent for their livelihood on mines. Anura Widana in his paper "The Impact of Mining Industry: A review of socio-economic and political impacts" stated that a large number of employment is generated from mining industry. [8] Most of the respondents are engaged in mines labourer, collection and other small business and these activities are low income activities. The income of labourer of mines is very low. 70% of respondents have income less than rupees 10,000. People which are working on fixed basis have in general higher income. But it is noticed that approx 30% people have income more than 10,000. If we discuss about health then 25.3% people have health problem and most of the mine worker have respiratory related disease. The infrastructure development is good in this area. The area has hospitals, schools and sanitary facilities but the roads are 82.7%. 84.8% people responded that the working hours are according to norms but the working conditions are not according to government guidelines. Medical allowances are not provided to the employees and there is no health and life insurance for the employees. From the survey it is found that most of the people have water, electricity and sanitary facilities. There are 50% respondents do not possess any vehicles, even a cycle. 46% respondents possess motor cycles and only 4% respondents possess four wheeler. The local people dependent on the mining. People from the neighbouring villages are employed directly or indirectly by mining in the area, and their major occupation is mine labour in iron ore mines and the steel plant.

Table-1. Parameters used in questionnaire

S.NO.	Parameters
1.	Gender
2.	Age
3.	Educational Status
4.	Employed
5.	Occupation Category
6.	Income
7.	Health problems
8.	Type of disease
9.	Infrastructure Development
10.	Working Hours
11.	Wages according to government guidelines
12.	Medical allowances provided by organisation for employees
13.	Leave
14.	Working conditions are according to law
15.	Salary increment as per norms
16.	Insurance Status
17.	Socio-economic Status

Table 2: Socio-economic profile of the respondent (n=100)

Parameters	Percentage
Gender	
1. Male	86
2. Female	14
Age group	18-60 years
Educational Status	
1. Illiterate	19
2. Below Primary	19
3. Primary	34
4. Secondary	17
5. Higher Secondary	4
6. Graduation and above	7
Employed	
1. Yes	22
2. No	78
Occupation category	
1. Labourer	67
2. Supervisor	7
3. Officer	3
4. Other	23
Income	
1. 5000-10,000	70
2. 10,000-20,000	20
3. 20,000-30,000	8
4. Above 30,000	2
Health problem	
1. Yes	74.7
2. No	25.3
Type of disease	
1. Respiratory	18
2. Cardiac	1
3. Other	9
Infrastructure Development	

1. Hospitals	99
2. Schools	98
3. Road	82.7
4. Sanitary facilities	94.9
Working hours are according to norms	
1. Yes	84.8
2. No	15.2
Wages according to government guidelines	
1. Yes	39
2. No	61
Medical allowances provided by organisation for employees	
1. Yes	7
2. No	93
Leave	
1. Yes	98
2. No	2
Working conditions are according to law	
1. Yes	9
2. No	91
Salary increment as per norms	
1. Yes	4
2. No	96
Insurance	
1. Health	5.1
2. Life	3.1
Socio-economic statue	
1. Water connection	100
2. Electricity connection	100
3. Toilets	99
4. Vehicles	39
5. Car	4
6. Two wheeler	46
7. Air conditioner	1
8. Cooler	26

CONCLUSION

We cannot deny in the fact that mining plays a remarkable role in the economic development of any country. Bhilwara is playing a significant role in fulfilling the demand of different kinds of minerals and the socio-economic condition of the people of the mining area is raised due to the mining activities. Mining activities provide employment that helps to increase the income of people of the mining area. The social status is improved due to the mining activities. But mining activities have the adverse impact on health. Mining activities have to emphasis on the safety of workers. Our reliance on minerals is so great that we can't imagine life without them. As a result, the question is not whether mining should be done or not, but how it should be done. Mining must be done in an environmentally and socially appropriate manner in order to cause the least amount of environmental damage while simultaneously contributing to the social and economic development of the area.

REFERENCE

1. Priyadarshini, V. & Dash, L. (2018). Impact of Mining on socio-economic and health status of indigenous people- a case study of Keonjhar, International Journal of Applied Social Science, 5(1):27-31
2. Arzoo, A. and Satapathy,K.B.(2016). Socio-economic and environmental impacts of mining in Odisha, India, *Scholars Academic Journal of Biosciences (SAJB),* 4(7):560-564
3. Kumar, S. R. (2015). Socio-Economic Impacts of Mining on Local Livelihoods in India Issues and Challenges, Indian Journal of Applied Research, 5(9):355 – 357.
4. Davis G. A. & Tilton J.E. (2005). The resource curse, Natural Resources Forum, 29: 233-242.
5. Sharma, P., Shandilya A. K. & Srivastave, N. (2019). Significance of iron ore resources of Pur-Banera belt in the economics of Bhilwara, International Journal of Engineering Trends and Technology (IJETT), 67(12).

6. Kitula, A.G.N. (2006). The Environmental and socio-economic impacts of mining on local livelihoods in Tanzania: A case study of Geita District, Journal of Cleaner Production, 14: 405-414.
7. Kitula, A.G.N. (2006). The Environmental and socio-economic impacts of mining on local livelihoods in Tanzania: A case study of Geita District, Journal of Cleaner Production, 14: 405-414.
8. Widana, A. (2019). The Impact of Mining Industry: A review of socio-economics and political impacts. https://dx.doi.org/10.2139/ssrn.3423562