

BIJOLIYA SANDSTONE MINING REGION: AN IMPACT ON EMPLOYMENT AND ECONOMIC LEVEL OF MINE WORKERS

Anwar Ul Haq

Research Scholar, MLS University, Udaipur (Rajasthan)

ABSTRACT

For thousands of years man has used stone for building, whether it was monuments, religious buildings or houses. With the increase in population and industrialization, the need for more blue metals increased rapidly. This directly led to the demand for quarrying. During the period of industrial revolution, the demand was at its peak. The resources were exploited to the maximum for short-term benefits. During this period the environmental issues were given less importance.

The main purpose of the present research work is to find the employment status of mining workers who are alleged in sandstone works in Bijoliya region. It has been tried to search out the answer related to why they are getting irregular employment from these type of mining activities. The research shows that the workers migrate to another mine site in search of employment. Another objective of the study is to find the economic level of mine workers where they are getting minimum wages. It is very hard to get proper nutrition by their low earning. Their children are not getting proper food and education facilities. So this research highlights their basic needs which should be fulfilled by alternative source of earning and providing the job opportunity to them in the study area.

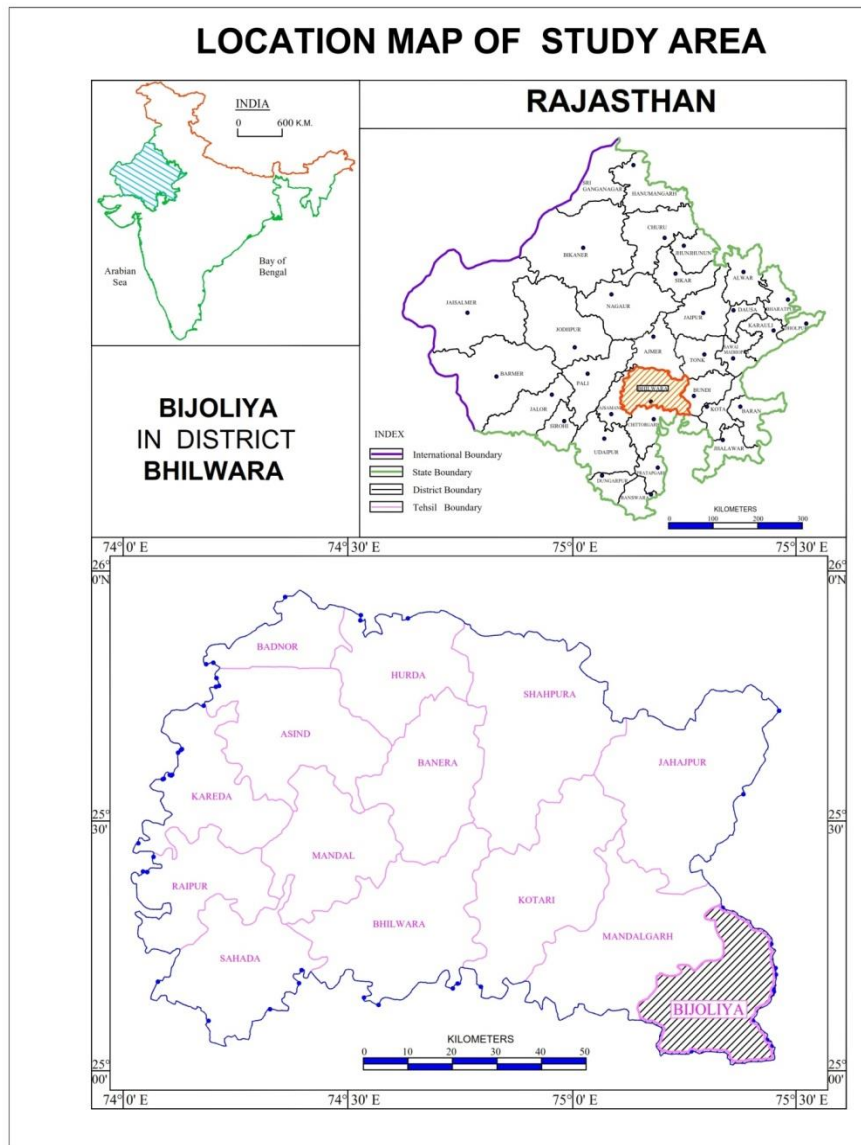
Keywords: Population, Resources, Industrialization, Sandstone, Mining

INTRODUCTION

Bijoliya region is located at 25°02' to 25°20' North and 75°10' to 75°30' East. It has an average elevation of 512 m. The town Bijoliya situated in the South East of Bhilwara. Bijolia is one of the largest mining regions of Rajasthan, where mining on a large scale commenced nearly three decades ago. Since then, the environment has been adversely affected, but no systematic evaluation has been carried out to assess the impact of the mining on the nature and socio-economic system of the people working in and around the mines. Quarrying activity in the Bijolia area is spread over an area of about 61.7 sq.km and covers parts of Bhilwara, Bundi and Chittorgarh districts of Rajasthan and the Mandasaur district of Madhya Pradesh. Fissile

sandstones of the Vindhyan Supergroup are extensively quarried for roofing as well as rough looring purposes, mainly near the villages of Nayanagar, Jharoli, Aroli, Gopalpura, Shambhupura, Pachanpura, Kansia, Banio Ka Talab, Champapur, Gudha, Makreri, Nala Ka Mataji, Budhpura and Lamba-Kho (Prasad, 1984).

Rajasthan is the largest producer of dimensional stones in the country and accounts for about 90 percent of the country's total natural stone production. Looking at sandstone, Rajasthan contributes around 10 percent of the total production in the world, and accounts for more than 70 percent of total production in the country, or 6.5 million tons per year.



Agriculture is no longer a sustainable occupation for the farmers. They are not able to reap a good harvest even when the rainfall is above average. The layers of quarry dust that settle on the leaves stall the growth and flowering of the crops. The water level of wells and ponds in the areas has dropped drastically due to the frequent deepening of quarry pits around the village. The negligent disposal of quarry waste is aggravating this situation.

Mining workers are paid according to the type of work they perform. Lifting debris, loading, unloading, and cleaning is categorized unskilled work, and is mostly done by women and older people. Semi-skilled work includes making big boulders, making holes in the sandstone beds – which do not need much experience.

SIGNIFICANCE

In present research, I have tried to evaluate the importance of mining for economic development of mine workers as mining is a major source of earning in the Bijoliya region. I also wanted to find the employment status of workers alleged in mining whether they are improving their earning level or not through mining work. I have also tried to know about the interest of mine workers in mining work, either they are getting regular employment or not.

OBJECTIVES

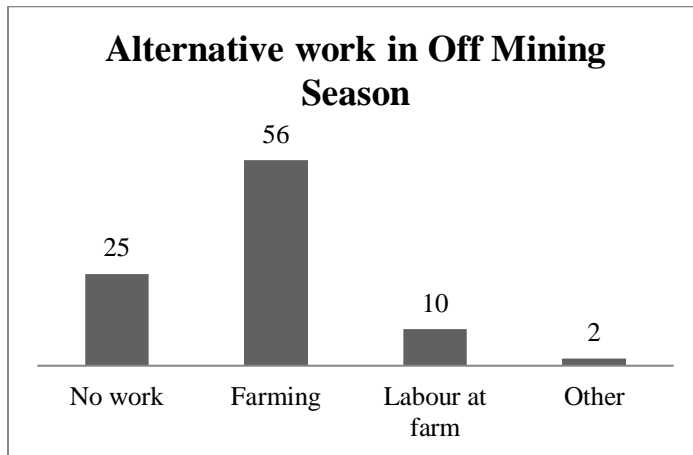
1. To find the impact of mining on employment status of workers.
2. To evaluate the impact of mining on economic level of workers in the study area.
3. To analyze the socio economic environment with influence of mining work in the study area.

METHODOLOGY

1. Field survey has done for primary data collection by taking 105 samples through schedule sets. Each set have 3 parts of different category like Mine owners, Mine labourers and local villagers.
2. Stratified random sampling techniques used in sample study by dividing the sandstone mining region in 5 blocks.

EMPLOYMENT STATUS OF MINE LABOURERS

Generally, many mines do not in action full of the year because of rainy season and other type of problem like price down, slow demand of prepared items etc. I talked to such type of labourers who could not get full year work from mine sites. They told that only 10 percent labourers can get full time work but other have to work less in case of mine closed.



The duration of stoppage of work is increased as mining pit may be filled by water after rainy season. If mine is deep, the disposal of large amount of water is difficult and 4 to 5 month may take to start mining work. In this time of unemployment, labourer used to search another work for livelihood.

Table - Annual income from agriculture

Income	No. of Labourers
Below 10000	67
10001-20000	19
20001-30000	15
Above 30000	4

About 65 percent labourers are going for agriculture work and hardly can get annual income from 10000 to 3000 by this. 67 out of 105 respondents get earning below 10000, 19 can earn 10000 to 20000, 15 can earn 20000 to 30000 and only 4 persons can get above 30000 rupees yearly from agriculture work. So in condition of non working period of mining work, many labourers may be out of employment and no other labour work in mining region. In poor situation, they eagerly wait for start of mining work and there may be full crowding at mine site in season. If mine site is closed, they used to migrate to another nearby site for suitable work.

ECONOMICAL STATUS

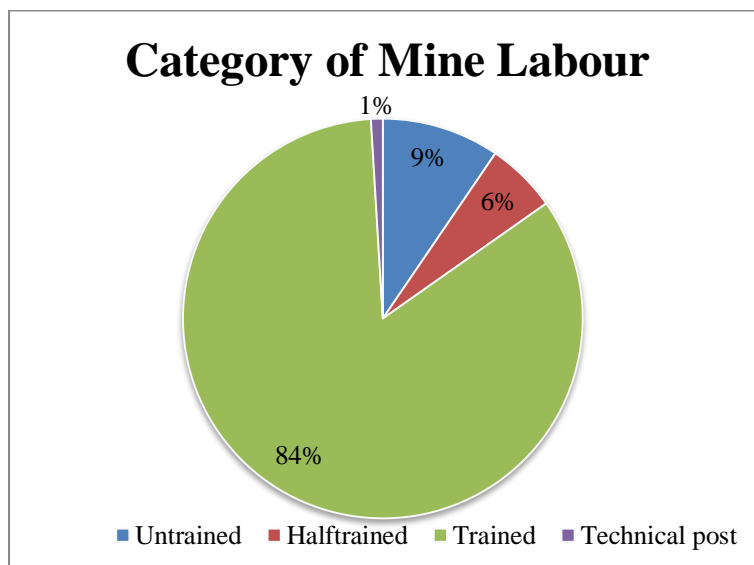
Most of the labourers in sampling are local form nearby village. Either they are having their own house but not in good condition. Localites who have their own house are 88 percent while labourers who are staying at nearby colony of mining area, is 10 percent and on rent persons are 2 percent. The conditions of nearby colonies of mines, are vary sinful and dirty where no facility of electricity and water supply. Most of the huts and houses are made by sandstone walls by creating pillars of strips and also using sandstone as temporary roof at nearby area of mines.

Table - Staying place of workers

Stayng Place	No. of workers
nearby colony of mine	13
own house	87
rent	4
other place	1

CATEGORY OF LABOURERS

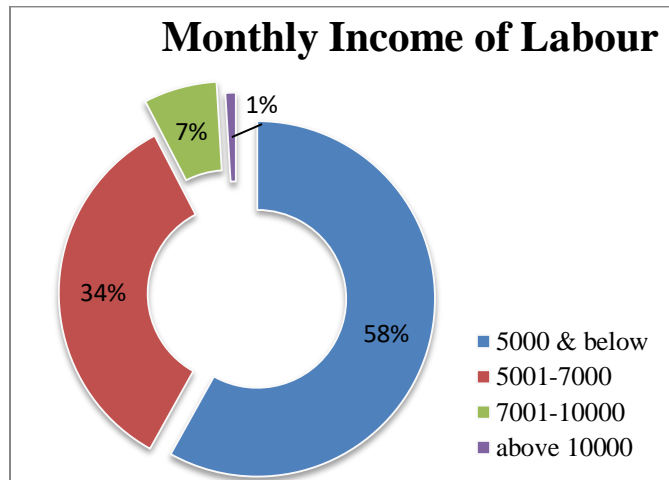
Many labourers are considering themselves as trained because they are working from long time in same work while they are still unknown from safety measures. But they are not trained by the safety programme at mine site. There are several examples of accidents which are putting the question on their experience and trained ability. Only 10 percent labourers are in untrained category which is new in mining work. Most of the labourers are engaged in stone breaking and loading work where as technical staff is very less. There may be only one or two members of technical staff in whole mine which are only literate just for reading ability. The technical staff is not trained properly and not fully educated as per norms of mining activities.



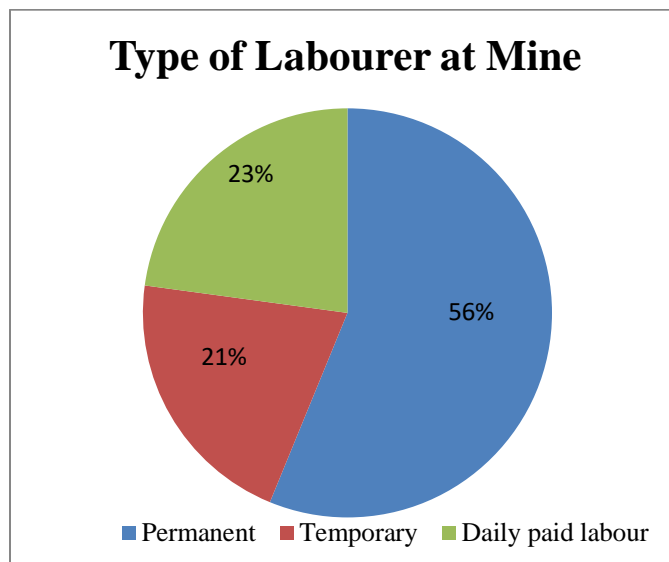
ECONOMICAL LEVEL WITH WEDGES

Most of the labourers are low paid labourers and getting low monthly income upto 5000 Rs. The actual data of earning of labourers are showing that 58 percent can earn upto 5000 Rs while 34

percent are getting 5000 to 7000 Rs per month. The range of 7000 to 10000 Rs income per month is only 7 percent of labourers while only 1 percent labourer's income is above 10000 rs. The result of analysis shows that 92 percent labourers have the monthly income upto 7000 Rs. We can imagine the economic standard of labourers by working in mines.



The food security and facilities whatever they can get is very poor and survive for living is found in my study of the area. In the whole area, the average household is 4.7 in families and they have to face many problems in a mere of income of 5000 to 7000 Rs monthly. The condition is very hard while it is their boundation to work in mines because of lake of good employment in the region.



The percent of permanent labourer is 56 percent in the mining field of the area while the temporary labourer is 21 percent. Daily paid labourer is 23 percent and we can say that most of labourers could not find full year work from mining field. Only 10 percent labourers can get work full time of year at mine site or outside. The rainy season is off time for mine work while stocked sandstone near the mine area can produce some work for laborers in free time. It may be like sheet opening, stone braking at stack yard, Cobble making etc.

CHILD WORKERS AT MINE SITE

Many children of labour family are also coming at mines for work in my observation during survey. Some of workers were also trying to hide their children's age for engaging them in work at mines. Their school education is also disturbed because of this. The ambience is not good for students at mine site.

SOCIAL HEALTH AND ECONOMIC LEVEL

Mining activities have a long history of development in the area of sandstone mineral. It has the movement from dynasty time before British rules. After independence, the mining leases and quarry license grant process was increasing in the area. The comparative difference can be observed clearly about the changes before and after mining activities in socio economic condition of the area. At one side, many farmers are looking in good condition with their wealth of fertile land and livestock where another face is also seen by the example of sinful condition of landless poor farmers and labourers in the region.

The changes from past to present in socio economic scenario can be seen with comparison of 1950 decades and now. It happened with the efforts of government and increasing facilities in the area. The facilities are improved in recent time like roads, education, health etc. But there may be universal changes of new trends of modern era at whole district level and only impact of mining cannot be considered as a development factor. In other hand, there are many superstitions in the area like child marriage, dowry system etc. But health and education system is definitely improved in all over view of the area. The thinking of the people is also changed of the area with the contact of outer areas and development of resources. But economic level of the labour class is still as struggle of earning in the mining based area.

By the comparison study of education level, the mining region is still backward then other area of tehsil and social organizations are also not built as needed. The life expectancy of labour class of the area is also very low where non mining areas are growing regularly in sector of agriculture and education by good and regular income. If we make highlight the monthly expensive and daily earning of the mine labourers by comparing to people of other area that many of mine labourers are living in very poor condition. It is also same in the category of BPL also. The facilities for BPL class are not proper in the area while many government facilities are available for them. Local administration is also not aware about the socio economic security of this class. This area is not in tribal belt but the situation and facilities are worse. Many Bhil people of tribal category are still surviving with starvation by working in mining sites because the employment and labour work is not regular.

In last 3 to 4 years, the slowdown in mining sector has created the problem before not only mine owners but also for labour class to maintain the daily wedges for survival of life. The negative impact made on the opportunities of employment before the mine labourers of the area. In 2013, the necessary of EMP plan in mining sector, most of the running mines were stopped in compliance of Supreme Court order. Another time was in 2015, when new amendment of Environment clearance was in focus, there were also banned mining activities for some time. In both time of stoppage of mine work, the actual victims were mine labourers. They had forced workless in the area and there were no alternate employment besides mine work. The mining work was closed for 3 months in rainy season and 4 to 5 month to get EMP plan of sandstone mines. Thus total 7 to 8 months were workless for poor labourers. The actual loss of work was for workers to survive the labour amount for daily food for their family. After completing EMP plan, there was some fund arrangement for CSR work which is for poor class of nearby village. But the actual benefit is not reached to ground level for labour welfare. At present time, they are still in same condition as before.

If we really need to improve the socio economic level of labourers and local poor people that early effort should be taken at ground level with responsibility. The local panchayat and government have the responsibility of them but some capable and sensible person also should take the social work in their hand. There must be created the ambience of social security and leniency by removing the dare of mine criminal groups and imperious people.

CONCLUSION

The mining activities are regular activity in the area from a long time and employment generating is clearly identified in the study area. The outside workers are also attracting for mining work and related activities as well as local workers. The future possibility of the employment is also looking in regular time. The changing pattern of mining and the technical development of work have made big opportunities for the development of residents of the area. But unavailability of regular employment is made another major problem for the poor workers and they have to struggle for work in off season. In the sandstone mining, where many mines are being closed in rainy season due to impounding of rain water in the pits, the big problem is to discharge the large amount of water and many mines can't be resumed work for a long time. Some of big mines can be run in only half of year and remaining time these can be seen as water reservoirs only. The releasing time of pit water and expenses of it is also costly. The closing of mining work is made big calamity for poor labour class and they have to shift other suitable place in search of work. In the area, many deep and old mines are closed due to insufficient equipments of mining. In this situation, localites can start to search alternative work like farming, labour at anywhere etc. but the lack of good farmland and grazing in another problem for them.

Mining work has made restrictions to agriculture work because most of the farms have been converted into mining pits and dump site. The grazing land for livestock is also restricted where large waste dumps are spread. The supporting work is not found and many mine workers are forced to change their place. The outside labourers are never settled permanently at any place as changing labour work at different mines. The temporary staying place and employment is making many social problems between them like illegal encroachment and migration to another place at any time. The irregular work is affecting on their daily wedges and they got low income from labour work. By this, the economic and all other losses have made for them and the level of poverty is always increasing for them. The social breaking is also another problem problems created because of this.

If the proper employment and good earning opportunities may be created to labour class at same place where they are working, then the dependency on mining work can be reduced and migration could be controlled. A permanent staying place can be developed for them at this stage. The suitable management of agriculture land in the area is another solution for local problems like alternate work, food and fodder requirement, social connectivity and local administration.

The actual benefits of mining field are collected by big contractors and owners of mine while poverty and instability has gone to labour class. If we maintain the importance of mining work in generating employment, then only we could give the real advantage to poor people of the mining region and labour class with justice. This work can only be done when mine owners think about development of their labourers. The changing scenario of present day mining in way of environmental protection and technical development of mining should be well managed. At one side, where we are going to develop the techniques, on the other hand we should always consider the human rights of poor class. The decreasing demand of sandstone has also made think to renew the way of mining industry in the area. The sandstone as dimension stone is going to replace with other construction stone like Marble, Granite etc. and RCC work is also big replacement of sandstone as roofing in building construction work. The competition of stones is increasing and sandstone is shifted to secondary place in this field. The big malls and hotels are making on new parameters where sandstone is not being fitted in this and demand is decreasing regularly. Sandstone work is limited in only some fields and thinkers are forced to make for alternative use. In past, sandstone flooring was very cheap in comparison to other mineral, where at present time ceramic tiles and low cost marble, Kota stone and other flooring material are presenting great competition to sandstone industry. With this negative impact, many sandstone mines are closed and some of on the margin to be shut down. The mine work at deeper level is being very costly and water removal work after rainfall is also being a business loss for the industry.

The searching of old and new problems of the sandstone mining region and their possible solution is the prime objective of my research. It is also the motive of my study to make suggestion for checking of the environmental degradation by maintaining the social and economic importance of mining activities in Bijoliya tehsil. The integrated efforts for environment protection can make the balance between environment health and human growth. We can solve the problem of employment by making arrangement for alternative work for localities like redevelopment of healthy agriculture system, improvement of livestock by establishing grazing land between mining areas etc. For development of agriculture, the irrigation system should be properly and ground water level must be improved. The advance farming techniques can make the new opportunities of employment in the village areas like drip irrigation, bio fertilizers, hybrid seed and animal husbandry techniques. Pit water of mining areas can also be a good source of water for irrigation and drinking purpose after filtering. If we find lack of farmlands in any rural area, then some other small industries can be developed like handicrafts, furniture work based on plastic and wood, iron work based business, fruit and vegetable business, fisheries in big mining ponds, transportation, communication and other mechanical work etc. In the new trend of mobiles and computers, the technical education is also useful to develop another option of earning. The awareness of education is always necessary in this region.

REFERENCES

- Agarwal, V., 1987. Mining and Environment, Rajasthan V. II, No. 1, pp. 47-48.
- Chauhan S.S. 2010. Mining, Development and Environment: A Case Study of Bijolia Mining Area in Rajasthan, India. Department of Environmental Science, University of Rajasthan, Jaipur, Rajasthan, India.
- Gupta, R.K. (1968). Anthropogenic influences on the vegetation of Western Rajasthan. Plant Ecology. Vol. 16: 79-94.
- IBM, (1994). Environmental aspects of mining areas. IBM Bulletin No. 27, Nagpur
- Lodha, R., 1993. Environmental Ruin, The Crisis of Survival Indus Publ. Co., New Delhi, 400 p.
- P. Madhavan, Raj S. Dec.2005. *Budhpura 'Ground Zero' - Sandstone quarrying in India*. INDIA COMMITTEE OF THE NETHERLANDS,
- Prasad B. (1976) Lower Vindhyan Formations of Rajasthan. Rec. Geological Survey of India, 106(2), 33-53.

Roy. B. C., 1959. Economic Geology and Mineral Exploration of Rajasthan, Memoirs Geological Survey of India. V 36-356.

Sinha, R.K., Pandey, D.K. and Sinha, A.K. (2000). Mining and the environment: a case study from Bijolia quarrying site in Rajasthan. The Environmentalist. Vol. 20:195-203.

Vaish, A.K. & Vaish, P., 1994. Harnessing Co-operative Efforts in Marble and Granite Industries in the TSP Region of Rajasthan, Int. Sem. Marble and Mining Industry, Vol. No. 2, Udaipur.

Wilson, L., "Minerals for Life" article, at www.drlwilson.com