

**IMPACT OF MINING BAN ON THE GOAN ECONOMY- A CASE STUDY**

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**ABSTRACT**

Mining has been a very important element in the economic history of modern Goa and a significant foreign exchange earner for the state. Recently, it has been designated as the industry at par with tourism. The inhabitants of Goa depend heavily on iron ore both directly and indirectly. The region is rich in minerals and ores and mining forms the second largest industry. Mining in Goa focuses on ores of iron, Bauxite, Manganese, Clays, Limestone and Silica.

Mining has provided the trigger to boost economy of the mining talukas. Certain natural factors like the presence of coastline, a very good natural harbour at Mormugao and a number of navigable perennial rivers have promoted the economic exploitation of mineral deposits. Transport of ores by barges is the cheapest option as compared to road and rail transport.

The state was earning revenue of up to Rs 25 crore from the mining sector, which then shot up between Rs 400 and Rs 500 crore in the last two years before the ban of the mining period. But with the ban on mining activity, the Goa government has taken a hit of Rs 800 crore for the fiscal year to its treasury due to the closure of mining activity in the state. The main objective of this paper is 1) To briefly examine the socio economic characteristics of the people who are involved in the mining activity. 2) To study the importance of mining in Goa and its impact on the environment due to extensive and illegal mining. 3) To find out the effects of mining ban on the Goan economy. 4) To recommend certain suggestions to as to improve the economic life of the people affected due to the mining ban.

The data has been collected through questionnaire focusing on the impact of mining ban in Goa. Sample sizes of 50 respondents were taken who were directly or indirectly affected due to mining ban and the data has been analysed. Thus it can be concluded that since mining constitutes the backbone of the Goan economy and the main source of livelihood of the people, resumption of sustainable mining activity is the need of the hour.

## 1.1 INTRODUCTION

Mining in India is a major economic activity which contributes significantly to the economy of India. The contribution of the mining industry towards GDP varies from 2.2% to 2.5%. Out of the total industrial sector, mining contributes around 10% to 11% of the GDP. Besides contributing to GDP, the mining industry in India is one of the major job provider as it provides jobs to around 700,000 individuals.

The tradition of mining in India is ancient and has undergone modernization along the rest of the world ever since India has gained independence in 1947. The economic reforms of 1991 and the National Mining Policy 1993 has further helped the growth of the mining sector. India's minerals range both from metallic and non-metallic types. The metallic minerals comprise ferrous and non-ferrous minerals, while the non-metallic minerals comprise mineral fuels, precious stones, among others.

The country on an average produces and works with roughly 100 minerals. These minerals are an important source for earning foreign exchange as well as satisfying domestic requirements. India also exports iron ore, titanium, manganese, bauxite, granite, and imports cobalt, mercury, graphite etc. The mineral resources of the country are surveyed by the Indian Ministry of Mines, which also regulates the manner in which these resources are being used.

The first reference to the mineral content in Goa soil dates back to the 16<sup>th</sup> century where a Dutch traveller by name Mr. John H. V. Linschoten had written that in Goa one can be found stones containing iron. He has also stated that the scientists have opined that gold and copper would also be available from them.

The prospecting of iron ore and manganese ore started in Goa as early as 1905. Though the regular export of iron ore from Goa commenced in 1947, it gained momentum only in 1949. Prior to the liberation, only a few small industrial units existed. The major economic activity of the district was confined to the mining of iron and manganese ore. The district of Goa is richly endowed with industrial minerals like iron ore, manganese ore, bauxite, lime stone, dolomite etc. Besides, the state of Goa is also well served by two navigable rivers namely the Mandovi and the Zuari which pass through the iron ore and manganese ore barring areas and join the sea near Mormugao harbour. This inland waterway system is considered a boon to the mining industry in Goa. It not only facilitates the speedy movement of mineral ore from the interior to the port but also helps in reducing the cost of transportation of the ore. These two rivers with the Cumbarjua canal provide facilities for cheap transport by barge of mineral ore from respective mines to the harbour where

the ore is loaded on ships for export. Mining in Goa has developed under the control and guidance of the mining department. Even though prospecting of iron and manganese started in Goa as early as 1905, it was only in year 1941 that a sample consignment of 1000 tons of iron ore was made to Belgium. Regular export of iron ore in Goa was started only in 1947 and most of it was exported to Japan. The speedy development of mining activity in Goa has to be attributed to very liberal policy in respect of granting of concession and also due to low taxation of minerals and nominal import duty on mining machinery. Foreign exchange earnings by way of this export are in the order of Rs 30 crores. Manganese ore of high grade is either utilized locally or dispatched to the neighboring states.

### **1.2 OBJECTIVES:**

The main objective of this paper is:

- 1) To briefly examine the socio economic characteristics of the people who are involved in the mining activity.
- 2) To study the importance of mining in Goa and its impact on the environment due to extensive and illegal mining.
- 3) To find out the effects of mining ban on the Goan economy.
- 4) To recommend certain suggestions to as to improve the economic life of the people affected due to the mining ban.

### **REVIEW OF LITERATURE**

Bismarck Kwaku Asare, M. B. K. Darkoh (2007) conducted a study on Socio-Economic and Environmental Impacts of Mining in Botswana: A Case Study of the Selebi-Phikwe Copper-Nickel Mine. The major findings of the study show that the presence of the mining has led to a rapid growth of the population through migration. But at the same time mining is also faced with financial difficulties, which have limited its ability to meet environmental quality standards which has led to air pollution and this has led to disastrous effects on human health, soil, water and vegetation in the area. The study also indicated the socio-economic benefits on account of mining which has led to the development of social and economic infrastructure, manufacturing and construction industries, commercial and public sector etc. Employment creation and income levels of the people has significantly increased on account of the mining activity.

### **METHODOLOGY**

The study is based both on primary and secondary data. Primary data is collected through a pre designed questionnaire scheduled administered to those people who were directly or indirectly

involved in mining activity. This study is mainly conducted in order to understand whether the economic life of these people were affected due to mining ban and based upon it necessary findings and conclusions were drawn in the study.

Secondary data was collected through books, newspapers magazines and internet websites..

#### **DATA ANALYSIS AND INTERPRETATION**

50 respondents who were directly or indirectly engaged in mining activity were interviewed. These people were involved in various types of business such as shipping agents, Transport and logistics, etc. The following findings were drawn from the data analysis.

#### **AGE WISE DISTRIBUTION OF THE RESPONDENTS**

Age is directly related to the level of economic activity undertaken. The following data gives the age wise classification of the respondents who are involved in the mining activity.

**TABLE 1**  
**AGE OF RESPONDENTS**

<b>Age Group ( in years)</b>	<b>No. of Respondents</b>	<b>Percentage</b>
<b>18-24</b>	<b>4</b>	<b>8%</b>
<b>25-34</b>	<b>21</b>	<b>42%</b>
<b>35-44</b>	<b>17</b>	<b>34%</b>
<b>44 and Above</b>	<b>8</b>	<b>16%</b>
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: Field Survey**

From the above analysis it is found that majority of the respondents who are involved in mining activity fall in the age group of 25-34 years i.e. 42%, 16% fall in the age group of 44 years and above only 8% of respondents fall in the age group of 18-24 years. Therefore we can conclude saying that majority of the respondents who are involved in mining activity are youngsters and only a few of respondents were teenagers.

**TABLE 2**

**TABLE SHOWING GENDER WISE CLASSIFICATION OF RESPONDENTS**

Gender	No. of Respondents	Percentage
Male	45	90%
Female	5	10%
Total	50	100%

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**Source: Field Survey**

From the above analysis it is found that majority of respondents i.e. around 90% are male and only 10% are female. Therefore we can conclude saying that majority of the respondents who are involved in mining activities were males.

**TABLE 3**

**TABLE SHOWING THE EDUCATIONAL QUALIFICATION OF THE RESPONDENTS**

Qualifications	No. of Respondents	Percentage
Primary & Secondary	8	19%
SSC	13	30%
HSSC	15	35%
Graduation	4	9%
Post Graduation	2	5%
Other	1	2%
Total	50	100%

**Source: Field Survey**

Out of 50 respondents interviewed, 30% have passed HSSC, 24% have passed SSC, 22% are graduates, 16% have completed in primary and secondary education, 4% are post graduates and 2% are diploma holders. Therefore we can conclude from the study that most of the respondents who are engaged in mining activities have studied only up to HSSC.

**TABLE 4**

**TABLE SHOWING EMPLOYMENT STATUS OF THE RESPONDENTS**

Employment Status	No. of Respondents	Percentage
Business/Self-employed	13	26%
As an Employee	37	74%
Total	50	100%

Source: Field Survey

From the above analysis, it is clear that majority of the respondents, work as employee in the mining firm and only a small percentage of the employees i.e. around 26% are self employed.

**TABLE 5**

**TABLE SHOWING THE TYPES OF BUSINESS OWNED BY THE RESPONDENTS**

Type of Business	No. of Respondents	Percentage
Shipping Agent	4	23%
Transport & Logistics	7	54%
Direct and Indirect Contract labourers	2	23%
Total	13	100%

Source: Field Survey

Out of 26 % of the respondents who own the Mining Business or were self employed, 23% were Shipping Agents ,54% were into Transport and Logistics and 23% were providing direct or indirect contract labourers. Therefore from the analysis one can conclude that majority of the respondents were engaged in transport and logistics.

**TABLE 6**

**TABLE SHOWING THE TYPES OF EMPLOYMENT OF THE RESPONDENTS**

Type of employment of the Employees	No. of Respondents	Percentage
Crane Operator	4	11%
Driver	8	21%
In Office	18	49%
Other	7	19%
Total	37	100%

**Source: Field Survey**

From the above analysis it is clear that out of 74% of the respondents who are employed, 11% of the respondents worked as Crane Operators, 21% Worked as Drivers, 49% worked in offices of various mining companies and the remaining 19% of the respondents worked as peons, security guards, etc.

**TABLE 7**

**TABLE SHOWING THE WHETHER MINING BAN HAS AFFECTED THE GOAN ECONOMY**

Response	No. of Respondents	Percentage
Yes	43	86%
No	7	14%
Total	50	100%

**Source: Field Survey**

From the above analysis it is found that majority of respondents i.e. around 86% are affected due to mining ban and only 14% of respondents are not affected due to mining ban. . Therefore from the analysis it can conclude that majority of the respondents are affected due to mining ban.

**TABLE 8**

**TABLE SHOWING THE HOW THE MINING BAN HAS AFFECTED THE RESPONDENTS**

Effects	No. of Respondents	Percentage
Less Salary	13	31%
Loss Of Job and no income	12	52%
Reduction in Sales	3	7%
Total	43	100%

**Source: Field Survey**

Out of 86% of the respondents who were affected due to mining ban, (indicated in table 7), it is clear that 52% of the respondents have no income due to loss of job on account of the halt in mining activities. These respondents are mainly contract labourers who were engaged in mining activity. 31 % of the respondents are still in service in mining firm but are offered less salary, 7% of the respondents feel that there is reduction in sales in their business activity due to mining ban. Therefore it can be concluded that the mining activity has affected the economic life of most of the people in Goa

**TABLE 9**

**TABLE SHOWING RESPONDENTS AVAILING GOVERNMENT PACKAGES**

Response	No. of Respondents	Percentage
Yes	6	12%
No	44	88%
Total	50	100%

**Source: Field Survey**

From the above table it is clear that 88% of respondents did not avail any government packages and only 12% of the respondents availed government packages .Therefore from the study it can be concluded saying that most of the respondents did not availed any government packages given to the people affected by mining ban

**TABLE 10**

**TABLE SHOWING JOB STATUS OF JOB AFTER MINING BAN**

Work Status	No. of Respondents	Percentage
Currently Unemployed	15	30%
Unchanged Business Line	13	26%
Started New Business	6	12%
Employed By Someone Else	10	20%
Intended To Migrate	6	12%
Total	50	100%

Source: Field Survey

From the above analysis it is clear that 30% of the respondents are currently unemployed, 26% are in same business line like running a restaurants etc., 20% of the respondents have been employed by someone else in some other jobs, 12% of the respondents have started new business and only 6% of the respondents preferred to migrate.

**TABLE 11**

**TABLE SHOWING WHETHER MINING IS BENEFICIAL FOR GOA**

Response	No. of Respondents	Percentage
Yes	41	82%
No	9	18%
Total	50	100%

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Source: Field Survey

From the above analysis it is clear that 82% of the respondents feel mining is beneficial for Goa and 18% of the respondents are not in a favor of mining activity because extensive mining have serious impact on the environment. Therefore we can conclude saying that most respondents claim that mining is beneficial for Goa.

**TABLE 12**

**TABLE SHOWING BENEFITS OF MINING ACTIVITY IN GOA**

Response	No. of Respondents	Percentage
Better Income	19	46%
Employment	20	49%
Other	2	5%
Total	50	100%

**Source: Field Survey**

From the above analysis it is clear that 49% of the respondents feel that mining is beneficial for Goa because it is a source of employment generation, 46% of the respondents feel that mining is beneficial for Goa because it is a source of income generation and 5% feel that mining should start because it leads to increase in Government revenue, etc. Therefore we can conclude saying that most of the respondents are of the opinion that sustainable mining should be started at the earliest because it can generate lot of employment and also provides a source of livelihood to the people besides generating revenue to the Government.

#### **OBSERVATIONS AND FINDINGS OF THE STUDY**

1. A total of 50 people were interviewed with the help of pre-designed questionnaire in relation to the impact of mining ban in Goa. Out of the total number of peoples interviewed, most of them belong to the age group of 25 to 34 years of age and majority of them were males.
2. Since mining activity provided a good source of income to the people, most of the people preferred to do mining business or work in a mining firm if a job was provided to them irrespective of their educational qualification. From our study it is clear that majority of the respondents had their educational qualification upto higher secondary and only a small percentage of them were graduates and post graduates which indicated that educational qualification was not only the prerequisite for the people to start an mining activity.
3. Since the mining companies provided their workers good salaries, overtime and other allowances, majority of the respondents preferred to work in the mining firm rather

than starting their own mining business. Those respondents who were into business, majority of them were into transport and logistics .

4. Since mining constituted the backbone of the Goan Economy, most of the people were affected due to the mining ban as there was loss of jobs, reduction in the sales, less customers in hotels and since there were no income from any other source, peoples economic life had almost come to a standstill.
5. Since majority of the people in Goa depends on mining for earning their livelihood, most of the people are in favour of early resumption of the legal mining activity. As mining activities were carried on extensive scale, it caused various ill effects mainly on health , environment etc. Therefore most of the respondents are of the opinion that mining activities if at all started should be carried at a sustainable level.
6. Inorder to tide over financial difficulties, the Goa government had introduced some financial packages to the people affected due to mining ban. But from some survey it was revealed that only a few section of the respondents availed the financial package and those who availed the financial package was not satisfied with the money that is given as it was not sufficient for them to live their livelihood because of inflation and other family commitments and at times there was delay in delivering these financial packages, besides there was a lot of formalities and paper work.
7. The mining ban has affected the economic life of most of the Goans. Most of people are currently unemployed because they cannot get an alternate job due to low educational qualification and less job opportunities in Goa. Those who have started business in the mining line choose to do the same business line as they have invested huge amount into that business by taking loans from the banks. These people were mostly the truck and the barge owners. These people are living with hopes that when legal mining resumes back again their trucks and barges would find some business and as a result they would be in a position to repay their loans. Those people with certain educational qualification have left their previous job and taken up a new job and those labourers who were employed under contract system intended to migrate as they couldn't find any other better job.
8. It was found from our study that majority of the respondents are of the opinion that mining is beneficial for Goa because they help in generating employment, provides better income to the people and is also an important source of revenue to the Government.

### **SUGGESTIONS**

1. Since mining constitutes the backbone of the Goan economy and most of the livelihood of the people depend on the mining sector for earning, care should be taken by the Goa Government to see that legal mining starts at the earliest.
2. Mining should be carried at a sustainable level so that it will not have an unfavorable impact on the environment.
3. In case of the mining packages the government should try to revise it to keep in mind the increase price level of the commodity.
4. The government should try to provide some alternative job employment for those who have lost their jobs due to mining ban

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