

## DEVELOPING ABANDONED MINES AS A RECREATIONAL AND TOURIST DESTINATION CENTER IN JODA AREA OF KEONJHAR, ODISHA, INDIA

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### ABSTRACT

Joda, a planned industrial city, and municipality in the Keonjhar district of the state of Odisha, India, have rich Iron & Manganese ore deposits and the economy enters on the large-scale Production of it. A perennial river named Sona River passes through Joda city; it is the lifeline of the city, as it fulfills the water needs. There are many mines in and around Joda. One of them is Joda East Iron Ore Mines. Tata Steel began mining the iron ore reserves at the Joda East Iron Mine in the Keonjhar district in 1955. Joda East Iron Mine is the jewel in the crown of the Mines Division, with a rated capacity of 2 million tones per anum (Mtpa) ore processing capability. While Joda is heading for industrialization, the natural resources degradation has occurred. Joda's typical natural resources had shown the demotion of social interaction among the urban residents. Combination of issues such as unemployment, low income, bad health, results in social exclusion and deterioration of the quality of life of individual and group and results in negative social behaviour such as aggression and violence. The diversity of sub-space present in Joda including the high mountains, undulating platforms, water bodies, beautiful landscape and the magnificent iron ore and manganese mines are just space which has been used for the resources and left abandoned. Joda has the golden opportunity of upgrading its abandoned mines into a recreational center as it's done in Turda Salt Mines, Transylvania, as it has all the favorable geographical as well as climatic conditions. So by using the existing natural resources (mines) for framing and proposing the framework of the tourism which ultimately promotes distribution of natural resources and creates the job opportunity. This research is focused on the development, upgradation and utilization of degraded mines which are believed to use the ecological footprint of the main tourism activities and services, also enhance the quality of landscape both urban & rural and avoid the physical and visual degradation of the existing environment.

**KEYWORDS:** Jada Tourism, Recreational Spaces, Abandoned Mines, Joda

Joda, a valley city in between the foot of two hills namely Bada Parbat in the East and Durga Parbat in the West. It's an industrial city and municipality in the Keonjhar district of the state of Odisha, India, having rich Iron & Manganese ore deposits and the economy enters on the large-scale production of it. Joda extends from 22.01667°N latitude to 85.43333°E longitude on the eastern coast of Odisha, India. It has an area of about 41 km<sup>2</sup>, according to Census of India, 2011. The ecological and geographical diversity of Joda includes the high mountains, undulating platforms, water bodies, beautiful landscape, the magnificent iron and manganese ore mines and the pristine beaches, rivers and natural heritage adds up the potential to become a tourist hotspot and has the key to unlock Joda's tourism potential.

While Joda is heading for industrialization, the natural resources degradation has occurred. With the exploitation of mineral resources the territory which was once thickly forested started attracting people from far and near. Joda's typical natural resources had shown the demotion of social interaction among the urban residents.

Combination of issues such as unemployment, low income, bad health, results in social exclusion and deterioration of the quality of life of individual and group and results in negative social behaviour such as aggression and violence.

### AIM

To upgrade the abandoned mines of Joda area of Keonjhar, Odisha into tourist destinations and recreational center which results in employment generation, infrastructure development, increase in per capital income and creation of new tourist attraction.

### OBJECTIVES

- i. To study the geographical conditions of JODA.
- ii. To study the present scenario of mines in JODA.
- iii. To study the feasibility of tourism in JODA.
- iv. To find out the tourist destinations spots in JODA.
- v. To find out the growth of town and its impact on tourism in JODA
- vi. To analyze the problems and issues in feasibility of tourism in mines in JODA.

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- vii. To find out and create the eco-circuit for the tourism in JODA

**METHODOLOGY**

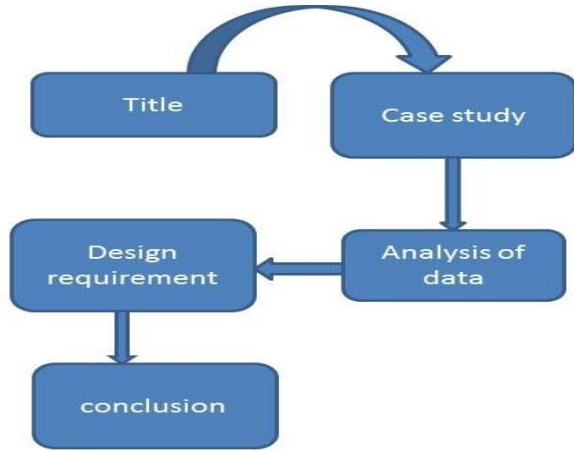


Figure 1: Methodology Chart

**NEED OF STUDY**

Since the abandoned mines are just an space which have been used for the resources and left. So using this space to use the existing natural resources for framing and proposing the framework of the tourism which ultimately promote distribution of natural resources and in a sustainable way, generates employment and is eco-friendly.

**JODA, A VALLEY CITY**

Joda, a planned industrial city, and municipality in the Keonjhar district of the state of Odisha, India, have rich Iron & Manganese ore deposits and the economy enters on the largescale production of it. A perennial river named Sona River passes through Joda city; it is the lifeline of after needs. There are many mines in and around Joda. One of them is Joda East Iron Ore Mines.



Figure 2: Joda and its five villages forming N.A.C (Notified Area Council) region

## PHYSIOGRAPHY

Joda, situated in the valley between the foothills of two hills namely Bada Parbat in the East and Durga Parbat in the West. The two hills have an altitude of about 2000 feet above the mean sea level and is blanketed with forest. The elevation height of Joda is 489 m (1,604 ft.). The valley between two hills over which Joda town is located is divided by Kundra River.



**Figure 3: Joda, Satellite View**

## TOURISM

In Latin, the word "tourus" means rotation, circular, and refers to changes in place of stay. In today's meaning it is derived from the French word tour, later adopted in other languages. This word means an endless journey back to the starting point. It was used in the late seventeenth century. Young Englishmen' trips to the European continent, travelling initially to France, were determined as the grand tour. The term Grand Tour was first used in 1670 by Richard Lassels. Previously, the movements for different purposes were called journeys or pilgrimage. Such terms should be used in the context of a historical perspective on tourism. Attempts to define tourism emerged in the late nineteenth century.

### Types of Tourism

#### Geotourism

It is a form of sightseeing tourism, although, in some cases, it may also have some features in common with tourism specialist. So the phenomenon of having relationships with other types of tourism can be separated as an independent form. It involves getting to know the geological attractions and active participation in the

"discovery" of interesting forms, rocks, minerals, terrain and landscape. The place of practicing this form of tourism is also mine. Exact learning of these values often requires the use of specialised equipment. For geotourism, it requires visitors navigate the difficult terrain, as well as the use of equipment used by geologists in some cases. Special places where we can enjoy geotourism are created on the initiative of UNESCO geoparks.

#### Mining Tourism

It is considered to be a part of industrial tourism. Mining tourism is any form of tourist activity in industrial sites, technological sites, and industrial heritage sites. Most frequently, these sites are carefully prepared as tourism products. In the majority of cases, industrial tourism is reduced to the notion, which defines tourist space or tourist sites – not the character of this type of tourism.

#### Entertainment Tourism

So far, the term was ignored in the literature. Considering the motives for tourism, it seems that one cannot miss such an important tourist participants to leave. The program packages usually appear some entertainment, but for many, the sole purpose of the trip is to participate in the wider fun and entertainment. These may include trips to parks and entertainment centers. They are built in big cities or between cities. Entertainment can also be a recreation and sport. Tourists, therefore, benefit from golf courses and water parks, recreation centers, comprehensively equipped.



**Figure 4: Water Park in Bhubaneswar.**

## THE TOURISM SYSTEM

The tourism development of a territory is based on designing, developing, and promoting a number of

attractions for tourists as well as providing the services that are needed for tourists to access and sojourn in a destination. Tourism attractions are normally based upon the resources available at the destination. Undoubtedly, those territories whose endowed resources have a high value will have a comparative advantage over others who do not have them.

### Characteristics of Tourism

Movement of people and their stay at various destinations.

- i. Gives rise to activities at the destinations.
- ii. Developing social and physical infrastructure and amenities to facilitate visitors.
- iii. Gives rise to recreational and other cultural events to attract tourists.
- iv. Developing pleasure activities and professional service providers.
- v. Gives rise to various service demands which are provided by commercial
- vi. Sense of tourist industry.

### The Tourism System Components

The figure describes all the stakeholders that interact within a destination, and that cooperate to define and supply the value proposition of the tourism destination. As can be observed, the destination represents a complex social system, a so-called destination system, composed by three basic subsystems: tourists, tourism supply providers, and state and other.



Figure 5: The tourism system components

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Mining and tourism activity are growing side by side in different regions around the world. Some of the mines are closed after the end of operation. This creates an opportunity for the development of mining tourism. Therefore, there are visible interactions between mining and tourism.

### Theories of Henning

Theories of Henning can also be transferred to the cultivation of mining tourism. Thus, this theory may be presented as follows:

- Theories of escape - Antique mines are the perfect place where one can get away from every day's problems, they are an opportunity to change the environment and lifestyle.
- Theories of recreation - some "tourists mining" is in such unusual conditions can perfectly relax, regenerate physical and mental strength, improve health and fitness.
- Theories of instincts - in the mines, there are discerning a unique place where one can realize unload of primal drives such as an itinerant or exploration urge.
- Conformist theories, explaining tourist activity in antique mines, imitation of the popular patterns of behaviour, deference to the current fashion or consumption for the show-off.
- Theories of pilgrimage building parallel between tourist and pilgrim. According to these theories, tourist destinations, including antique, mines open to the public can be compared to religious sites whose visit is tourist obligation (or even the duty). This manifests the sacred character of the mine itself.
- Theories of imaginary worlds, which supporters point to the realistic experience of the world by tourists. Tourists can verify stereotypes and misconceptions about working in the mines, specific operating and safety conditions. The analysis of mining tourism by Henning theory allows to accurately determine the possible interest of the tourists engaged in mining

tourism and defines in theory and practice needs arising from visiting of historic underground objects.

**JODA: AS A TOURISM DESTINATION**

The District being located on a cross road of N.H.-10 and 215 has been a vintage point visitors from Raipur, Kolkata, Rourkela, Bhubaneswar, Cuttack etc. The district has various Tourism Potential Viz. age old Shrines, Prehistoric paintings Old palaces, natural bounties, waterfalls, wildlife Sanctuaries, Mines which work as a Network to provide employment opportunity for people involved in Tourism Industry. It develops Economic status of the locals who cater food material, Transport, shopping items to Tourists and visitors.

**Key Factors Affecting Tourism in Joda**

The tourist has the central role in the tourism system. Tourists and their needs stand as the main driving force behind destination planning, development and management. Tourism demand at the destination is composed of national and international tourists.

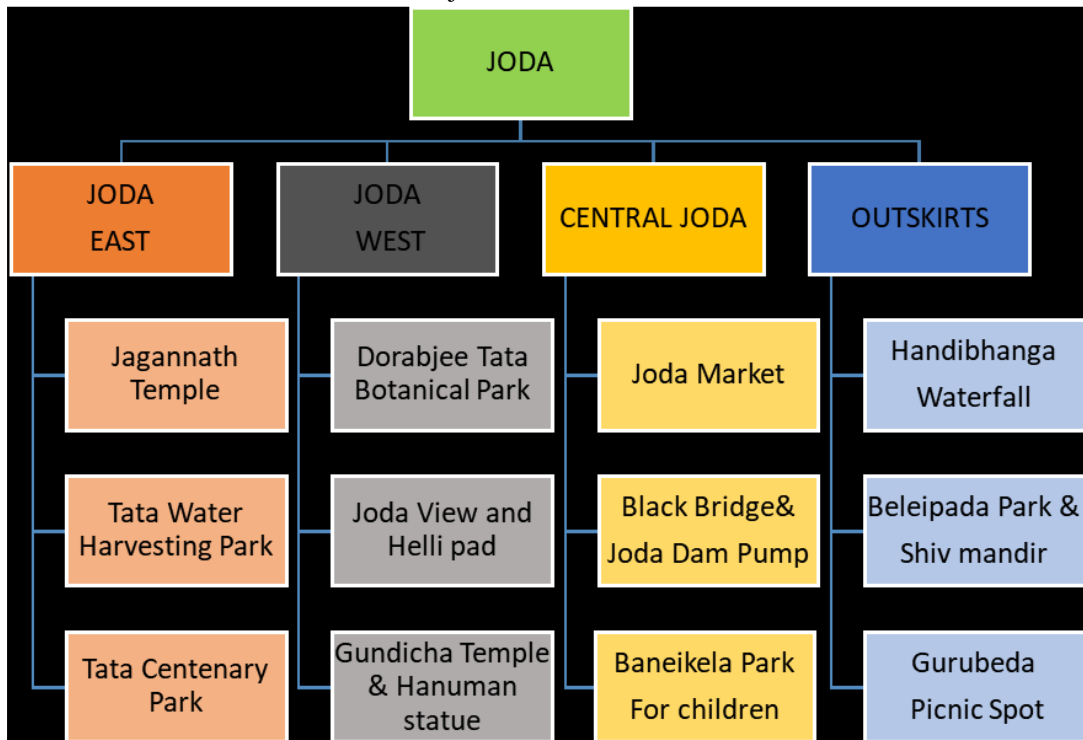
National demand normally represents a more stable flow of visitors, based upon which tourism can be planned and developed. International arrivals are more often subject to

ups and downs due to exchange rate fluctuations, geopolitical issues, and changing destination.

**Destination Spots in and Around Joda**

The ecological and geographical diversity of Joda includes the high mountains, undulating platforms, water bodies, beautiful landscape, the magnificent iron and manganese ore mines and the pristine beaches, rivers and natural heritage adds up the potential to become a tourist hotspot. With the scenic view of forest cover and hills, Joda is developing very fast as tourist location. The destination spots are as follows:

- i. Dorabjee Tata Botanical Park (Joda West)
- ii. Tata Centenary Park (Joda East)
- iii. Tata Water Harvesting Park (Joda East)
- iv. Joda View and Helli pad (Joda West)
- v. Murga Mahadev Temple & Falls
- vi. Handi Bhanga Water Falls
- vii. Bileipada Park & Shiv Mandir
- viii. Jagannath Temple (Joda East)
- ix. Gundicha Temple & Hanuman statue (Joda West)
- x. Gurubeda Picnic Spot
- xi. Joda Dam pump



**Figure 6: Divisions of Joda**

All the above mentioned tourist destination points are maximum 20-30 minutes' drive from central Joda except Handibhanga Waterfall which is 1 hour drive from Central Joda.

**PRESENT SCENARIO**

India's largest iron ore producing areas, Joda and Barbil have at least 26 iron ore mines. Official sources said around 21 mines in Joda and five mines in Barbil are producing iron and manganese ores. These two towns have a total population of around 1.13 lakh among whom 45 to 48 per cent belong to Scheduled Castes and Scheduled Tribes. Around 7000 mineral-loaded trucks pass through the two towns each day from mining sites to railway sidings and ports. Most of the mines are nearly abundant or will be abandoned in a short period of time since extraction of minerals have been done to a larger extent almost depleting the natural resources of the particular area. Some of the mines are as follows:

- i. Bickhunda mines
- ii. Tata east & iron mines
- iii. MESCO mines



**Figure 7: Bickhunda Mines**



**Figure 8: Tata East Iron Mines**

**CASE STUDY OF TURDA SALT MINES, TRANSYLVANIA**

Being, as a settlement, near Cluj, almost all tourists that come to Cluj also get to visit Turda Salt Mine. The upgrading of the salt mine was done between the years 2008-2010. Therefore, some standards of modern visiting, were included. An elevator with bird's eye view was installed, a wheel with gondolas. A recreation space with wharf was created in which tourists can boat.



**Figure 9: Turda Salt Mines, Transylvania.**



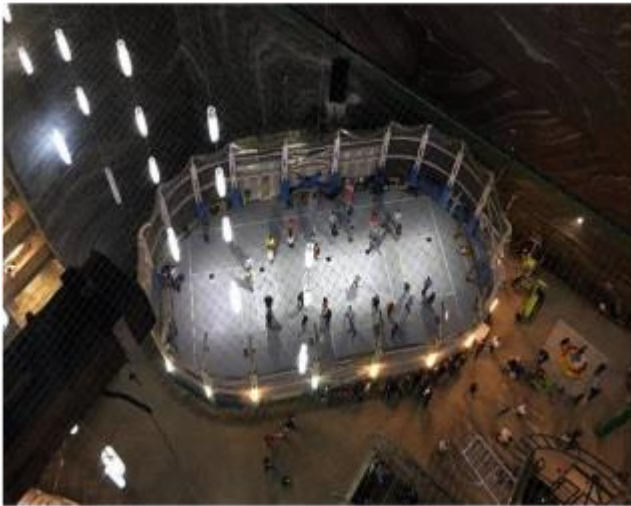
**Figure 10: Turda salt mines**

**Architectural Upgradation**

Access: from the city of Turda follow the traffic signs to Turda Salt Mine. The road is very well signalized. The upgrading of the salt mine was done between the years 2008-2010. Therefore, some standards of modern visiting were included. An elevator with bird's eye-view was installed, a wheel with gondolas. A recreation space with wharf was created in which tourists can boat.

### Features

- i. A panoramic wheel
- ii. Minigolf ground
- iii. Table tennis
- iv. Bowling runway
- v. Billiards table
- vi. Amphitheatre
- vii. Boating on lake.
- viii. Basket Ball Ground.



**Figure 11: Mini Basket Ball Ground.**



**Figure 12: Amphitheatre**



**Figure 13: Bowling Runway.**



**Figure 14: The center of the mines with boating and other facilities.**

### ANALYSIS AND INTERPRETATION

- i. Use of abandoned mines, as the area covered by the mineral deposits classified as mining area come to the average of 4993.20 acres, constituting 51.06% of the Master plan.
- ii. Undeveloped area consisting the areas of mining, agricultural and vacant lands, burial and cremation grounds and water bodies covering an area of 8533.67 acres, constituting about 87.26% of the Master Plan area.
- iii. Will mark JODA on the world map as a tourist destination.

- iv. It provide education to the tourist about the mines, as they learn about the geology and structure of the Earth and try to understand the difficult and specific work of miners.
- v. The ecological and geographical diversity of Joda includes the high mountains, undulating platforms, water bodies, beautiful landscape, the magnificent iron and manganese ore mines and the pristine beaches, rivers and natural heritage adds up the potential to become a tourist hotspot.
- vi. Joda grew in a linear form along the valley between the town hills .The express highway which takes off from the State Highway serves as the major artery of the town .Again the hills to the north of the State Highway pose a restriction to its expansion on the northern side. All these have given this town a linear shape along the Express highway. Therefore for the development of the area the development should be made in the main artery i.e. State Highway 10.
- vii. Opportunities:
  - Employment generation.
  - Infrastrcutre development.
  - Increase in per capital income.
  - Creation of new tourist attraction.
- viii. Events and festivals like Rath-Yatra and Durga Puja Fair adds an additional product alternative for touristsin Joda.



Figure 15: Linear development of Joda.



Figure 16: Rath Yatra in Joda.

## CONCLUSION

Joda grew in a linear form along the valley between the town hills .The express highway which takes off from the State Highway serves as the major artery of the town .Again the hills to the north of the State Highway pose a restriction to its expansion on the northern side .All these have given this town a linear shape along the Express highway In conclusion, it turns out that mine visiting belongs not only to the realm of mining tourism.

Visitors can focus on different aspects of tourist attractions. Almost all of them can take place in mines. This is unique when compared to other tourist attractions and products, including museums and facilities on the surface. The respondents indicated this aspect as a factor increasing tourist attractiveness of a given place. When visiting mines, tourists are offered education as they learn about the geology and structure of the Earth and try to understand the difficult and specific work of miners. What is also important for mine visitors, is the untypical environment they find themselves in.

The ecological and geographical diversity of Joda includes the high mountains, undulating platforms, water bodies, beautiful landscape, the magnificent iron and manganese ore mines and the pristine beaches, rivers and natural heritage adds up the potential to become a tourist hotspot.

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