

Ministry of Tourism & Culture
(Department of Tourism)



***Preparation of 20 years Perspective Plan
For
The state of Jharkhand***



FINAL REPORT

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**ORG-MARG RESEARCH LIMITED
NEW DELHI**

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EXECUTIVE SUMMARY

- E.1 Department of Tourism under the Ministry of Tourism and Culture, Government of India, has proposed a 20 years Perspective plan for development of Tourism in state of Jharkhand [a newly formed state]. Keeping in mind the aforementioned objective, Ministry of Tourism, Government of Indian, has assigned ORG-MARG Research Pvt. Ltd. to prepare the plan. The plan is divided into 7 chapters under different headings.
- E.2 On 14th Nov.2000 Jharkhand was formed after separating 18 districts of South Bihar. Height of Jharkhand plateau ranges between 1000-3000 ft. from sea level. Jharkhand situated at the eastern corner of “Vindhya” mountain range has a distinct cultural, mineral, natural, tribal heritage among other states of India. Jharkhand is among the few destinations that offer a perfect holiday option.

Although Jharkhand is in the nascent stage of development, it still holds a vast potential for attractions like waterfalls, reservoirs, wildlife sanctuaries, hills to name a few.

Community participation is the core of Jharkhand. The state consists of nearly 30 diverse and distinct tribal communities, which are there since ages. Although they have their own specific language and culture, still they respect other's activities. **Akhra** (community ground) is the binding force and denote the status of the tribes.

E.3 During the study ORG covered large number of tourist spots mainly located across 2 existing circuits and a number of stand-alone destinations. Besides this, one new circuit and 2 spots that holds potential of being converted into tourist attraction have been identified during the course of study. The spots/circuits were analysed in terms of location; connectivity, infrastructure, identity, amenities, and limitation besides this what is the existing traffic and inventory levels were also studied.

- Spots covered in Ranchi-Hazaribagh-Tilaiya circuit were Jonha fall, Hundru fall, Tagore Hill, Ranchi Hill, Rock garden, Acquaworld, Ranchi lake, Crocodile park, Jagnnath temple, Hatia dam, Hazaribagh national sanctuary, Hazaribagh lake, Konar dam, Canary hill, Salpharni dam, Surajkund, Rajrappa temple, Tilaiya dam etc.
- Spots covered in Daltenganj-Mahuadandh-Netarhat-Ranchi circuit are Betla National Park, Palamu Quila, Lodh fall, Sunrise point, Sunset point, Upper Ghaghri, Lower Ghaghri, Koyal view etc.
- A new circuit was identified as Ranchi-Bundu-Jamshedpur. Till date most of the tourists were visiting spots in this circuit as stand alone spot. From now onwards Dassam fall, Sun temple, Dalma national park, Dimna lake can be promoted as a package tour because of their connectivity with National highway 33 and proximity to each other.
- Dalma is the first Elephant national park of India. This park shall be a great opportunity for the visitors to experience wildlife adventure without any boundary.

There is no reserve/buffer area; visitor can enjoy the complete area of the park (approx. 190 km).

- Sugabandh, identified as new tourist spot 65 km from Betla on Daltenganj-Netarhat route has a distinct natural creation and structure that attracts tourists. There is a service road of 5 km that connects this spot with Daltenganj-Netarhat highway.
- Betla & Lodh fall have all the potential to attract domestic as well as international tourists. Lodh is only natural waterfall in Jharkhand that has water all over the year. Betla is signified as only tiger reserve area in Jharkhand. Connectivity of these spots with Varanasi is another positive aspect that can be used to attract international visitors.
- Netarhat being the only hill station in Jharkhand has unique scenic beauty. But absence of internal transport and approach road is hindering the prospects. Normally bus takes more than 90 minutes to cross the valley stretch of 22 km, the condition of road is a major limiting factor. Amenities like food joints, communication kiosks, medical facility, drinking water are inadequate at this place.
- Deoghar has nine tourist spots, each having unique characteristic which makes the tourist to extend their visit. Pilgrims make it a point to visit all the spots as they feel that this is god's place and they should make most from their visit. The average duration of stay is 2-3 days.

- Dhanbad, the mineral capital of Jharkhand consists of water reservoir & dam. Topchachi lake is the largest water reservoir in eastern India and Maithon dam is the biggest one in Damodar Valley Corporation (DVC).
- Saranda, an unique storehouse of ecological and visual delights, which can be developed as a prime spot of tourist attraction.

E.4 Insufficient operational infrastructure i.e. approach road, sanitation, drinking water, parking place, sheds at the spot are the parameters that require immediate attention from the concerned authorities. Almost 50% of the spots do not have surfaced approach road thus no public transport is available for the tourists.

- Lack of connectivity & basic infrastructure were the major impediments identified at most of the spots. Some spots Lodh fall, Sugabandh, Lower Ghaghri, Dassam fall, crocodile park etc. do not have any approach road and some others like Hundru, Jonha, Vaitinda fall, Netarhat, Panchgagh fall, Dalma national park, Sulpharni dam etc. require resurfacing of the approach road.
- No public transport is available for almost 70% of the spots in State. Tourists have to engage private taxis to visit these spots, but this is abnormally high for the tourists.
- Internal transport is available during the day only, no transport is available at night. So the tourist have to travel during day only thus have very less time to enjoy the spot and be back at the base. This is major limitation with tourism

industry in Jharkhand. Safety is prime concern of the tourist, as Jharkhand is known for its Naxal activities. Movement is restricted after sunset and public transport is operational accordingly. For example: Bus for Ranchi-Netarhat route are available till 10 AM only and back till 3 PM.

- Amenity at spot includes sanitation, drinking water, parking place, food stalls and primary medical facility. These were not available at Lodh fall, Sugabandh, Panchgagh fall, Sunset point (Magnolia point) whereas few of these were available for the tourist at Betla, Deer park, Maithon dam, Topchanchi lake etc.
- Power situation is very poor in Jharkhand as just 60% of total villages are connected through electricity. Complete absence was recorded at waterfalls near Ranchi, Deer park, Crocodile park, Lodh fall, Panchet dam etc.
- Communication was a major impediment recorded during the study. Kiosks are rarely available for the tourists in the proximity of the spots like Betla, Netarhat, Tilaiya dam, Hazaribagh sanctuary, Surajkund, Salpharni dam etc. No STD/ISD booth was available for the visitors.
- Accommodation facilities are available through BSTDC tourist bungalows only and that is also located at 6 spots. Budget accommodation hotels are available only at Ranchi, Dhanbad, Jamshedpur, and Deoghar. No other city in state has quality hotels for the tourists to stay.

- Most of spots are naturally created thus have limitations attached. Tourist visits also vary seasonally like the amenities near the spots. During the season local inhabitants build stalls for 3-4 months thereafter the structure are removed.
- Guide facilities are not available at nearly all the spots. Visitors are not in a position to know about the spot or surroundings. Many tourists defer their visit plan because of this, as they are skeptical to move to a particular spot without any knowledge of the spot.

E.5 Suggestions made by the consultant include development of operational infrastructure, improvement in amenities at various spots/circuits, products conceptualization for tourist attraction. Some highlights of these are:

- ☞ Being the most preferred medium of transportation roads require immediate attention from the authorities. Condition of the roads connecting tourist spots is very bad thus very less public transport is operational on the route. Ranchi-Netarhat, Angara-Hundru, Mahuadandh-Lodh, are some of the spots that do not have any connecting road.
- ☞ Width of the national as well as state highway is not uniform and sufficient to accommodate the traffic safely. It is suggested to widen NH 33 and NH 23 as these two host major part of the traffic. State highways connecting spots in Netarhat-Daltenganj route are just 2 Mt wide. GT Road passing through Dhanbad requires resurfacing.

- ☞ Ranchi the only airport in Jharkhand has an single Indian Airlines flight routed through Mumbai-Delhi-Ranchi-Patna. Fare is charged on a hopping basis but this should be fixed on destinations, rather than the hopping system. At the same time, efforts to develop Jamshedpur into a full fledged Airport, should be given priority.
- ☞ Inter connectivity of various districts of Jharkhand should be planned. Network between Ranchi-Daltenganj, Ranchi-Hazaribagh should be installed and improvement should be done in connection between Ranchi-Jamshedpur, Ranchi-Lohardaga.
- ☞ The consultant has identified
 - ✓ Accommodation projects(hotels/resorts/motels)
 - ✓ Cafeteria projects(restaurants, wayside facilities)
 - ✓ Service oriented projects (travel agency/operators/franchise)
 - ✓ HRD
- Communication Kiosks (STD/ISD/PCO, Cyber café) should be installed at spots namely Betla national park, Netarhat, Mahuadandh (Lodh fall), Maithon dam, Topchanchi lake, Surajkund, Tilaiya dam, Panchgagh fall etc.
- Sanitation, potable drinking water points and other public conveniences are suggested at Hazaribagh sanctuary, Panchgagh fall /Rock Garden/ Sugabandh/ Maithon Dam/ Hatia dam.

- Wayside cafeteria is suggested at following Bundu, Khunti, Latehar, Sugabandh, Mahuadandh, Angara check post, Maithon dam, Netarhat, Surajkund, Konar dam, Dalma National park, Betla National park.
- ☞ Medical support system is completely unorganized that's why a common disease like **Malaria** has taken a shape of chronic disease at Netarhat. Some NGOs as well as Private medical professionals should be motivated to service the inhabitants more effectively.
- ☞ Accommodation facility has been suggested at Hazaribagh, Netarhat, Chaibasa and Ranchi. Budget hotels should be planned at these places with private participation.
- ☞ The consultant has suggested tourist facilitation centers for guidance and support of tourists at Delhi, Varanasi, Betla, Netarhat, Dhanbad, and Deoghar.
- ☞ The various products identified were Hot Air Ballooning for Betla, Ayurveda Center at Betla National Park, Rock climbing at plateau of Netarhat and Ramgarh, Urban Haat at Ranchi & Jamshedpur, Ethnic Tourism comprising the Tribes of Jharkhand, Eco- Tourism at Saranda, Spiritual tour covering the various spiritual sites of Jharkhand, Wonder Tour comprising of the Waterfalls and Dams, and finally Heritage Tour at McCluskieganj.

E.6 The tourist always wants value for money when any destination is visited. This varies from tourist to tourist & destination to destination. Besides this it also varies for domestic and international tourists since they have different needs as well as motivations for an experience is different in both the cases. As per the study foreign tourist are more

interested in tribal area, ethnic tourism, adventure, wildlife tourism, culture & heritage, eco-tourism, handicrafts whereas on the other hand domestic or day visitors were interested in religious places, monuments, amusement facilities, leisure tourism. The plan has to be focussed on the basis of these needs.

- Traffic inflow should be tracked and compare it with the projections. Any variation should be scanned along with reasoning and measures to motivate the tourists.
- The consultants have worked out three phases for development based on demand priority for development and magnitude of various developmental projects. The total duration of all the phases collectively is 20 years indicated as short terms (2002-2007), medium term (2007-2012), long-term (2012-2022).
- Short term, is the first phase spanning for a period of five years. At the same time priority projects identified by the Consultants would be planned in detailed during this phase. Still emphasis should be on developing operational infrastructure suggested by the consultant at tourist spots/circuits.
- Medium term plan concentrates on development of products conceptualized during the study. Monitoring of the tasks implemented is also necessary in order to maintain the standards and revenue.
- Prime objective of long-term plan is performance appraisal of projects implemented during short and medium term. Any deviation from the objective should be taken care of before they get delayed and non revertible.

E.7 Eco tourism has been identified as major thrust area in Jharkhand. Catalyst identified was abundance of natural assets i.e. not utilized properly till date. State government decision of sharing the income from forest products with local inhabitants is a leap forward step in right direction. Consultant has identified some steps for this:

- ☞ Environmental Impact Assessment (EIA) is one of the proven management tools for incorporating environmental concerns in development process and also in improved decision-making. This has been taken care in fifth chapter of our plan. Conservation plans have been suggested in perspective of existing as well as proposed infrastructure developments.
- ☞ The consultant has suggested 11 activities to be performed for eco development and maintenance of natural assets. Suggestions are made for preservation of endangered species and other forest products.
- ☞ Palamu Tiger reserve is incomparable asset of Jharkhand as it was one of the 8 national park initially identified for development under Tiger conservation programme (TCP). This is among major attraction point for adventure as well as wild life tourists. The forest department has conceptualized eco-development program for this area with cooperation from local inhabitants.
- ☞ One major suggestion is reducing the dependency of local inhabitants on forest. Cultivation is very poor in state and people are dependent on forestry products despite vacant agricultural land. Other identified revenue stream should be implemented in order to create conducive environment for this change.

- ☞ It has been observed that Joint Forest Management (JFM) has been successful, by and large in managing forests in a sustainable manner in various parts of the country. This approach has exemplified fruitful collaborative efforts of the forest department. This should also include local community participation for forest conservation.

E.8 An assessment of the IXth and Xth Plan Outlay for the state tourism development has been presented herein. The future elements of the Perspective Plan for development of basic infrastructure, tourism product development and creation of selective tourism circuits requires a sizeable capital investment towards creation of additional facilities to cater the needs of projected flow of tourist traffic.

The plan should focus on sustainable tourism development, which is eco & environment friendly and overall tourist friendly. Tourism is said to be at opposite heads with environment, wherein tourists at a particular destination leads to overcrowding which in turn leads to waste generation resulting in generation of various types of pollutants of different forms & types. The sustainable development consists of various benefits in different forms such as benefiting

- local population / inhabitants
 - participating agencies/associates/bodies
 - provide a lasting experience
 - informative in nature
 - conserving resources(cultural & historical heritage)
 - Emphasis on quality & not quantity.
- An environment planning approach is essential for sustainable development of tourism. This implies that all aspects of environment be carefully studied, analyzed while proposing development at sensitive tourist destinations, thus it calls for an separate cell

whereby all monitoring activities can be carried out related to the environment.

- ☞ Tourism dept. should give high priority to planning new approach roads and maintenance of existing ones that provide linkage to thrust areas and other identified destinations of tourist importance.
- ☞ State should give high priority to planning new roads and maintenance and improvement of existing roads that provide linkage to thrust areas and other identified destinations of tourist importance. The roads from Ranchi- Jamshedpur, Ghaghra- Netarhat – Daltenganj. Total cost projected for this head is INR 1100 lacs.
- ☞ The state government should take steps to provide adequate transport services for various categories of tourists. Five percent of the accrual from M.V. Taxes will be earmarked for various passenger amenities. Private sector should be motivated to participate in this and permits should be issued on priority basis.
- ☞ Central government assistance through various plans like Prime minister **Gramin Sadak Yojna**, National Action Plan for Tourism (NAPT) etc. should be utilized properly in order to generate effective results.
- ☞ Details of funding for master plan has been structured into subheads:
 - Basic infrastructure
 - Manpower
 - Marketing and Promotion
 - Identified Products
 - Selective Tourism Areas/Spots

- ☞ These subheads have been divided into periodic plans with projected fund outlay. Short-term outlay is projected to be 11 Cr (approx.). Medium term is projected approx. 334 Cr. and long-term plan will require investment of approx. 190 cr.
- Costing of Basic Facilities

Costing of facilities

Facilities	Average Cost (Rs. Lacs)	Locations
Tourist Facilitation Centre	6 – 8	Betla/ Delhi/ Ranchi/ Jamshedpur
Sanitation/Public Conveniences	6 – 7.2	Hazaribagh Sanctuary, Panchgagh Fall /Rock Garden Sugabandh/ Maithon Dam/ Hatia dam
Approach Roads	1100-1200	Lodh Fall/ Hundru Fall / Dasam fall/ Salpharni Dam/ Sugabandh /Vaitinda fall/ Panchgagh /Crocodile park/ Dalma sanctuary
Cafeteria/Wayside Amenities	120-140	Bundu/Khunti/Latehar/ Sugabandh/Mahuadandh/ Angara check post/ Maithon dam/Netarhat/Surajkund/ Konar Dam/ Dalma National Park, Betla National park.
Potable water	12-18	Hundru Fall/ Panchgagh/ Rock Garden/Hatia Dam/ Netarhat/ Konar Dam/ Salpharni Dam/ Tilaiya Dam/ Johna falls
Landscaping /Garden	35-40	Rock Garden/ Hatia Dam/ Maithon Dam/ Tilaiya Dam
Parking Area	15-18	Hundru Fall/ Lodh fall/ Baidyanath Temple /Netarhat
Museum / Trico Emporium	50-60	Betla/ Jamshedpur
Security Booth	4-8	Lodh fall/ Hazaribagh sanctuary/Dhanbad
Power Back-up 25 KVA	20-24	Various circuits
Budget Hotels [200-250 rooms]	400	Hazaribagh, Netarhat, Chaibasa, Ranchi.

Development of tourism infrastructure and improvement of tourism products mainly consist of the following :

- i) Central Financial Assistance for integrated infrastructure development.
- ii) Central Assistance to state government for developing tourist circuits and product development.
- iii) Institutional Assistance
- iv) Package of incentives for promoting private investment in the tourism sector.

☞ Funding options have been also taken care of through identification of institutions specializing in supporting tourism development activities. The institutional assistance for developing tourism facilities is available from domestic financial institutions i.e. TFCI, IFCI, SIDBI, SFCs, IDBI, ICICI.

☞ The most popular pattern for funding is the 'normal funding' under which, the Dept. of Tourism, Govt. of India meets almost the entire expenditure except the cost of land and interior decoration in case of the construction projects. Around 60% of the project cost has to be raised as loan from financial institutions or banks.

➤ A tax holiday should be made available for a period of 5-10 years on the capital investment to various tourism projects whether declared by the Central government (circuits) or the state government located in designated areas as well as located on state as well as national highways. Necessary administrative arrangements shall be made available at state as well as district level to make the incentive scheme operational.

- The JTDC shall have to assume a catalytic role focussed on acting as a clearing house of information, production & distribution of brochures, literatures etc. Besides this the department shall open its offices at various important cities of India to provide publicity as well as tourism information along with packages, circuits, tariffs etc.
- Intensive efforts shall be undertaken to attract private investors from other states as well as countries including NRI's to invest in tourism sector. The Department of Tourism along with the state department, shall have to play an active role in ensuring smooth and clear cut permissions, information, plans are available to them easily without any hassles of the government.
- A special task force needs to be created under the chairmanship of the Secretary as well as the Director of tourism along with other core members for effective co-ordination & implementation as well as monitoring the activities among various government departments, agencies to speed up the decision making process as well as take corrective measures on the spot and implement the same.
- To make the entire system result oriented it is necessary that there be a strong feedback and monitoring system.
- ☞ Package of Incentives for promoting private Investment in Tourism industry should be designed with support from TFCI, IFCI, IDBI and other financial institutions. These can be opted from available incentive options like: priority sector, interest subsidy, income tax exemptions, capital subsidy for heritage hotel, Liberalized Exchange Rate Management Scheme (LERMS) etc.

E.8 One of the impediments identified was lack of awareness among the tourists. Marketing of the spots has to be planned in respect of attracting more visitor from other parts of India. Till date 90% of the tourist influx is from West Bengal only, efforts should be made to attract tourist from other origins also.

- ☞ Support system should be in place to assist the tourists. This includes facilitation center, approved guide, photography, brochure of the particular circuit as well as spot, facility to make the tourist at ease etc. All these should be performed through government support in order to earn faith of the visitors later this task can be shifted to approved tour operators.
- ☞ Developing optional tour packages will definitely be a great help for saving time and money for tourists. These should be designed through approved operator and promoted through government institution in order to gain the goodwill of the tourists.
- ☞ Government should formulate strategies to promote suggested types of tourism targeted at domestic as well as international tourists respectively. Separate brochure should be printed for these to motivate the visitors and also promote each trip in specialized manner. Amenities should be planned in similar terms along with distinctive traits of the local inhabitants.
- ☞ At present Tribal handicrafts are not actively promoted, there is only one shop showcasing the products. Most of the visitors do window-shopping because they aren't able to judge the significance of product displayed. TCDC being the apex body in state should come forward with lucrative schemes for tribals and proper marketing initiatives should be taken to market that.

E.9 The development of tourism is connected with a number of factors such as

- Changing lifestyles & demographics
- Political climate
- Economic factors
- Investment climate

Marketing of the spots has to be planned with respect to attracting more tourists as well as repeat tourists. This is divided into 2tier plan

1st tier

- Creation of facilities
- Awareness build - up
- Target the tourist community (state specific)

2nd tier

- Invite private participation
- Provide operational incentives

To achieve these following steps need to be adopted

- Project Jharkhand as a major destination within and outside the country.
- Motivate international tourists at Varanasi to extend their trip and enjoy the nature's paradise [Betla-Lodh fall-Netarhat].
- Identify the USP of various circuits / products.
- Focus on the operators and agents other than JTDC.
- Improve inter destination connectivity.
- Provision of Basic facilities [irrespective of the traffic] needs to be developed at various identified areas.
- Attract high-end tourist and focus on certain themes/products.

- Petrol pumps should be planned on various highways along with a cafeteria to facilitate the trip and midway halt for the Tourists.
- For remote areas, central power backup systems [generator 30-35 KVA] and charge for the same at higher rates than JSEB.

CHAPTER -1

INTRODUCTION

1.1.0 Background

Recognizing the importance of tourism as an instrument for economic development, a comprehensive tourism policy was framed by the government. As a consequence of economic restructuring & liberalization of policies, the Tourism Industry was declared as a priority sector for foreign investment.

Though India has the potential of being the number one destination in tourism circuit, the lack of commitment & changing policies are causing a hindrance. Tourism has to be given the status of India's top economic driver & become a national priority.

India is getting just 2.6 million foreign arrivals a year & its share in world tourism arrivals has remained constant at 0.40%. The number of Indian travelling abroad is much more than the tourists coming in. On the other hand domestic tourism has grown by leaps & bounds from 64 million tourists to 176 million but the average Indian spending is much less than the world average, which is approximately 10% on travel & tourism. The Indian average, which is 4.6%, is slowly on the rise that shall translate into India being the highest growth country for tourism demand in the world.

The government spending is a mere 0.9% of its total spending on travel & tourism, compared to other countries, which ranges between 5-15% of the total expenditure.

This translates into lack of infrastructure in terms of

- rail, road, air connections
- communication
- accommodation
- tourist information network

Secondly, unplanned growth is having its impact on local environment as well as creating cultural and social problems in existing high traffic areas resulting in overcrowding. As a result India is unable to capitalize fully on the dramatic shift visualized by the tourism industry-a shift from America & Europe to Asia & Far East.

The visitors to India come mainly from England & US followed by Sri-Lanka, France, Germany, Canada, Japan, Australia & Singapore. The majority is in the younger age bracket between 25 & 44. Nearly 70% of the visitors are men. Besides this 45% of the overseas visitors to India are repeat visitors.

1.2.0 Need for the Study

The tourism industry has been generating an impressive volume of employment and is also one of the prime foreign exchange earner. The development of this industry depends on the quality of environment and availability of facilities and amenities, which are of utmost importance as people expect a peaceful atmosphere.

As a result accessibility, accommodation & recreation are the three essential factors, which go a long way in the development of tourism.

India has an immense potential to be developed as the main tourist destination in the coming years because of some of the important features mentioned below:

- India with a population of over 1 billion is spread over an area of 3287 million sq. kms.
- A coastline of over 7516 kms
- Railway network of over 62,700 kms
- Over 61,500 hotel rooms in over 1083 hotels (3 star – 5 star)
- Some of the most beautiful beaches in the world.

- Over 80 national parks & 444 wildlife sanctuaries
- Over 51 hill stations

The potential of domestic tourism has grown substantially during last few years due to increase in income levels & emergence of dynamic urban middle class with increase in spending habits.

To assess the tourism potential the Ministry of Tourism has entrusted the task of Preparation of 20 years perspective plan for the state of Jharkhand to **ORG-MARG Research Ltd.**

1.3.0 Terms of reference

- i) A perspective plan with a time frame of 20 years needs to be developed for developing sustainable tourism giving year-wise phasing of investment having regard to the resources available. Department of Tourism shall provide Central financial assistance for this purpose subject to the maximum of Rs. 20.00 lakhs.
- ii) The Plan should indicate short-term and long-term plans, targets and ground realities.
- iii) The Plan should indicate all activities to be undertaken by different agencies clearly indicating the time frame for each activity.
- iv) The Plan should be able to assess the existing tourism scenario in the State/Union Territory with respect to existing traffic levels and inventory of
 - natural resources
 - heritage and other socio-cultural assets
 - quantitative/ demographic factors like population, employment, occupation, income levels etc.

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- services and infrastructure already available
 - v) The Plan should review the status of existing development / investment plans of schemes for the development of tourism in the region.
 - vi) The Plan should list and evaluate existing potential tourist destinations and centers and categorise them on the basis of inventory of attractions, infrastructure availability, degree of popularity, volume of traffic flow etc.
 - vii) The Plan should analyse and categorise existing / potential destinations and centers, as a stand alone destinations, part of a circuit and / or as major attractions for special interests groups, etc.
 - viii) The Plan should assess the existing infrastructure levels at identified destinations / centers in terms of quality of roads / transportation facilities, civic amenities, enroute transit facilities, boarding and lodging facilities etc.
 - ix) The Plan should be able to broadly assess traffic flow to identified destinations & centers for assessment of infrastructure requirements taking into account past growth trends, suggested linkages and integration, future expected developments including likely investments by the State and investment climate / incentive for the private sector etc.
 - x) The Plan should attempt and arrive at an indicative cost configuration of likely investment on infrastructure development under different heads and to prioritise investment needs by drawing up a phased investment plan covering the next 20 years.

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- xi) The Plan should identify the existing as well as new tourism projects including projects for expansion / augmentation, upgradation of facilities and services destinations & centers, which have potential for development.
 - xii) The Plan should undertake product conceptualization cum feasibility exercise inter-alia for identified projects covering aspects like locational evaluation, schematic product planning & conceptualization including quantification of individual project parameters, assessment of overall investment levels and of project viability cum feasibility study exercises etc.
 - xiii) The Plan should prepare an action plan for implementation of identified potential development schemes / projects / products and for development of infrastructure in conformity with the policy objectives & guidelines provided by the concerned state / central agencies / departments and the requirements of national development and funding agencies. The overall development plan to also take into account WTO's Bali declaration on tourism development.
 - xiv) The Plan should include Project-wise potential for employment generation; a reasonable percentage of potential employment is to be reserved for women.
 - xv) The Plan should indicate the actual and the projected number of domestic and foreign tourist arrivals for each proposed tourist place.
 - xvi) Prioritise the scheme on the basis of employment potential of the project and the tourist arrivals at the proposed place.
 - xvii) An inventory of existing infrastructural facilities (including paying guest facility) is to be made; after which, the proposed infrastructure needs to

be split up into various segments concerning different State Government Departments, such as PWD, Forest, Culture, Handicrafts etc., and dovetailed with the Tourism Plans.

- xviii) Since the perspective plan would be used for external assistance, it would be desirable to suggest State tourism projects to foreign funding agencies for financial assistance; each project has to be properly and finalized accordingly.
- xix) Other sources of funding such as loans from the Financial Institutions, the Tourism Finance Corporation of India (TFCI) etc., need to be explored. Besides, proper incentives need to be suggested for private sector participation.
- xx) Further the available institutional machinery in the State to oversee / coordinate the development of tourism infrastructure has to be specifically suggested.
- xxi) Facilities for performance by local artists; cultural troupes should be built into the perspective plan.
- xxii) Cultural complexes can be suggested with the financial help from the State Department of Culture and later made economically viable on pattern of Dilli Haat.
- xxiii) Handicraft shops should be suggested at various tourist places; these could be run by women.
- xxiv) Perspective plan should include potential developing health resorts at / near the tourist places. Yoga classes, nature cure facilities, ayurvedic system of medicines should be available at these places to attract tourists.

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- xxv) Consultant preparing the perspective plan should be asked to give an executive summary of the plan along with the report.
 - xxvi) The perspective plans should incorporate attractive packages / schemes to attract private sector investment.
 - xxvii) It is necessary that the environmental issues are dealt with in sufficient details and environmental impact assessment studies made in respect of all new projects.
 - xxviii) The perspective plans should include carrying capacity studies, instruments of spatial and land use planning, instruments of architectural controls for restoration of old properties and construction of new ones in old towns and cities, strategy for local community participation and protection of cultural identity, awareness programmes for local participation and local commitment to the project.
 - xxix) Measures necessary for mitigating the adverse environmental impacts and rehabilitating and tourist places already environmentally damaged should be incorporated in the perspective plans.
 - xxx) The perspective plan should include strategy for privatization of the tourism related properties owned by the State and the State Tourism Corporation.

1.4.0 Methodology

The methodology was drafted in relation to the objectives outlined based on the Consultants' understanding of the requirement

1. Preparation of Tourism Master Plan for the State as **Stage I** and
2. Preparation of Detailed Tourism / Spot Plans for individual tourist centres as **Stage II** at the local level.

The methodology has been arrived at after careful consideration of the nature and scope of the study supported with relevant analysis and background research.

Broadly speaking, this study cannot be viewed as a linear process of research rather as an iteration of tasks correlated in a logical sequence leading to an understanding of complex issues. In other words, the study was conducted at various levels of spatial reference, namely, state, district and the local level so as to bring the whole process into a meaningful systems framework.

1.4.1 State Level

At the state level, emphasis would be to evolve an ecologically sound and economically viable Tourism Master Plan to encompass the tourism potential of the concerned state. The Master Plan would be formulated for a time scale of about 20 years, which would include X Plan, XI Plan XII Plan and XIII Plan periods.

The strategy for the development of tourism will be an outcome of the following exercise

- a. Identification of Existing tourism potential (areas / places) of different survey states*
- b. Classification of the tourism potential based on the nature, scope, scale and mix of the activities.*

The scale and mix refers to the intensity of the potential and the amount of revenue generated as a result of the spill over effect and its possible utilization. The classification would largely depend on the economic aspects and the social value of the potential in terms of its image and prestige.

- c. *Assessment of Environmental sensitivity of the region and categorization of differential sensitivity zones.*

All development activities concerning tourism must consider the question of ecological sensitivity to ensure that development would not have adverse effect on environment. In this respect, it is proposed to delineate the state into zones of environmental sensitivity by utilizing number of indicators relating to altitude, slope, rainfall, vegetation, land use etc. so as to assess their amenability to intervention for tourism development.

- d. *Identify natural and possible travel circuits that have emerged by virtue of their location, scale and accessibility and evolve or enlarge additional or new circuits, which could be developed by removing barriers such as accessibility etc.*

In this process, it would become necessary to view tourist potential centers in a wider spatial perspective.

- e. *Assess the economic impact of ongoing / new tourism activities including their multiplier effect.*

Deliverables

- a. Evolve an ecologically sound and economically viable Tourism (Development) Master Plan, through integration of identified travel circuits and the ecological sensitivity zones.
- b. An assessment of the interaction between the economic and demographic parameters and the tourism areas / places leading to an overview of tourism in the state.
- c. Integration of the basic tourist and other infrastructure with the overall developmental framework for proposed survey state.
- d. Identification of priorities of development and formulation of a sound tourism / marketing strategy showing assessment of what would sell and at what price to the potential tourists (Domestic & International).
- e. Evaluate what facilities / assets could be created to meet the above-generated demand.
- f. How to position the product / packages through preferences and image building (niche marketing) as well as the institutional capability building for creation, maintenance and operation of assets over the plan period.
- g. Development of regional linkages & connectivity with intra-regional transport system. The perspective plan at this stage would define the improvement & new requirement for air, water & surface transport system from tourism development angle.
- h. Various infrastructural support systems such as power, telecommunication etc.

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- i. Employment potential & social welfare capacities of tourism development process in respective state.
 - j. An overall investment pattern indicating short term, medium term & long-term investment for development of required infrastructure & facilities for the respective state.
 - k. Institutional development plan for implementation & management of tourism assets

1.4.2 District / Regional Level

The District level highlights the task of formulating programmes for various districts towards tourism. In addition, guidelines relating to infrastructure provision would be attempted at this stage. This becomes essential in order to reconcile with the areas of emphasis between the regional strategy and the state level policies.

The specific programme formulated would include the following features:

Stage I

- a. Identification of the various tourist centers / spots.
- b. Classification of these tourist centers based on their nature and tourist statistics including the magnitude of tourists in terms of numbers and longevity and their location in the environmental sensitive zones of various order.

Stage II

- a. Identification of factors either inhibiting or promoting the growth of tourism, both domestic and international in various districts / regions.
- b. Assessing the infrastructure facilities in each of the centers and its present level of utilization which will include the following elements :
 - Level of infrastructure available at four levels, namely at destination areas, transit arrangements, ancillary activities and origin areas.
 - Economics of infrastructure in terms of investment.
 - Promotional infrastructure aimed at up-liftment of social values.

Deliverables

Formulating a set of plans with specific reference to the type of infrastructure to be provided in these centers in relation to their location in environmental sensitive zones. Their present / proposed primacy in travel circuits along with the investment pattern to strengthen the existing infrastructure in addition to the new ones.

1.4.3 Local Level

The local level study deals with the individual centers exclusively in a detailed manner wherein they will be classified and graded. Tourism Development (Master) Plan would be prepared for typical centers for the first five years with promotional schemes and these Development Plans would contain the following elements.

- a. Evolution of the center as tourist spot.
- b. Historical / Architectural / Cultural significance of the center.
- c. Assess the present state of the center in terms of its land use, climate, geology, demography, agriculture, economic activities, community facilities, transport network and infrastructure facilities with reference to tourism.
- d. Conduct a market research exercise at various locations & points including a sample survey of the following segments:

Categories of tourist

Business, holiday, religious, adventure/sports, heritage etc

Hotels

Star category, private hotels, guest house, lodge.

Agents & tour operators

Govt. approved agents, tour & travel operators, packaged tour operators.

As a result forecast for both domestic & foreign tourist.

Besides this secondary research shall also be carried out to generate tourist statistics, information and publicity details.

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- e. Assess the tourism amenities and facilities presently available to the tourists.
 - f. Assess the need for tourism amenities, facilities and infrastructure w.r.t. the needs of different socio-economic groups.
 - g. Expected benefits and socio-economic effects of the potential tourism demands in the center and in its regional context.
 - h. Specific proposals for improving tourist inflow with specific reference to enhancing and development of tourist attractions.
 - i. Product development plans including a sub plan for the development and marketing of some unique tourism product for each state.

The new products may include new site development, development of tourist complexes, entertainment parks, botanical gardens, resorts, sports facilities, health clubs, nature care facilities/ ayurveda centers, handicrafts center, shopping mall, cultural complexes etc.

- j. An outline of the investment programs alongwith various incentive schemes, packages to attract private investment.
- k. Phasing of the investment proposed alongwith time frame for each developmental activity.
- l. Implementation schedules, monitoring and management including role/responsibilities of different agencies.
- m. Protection Measures :

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- Environmental impact of tourism on ecology need for conservation
 - Impact of tourism development projects on the environmental and local culture
 - Vigilance for protection of tourists against exploitation and fleecing.

The above methodology would thus carry out a detailed study on the tourism potentials of respective states giving full justice to the immense varieties of tourist interest in the state and would also bring out a plan document that is pragmatic.

The study would be based on surveys of sample zones and centres. Semi structured questionnaires shall be administered among a set of respondents. Besides this in depth discussions shall be carried out with various government & non government agencies, institutes, state government bodies, experts, associations etc. This would also cover tourists and related service institutions.

CHAPTER - 2

STATE PROFILE

2.1.0 INTRODUCTION

Jharkhand (Jhar+ Khand) stands for “**Land of Forest**”, cultural name given to forest highland of Chotanagpur plateau. The land is eastern corner of “Vindhya” mountain series and has distinct cultural, mineral, natural, tribal, geographical resources amongst other states in India. This state also envelops significant social and political history on its lap.

On 14th Nov.2000, Jharkhand was formed after separating eighteen districts of South Bihar. It extends from 21⁰ 28’N - 25⁰ 18’N Latitudes and from 83⁰ 22’E - 82⁰ 57’E Longitudes. Height of the Jharkhand plateau ranges between 1000 -3000 ft. above the mean sea level. Overview of certain important facts of the state are elucidated herein:

- Jharkhand is surrounded by five states namely **West Bengal, Chattisgarh, Orissa, Uttar Pradesh** and **Bihar**. Except Lohardaga all other districts has one or more state as its boundary.
- Maximum portion of Jharkhand, which is made of very ancient stones, is known as **Archean Granite Tatanis**.
- Reference of Jharkhand can be found in **history as ancient as of 12th century**.
- Jharkhand is one of the few places in the world, where **Uranium** is found. Mines of Uranium are situated at Jadugoda.
- **Mc Cluskiegunj**, once a happening and favorite place for Anglo-Indians, which later became a colony of Anglos, still houses some Anglo-Indian families. Mc Cluskiegunj, also known as **The Gunj**, is situated about 65 km South-West of Ranchi.

- Height of **Parasnath Hills**, situated in eastern Jharkhand is approximately 4,480 ft. above the Mean Sea Level. These are the **highest hills of the State of Jharkhand**.
- Height of **Netarhat** is 3,871 ft from Sea Level. These are the **highest hills of Western part of the State**.
- Main rivers of Jharkhand are **Damodar** and **Swarnarekha**. Damodar originates from South - eastern hills of Palamau and Swarnarekha originates from Piska Nagri, near by Ranchi. Bokaro, Konar and Barakar are auxiliary rivers of Damodar.
- Hazaribagh, Palamau, Giridih and West Singhbhum are the districts having most of the forests. Dhanbad district is the one having least forest area.
- Tropic of Cancer passes thorough the State. It passes from Kanke situated near Ranchi, the Capital City of Jharkhand.
- Once upon a time Hazaribagh had **One Thousand Bagichas** (small forests) and that is the reason it has been named as Hazaribagh or place of hazar bagichas.

Jharkhand is among the few destinations, which offer a perfect holiday option. Apart from natural allure, tourist can enjoy a wide range of pursuits. Chhotanagpur, is a name that springs up before the mind eye as a highland diffused with rolling hills, clad in luxuriant forest, criss-crossed by numerous narrow, limpid hill streams. The glorious plateau is riddled with celestial springs bubbling with mineral water. Jharkhand has many facets to entice tourists and all those who are lovers of natural beauty. As indicated above, its evergreen forests, wild life, lakes, waterfalls, scenic beauty, health and holiday resort and soothing climate are an additional bonanza for tourists.

It is mostly a tribal area. Nearly 80% of the population of the state belong to tribes.

Deoghar is a well-known Hindu pilgrimage center. One of the Dwadash Jyotirlinga is situated here.

Table 2.1: Jharkhand at a Glance

Area (in Sq. Km)	75834.29
Districts	22
Blocks	211
Panchayats	3744
Villages	32620
Legislative Assembly seats	81
Lok Sabha Assembly seats	14
National Highways (Kms.)	1006
State Highways (Kms.)	4662
Health centers	506
Govt. Hospital	18
Primary Health Center	566

Source: Website, Government of Jharkhand

Table 2.2: Demographics of Jharkhand

Total Population	26909428
Male	13861277
Female	13048151
Total Population between 0-6 years	4796188
Male	2440025
Female	2356163
Rate of Increase in Population in a Decade	
1981-1991	24.03 %
1991-2001	23.19 %
Population Density (persons per Sq. Km)	338
Birth Rate	32.1 %
Death Rate	10.2%
Total Literates	11970177
Male	7759966
Female	4210211
Literacy rate	
1991	41.39%
2001	54.13%

Source: Census of India

Table 2.3: Districts of Jharkhand, Area & Population

District	Area (in Sq. km)	Population (in %)
Ranchi	7573.68	2214088
Lohardaga	1490.80	288886
Gumla	5320.94	707555
Simdega	3756.19	446421
Palamau	4015.16	1182770
Latehar	3660.47	467071
Garhwa	4044.22	801350
West Singhbhum	5290.21	1080780
Saraikela Kharsawan	2724.55	707175
East Singhbhum	3533.35	1613088
Dumka	3716.36	950853
Jamtara	1801.98	544856
Sahebganj	1705.98	736835
Pakur	1805.59	564253
Godda	2110.45	861182
Hazaribagh	5965.35	1836068
Chatra	3706.22	612713
Koderma	1311.63	394763
Giridih	4887.05	1496189
Dhanbad	2074.68	1949526
Bokaro	2860.82	1454416
Deoghar	2478.61	933113

Source: Website, Government of Jharkhand

2.1.1 Geography

- Diversification in geographical location has made this infant state distinctive in itself. At one end, its southern-plateau holds ancient shape of earth and on the other hand southern plain depicts modern sculpture of himalayan range.
- Development of land has given a stair type shape to its core Netarhat. Visitors are required to cross approximately 1000 stairs from any side after they start moving.
- This state has all form of land in equal proportion. Plains are fertile, Hills stocks minerals and forests are full of flora and fauna. At one point there are king of Hill “**Asur**” and “**Birhore**” tribes and on the other Jameshedpur, Ranchi and Dhanbad and Bokaro, leading Industrial hubs.
- The key physical features of the state are lamented below:-

Dense Forests -Barehsal-Betla (Palamau) Saranda (Singhbhum)

Plateau - Netarhat (Koharaaga), Ranchi, Hazaribagh

Fall - Lodh, Hundru, Jonha

Large River - Sone, Damodar, Swarnrekha, Vaitarni

Plain Land -Nawadah, Dhanpal, Bakunda, Midnapur, Mayurbhanj, Sundargarh, Sundargarh, Raigarha, Sarguja

Valley (Height in ft.)

1000-2000 Rajauli (North), Bawan ghati (South), Dhal bhum (W), Taspur (E).

2000-3000 Chatupalu (N), Toba (S), Taimara (E), Mushami (W)

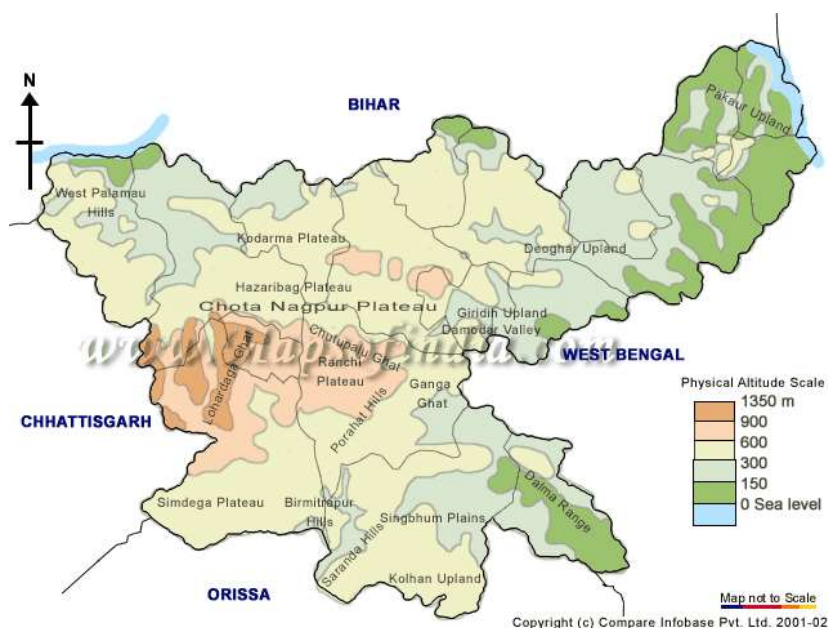
3000-4000 Garu (N), Chainpur (S), Bishunpur (E), Mahuadandh (W).

➤ **Major Rivers**

The main rivers of the State are Damodar, Mayurakshi, Barakar, Sankh, Son, Auranga, More, Karo, Bansloi, South Koel, Kharkai, Swarna Rekha, Ganga, Gumani, Batane.

Damodar and Swarnarekha are major rivers, originating from southeast hills of Palamau and western part of Ranchi respectively. North Koyal in northwest and south Koyal in southeast are other respected rivers. Major supporting rivers of Damodar are Konar, Bokaro and Barakar whereas supporting rivers of Swarnarekha are Kanchi, Karkari, Kharkhai and for North Koyal supporting river are Oranga and Ananth and supporting rivers of south Koyal is Karo.

Major rivers of Samthal Pargana is Ajay. These rivers form varied waterfalls that are the major attraction points. Ganga passes through northeast part of Sahebganj.

Fig. 2.1: PHYSICAL MAP OF JHARKHAND**Fig. 2.2: TOURIST MAP OF JHARKHAND**

2.1.2 Climate:

Jharkhand climate is hot monsoon. May is the hottest month and December, January is coldest. At times temperature goes below 5° C due to severe cold wind. Netarhat is the coldest whereas Jamshedpur, Dhanbad and Daltenganj are the hottest. Average annual rain is between 125 to 150 cms. Highest rain receiving area is Netarhat whereas lowest amount falls in the northern part of Palamu–Chatra. Southwest monsoon enters in second week of June.

August annual temperature is approximately 25°C but in summer JSR, Daltenganj etc. possess maximum temperature, in the range of 40°C. Netarhat and other surroundings areas are comparatively cool due to height of theirs. Temperature moves below 10°C during winter.

2.1.3 Natural Resources

Jharkhand is a state of Mines & Minerals, Industries, Wildlife Sanctuaries and Forests. No other state in India has been booned by natural resources like Jharkhand. For our convenience, these can be sub-grouped under three heads namely:

- a. Mineral Resources
- b. Forest Resources
- c. Water Resources

a) Mineral Resources

Minerals are found in abundance all over Jharkhand. Some are general and some are very costly. Widely found minerals are: - Coal, Iron ore, Bauxite, China clay. The minerals can be broadly divided into 3 categories namely fuel, metal and non-metal. It is rich in Iron and Steel, Coal; Mica etc. Area rich in iron ore is Chotanagpur. Bokaro is well known for its Iron and Steel industry. Jamshedpur is the industrial capital of the state.

Mining is done on (approx.) 33,200 hectares of land in the State. Dhanbad tops the list of mining districts with total area of 15353 hectares (50%), while other major districts known far & wide for their mineral deposits are Hazaribagh, Singhbhum & Giridih.

According to 1994 census, total coal reserves in Jharkhand was 64,600 Mn. Tons, major portion being located in Jharia. Both Anthracite & Bituminous coal are found in mines. The state contributes to almost 42% of all India excavation. Carbon percentage varies between 50%-60% making the coal of premium quality.

South Singhbhum Iron ore belt is worlds largest known iron reserve. Quality of iron ore is also good i.e. **Hematite** that contains more than 64% of iron content. Jharkhand holds 26% of all India reserves and contributes to as much as 18% to national production every year.

Bauxite, a raw material for Aluminum that finds varied applications in household, factory and power projects. Mines are at Northwest plateau of Ranchi and “**PAT**” area in **Palamau**. Bauxite is of a premium quality that possesses 51-55% of **Alumina** and major mines are located in the Lohardaga district.

Mica is another feather in Jharkhand glory as it ranks not only in India but also amongst world’s largest producing areas. Mines are spread in the northern region with a total area of 3770 sq. km. High quality white mica (**Masco white**) is also found in abundance and commonly termed as Ruby Mica. Approx. total production is 400 lakh tons annually.

Uranium is most precious mineral found in Jharkhand among the nuclear ones. From production point, **Jadugoda** is the leader in the state. The Uranium is cleaned at local factories. Presently surveys are on to identify the areas of reserve through geological officers.

Private participants take mines on lease after a proper valuation by geological survey officers and royalty is fixed for the leased period. Jharkhand since past has been a raw material sourcing point for major Industrial houses of India. End product is rarely manufactured in the State by these organizations; they mostly source raw materials from the state. This way the state is losing its potential to be major manufacturing hub for end-products. Some of the end product manufactured here are **Steel** and **Industrial Cables** by TISCO & SAIL.

Table 2.4: Mineral Reserve of Jharkhand

Sl. No.	Name of Minerals	Estimated Mineral Reserve of India	Estimated Mineral Reserve of Jharkhand	Percentage in Total estimated reserve (%)
1	Coal	193421.36	62084.85	32.10
2	Iron ore	9681.86	3065.25	31.66
3	Lime stone	54139.24	572.90	1.06
4	Copper ore	358.71	93.06	25.94
5	Bauxite	3037.49	1110.04	36.54
6	Pairite	57.15	52.00	90.99
7	China Clay	869.21	41.78	4.81
8	Kairite	1355.75	113.00	8.33
9	Fire Clay	702.47	47.8	6.80
10	Dolomite	4910.95	47.20	0.96
11	Graphite	6.09	3.50	57.47
12	Bentonite	367.37	1.15	0.31
13	Soap Stone	67.42	0.19	0.28
14.	Quartz and Silica sand	779.22	148.27	19.03

Source: Mineral Trading Corporation (Estimated reserve in million tonnes)

Production of different minerals in the State are as shown in the Table below.

Table 2.5: Production of different minerals in Jharkhand

Mineral	No. of Mines	Production	Unit	Rank in the India
Coal	183	59919	Thousand Tonnes	3
Iron ore	28	8659	Thousand Tonnes	1
Bauxite	6	1029	Thousand Tonnes	3
Lime Stone	33	1242	Thousand Tonnes	
Copper Ores	5	1189	Thousand Tonnes	1
Manganese	-	18718	Tonnes	-
Mica	84	1082	Tonnes	1
Kairite	3	4922	Tonnes	1
China Clay	25	23256	Tonnes	-
Fire Clay	-	49970	Tonnes	-
Graphite	-	7276	Tonnes	8
Silver	-	13648	Kg	-
Gold	-	254	Kg	6
Uranium	-	-	-	1
Chromite	-	-	-	2
Asbestos	-	-	-	1
Thorium	-	-	-	3
Isemenite	-	-	-	2

(Source : Website, Government of Jharkhand)

b) Forest Resources

Almost 30% of total area of Jharkhand is forest close to specified average of 33% by the MoEF. Chatra district holds the highest percentage of forest area (53%) and Sahebganj (2.4%) has the lowest. According to Annual report (1999-00) break-up of forest area was:

Table 2.6: Jharkhand (Flora and Fauna)

State	Geographical area (sq. km)	Forest Area (000 hect.)	Forest Area (Percentage)
Jharkhand	79.71	23.32	29.26
Bihar	94.16	6.16	6.54
India	3237.26	688.28	21.26

Source: Website, Government of Jharkhand

Forest area is divided into 3 broad categories mainly for administrative ease and their proportion is:

Reserve forest	:	16.8%
Protected Forest	:	80.4%
Other	:	2.8%

An overview of the different types of forests are presented in the Table below:-

Table 2.7: Forest Areas under different districts of Jharkhand

Forest Division	District	Reserved	Protected	Unclassified
Deoghar	Santhal Pargana	23546	31400	
			7854	
Dumka		12853	148136	
Hazaribagh West	Hazaribagh	672	176524	340
Hazaribagh East	Hazaribagh	1743	63625	
	Giridih		60331	
Chatra South	Hazaribagh	752	101828	
Chatra North	Hazaribagh		93372	
Kodarma	Hazaribagh	15630	73408	
Giridih	Giridih	8776	143020	
Dhanbad	Dhanbad	10825	15555	
Saranda	Singhbhum	81808	3988	86
Kolhan	Singhbhum	58716	11258	68
Porahat	Singhbhum	50628	15816	98
South Chaibasa	Singhbhum	31	50875	
North Chaibasa	Singhbhum	6486	61540	
Ranchi East	Ranchi	11742	80182	
Dhalbhum	Singhbhum	53050	51863	
Ranchi West	Ranchi	15677	57784	
Lohardaga	Lohardaga	10613	15960	
Latehar	Ranchi	3417	10652	

(Area in Hectares)

(Source: Website, Govt. of Jharkhand)

Table 2.7(contd.): Forest Areas under different districts of Jharkhand

Forest Division	District	Reserved	Protected	Unclassified
Latehar	Palamau	17231	101084	
Gumla	Gumla	12102	118717	16
Daltonganj North	Palamau	3987	126661	
Garhwa South	Palamau	549	123586	
Garhwa North	Palamau		78705	
Daltonganj South	Palamau	58081	46044	45
Giridih Afforestation	Giridih	485	16318	

*(Area in Hectares)**(Source: Website, Govt. of Jharkhand)*

According to geographical differences forests can be broadly divided into Wet & Dry. Wet forests are found where annual average rain is more than 125 cm and Dry ones are found where annual average rain is less than 125 cm. Major forest products are Sal Trees, Bamboos, Kendu and many more.

The forest area hosts 2 national park, 9 sanctuaries and 2 Zoological/Botanical parks that are major attraction for adventure and wildlife tourist. Govt. has varied institutions like FDC, Institute of Forest Productivity, and ICFRE that are constantly working for forest preservation and development. Presently State government has 10, 000 km Forest roads in records. Out of this 90% are Kachha road. Authorities prefer to go for mounm road than tar / metallic roads.

As per Forest Policy 1952, at least 33% of total area should be covered by Forest but this exists in just 5 districts of Jharkhand. Jharkhand government has passed a bill providing that 90% of the resources generated from the sale of minor forest produce and other income from forests would go to the village/village near such forest. The income generated would be used for welfare of villagers and plantation. For this the villagers have to constitute a society, which would have to be registered with the Deputy Commissioner and the forest department.

c) Water Resources

Due to its geographical distinctiveness, Jharkhand has abundant supply of water resources. Its surface level water supply is 5 times of the under ground water resources. Utilization level is as low as 23% for surface level and 27% for underground water.

Table 2.8: Water Resources of Jharkhand

Parameters	Type	Jharkhand	Bihar
Total Water Resources (Billion cubic meters)	Surface	23789	315887
	Underground	4992	28654
	Total	28781	344541
% of Water Resources	Surface	82.66	91.68
	Underground	17.34	8.32

(Source: ORG MARG Survey)

According to government records state has capacity to irrigate 14.51 lakh Hectare, whereas it is able to irrigate only an area of 2 lakh Hectares.

Usage pattern of water in Jharkhand depends mainly on stable groundwater sources like well and dams. The state doesn't have portable infrastructure in place in order to achieve effective utilization level. This is one of the most prime factors responsible for wastage of water resources. A comparison of different types of structures

Table 2.9: Different types of structures in use

State	Total Usage of Water (In million cum)	Type of Structure					
		Well (in million cum)	Usage %	Shallow Hand pump (in million cum)	Usage %	Tube Well (in million cum)	Usage %
Jharkhand	771.5	727.1	94.31	44.4	5.76	Not Available	Not Available
Bihar	10424.3	1091.4	10.47	6665.2	63.94	266.7	25.59

(Source: ORG MARG Survey)

Table 2.10: Usage of Irrigation structures

Type of Structure	Jharkhand	Bihar
Surface		
Construction Capacity	2.42	40.01
Irrigated area	1.13	17.32
Percentage of Usage	46.69	43.29
Underground Water		
Construction Capacity	1.90	44.95
Irrigated area	0.81	17.80
Percentage of Usage	42.63	39.60
Total		
Construction Capacity	4.32	84.96
Irrigated area	1.94	35.12
Percentage of Usage	40.90	41.34

(Source: ORG MARG Survey)

Table 2.11: Sources of Irrigation at Jharkhand

Type of Irrigation	% of Usage
Canal	17.53
Pond	19.07
Tube well (Nal Kup)	8.25
Well	29.38
Others	25.77

(Source: ORG MARG Survey)

According to environmental experts for equilibrium of Health & Environmental approx. 2000 cu. Mt/person/year water is must. If the capacity is less than 1000 cu. Mt/person/year then there is a shortfall as soon as it goes below this level status become alarming.

Combined Bihar was having 21 basins with a capacity of 325.77 billion cubic meter (bcm) out of that Jharkhand holds 7 basins with a capacity of 18.18 bcm (5.6%). Jharkhand have 14 dams that are source for various irrigational projects and 10 power projects. Some hard facts associated with river basins is depicted as below

Table 2.12: River Basins of Jharkhand

Basins	Population 1991 (lakhs)	Population 2025 (lakhs)	Agricultural Land 2025 (Lakh Hect)	Available Water Capacity (bcm) (2025)	Available Water Capacity (per person/year) (2025)
North Koel	18.99	39.14	3.52	2.23	1432
Shankh	4.57	9.42	2.12	2.65	6300
South Koel	16.33	33.66	4.67	4.18	2983
Damodar	72.53	142.46	4.89	1.85	365
Swarnrekha	40.46	82.24	4.90	3.95	1100
Ajay	11.67	24.05	1.92	1.23	1268
Mayurakshi	15.72	32.38	2.45	2.29	1683

(Source: ORG - MARG Survey)

2.1.4 Heritage and Social Cultural Aspects

Heritage Aspects

Jharkhand has preserved its natural as well as social heritage to fullest. Natural assets are backbone of this state livelihood. Society is still based on tribal ethics and people use to follow their traditions in modern age also. These display their faith in tradition & culture.

Archeological Survey of India has identified one spot for preservation in Jharkhand and that is “**Benisagar Temple**” situated at Maghgaon Block (West Champaran). This was built during **PALA** Period (6-7 AD) and was operational till **GUPTA** Period (1200 AD). This is earliest known temple in the state.

State archeological department has also identified some heritage monuments that will be preserved and developed from both point Tourism & State property. Lists of those are as below:

Table 2.12: Monuments identified by State Government for rejuvenation

Monument / Spot Name	Location	District
Old Temple	Shyamsundarpur , Purullia	East Singhbhum
Tagore Hill	Morahbadi, Sadar	Ranchi
Ram Mandir	Chutia, Sadar	Ranchi
Kuleshwari Mandir	Hunterganj	Chatra
Old Temple Fort & Nakkarkhana	Palamu	East Singbhum
Nagfheni Mandir	Naagpheni, Sisai	Gumla
Old Shiva Temple	Bedo	Ranchi
Pateshwari Mandir	Pat pahar, Kura	Ranchi
Kapileashwari Mandir	Panda, Nirsa	Dhanbad
Old Shiv Temple & Shakti Mandir	Upchutia, Nirsa	Dhanbad
Old Durga Mandir	Tamar	Ranchi
Old Shiva Temple & Bhagwati Mandir	Haradih	Ranchi

(Source: State Archaeological Department)

Table 2.13: Reserve Monuments according to first notification

Monument/Spot Name	Location	District
Old Shiva Temple	Tanginath, Dumri	Gumla
Shahpur Quila	Daltenganj	Palamu
Domvari Hill	Muruh	Ranchi
Malumati Temple	Dumka	Dumka
Snagidalan Temple	Rajmahal	Sahebganj
Jagnnath Mandir	Jagnnathpur, Namkum	Ranchi

(Source: State Archeological Department)

Socio - Cultural Assets

The State has unique language, festivals, folk dance and music but each of these gets enmeshed. Some key insights are:

Table 2.14: Cultural Heritage of Jharkhand at a glance

Languages	Santhali , Mundari , Kurukh, Khortha, Nagpuria, Sadri, Khariya, Panchparagnia, Ho, Malto, Karmali, Hindi, Urdu, Bangla etc
Festivals	Sarhul, Karma, Sohrai, Badna, Tusu, Id, X-mas, Holi, Dushahra etc
Folk Music	Akhariya Domkach, Dohari Domkach, Janani Jhumar, Mardana Jhumar, Faguwa, Udasi, Pawas, Daidhara, Pahilsanjha, Adhratiya, Vinsariya, Pratkali, Jhumta etc
Folk dance	Paika, Chaw, Jadur, Karma, Nachni, Natua, Agni, Choukara, Santhal, Jamda, Ghatwari, Matha, Sohrai, Lurisayro etc
Folk Singer	Ghasi Ram, Ghasi Mahant, Rungtu, Ledaram, Vasudeo, Shekh Ali aan, Kanchan, Kripal Ram Deogharia, Pandey Durga Nath Rai, Pandey Virendra Nath rai, Prafulla Kumar Rai, Chamu Kamar, Bhawapritanand
Musical Instruments	Kadri, Gupijantra, Sarangi, Tuila, Vyang, Anandlahri, Bansuri, Arbansi, Sahnai, Madanvari, Singa, Sankh Mandar, Dhol, Dhak, Dhamsa, Nagara, Damama, Karha, Tasa, Jurinagra, Visamdhanki, Thapchanchu, Kartal, Jhanjh, Thala, Manjhira, Ghanta
Paintings	Santhali Bhittichitra, Oraon Bhittichitra, Jado Patiya

(Source: Welfare Department, Jharkhand)

Socially this state is more vivid than any other Indian state because concentration of different tribes at one place and still they pursue peaceful life mixing with each other. Jharkhand envelops 30 types of scheduled caste/tribes; these are broadly divided into major, minor and primitive types. *(Please find enclosed Figure 2.1 in page no. 20)*

Despite having approximately 30 diverse tribes, Jharkhand holds common identity in terms of cultural representation.

Tribal Characteristics

The State has been the homeland for aboriginal races commonly known as **Adivasis**, which literally means “**original settlers**”, “**earliest settlers**” or “**autochthons**”. As per sociologists, tribes are defined as a group of persons having common definite territory, dialect, name, religion and culture. Members of a tribe have blood relationship and consequently strong kinship bond. Having spent centuries in harmony with nature, tribes have acquired an unique knowledge about their natural resources. They can, therefore, be better described as natural environmentalists. Tribals down the ages have been fiercely protective about their culture. As per the Article 343 of Indian Constitution, the Tribals have been accorded constitutional status in the Indian Union.

Tribal population contributes to 90% of the total population and this makes the state very distinct in India. Very few states have such a combination of human culture. Despite having majority, these tribes are so peace loving and cooperative that they are ready to work under the migrated population. The tribal groups are headed by individuals who represent them among tribal community. Tribes worship nature and nature is everything for them i.e. food, medicine, dance and song and makeup.

These tribes normally belong to the following linguistic groups that are namely:

1. Indo-Aryan linguistic family: Nagpuri, Sadri, Panch, Pargania.
2. Astro-Aisatic linguistic family: Munda (again sub distributed into various Tribal -Groups).
3. Dravidian linguistic family: Oraon, Kuduk, Matto

The tribes of Jharkhand can also be segregated into the following 3 categories as shown below:-

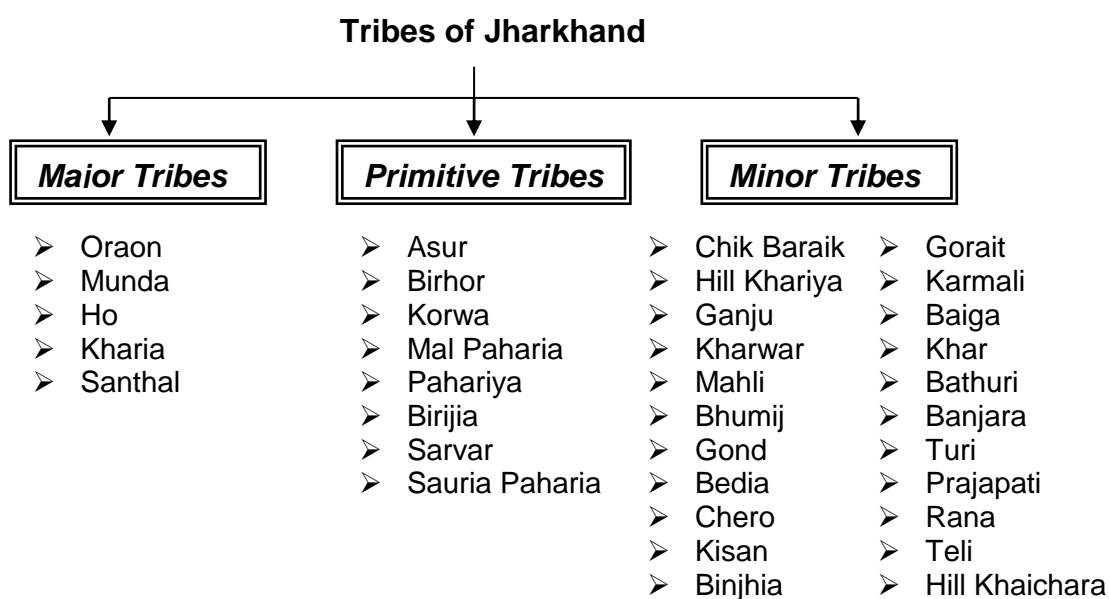


Figure 2.1: Tribes of Jharkhand – At a Glance

A synopsis of the different tribes mentioned above are included below:-

Name of the Tribe	Area of Habitation	Characteristics
Munda	Ranchi, Gumla, Lohardaga, West Singhbhum, East Singhbhum, Hazaribag, Palamau, Dhanbad	<ul style="list-style-type: none"> ✓ Encompasses 13 sub tribes ✓ An endogamous tribe ✓ Revere Singbonga or sun god as their supreme god ✓ Prime activity of livelihood is agriculture and hunting operations
Oraon	Ranchi, Gumla, Lohardaga, West Singhbhum, East Singhbhum, Hazaribag, Palamau, Dhanbad, Gharwa	<ul style="list-style-type: none"> ✓ Settled agriculturists ✓ Also depend on minor forest products ✓ Subsidiary occupations include hunting, fishing, cattle rearing art & crafts, agricultural and unskilled labourers
Ho	East Singhbhum West Singhbhum	<ul style="list-style-type: none"> ✓ Primarily Agriculturists ✓ Supplementary occupation includes – collection of minor forest produce, hunting, fishing and animal husbandry ✓ Some occupations are :- agricultural, unskilled, seasonal and permanent labourers in mines and factories.
Santhal	Hazaribag West Singhbhum East Singhbhum Dhanbad Giridih	<ul style="list-style-type: none"> ✓ They are pure Dravidian stock ✓ Live in Elementary as well as extended patterns of family units. ✓ They have time honoured administrative units for their control and orderly behaviour of villages ✓ Thrive primarily on agriculture, animal husbandry and hunting

Name of the Tribe	Area of Habitation	Characteristics
Mal Pahariya	Rajmahal Hills and adjoining areas Dumka Pakur Sahebganj	<ul style="list-style-type: none"> ✓ Predominantly agricultural labourers ✓ Also practise shifting cultivation
Asur	Scattered all over Chotanagpur Plateau but more concentrated in Palamau District	<ul style="list-style-type: none"> ✓ Primarily Agriculturists ✓ Also collect minor forest produce and work as mining labourers ✓ Have immense knowledge about medicinal herbs. ✓ They are divided into 3 main categories : Bir Asur, Birjia Asur & Agaria Asur
Korwa	Palamau Gharwa Gumla	<ul style="list-style-type: none"> ✓ Main Source of livelihood are :- Food Gathering, Hunting, Minor Forest product collection ✓ Very few individuals carry out cultivation ✓ Fishing and Hunting are practised as subsidiary occupation.
Birhor	Forest regions of Ranchi, Hazaribagh, Giridih, Gumla and Lohardaga	<ul style="list-style-type: none"> ✓ Nomadic Tribe ✓ Occupation – Food gathering and Hunting ✓ Known for their Art and Crafts ✓ Have good knowledge of medicinal herbs
Ganju	Southern Hazaribag	<ul style="list-style-type: none"> ✓ Also known as Bhogta ✓ They are subsistence agriculturists and live near forests ✓ They decorate their house walls with beautiful mural paintings

Name of the Tribe	Area of Habitation	Key Characteristics
Malhars	Nomadic tribes roam about from place to place	<ul style="list-style-type: none"> ✓ Metal casting tribe ✓ Known for beautiful metal souvenirs
Turis	Primarily Hazaribag and also to some extent in other districts like santhal pargana and dhanbad	<ul style="list-style-type: none"> ✓ They work with exceptional skill on bamboo. ✓ They make beautiful baskets, paddy containers manure containers and even combs
Prajapati	Found in Hazaribagh & elsewhere	✓ Known as Pottery making community
Rana	Found in Hazaribagh & elsewhere	✓ Known as Carpenter Community
Teli	Found in Hazaribagh & elsewhere	✓ Oil extracting community
Kurmi/ Keori	Found in Hazaribagh & elsewhere	✓ Primarily Agricultural community

‘Unity in Diversity’ is well reflected in the living and culture of those tribes, which is a treasure to the State by virtue of its own merit. They reside in Kaccha houses and roam in their ancient attire. The traditions, languages, culture, lifestyle everything is different than the other group but still they are binded with some intrinsic chord that is common to all of them.

One of the major parts of their lifestyle is dance they normally perform this on a daily basis after returning back from work. Community participation is culture as every one participates in every branch of the task.

Every village must have an “Akhara” (Dancing ground) that will display the strength and prosperity of that village. Tribals respect this ground like god and can’t control them if any damage is done to this. But in modern life this feeling is replaced by other cultural concepts.

Every Tribe has a particular dancing pattern that reflects their way of life but community participation is common to all. A synopsis is given in the Table below.

Table 2.15: Dance pattern of Different Tribes

Dance Pattern	Performing Tribe	Places where performed
Mundari	Munda	Ranchi, Khunti, Tamar, Bundu, Sili, Sonhatu, Torba, Banno
Ho Dance	Ho	Singbhum (East & West)
Santhali Dance	Santhal	East Sinngbhum, Jamshedpur, Santhal Pargana
Kuduk Dance	Kuduk	Ranchi, Gumla, Lohardaga, Simdega, Palamau
Nagpuri	All Tribes	Ranchi, Gumla, Lohardaga, Simdega, Palamau
Panchpargania	All Tribes	Sili, Sonahatu, Bundu, Tamar
Kurmali	All Tribes	Sili, Sonahatu, Bundu, Tamar

Tribal Co-operative Development Corporation (TCDC)

Role

The role of the aforesaid organisation is to procure Minor Forest Produce and Surplus Agricultural products like Tamarind/ Mahua Flower / Chironjee / Barbati / Tassar Cocoon etc. through **LAMPS** (Large Area Multi Purpose Cooperative Society) and Tribal cooperatives societies. Marketing the products thus collected with the help of **TRIFED** and **NAFED**, as the Apex Organization of G.O.I and through other recognized agencies.

Motivating groups and individuals to pursue income generating economic schemes and securing loans on their behalf from Financial Institutions like NSTFDC/NSFDC, NCDC, Commercial Banks and Government Assistance as subsidy.

Identity

The **Jharkhand State Tribal Cooperative Development Corporation Ltd.** was established in 1969 in order to provide total support for promotion of tribal co-operatives in the tribal areas.

Operational team consists of professionals from diverse stream headed by Managing Director, who is a representative from State Bureaucracy. At present 7 branch offices are in operation in Jharkhand. No set up is present outside the state.

Objectives:

1. To supervise, assist, provide technical guidance and to develop the business of Forest Labor Co-operative Societies, Multipurpose Co-operative Societies functioning for the benefits of tribal people and to control, co-ordinate and consolidate their activities.
2. To enter into all kinds of contracts and transactions relating to major and minor forest produce with a view to the gradual elimination of middlemen and thus ensuring fair wages and fair share of profits to tribal workers.
3. To purchase agricultural produce and market such produce to the best advantage.
4. To undertake the distribution of supplies and make such bulk purchases as may be necessary for this purpose.
5. To undertake the processing and grading of agricultural and forest produce and other commodities and to set up manufacturing and processing units.
6. To raise loans and accept deposits
7. To arrange for and provide such credits as may be required.
8. To take up the management of any co-operative society.
9. To acquire and hold share in any co-operative society.
10. To provide facilities for training in co-operative organizations and to grant such facilities, scholarships and awards for research or other purposes as would directly or indirectly help the co-operative movement among tribal people in general.
11. To undertake developmental work in tribal areas.
12. Generally to undertake such other business and do such other things as are incidental and conducive to the promotion and attainment of the above projects.

In total there are 424 LAMPS active in Jharkhand presently out of these 224 are affiliated by TCDC. In every block there are at least 4 LAMPS.

TRICO Emporium:

An outlet set up by TCDC to display & sells the goods procured from various tribal co-operatives. Procurement is done through LAMPS as well as individuals, who approach the society with their products.

The mark up is approx. 20% on the cost for all the products sold through the emporium.

Timing: 9.30 AM – 1.00 PM
 2.30 PM – 5.30 PM

2.1.5 Crafts of Jharkhand

Jharkhand is known far and wide for its wonderful woodwork, exquisite bamboo works, creative paitkar paintings, rare tribal ornaments and intricate stone carvings. The beautifully carved wood products and bamboo products are spectacle of the wonderful craftsmanship of the state populace. Lack of promotion and marketing of these products has mostly resulted in extinction of some crafts like paitkar paintings and stone carvings. Some major artworks practised by the inhabitants especially the womenfolk are as follows:-

Wooden Craft

Abundance of wood in Jharkhand has contributed to its profuse use in a variety of wood articles for household requirements. The artisans in the region were involved in beautifully designing different articles of household use. These include door panels, boxes and windows besides wooden spoons etc. These carved and designed articles are a class of their own and have good market in both India and abroad.

Bamboo Crafts

The bamboo found in the forests of Jharkhand is thin but flexible and very strong. Using these the artisans of Jharkhand produce different artifacts like basket, haunting and fishing equipment.

Paitkar Painting

One of the oldest tribal paintings of India, also known as scroll paintings due to its appearance, depicts life after death. This form of painting is in the process of extinction due to lack of funds for promotion.

Metal Work

The Malhar and Tentri communities in the State are experts in the metal crafts and making household wares. The Malhars are primarily nomadic and move from village to village casting utensils of utilitarian use. Objects like measuring cups, cooking ladles are casted in either bronze or aluminium. They also make beautiful metal souvenirs.

2.1.6 Prime Festivals

As lamented earlier, each tribe has a lifestyle, which is specific and distinctive to the tribes only. Yet, some of these festivals are prime ones in the State. A brief narration is incorporated herein.

Maghi

Is the major festival of the Ho tribes, which is celebrated in the Month of January or February for a period of five days. The songs performed during the festivals are not only melodious but are full with message of love. Ho youths get a chance to acquire their lifemate during this period.

Baha

Is another major festival of the Ho's as also the Santhals, which is celebrated in the honour of a village deity at the onset of spring in the month of March, when Sal flowers bloom.

Karma

It is a major festival of the Oraons. It is celebrated in the month of September, especially on Bhado Ekadashi. A branch of the Karma tree is brought by an unmarried girl with the help of unmarried boys of the village under fasting. The branch is kept in the Akhara, that is worshipped by the Priest or Pahan.

Khaddi

It is a major festival of the Oraons, celebrated in the month of March or April. The festivals are celebrated at Sarna Place, where fowls are sacrificed by the priest and every object in the house are decorated with Sal trees.

Sohrai

It is a major festival of the Oraons as well as Santhals, celebrated in the month of November during Diwali. Cattle are washed and worshipped. Lights are lit up at the onset of darkness and people partake food and drinks collectively. On this occasion, villagers celebrate Sohrai Jatra.

Maghe

It is related to agriculture and is celebrated by all tribes associated with agriculture in the month of Magh. This festival is celebrated to mark the start of new year and the end of the old year.

Phagu

It is celebrated as festival of spring in the month of fagun (February – March). The festival is celebrated for a period of 2 –3 days. The Oraons go to forest in search of game on this occasion. At nightfall, they enjoy dancing and singing accompanied by food and drinks.

Bandhana Puja

It is celebrated by the Santhals, which usually takes place either in the month of Chaitra or in the month of Baisakh. During this, all the gods and deities are worshipped and offered their due and appropriate sacrifices and Puja. Dancing, Singing and drinking go on for a week and more during this festival with friends and close kins.

2.1.7 Education:

- The state is hub of educational services earlier in Bihar and now for Jharkhand institutions operating in state are effective both way qualitative as well as quantitative.
- The State houses approximately 21386 schools and 5 universities, which includes a Deemed University. (*Source : Website, Government of Jharkhand*)
- State government has reserved 65% seats for state boys/girls at major institutions like Netarhat school, Vikasvidalya, BIT Mesra, Sainik School, Tilaiya.
- Schools like Netarhat/Vikas/St. Xaviers are of national fame that produces pride of national every year since last number of years.
- Higher educational is also popular in state of through BIT (Mesra), REC (Jamshedpur), XLRI, XISS, CMPDI, ISM. All these are high ranked institutions in India. Students feel pride after graduating from these institutions. All India entrance exams are conducted for getting into these institutions.
- Missionaries are actively spreading basic education in state through charitable institutions. They conduct clases in remote villages as well as in urban centers to cater both geographical concentration. They always promote education with earning and support they student in achieving through.
- Most of the institutions are residential and conduct All India exams for entrance. Student from all parts of nation are studying at various institutions. Parents coming to meet their children, plan to visit some attraction of the surroundings.
- Various conferences, seminars are organized on a regular interval in these institutions. Visitors from all parts of national participate in these happenings. The participants plan some spot visit after the. With their assignment. Normally they enquire for some packages but in absence of that present plan the trip on their own.

2.1.8 Economy

- Jharkhand economy combines **Banjara** culture at one end and stable economy at another.
- Dependency is more in agriculture and forest products. Parallel to this tribal depends on more than one stream of employment that includes cultivation, forestry, manufacturing and labor. All over the year they do divers, activities for livelihood.
- Almost 23.3 lakh families are below poverty line out of these 3.91 lakh are of S.C. and 8.8 lakh from ST.
- 50% of the farmers sow for 3-5 month, 20% crop for 9-12 month, 30% crop in both seasons. Just (10% of total farmers are able to generate more than their requirement. Thus other have to search for other options like woodcutting, labour, cycle rickshaw-driving etc.
- Industries are mineral based and manufacturers primary goods for other industry. Major ones are of steel, coal, mining, heavy engineering, commercial vehicle and cement, concentration of these Industry is in Ranchi, Jharkhand, Bakaro, Dhanbad.
- Lack of large-scale industry in state can be related to the two main reasons namely rehabilitation problems and disappointed growth in employment for local inhabitants. Apart from these environment is severely damaged due to mining and other industries. Jamshedpur is best example for this as despite being close to hilly region its Average temperature ranges between 20⁰-25⁰ in winter and goes upto 45⁰ in summer.
- Per capita income of the State is approximately Rs. 4161/- per annum.
(Source :- Website of Government of Jharkhand)

2.1.9 Employment

- Employment is most volatile part of original inhabitants life. They are primarily involved in labor or seasonal jobs.
- Most of the service class community has migrated from other parts of nation. They are residing here for last 10-20 year working with either mines or any other central govt. institutions.
- Rate of growth in employment has increased since formation of new state large avenues has been opened by state government through ambitious project for development.
- Govt. has initiated good number of employment generating schemes for the rural population. They are mainly self-employment scheme, supported by central government.
- Major portion community is involve in business, because of vast potential offered by the system. Most of the resident don't belong to Jharkhand, thus they reside either on a rented accommodation or company set up both way they to lot of shopping. This provides a good demand for all articles in the state.
- People are not shy of duties they perform (or are offered). They are laborious and honest, that is why they are always engaged in one or the other activity. Normally a person performs more than one task in a year. Most of these are season-based i.e. they do harvesting, labor work, employment and business.

2.1.10 Services and Infrastructure

Since its formation state government has laid major emphasis on this aspect. Being a hilly region this place has undulating land impediment of rail connectivity. Jharkhand is well connected by road with other parts of country where as rail and air are not so prominent mode of travel. Situation of infrastructure resource is quite poor, as most of the places are isolated from main city. Nature is major attraction to the tourists as well as inhabitants.

Road

National highways passing through the state are namely NH 2, NH 6, NH 22 and NH 33. Connectivity through these is not effective and requires co-operative of state as well as center efforts to improve the connectivity. Natural limitations should also be addressed in pursuit of this objective.

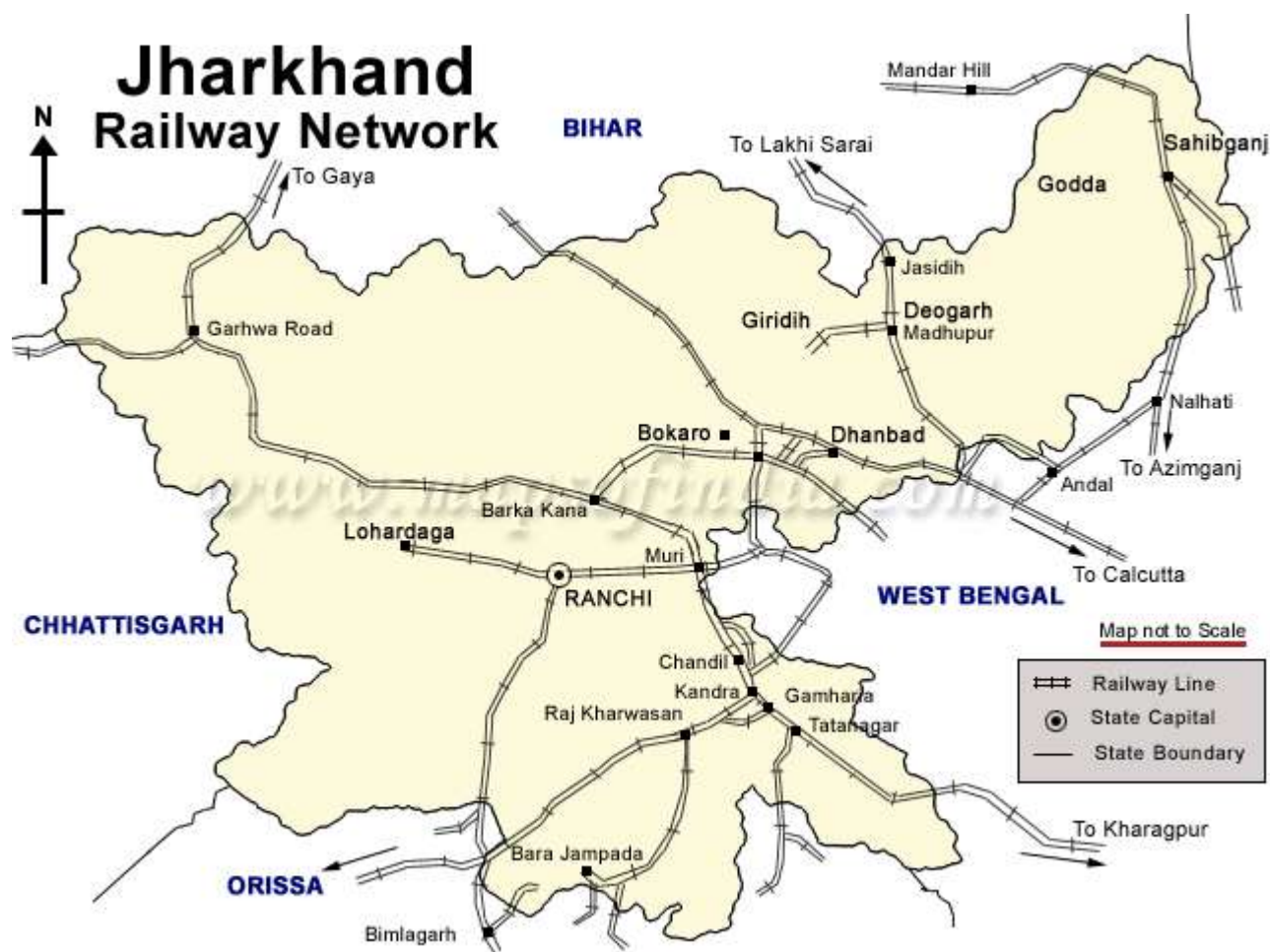
Total length of National & State highway is 1006 & 4662 km respectively. This connects only 8484 villages out of 32620.

Rail

Despite having undulating land and scarce rail tracks, Jharkhand hosts trains of Southeast and Eastern railways.

Major stations on southeastern railways are Chandil, Muri, Barka, Ranchi, Muri, Kotshila, Chandrapura and Bonda mund.

Eastern Railways main stations are Datan and Daltenganj. Train connectivity is very poor through this route. State government has laid down plans to develop new route and connects Jamshedpur with the mail line.



Air

Only one airport is there at Ranchi and that also hosts one flight of Indian Airlines only. (Mumbai-Delhi-Ranchi-Patna). Track available to the visitors is one only.

Earlier one another small airport was operational of Dhanbad; that was connected through Vayudoot Service from Ranchi.

Housing

Pucca houses are still dream for major part of its population. Even state capital passes 95% semi-pucca house of its population. Only mineral and Industrial belts consists of pucca houses for major part of inhabitants. Tribals are still residing in their primitive culture so they find pucca houses a bit difference.

Power

Four Thermal (capacity of 2700 MW) and ten Hydel projects (capacity of 500 MW) are operation in Jharkhand. These are backbone of state infrastructure. By viewing the capacity of these projects one can easily say that supply exceeds the demand, still power is a problem in state.

Table 2.16: Capacity Utilization at Power Project

Sr. No.	Production Unit	Production Capacity	Production	Usage (%)
1.	Patratu (Steam) Thermal Power Plant	840	210	25.00
2.	Tanughat Power Cooperative Ltd. (Hydel Project)	420	100	23.81
3.	Swaran Rekaha (Hydel Power Project)	130	130	100.00
Total		1390	440	31.65

(Source: Various)

Just 60% of the rural area is connected with electricity. Following table depicts the existing scenario in Jharkhand:

Table 2.17: Villages having Electricity Facility

State	Total Villages (000)	Villages having electricity facility (000)	Percentage of Villages having electricity facility
Jharkhand	33.315	20.002	60.10
Bihar	44.379	27175	61.23
India	605.224	503.969	83.27

*(Source: Various)***Table 2.18: Hospital & Dispensary Details**

Aspect	Jharkhand	Bihar
Govt. Hospital	18	38
No. of Beds	3739	8669
Physical Health Center (PHCs)	566	1643
No. of Medical officer	1132	3445
No. of Personnel in Para Medical Professionals	757	1283

*(Source: Various)***2.1.11 Agriculture**

- Agriculture is 25% of state GDP.
- 1/3rd of the population is dependent on agriculture. Adage is “Permanent Livelihood option “ because main objective of agriculture is livelihood. That’s why very less commercial crops are there in Jharkhand.
- Agriculture is complex and vivid and performed in difficult conditions by farmers having scarce resource. But still government has planned a 2.5% growth in agro products from present level of 1.80%.
- Land is divided mainly into 3 geographical regions namely mid plateau area, west plateau area, and east plateau area.
- Land is segregated into **Done** and **Tand**. Both can be sub grouped again into 1,2 and 3.
- Done land is used for Rice, and often during winter for wheat.

- Tand land is used for Dalhan, Telhan and other commercial products. Besides this vegetable are also cropped in BARI near residential areas.
- Lift irrigation will be very beneficial for Agriculture.
- Single Kharif products are grown in 90% area, Average rain of 150cm is between mid-june, October, Just 8.9% of the land is irrigated.

2.1.12 Environment

Jharkhand is termed as the “ Back bone of India” due to vast resource of minerals. But this excavation is only responsible for the following loss in environmental resources.

- Soil erosion
- Damage to forest leading to depletion of wildlife
- Changes in land use
- Land and forest draught
- Loss of Quality of water due to pollution
- Non - availability of water round the year in river basins
- Climatic change

Other than Uranium, Copper and Mica, all other mines are of open cast type. Very first impact of these is soil erosion and forest degradation, which in turn makes a negative impact on environment. An open cast mine requires 5-15 sq. Km of land for its operation, due to this land is not left aside for any other activity. For example, in Jharia 70% of the land is used for mining.

Thermal power stations generate fly ash as a by-product during power generation process. This fly ash gets mixed with the water flowing through river and makes the water unfit for consumption. The contaminated water can be instrumental in bringing about diseases related with skin and stomach.

CHAPTER - 3**TOURIST CIRCUIT & DESTINATIONS**

3.1.0 Introduction

The state of Jharkhand consisting of 22 districts have the necessary potential to participate in development and promotion of tourism in the eastern part of India. The range of flora & fauna as well as the socio-cultural assets are really astonishing and needs no further elaboration. The state is divided into major tourist circuits for the convenience of the tourists to allow them to cover as many spots as possible in the shortest possible time.

3.1.1 Tourist Circuits

During our primary survey following tourist circuits were identified:

- a) Ranchi-Hazaribagh-Tilaiya**
- b) Daltenganj-Mahuadandh-Netarhat-Ranchi**
- c) Ranchi-Bundu-Jamshedpur**
- d) Deoghar**
- e) Dhanbad**
- f) Saranda**

a) RANCHI-HAZARIBAGH-TILAIYA

This is most visited circuit due to its proximity to state capital and owing to its superior connectivity. Tourists spots identified in this circuit are Jonha fall, Hundru fall, Tagore Hill, Ranchi Hill, Rock Garden, Acqua world, Ranchi Lake, Crocodile Park, Jagnnath Temple, Hatia Dam, Psycho Fall, Deer Park, Panchgagh Fall and Mc Cluskieganj in and around Ranchi. Spots at Hazaribagh include National Sanctuary, Hazaibagh Lake, Konar Dam, Canary Hill, Sulpherni Dam, Surajkund, Rajrappa Temple.

Tilaiya has two spots of tourist attraction, which are Tilaiya dam & Sainik School.

RANCHI

Location

At an altitude of 652.1 meters above sea and between 23°23' North & 85°23' East an exceptional recreation place is **RANCHI**. Surrounded by hilly range, forest, rivers, waterfalls, lakes this places provide a picturesquely view.

Identity

With a geographical area of 7698 sq.km state capital Ranchi holds a great significance in Jharkhand. This city is known for its climatic distinction and natural resources, which enables the tourists to stay for a longer period of time.

Total population: 2210000

Connectivity

Ranchi is well connected by road, rail and air.

Air

Ranchi is the only airport of Jharkhand with a daily airbus flight to Patna / Delhi / Mumbai by Indian Airlines. No other operator has its facility in this route.

Rail

Despite undulating nature of land Ranchi is well connected with all major parts of India. It has good number of trains for Delhi, Patna & Kolkatta. In long distance trains it is connected with Chennai & Pathankot through one train daily.

Road

Most of the travel is done through road in the city. The city is well connected with all major towns of India. Traveling is mostly done through state transport buses in the state. Patna 335 Kms & Kolkata 408 Kms are the busiest route. Deluxe & Super Deluxe buses are available from all bus stations in Ranchi.

Infrastructure:**Hotels**

Ranchi hosts all types of accommodation amenity in Jharkhand. Besides being the state capital it occupies an important place in Industry segment also. Most of state Industrial houses have head offices located in proximity of city. The various types of Hotels located in Ranchi are as under:

Table 3.1: Accommodation Facility at Ranchi

Hotel Name	Location	Category	Room Strength	Tariff Range (Twin sharing)	Amenities
Apsara Hotel	Lalpur Chowk	Budget	45	200-350	A Restaurant & 35 bed dormitory.
Hotel Konark	Station Road	Budget	38	175-350	Travel Agent & Guide is available
Hotel Chinar	Main Road	3 Star	41	660-1800	2 Banquet Hall & 1 Bar/Restaurant
Hotel Satkar	Station Road	Budget	23	150-250	Package tours through JSTDC approved agent.
Hotel Ashoka	Station Road	Budget	20	150-200	Package tours through JSTDC approved agent.
Hotel Birsa Vihar	Main Road	BSTDC Tourist Bungalow	20	300-550	Package tours through JSTDC approved agent.
Hotel Ambassdor	Station Road	Budget	17	250-450	Travel Agent & Local Guide
Hotel Amrit	Station Road	Budget	35	350-1200	Package tours through JSTDC approved agent.
Hotel Ranchi Ashok	Doranda	3 Star	28	1900-3900	ITDC Approved, 2 Banquet halls & 2 Suites are available.
Hotel Kwality Inn	Station Road	3 Star	34	750-1800	2 Banquet halls & 2 Suites are available along with Bar & Restaurant
Hotel Arya	H.B. Road	3 Star	30	800-2500	2 Banquet halls & 4 Suites along with 24 Hrs coffee shop.
Hotel Embassy	Station Road	Budget	22	125-250	Package tours through JSTDC approved agent.
Hotel Basera	Near Over bridge	Govt. Approved	18	300-400	Package tours through JSTDC approved agent.
Hotel Yuvraj	Doranda	3 Star	33	700-1600	2 Banquet halls, 1 Suite & Local Guide support.
Hotel Yuvraj Palace	Doranda	4 Star	25	1700-3400	2 Banquet halls & 4 Suites along with 24 Hrs coffee shop.

(Source: ORG- MARG Survey)

Restaurants

Ranchi being a recreational spot has splendid varieties of food joints, one can have Indian/Chinese/Continental/Thai food at any time in the city. Kaveri Vegetarian Paradise, Hangul Bar & Restaurant, Elora, Minmin's Chinese joint to name a few is in the vicinity of the town.

Ranchi holds major charms for outing and attraction. To take care of that Motel on NH 33 (Ranchi-Patna Route), nightlife glorifies at these joints. They serve food & drinks round the clock, open-air sitting arrangements add aroma to the trip. Some famous Motels are Madhuban, R.K. Motel etc.

Tour Operators

After separation from Bihar; registered tourist operator with Bihar but operational in Jharkhand aren't been given the due support from government. Just two tour operators are authorized by JSTDC and only one is based in Ranchi that is: Suhana Tour & Travelers. Rests all are ticketing agents.

Tour Packages available from Ranchi include the following:

Spot/Circuit Name	Dep.	Arr.	Duration	Charge/person
Hundru-Johna-Dasam Falls	9 AM	6 PM	1 day	INR 110
Hundru-Jonha-Sita Falls	9 AM	6 PM	1 day	INR 110
Hirni-Panchgagh-Deer Park	9 AM	5 PM	1 day	INR 110
Hazaribagh Forest-Tilaiya Dam	10 AM	3 PM	2 days	INR 250
Rajrappa Temple & Zoo	8 AM	4 PM	1 day	INR 110
Ranchi Local Sight Seeing	8 AM	12 PM	½ Day	INR 80

Note: Charge includes traveling expenses only.

Attractions**JONHA FALL*****Location***

- ☞ Jonha fall is about 40 kms from Ranchi on Purulia road. (Ranchi-Angara-Amrdubagan--Jonha fall).

Identity

- ☞ There is a temple named after Gautam Buddha so it is called Gautam Dhara falls too.
- ☞ On every Tuesday & Saturday Mela (fair) is organized in Jonha. This Mela is famous in that area.
- ☞ Water falls from a height of 45-meter forming about 5 contour cascades & is surrounded by forest.

Connectivity

- ☞ One may go there by daily service private Bus or Jeep from Khaddar bus stand. Private vehicles are more preferred.
- ☞ One may go up to Gautam Dhara station (Ranchi-Muri) by train also. This is the route for all trains to Kolkatta & Bhubneswar.

Amenities

- ☞ There is a hot spice (Tourist Rest House) at the fall that accommodates Lord Gautam Buddha's temple.
- ☞ Food & drinks are available through local inhabitants through out the day. Non-Veg dishes are in major demand over there.
- ☞ Being safest fall among all the tourists enjoys having bath over here; for this local villagers sell soaps, Towels, cooking materials to the tourists.
- ☞ There are approx. 500 stairs at the fall this makes the spot more exciting.

Limitations

- ✎ Connectivity is major drawback because this spot is 5 Km away from the highway and no public transport is available from that point, so tourist has to take private vehicles to visit this spot. This is very costly proposition when any individual wishes to visit that spot.
- ✎ Quality of food is not good and regular one so tourist prefers to take cooked food from Ranchi itself.
- ✎ Wayside relaxing places are not there.
- ✎ No parking facility is there so visitors face tough time during peak season.
- ✎ Accommodation is not maintained properly and deteriorating day-day.
- ✎ Local guide is not available for the tourist.

HUNDRU FALL

Location

- ✎ About 38 km. from city center near Getalsud, block Anagara, Ranchi (Ranchi-Namkum-Anagara-Getalsud-Hundru).

Identity

- ✎ The Swarnarekha River falls from a height of 320 ft. At the base of the fall a beautiful pool has been formed that allows the visitors to enjoy bathing.
- ✎ This is the most ancient spot in proximity of Ranchi. It is a very attractive spot in winter & summer but in rainy season it's very risky for the visitors.
- ✎ Water takes a serpentine course in the forest valley; the glimpse of this is great for the tourist.
- ✎ Getalsud Dam on Swarnarekha river is just 4 km from this spot; the dam supports two power plants of 65 KWH each.

Connectivity

- ✎ It is connected through road but no public transport is available after Anagara check post and for 22 Km one has to take other medium of transport like private jeep/car etc.
- ✎ Private Taxis & Auto are available for this spot from Ranchi and charges for them are:
Auto Rickshaw-- INR 300-350; Jeep/Car-- INR 600-700.

Amenities

- ✎ Cafeteria eating joints are provided.
- ✎ 2 Guesthouse are available for Tourists who wish to stay over there. Having 2 rooms & one hall each both can accommodate 25-30 persons. Cost of this accommodation is variable and depends on the guard who is in charge for these.
- ✎ Facility for preparing own food is also available at the spot for the visitor in groups who carry the raw material to the spot.

Limitations

- ✎ Connectivity has to be addressed urgently as one can't visit the spot without private vehicles.
- ✎ Basin created by the waterfall is very deep and dangerous.
- ✎ Width of the connecting road is just 2 meter and that also in very bad shape.
- ✎ Power is not available in Hundru village, despite of having a power plant just near the village. Power connection is available in all nearby village.

TAGORE HILL

Location

- ☞ This spot is 3 Km from GPO at Morahbadi in Ranchi.

Identity

- ☞ It is associated with Gurudev Rabindra Nath Tagore, as number of books are supposed to have been written by him on the hilltop.
- ☞ Ram Krishna Ashram is situated at foot of the hill along with an Infertility Research center.
- ☞ Height of the hill is approx. 300 ft. from ground.
- ☞ This hill has been taken over by State archeological dept. for preservation & development.

Connectivity

- ☞ Being close to Ranchi this spot is well connected by road.
- ☞ Auto/cycle Rickshaws are available for this spot anytime.

Amenities

- ☞ A photograph shop is operational for the visitors.
- ☞ Food stalls are nearby the foot of the hill.
- ☞ Visitors can take rest at the hall on hilltop.

Limitations

- ☞ No facility of drinking water at the spot besides being its nearness to the town.
- ☞ Stairs are in real bad shape and going through that is risky proposition for the visitors.
- ☞ Parking facility is not available, so the visitors have to park their vehicles at a distance of 500 meter and then walk to the spot.

RANCHI HILL

Location

- ☞ In the heart of the city this is located at just 1 Km from Firewall Chowk.

Identity

- ☞ This is a recreational as well as scared pilgrimage spot of Ranchi.
- ☞ Altitude of the hill is 2140 feet from sea level.
- ☞ Lord Shiva temple is situated on the top of the hill. Devotee assumes the place of reverence during Shravanamas similar to that of Baijnath Dham (Edgar).

Connectivity

- ☞ Situated in Old Ranchi this is very well connected with every medium of road transport.
- ☞ It is hardly 10 minutes walk from Birsa Chowk (Reference point of Main road).

Amenities

- ☞ A panoramic view of the town can be had from the hilltop.
- ☞ It is situated in the heart of city so food, drinks and other facilities are available for the tourist near the hill.
- ☞ There are stalls stocking flower, Coconut and other articles for devotees on the hilltop.

ROCK GARDEN

Location

- ☞ The spot is 6 KM from Birsa Chowk at Kanke road.

Identity

- ☞ Developed on the bank of Kanke dam the park has every thing to attract visitors.
- ☞ Artificially structured Birsa statue and Titanic corner are things to see at this park.
- ☞ One corner of the park provides bird eye view of city.
- ☞ The park holds great potential for being developed into an major attraction.

Amenities

- ☞ Canteen stocking packaged food and drinks is operational inside the spot.
- ☞ Covered bench has been put up for the visitors to enjoy the visit.
- ☞ The local authority provides sufficient space for Vehicle parking and guides to support the visitors.

Limitations

- ☞ The canteen inside the park is not hygienic and does not prepare any snacks thus visitors are skeptical in having anything from that place.
- ☞ Cultural/musical shows can be organized at this spot.
- ☞ Due to ill maintenance, artificial structures are loosing vividness.

ACQUAWORLD

Location

- ☞ Approx 5 Km from Birsa Chowk on Kanke Road.

Identity

- ☞ This spot is known for its fish aquarium and locally termed as Machli Ghar by the local inhabitants.
- ☞ Children Park is another attraction at the spot.
- ☞ Perceived as recreational spot within city, the spot attracts major tourist influx.

Amenities

- ☞ Restaurant inside the aquarium is one of the major attractions of the tourists. Food is admirable at this joint thus revisits were recorded in good volume.
- ☞ Rides and swings are set up at Children Park inside the campus; children enjoy their time in this park. All these amusements are safe for the teenagers.
- ☞ Parking place is sufficient to support inflow of the vehicle.

Limitation

- ☞ Timing of the aquarium is not convenient for the Tourist; it should be operational until 10 PM.
- ☞ Variants of fish are primitive and have an image of general species.
- ☞ Photography facility is not available.

RANCHI LAKE

Location

- ☞ At the bottom of Ranch Hill. It is a few minutes walk from GPO and is adjacent to Ranchi Telephone Exchange.

Identity

- Excavated by Col. Onsely, a British Agent in 1842. It was a picnic spot during pre-independence era but presently wastewater is dumped in the lake.
- Madan Mohan Jha (DC) envisaged beautification in 90's but nothing has materialized for this spot. There is a Lake Sudhar Samiti with an objective of beautification & development of the spot.
- There are two temples surrounding the lake, people take bath before praying in this temple. Two gumbads in middle of the lake adds vitality to the spot.
- Boating had started sometime back but wasn't successful, mainly due to drainage and foul.

Connectivity

- Walking distance from city heart. Auto/Cycle Rickshaws are available from every point of the city.

Amenities

- Food & drink facility is optimum around this spot.
- Small park is created at one corner of the lake this provides a place for visitors to enjoy their trip.
- Proper Stairs are built to facilitate bathing in the lake.
- Boats are available for the tourist to take a trip of lake.

Limitations

- Water is very impure due to drainage in the lake.
- Water impregnates all types of waste product in it. Visitors are reluctant to spend time at this spot.
- Road circumventing the lake is very narrow, surrounding is not clean & hygienic.
- Annoyances of local inhabitant hinder the development strategies.

MC CLUSKIEGANJE***Location***

- A sleepy small hamlet 67 Km from Ranchi on State Highway 47.

Identity

- With a total area of 35 sq. km, this place was popular with Anglo Indian community.
- The name evokes nostalgia and one gradually discovers that the place is amidst green forest.
- At the height of 2140 ft, weather is remarkably recreating for the tourists. Peak temperature is of 35⁰ C during summer other wise winter is most charming season at this place.
- Visitors come here to spend their time in leisure, earn peace and rejuvenate themselves.

Amenities

- ☞ Typical Anglo Indian cottages, clubs and shops.
- ☞ Food joints are also present in their own traditional manner.
- ☞ Internal transport is good compare to other tourist spots

CROCODILE PARK

Location

- 32 Km from Ranchi on Ranchi-Hazaribagh route. Visitors have to take a right turn from Ormanjhi Block for another 12 Km towards west.

Connectivity

- Well connected by road through Ranchi-Ormanjhi-Hazaribagh route. Service road for 12 Km connects this spot with the Highway.
- Public transport is available up to 26 KM from the city for rest 5 KM visitor has to opt for foot. This is the major reason; tourists take a private vehicle directly from Ranchi/Hazaribagh.

Identity

- Mutta Magar Breeding center named after Mutta village circumventing this and Bheda River is source of water for this breeding center.
- This took off with 3 Jharkhandi muggars and 2 from Chennai near Ormanjhi. At present there are 20 muggars (2 old, 10 young & 8 children). Some 5 muggars were shifted to Patna Zoological Park in 1999 from this place.
- Best food for these muggars is Fish & Meat. On an average 15 Kgs of mutton is served to the Muggars.
- Bheda River is base for Muggars; they freely reside in the water and at times come out in the plains also. This creates panic in the local inhabitants as well as tourists also.

Amenities

- A forest rest house is available for the tourist on demand. With a capacity of 10 people the rest house is well furnished & maintained.
- The guards on demand can cook food; charges are nominal for that.
- Covered benches are constructed for the visitors.

Limitations

- Nearest shop for food & other snacks is 4 KM from the spot.
- Public transport is not available for 4 Km from the service road.
- No guide is available at the spot.
- The local authorities do not facilitate photography.

JAGANNATH TEMPLE***Location***

- Situated on a Hillock in HEC at 10 km from city center.

Identity

- Built in 17th century; the temple was built to reciprocate Jagannath Temple of Puri by Thakur Arinath Shaddev (youngest son of Ratu Maharaja).
- Every year on 12th July Rath Yatra is organized at the temple and it lasts for 10 days. On an average 2 or 2.5 lakh people attend this celebration.
- On an unfortunate day 6th Aug 1990; 3 out of 4 sides of temple had collapsed in the morning. Thus shrine had to be shifted and then reestablished after the renovation.
- State archeological dept. has taken over the shrine and this spot has become Heritage assets for the State.
- Visitors have to climb 85 stairs for the temple.

Connectivity

- Well connected by road with city centers; public transport is also available for this spot from all parts of Ranchi City.

Amenities

- Mandir development society was formed in 1976 since then it is working to facilitate the visitors and develop amenities around Temple.
- A Large shed is constructed by society for making the people feel comfortable.
- Food & snacks are available through stalls nearby the hill of temple.
- A rest house is available for the visitors by Mandir society.

Limitations

- Frequency of transport is not good.

HATIA DAM***Location***

- Its 12 KM from City center towards east.

Identity

- This is most crucial dam in Ranchi as it maintains the water supply to HEC, backbone of Ranchi economy.
- Built on Swarnarekha river; depth of Water is 50 Ft. in the mid of Dam and 30 ft. at corners.
- Wednesday market provide livelihood to as many as 2000 inhabitants in 6 villages surrounding the spot.
- Popular recreational and picnic spot; highest inflow of traffic is on 1st & 14th Jan every year. Major visitor are local inhabitants and they spend 5-7 Hrs. at this spot.

Connectivity

- Well connected through major parts of city and public transport is frequently available from city center.

Amenities

- A number of permanent stalls of food & other articles are there.
- Open ground is developed for the visitors to sit & enjoy.

Limitations

- Drinking water is not available at the spot.
- Development of circumventing area is improper from tourist point of view.
- Lighting is not proper at the spot.
- No recreation facilities are available.

JAIBIK UDYAN***Location***

- It is 17 Km from Ranchi on NH-33 (Ranchi-Hazaribagh route) near Ormanjhi.

Identity

- Bhagwan Birsa Jaibik Udyan was inaugurated on 26th Jan 1994.
- It has a total area of 104 Hectare and NH 33 divides this into Zoological & Botanical regions respectively. Zoological area 83 Hectare and Botanical area is 21 Hectare.
- This has been developed in natural forest area thus good quality Sal trees are in abundance.
- Fairly good numbers of wild animals/reptiles are kept in cages for visitors. Recently some more animals were brought from Nandankanan & Betla National park to add glaze to its characteristics.
- A part of Getalsud dam exists at the end of the park that is a good picnic spot. Migrated bird visit this place in winter.
- The zoological park generates annual revenue of Approx. INR 2.00 lakhs.

Connectivity

- ☞ This is well connected by road with Ranchi as well as Hazaribagh.
- ☞ Situated on NH 33 public transport is regularly available for the spot.
- ☞ Frequent taxis/trekkers are available from Line taxi stand behind Firayalals.
- ☞ Nearest railway station (24 Km) and airport (30 Km) is Ranchi.

Amenities

- ☞ 8 rest sheds, 9 drinking water points, 4 Urinals, are available for the visitors.
- ☞ 4 canteen are operational at various locations inside the park. They are rightly priced and stock quality packaged foods.
- ☞ Park is closed on every Monday and timings are winter: 9.00 AM-5.00 PM & summer 9.00 AM-5.30 PM.
- ☞ A veterinary hospital is operational for the animals with resident doctor.
- ☞ Children Park is constructed on the main gate for making the teenagers merry.
- ☞ Boating facility is available in lake inside.
- ☞ Various commercial charges are as below:

i) Entry Fee Ticket

Entry fee/person (in Rs.)		Camera fee (in Rs.)		
Adult	Child	Video	Still	Movie
2.00	1.00	200.00	5.00	1000.00

(Entry fee is deposited in state exchequer.)

ii) Other Vehicle Fees:

Vehicle Type Charge			Boating fee/trip
Car/Jeep	Bike	Bus	
3.00	2.00	5.00	20.00

(Vehicle fare forms the state revenue.)

Limitations

- ☞ Wild life hasn't been updated since last 10 years that's why the park is loosing its charm among the visitors.
- ☞ Behavior of guides & park staff is not supportive with the visitors.
- ☞ Boats are not sufficient during peak season.
- ☞ Photography facility is not available inside the park.

PSYCHO FALL***Location***

- This is located near Tamar village 50 Km from Ranchi.

Identity

- Alternatively known as Rani fall this spot is popular for its scenic beauty and openness that attracts the visitors.
- Water falls from a height of 20 ft. and creates a small natural basin at the bottom of the hill.

Connectivity

- Well connected through road with Ranchi-Chaibasa Route.
- Visitors had to take a break at Tamar morh and from there take a Trekker/Bus for another 11 km for the spot.
- Taxis are available for the spot from Ranchi. Through this medium of transport tourists can also visit Deer park at Kalamati.

Amenities:

- All the facilities are available during tourist season at the spot. Local villagers establish temporary shops around the fall and as soon as the season is over they remove the same and get engaged in other activities.

Limitations

- No Canteen or shop is available for the visitors.
- No space for the visitors to sit and enjoy.
- Photography facility is not available at the spot.
- Parking space is not sufficient during the season.

DEER PARK

Location

- ✍ Located at Kalamati 24 Km from Ranchi on Ranchi-Chaibasa Road.

Connectivity

- ✍ This spot is on Ranchi-Chaibasa Road and buses are available from Khaddar Bus Stand.
- ✍ Rail & Air connections are through Ranchi only.



Fig. 3.1: Deers at Deer Park

Identity

- ✍ Its foundation was laid in 1981 and Mochiram Munda did formal opening in 1987.
- ✍ The park has an entry ticket of INR 4 and it is closed on Thursday every week.
- ✍ The park is spread in 54-Acre area. There are 214 Deer in the park out of this 48 are sambhar and 166 are cheetal.
- ✍ Visitor influx during lean period is 25-35/ day and during peak it is 50-60/day.

Amenities

- ✍ There is a children Park in park campus, 3 Jhula and 2 Ride are there for the tourists to make most out of their visit.
- ✍ One shed that can occupy around 20 persons is build near the canteen & children park for the visitors.
- ✍ There isn't any restricted area in the Park that gives the visitor a freedom to enjoy the wild life.

Limitations

- ✍ Parking facility is not sufficient at the spot.
- ✍ Guides are not available; visitors are very keen to know more about the wild life.

- ✍ This park has great potential for tourist but lack of attention is hindering the prospects.
- ✍ No medical professional is available in the park.
- ✍ No commercial Photography arrangement at the spot.

PANCHGAGH FALL

Location

- ✍ It is near Hesadi about 50 Km from Ranchi on Ranchi-Chaibasa Route.

Identity

- ✍ This spot has been identified very recently and possess vast potential due to its geographical formation.
- ✍ Safest waterfall in Jharkhand that has sand at the bottom of the hill. This is most preferred picnic spot by local as well as tourists.
- ✍ Local authorities have developed some constructions that add glare to the beauty of this spot. SBI, Muruh has constructed a welcome gate on Ranchi-Chaibasa Road at the corner of this spot.

Connectivity

- ✍ Well connected by road, public transport is available both from Ranchi and Chaibasa for this spot.

Amenities

- ✍ The facilities depend on tourist inflow. During peak season local inhabitants create food stalls near the spot.
- ✍ 2 Sheds that can occupy 20 people each are available for the visitor.
- ✍ Parking facility is also sufficient during peak season and can adjust 30 vehicles.
- ✍ Bathing space is designed for the visitors so that they can safely enjoy the trip.

Limitations

- ✍ No transport is available on service road (3 Km) connecting the spot to Ranchi-Chaibasa Road. The road is narrow as well as ill maintained thus driving is horrible on this road.
- ✍ No permanent establishments for food/ snacks at the spot hamper its image.
- ✍ There is no guard to protect the vehicles parked, so visitors are skeptical regarding visiting that spot on own conveyance.
- ✍ Guide facility is not available on the spot.

HAZARIBAGH

Area: 11165 Sq. kms.

Identity

Hazaribagh literally means a place with thousand gardens. During the Muslim rule the main estates in the district were Ramgarh, Kunda, Kendi, Chai and Kharagdiha. Later Ramgarh, Kharagdiha, Kendi and Kunda were formed into Hazaribagh division. After 1991 census the Hazaribagh district was divided into three separate districts of Hazaribagh, Chatra and Koderma. The towns in the district include Barkakana, Barughutu, Gidi, Hazaribagh, Patratu, Ramgarh Cantt., Sauda, and Sirka.

The 12 Blocks in the district are: Barhi, Barkagaon, Bishungarh, Church, Gola, Hazaribagh, Ichak, Katkamsandi, Keredari, Mandu, Patratu and Ramgarh.

Total population - 18.36 lakhs.

Connectivity

Air

Nearest airport is Ranchi (97 Km). Indian airlines flight from Kolkatta; Mumbai & Delhi is operational at this airport.

Rail

This is on Howrah-Delhi grand trunk line.

Road

Located on NH 33 this is well connected with most parts of India. All the buses going to Patna cross through Hazaribagh. Frequent bus service is available for all parts of State.

Industries and Minerals

Indo Asahi Glass factory at Bhurkunda in the district is a major sheet glass manufacturing unit. Coal is the primary mineral found in the district. The other minerals that are available are mica, fire clay, limestone and quartz.

Attractions

HAZARIBAGH SANCTUARY

Location

✦ This sanctuary is situated on Hazaribagh- Barahi Road, 19 km from Hazaribagh.

Identity

- ✦ This was notified in 1976 & enjoys good number of tourist inflow every year.
- ✦ Total forest area is 186.25 sq. km of which 70 sq. km is identified as tourist area.
- ✦ Principal animals are Tiger, Panther, Wild Boar, Nilgai, and Sambhar etc. There are 4-watch towers in the sanctuary that gives a panoramic view of the wild life. According to census figures 1999-00 the population of wild life at this sanctuary is as below:

Name of Wild Life	Panther	Leopard	Elephant	Tiger
No. of Wild Life (1999)	102	15	9	3

Connectivity

- ✦ Public conveyances like Bus/Jeep are available until tax collection points that is 10 km before the main gate of Sanctuary. Beyond this no conveyance facility is available, one has to complete the journey on foot.
- ✦ Roads are in a very bad shape making the journey miserable. Width of the road is 3 meter thus two way movement is difficult.

Amenities

- ✦ 4 watchtowers to view the beasts. Arrangement of fog lights makes the nightlife exciting.
- ✦ Jeep safari is available for wild life view inside the sanctuary. Trip starts from DFO office at 5 PM & ends at 10 PM, charge for this is Rs.50/person.
- ✦ Boating for Rs.20 (1/2 Hrs) in the lake inside makes the view adventurous.
- ✦ Canteen in the sanctuary provides packaged food to the tourists.
- ✦ Accommodation is good; one Tourist Bungalow of BSTDC & two other forest bungalows are available for the tourists. Room charges are quite nominal ranging from Rs. 200-300/room & Rs. 70/bed. Total Strength of the bungalow is 70.
- ✦ Mourm roads make the journey in jungle more comfortable & easy. Entry fee for Bike is Rs.15, Trekker it is Rs. 50 & for Bus Rs.80.

Limitations

- ✦ Connectivity is major limitation of this spot, no public transportation is available for this site from Hazaribagh city. One has to reserve vehicle or have own conveyance for this place.
- ✦ In past Jeeps with searchlight were available for the tourist to take night drive & do some adventure. However, as GOI has prohibited night travel in sanctuaries, forest Dept. has removed this facility. Thus, adventurous tourists have to search for other spots.

- ✧ No restaurant is available inside sanctuary, just a canteen that stocks packaged food
- ✧ Guide support is not available at the spot.
- ✧ Photography is not possible at the spot.

HAZARIBAGH LAKE

Location:

- ✧ In the vicinity of the town, just 2-3 km from city heart.

Identity

- ✧ This is a picnic and recreation spot for the tourists.
- ✧ Children Park along with a lake view restaurant adds glare to its image.

Connectivity

- ✧ This is well connected with the city and public conveyance is easily available for this spot.

Amenities

- ✧ Six Peddle Boats with individual occupancy of four people are available for whole day to the visitors.
- ✧ Open-air restaurant with Children Park increases the aroma of the spot. Capacity of the restaurant is 50 persons.

Limitations

- ✧ Infrastructure at the lake is not sufficient and it requires up gradation urgently.
- ✧ No sitting facility is available in circumference of the lake.
- ✧ There are only two Swings in Children Park; many children have to wait for a long time.

CANARY HILL

Location

- ✧ 5 km from city heart

Identity

- ✧ This is a recreation spot and one can have a view of Hazaribagh city from hilltop.
- ✧ Hill infrastructure is compatible for Adventure sports i.e. trek, rock-climbing etc. in winter season. Trekking facility is available for the visitors in winter season.

Connectivity

- ✧ This is well connected with the city and public vehicles are available for the spot.
- ✧ Average fare for Rickshaw is Rs.20.

Amenities

- ✧ There is a restaurant near the bottom of the hill. It is open for 24 Hrs.

Limitations

- ✧ There is no road for going up the hill; visitors have to climb through pathway.
- ✧ Cleanliness is another reason for less traffic at this spot.
- ✧ Food & Portable water facility is not appropriate.

KONAR DAM

Location

- ✧ This is situated on Hazaribagh Tilaiya Road at 95 km from Hazaribagh City.

Identity

- ✧ This dam was build to control the water of Konar River; this comes under Damodar valley Corporation.
- ✧ Depth of water is approx. 50ft.at center and 30ft. at corners and boundary is 2 km long.

Connectivity

- ✧ This is well connected through Road from Hazaribagh and bus & trekkers are easily available during the day.

Amenities

- ✧ No amenities are available at this spot thus tourist had to arrange food & water from midway hotels during their visit.

Limitations

- ✧ Neither food nor sitting place is available for the tourist at the spot.
- ✧ Branch Road (approx. 3 km) to spot is kachha & thus no vehicles prefer going to that spot. Visitors have to pay extra money for that part of the transportation.
- ✧ No accommodation is available for the visitors at the spot so they have to rush back to the city in spite of their wish to stay.

SALPHARNI DAM

Location:

➤ 18 km from Hazaribagh



Figure 3.2: The Serene environment at Salpharni Dam

Identity

➤ Good number of birds migrates in winter & rainy season that adds glare to this spot.

Connectivity

- Well connected through road; Jeep/trekker are available for this spot from city center.
- Branch Road (approx. 4 km) to spot is kaccha & thus no vehicles prefers going to that spot. Visitors have to pay extra money for that part of the transportation.

Amenities

- Canteen facility is there for the tourists during day hour.
- Two guesthouses that can accommodate approx. 40 people are available for the visitors.

Limitations

- ✎ Frequency of public transport is not good and vehicles are available until 4 PM only for Hazaribagh so the tourists are not able to enjoy the site.
- ✎ Food at canteen requires improvements.

SURAJKUND**Location**

- ✎ 120 Km from Hazaribagh on NH 33

**Figure 3.3: Vent at Surajkund****Identity**

- ✎ There are five Kund at this place all have historical significance and importance. All these have specialized characteristics:

Name of the Kund	Significance
Surajkund	Water keep simmering all the time
Bharatkund	Water is hot all over the year
Ramkund	Water is cool all over the year
Sitakund	Chilled water is there in the kund
Laxmankund	Water is warm all over the year

- ✎ Mela on 14th January has great impact on the mindset of the visitors and their number increases significantly during the 15 days of Mela.

- ☞ Water contains Sulphur & Sulfur is regularly coming out of the kund. Popular belief is that people used to cook rice in the water.

Connectivity

- ☞ This place is well connected with Road and situated on Hazaribagh-Calcutta highway.
- ☞ One has to take left from Barkatta & there is a service road for 11 Km for the spot. Trekkers are available for the spot from Hazaribagh.
- ☞ Route from Hazaribagh-Barahi-Barkatta-Surajkund.

Amenities

- ☞ Food stalls are available midway to the spot.
- ☞ Dormitory of seven beds is available for the visitors at the spot along with a canteen that serves cooked food on demand.

Limitation

- ☞ Spot is ill maintained by the local authorities resulting in deterioration of natural resources at the spot.
- ☞ Vehicles are not available regularly mainly due to high variation in the traffic and driving is herculean task for the visitors on narrow service roads.
- ☞ Electricity & other amenities do not exist at the spot as well as on the connecting road to the spot.
- ☞ Guides are not available and being a religious spot visitors are curious about the significance.

RAJRAPPA TEMPLE

Location

- ✎ Rajrappa is situated at the convergence of river Damodar and Bhairavi, (popularly known as Bhera) 80 km from Ranchi. (Ranchi- Ramgarh-Rajrappa).

Identity

- ✎ The headless temple of Goddess Chhinnamastika stands on the body of Kamdeo and Rati in Lotus bed.
- ✎ This temple is supposed to be very sacred. It is a very old one and its architectural design resembles the design of temples of Tantrik importance. It is pronounced that Viswakarma himself has built this temple.
- ✎ A number of attractive temples have been build around the main temple. A large number of pilgrimages come here throughout the year particularly from Bihar, Jharkhand and West Bengal.
- ✎ Various rituals are performed here for the good cause. Presumption is very famous that first worship at this place multiplies the luck.
- ✎ “BALI” (goats head is offered to Maa Chhinnamastika) performed by devotees either for completion of any wish or on completion of any wish.
- ✎ On 14th of January (Makar Sankranti) a special religious fair is organized visitors are in lacs for this. Similar fair is also organized on Vijaydashmi.

Connectivity

- ✎ Well connected with Road from Ramgarh. Public Transport is available from Ranchi as well as Ramgarh for this place.
- ✎ Nearest railway station is Ranchi and trains are available for all major places in India.
- ✎ The nearest airport Ranchi (170 kms) is connected with Calcutta, Patna, Lucknow and Delhi by regular Indian Airlines service.

Amenities

- ☞ One can enjoy bathing and boating in the river near the main temple. At present wooden boats are available for the tourist at INR 25 per trip of 30 minutes.
- ☞ Other than the beauty of temple, the beauty of nature can also be enjoyed. A beautiful scene can be seen from the roof of the temple. It is not only a famous religious place but also the best picnic spot.
- ☞ Hotels and consumer shops are available in good number at this spot. Vegetarian dishes are served on order.
- ☞ Dharamshala and guesthouses are available for accommodation of the pilgrimages in good number. Rates are very nominal at these places.
- ☞ The authorities have developed bathing places for the pilgrims.
- ☞ Pujari of the temple guide the visitors about the significance of temple and Photography facility is available to the tourists to capture the scenic beauty.

Limitations

- ☞ Condition of the road connecting Rajrappa with Ramgarh is horrible thus; visitors have to experience horrible time during their tour. It takes two Hrs to cover a distance of 25 Km by public transport.

TILAIYA***Location***

- ☞ This is small hamlet located at 67 km from Hazaribagh.

Identity

- ☞ This place is known for Sanik School and Damodar Valley Corporation (DVC) in tandem with its natural resources.
- ☞ Tilaiya besides being a recreation spot have always been admired for its climate & scenic beauty.

Connectivity

- ✎ This is well connected with Road from Hazaribagh. Public Transport is available from Ranchi as well as Hazaribagh for this place.
- ✎ Nearest railway, station is Koderma a major station on Howrah-Delhi Grand Chord line.
- ✎ The nearest airport Ranchi (170 kms) is connected with Calcutta, Patna, Lucknow and Delhi by regular Indian Airlines service.

Infrastructure

- ✎ BSTDC has developed a Tourist complex at “URWAN” where one can consider spending time by the side of Tilaiya Dam.
- ✎ There are some other private guesthouses in vicinity of town but they don't operate all over the year.
- ✎ Roads are narrow but maintained properly; Power plant near the dam is source point for Electricity in the town.

Attractions**TILAIYA DAM****Location**

- ✎ Located at 2-3 Km from Tourist complex this dam provides a pleasurable atmosphere to the visitors.

Identity

- ✎ The dam was completed in 1953 as a part of Damodar Valley Scheme.
- ✎ Build on Barakar river this is a preferred attraction for the Tourists. Sunrise at this dam has release freshness that has an unique impact on visitors.

Connectivity

- ☞ Situated on GT road this is most well connected spot through road. Main road from Barhi passes through this dam thus public transport is easily available from Hazaribagh as well as Barhi.
- ☞ Cycle rickshaw is also available from any where in this city to this place.
- ☞ Rail & Air connectivity is through Ranchi only.

Amenities

- ☞ Food and other stalls are available in good number in and around the spot.
- ☞ Accommodation at BSTDC guesthouse is a good option for visitors who plan to enjoy the sunrise.
- ☞ Boats are available for the visitors to enjoy the aroma of the lake and scenic beauty of nature.
- ☞ On the other side of the park there is an island in past that was hosting Crocodiles boats are available to visit that place.
- ☞ Trout Fishing can be enjoyed at the lake on special demand by the tourists.

Limitations

- ✍ Tourist complex is not well maintained by the authorities and require renovation to a large extent. That's why instead of a surge to view sunrise tourists opt for accommodation at Hazaribagh bungalow.
- ✍ Guide is not available for the tourist.
- ✍ The Army officials have banned photography.
- ✍ Canteen at the spot requires more investment in terms of sitting arrangement, food quality, and infrastructure.

B) DALTENGANJ-MAHUADANDH-NETARHAT-RANCHI

This circuit holds potential like anything in Jharkhand. But till date not all tourist cover all the spots of this circuit. Major impediment identified was connectivity and transportation, that hinders the expectation of visitors. Tourist spots are Betla National Park, Palamu Quila, Lodh fall, Sunrise, Sunset, Upper Ghaghri, Lower ghaghri, Koyal view. One new spot was identified on Betla- Mahuadandh route, provides a scenic beauty of nature and small fall.

NETARHAT***Location***

- ☞ 156 Kms from Ranchi is “Netarhat”, the queen of Chotanagpur.
- ☞ It is situated at a height of 3,7000 ft above sea level and is a hill station of Jharkhand.

Identity

- ☞ Netarhat is a beautiful resort during summer. Dense forests, serpentine roads, cool bracing breeze, moonlit nights must have persuaded the English to call this place that possibly sums up 'nature' and heart of Netarhat.
- ☞ This place is an out of this world experience.

Connectivity

- ☞ Ranchi (156 km) is nearest airport.
- ☞ Rail connection through Daltenganj (145 km) as well as Ranchi (156 km).
- ☞ Road connection is through Ranchi-Lohardaga-Netarhat (156 Km) and Daltenganj-Mahuadandh-Netarhat (145 Km). Bus service is available from both points but service is not frequent.
- ☞ Valley stretch of 22 km is major impediment for connectivity as road condition is horrible and drive is very risky. Bus takes almost an hour to cross the valley.

Attractions

SUNRISE VIEW

Location

- It is located at Prabhat Vihar Hotel of BSTDC.

Identity

- View of sunrise can't be explained in words, since ages visitors gather at this point to see sunrise.
- At 5:30 AM Sun appears as coming out from nature's lap with much innocence and purity.

Connectivity

- Just in front of tourist bungalow of BSTDC visitors use to walk in the morning from their place.
- Roads in the block are maintained properly..

Infrastructure

- A number of tourist lodges & bungalows are available for the tourists. Prabhat Vihar of BSTDC that gives a panoramic view of sunrise as well as valley from the room itself.
- Other accommodation Forest rest House, Palamu Bungalow, PHED Rest House, Panchayat Center, and SBI Holiday Home.
- Food and other facilities can be ordered at restaurants in all Bungalows.
- Tourists can shop tribe related articles at local hat.

Limitation

- Public transport is not available adequately from connecting stations like Ranchi, Lohardaga, Mahuadandh and Daltenganj.
- Valley of 22 Km is badly damaged and narrow. Trucks transporting Bauxite to various places are mainly responsible for this damage. On an average 1000 trucks cross the valley per day. Bus driver has to be very cautious while driving on that valley.

- Route from Mahuadandh is better comparable to Lohardaga route but conveyance is not available through that route only private vehicle opt for this.
- No restaurant is available in the city some roadside dhabas stocking snacks can be found during the day. At night, nothing is available for the tourist.
- Internal transport is not available in the city tourists have to opt for private Jeep/Taxi to visit local spots; this is very costly proposition for individuals as well as couples.
- Communication facility is negligible in the city; very few STD points are there.
- No commercial guide is available in the city, visitors have to take help of the local inhabitants this is very tough task for international visitors.
- Other attractions like Photography, Entertainment joints, cultural dance are not available in the city.

UPPER GHAGHRI

Location

- It is 6 Km from Prabhat Vihar tourist bungalow.

Connectivity

- Well connected through road with all major spots of Netarhat.
- No public transport is available for this spot.

Identity

- Waterfalls create a scenic beauty that is unique.
- Picnic & recreational spot.

Limitation

- No public transport is available for this spot.
- Food & other snacks are available during the peak season through temporary stalls by local inhabitants.

LOWER GHAGHRI***Location***

- ∞ 10 Km from Prabhat Vihar Tourist Bungalow.

Connectivity

- ∞ Well connected through road with all major spots of Netarhat.
- ∞ No public transport is available for this spot.

Identity

- ∞ Waterfall from a height of 375 ft creates a scenic beauty.
- ∞ Presently this spot is converted into picnic spot and government has banned visits to this place in lieu of some renovation work.

Limitation

- ∞ No public transport is available for this spot.
- ∞ Food & other snacks are available during the peak season through temporary stalls by local inhabitants.

KOYAL VIEW RIVER***Location***

- ∞ 3 Km from Prabhat Vihar tourist bungalow.

Connectivity

- ∞ No public transport is available for this spot.

Identity

- ∞ The point provides a picturesque view of Koyal river.

Limitation

- ☞ No public transport is available for this spot.
- ☞ Food & other snacks are available during the peak season through temporary stalls by local inhabitants.

MAGNOLIA POINT***Location***

- ☞ At extreme west this is the best place to enjoy Sunset.
- ☞ 10 Km from Prabhat Vihar tourist bungalow.

Limitation

- ☞ No public transport is available for this spot.

BETLA NATIONAL PARK

Location

- Betla is located between 23° 55' North and 83° 55' eastern at Western part Chotanagpur Plateau.
- Forest of Latehar Forest Division, Ranchi west Forest Division, Garhwa South Forest division and Sarguja District of Madhya Pradesh, surrounds this reserve on three sides.



Figure 3.4: The surreptitious forest at Betla

Identity

- This was first of its kind in world and in 1974 it became one of the earliest tiger reserves in India.
- The terrain is undulating and densely covered by forest, which ranges from moist deciduous to evergreen.
- The park has an average elevation of 1000 ft. and is open through out the year although best period for visit is Feb-April.
- Presently the tiger reserve extends over an area of 1026 sq. km. This area is divided into zones namely:
 - ➡ Core or Wilderness Zone-- 213 Sq. Km
 - ➡ Buffer or Multiple use Zone—813 Sq. km
 - ➡ Tourism Zone (Overlapping)—53.78 Sq. Km (Eco Tourism Zone)

- It has very wide range of bio-diversity and many endangered, rare, and threatened species of flora and fauna are found. These are:
 - Species of mammals (39 Genera & 21 families) – 47
 - Species of birds—174
 - Species of flora-- 970
 - Species of climbers--25
 - Species of Shrubs (grasses)-- 46
 - Species of valuable, medicinal plants- 56
- The reserve is very rich in mammalian population. The population dynamics of animals found in the reserve is as like:

Connectivity

- Having approach from both Netarhat (120 Km) as well as Daltenganj (26 Km), this spot is easily accessible by road. Ranchi (140 Km) is also connected through both routes.
- Buses are available for Ranchi-Daltenganj all over the day and from Daltenganj jeeps as well as buses going towards Netarhat passes through main gate of National Park.
- Nearest Railway station is Daltenganj hosting trains from Eastern Railway. Trains from West Bengal as well as Mugalsarai are operational. Just 13km from Betla one small station **Barwadih** is a halt for trains going towards Daltenganj.
- Air connectivity is through Ranchi (140 km) only.

Amenities

- This sanctuary has been developed to accommodate day as well as overnight visitors. It has furnished Tourist Bungalow that can accommodate 25 persons and 2 dormitories of total 24 beds.
- Besides this there are 3 more Forest bungalows & 5 private guesthouses with an average capacity of 20 beds each.
- For more adventurous, there is treetop guesthouse that is endowed with energetic viewpoints.

- A spacious restaurant caters adequately to the food requirement of visitors.
- Elephant as well as Jeep Safari never fails to enthrall visitors who can move among the sambhar, elephants, & monkeys. Some fortunate ones are able to have a glimpse of **TIGER** in the tourist zone.
- Local guides of Forest Dept. are provided on request and availability.
- Photography is permitted after paying the required charges.

Limitations

- Road connecting the spot with Daltenganj & Netarhat is narrow at times it is tough for the heavy vehicles to pass.
- No amenities for nightlife as most of the tourist are overnight and they find night boring without any attraction.
- Public transport is not frequent for Daltenganj as well as Netarhat during off peak season.
- Forest erosion affects the flora & fauna of the Park in turn making the visits uninteresting.

LODH FALLS

Location

- ✧ 62 Km from Netarhat this spot is on Netarhat-Mahuadandh-Betla-Daltenganj route.
- ✧ Tourists have to take a service road (22 Km) from Mahuadandh.

Connectivity

- ✧ Only road connection through Mahuadandh is available for this spot, but no public transport is present from this place. Tourists have to take private Jeep to visit these spots.
- ✧ Daltenganj is nearest Railway station hosting trains from West Bengal.
- ✧ Nearest Airport Ranchi (156 kms) is connected by Indian Airlines flights with Bombay, Patna, and Calcutta & New Delhi.



Figure 3.5: The Majestic Lodh Falls

Identity

- ✧ It is one of the biggest water falls of Jharkhand where water falls from height of 468 ft.
- ✧ Perceived as only natural waterfall by the tourists.
- ✧ Located inside WOLF Sanctuary this spots hold great significance for the adventure tourists.
- ✧ Popularly known as “BUDHA Fall” as the river that supports this fall is BUDHA river originates from Chattisgarh.
- ✧ Water is so cold & pure in summer also that people drink that water as it is.

Limitation

- ✎ No public transport is available for this spot.
- ✎ Connecting Road is badly damaged and narrow that makes the drive awful for the visitor.
- ✎ Naxals are another major concern of the visitors as the inhabitants are either a part of the team or supporter to them encircle this area.

SUGABANDH**Location**

- ✎ 65 Km from Betla National park (Daltenganj-Netarhat route) and 25 Km from Mahuadandh (Mahuadandh- Daltenganj route).

Identity

- ✎ Till date this is unexplored spot by the tourists but can be converted into a hot spot if promoted rightly.
- ✎ Known for natural creation and story behind it, this spot has every thing a picnic spot should posses.
- ✎ The scenic beauty is a major attraction for the tourist.

Fig. 3.6: A Waterfall**Connectivity**

- ✎ Service road connecting the spot with Daltenganj-Netarhat highway is totally kachha and broken for 5 KM.
- ✎ Daltenganj is nearest Railway station hosting trains from West Bengal.

Limitation

- ✎ No public transport is available for this spot.
- ✎ Connecting Road is badly damaged and narrow make the drive difficult for the visitor.

C) RANCHI-BUNDU-JAMSHEDPUR

Till date this route was not identified as a circuit but during our primary survey we identified potential of developing a package for this circuit. Major spots in this circuit are Dassam fall, Sun temple at Bundu. In Jamshedpur major spots are Dalma Elephant Park, Dimna lake, Jubilee park, Tata Zoological Park, Hudco lake.

JAMSHEDPUR

Jamshedpur, as the burgeoning township was named in 1919 in tribute to Tata Steel's Founder, is India's first planned industrial city. It is a model for the harmonious co-existence of industry and environment. Acres of verdant parks and gardens dot the city and provide bucolic sanctuaries from the pressures of everyday life.

Connectivity**Rail**

- ☞ Operating trains on Eastern railways and well connected with Orissa, West Bengal, and Delhi.

Road

- ☞ Well connected with the capital Ranchi through NH-33. Through Ranchi it is also connected with other parts of Bihar & Bengal.
- ☞ Frequent public transport is available to & fro between Ranchi-TATA. Night service deluxe buses are available for Patna.
- ☞ Kolkatta is approx 300 Km from TATA and buses are available through out the day for this place.

Attractions

JUBILEE PARK

Location

🌀 2 Km from City Center

Identity

🌀 Over 225 acres of lush green Parks dotted with flowerbeds and illuminated fountains, was presented by the Steel Company to the citizens of Jamshedpur in its Golden Jubilee Year.

Connectivity

🌀 Well connected with every part of city.

Amenities

- 🌀 Food & snack stalls are available inside the spot.
- 🌀 Sheds and benches are installed at various places inside the spot for the visitors to enjoy.
- 🌀 A small lake with fountain is major attraction point for the visitors. Lighting at night is memorable episode.

TATA STEEL ZOOLOGICAL PARK

A variety of fauna exists in conditions close to their natural habitat at the park. The adjoining lake, Jayanti Sarovar, offers boating facilities in idyllic scenery.

SIR DORABJI TATA PARK

Manicured lawns and flowerbeds and brilliantly lit fountains provide a delightful touch of color to the park.

RIVERS' MEET

The scenic confluence of the Kharkhai and Subarnarekha rivers is located at the northwest tip of the city.

HUDCO LAKE

Nestled in the picture and hilly terrain of Telco colony, the lake is a delightful retreat for those desirous of being in nature's lap within the city precincts.

DIMNA LAKE

Located at a distance of 13 kms from the city limits, at the foot of the Dalma Hills, its salubrious surroundings are ideal for an outing or a picnic.

DALMA NATIONAL PARK

Location

- Dalma is located at 10 km from Jamshedpur on NH 33.
- This is located on border of Jharkhand, Orissa & west Bengal.

Identity

- This forest reserve has a spread of 193.2 Km in between East & West Singhbhum.
- The terrain is undulating and densely covered by forest, which ranges from moist deciduous to evergreen.
- The sanctuary has been recently converted as first Elephant National Park. There won't be any restricted area in this fall and tourists can enjoy the whole park.

- Presently the Elephant Park extends over an area of 193.2 sq. km. This area is divided into zones namely:
 - ➡ Core Zone-- 59.4 Sq. Km
 - ➡ Buffer Zone—132.2 Sq. Km
 - ➡ Traditional Use Zone—123.33 Sq. Km
 - ➡ Tourism Zone (Overlapping)—13.94 Sq. Km
- The park is very rich in mammalian population. Major one are Elephant, Bear, Giant Squirrel, Pangolin etc.

Connectivity

- Well connected with NH 33 (Ranchi-Jamshedpur)
- Buses are frequently operational for Ranchi-Jamshedpur. For 3 Km approach road visitors have to get down to foot or in season cycle/auto rickshaws are available for them.
- Nearest Railway station is Jamshedpur major center for trains from South Eastern Railway. It is a major halt on Howrah-Mumbai Route. Trains from West Bengal as well as other parts of India are operational.
- Air connectivity is through Ranchi (140 km) only.

Amenities

- This sanctuary has been developed to accommodate day as well as overnight visitors. It has furnished Forest Bungalow that can accommodate 25 persons and 2 dormitories of total 30 beds.
- For more adventurous, there is treetop guesthouse that is endowed with energetic viewpoints.
- A spacious restaurant caters adequately to the food requirement of visitors.
- Elephant as well as Jeep Safari never fails to enthrall visitors who can move among the sambhar, elephants, monkeys, barking deer, sloth bears, and porcupines.
- The steep slopes of Dalma are a trekker's delight.
- Local guides of Forest Dept. are provided on request and availability.

- Photography is permitted after paying the required charges.
- The important visitor sites will be;
 - (a) Tesri Nala and its watch tower
 - (b) Pindrabera FRH
 - (c) Barkabandh and its hideout
 - (d) Manjhla bandh and its watch tower
 - (e) Neechla bandh and its hideouts
 - (f) Bijlighati and its hideouts, waterfalls and its view points
 - (g) Dahubera
 - (h) Pharenga village
 - (i) Chharghar.
- Some more details on various charges:

i) Entry Fee Ticket

Entry fee/person (in Rs.)		Maintenance fee/person (in Rs.)		Total Entry fee/person (in Rs.)	
Adult	Child	Adult	Child	Adult	Child
3.00	2.00	2.00	1.00	5.00	3.00

Entry fee will be revenue and will be deposited in state exchequer.

ii) Tourist Vehicle Fee:

a) Departmental

Fare/Person		Maintenance Fee/Person		Guide's fee/Person		Total Fare/Person	
Adult	Child	Adult	Child	Adult	Child	Adult	Child
25.00	10.00	25.00	10.00	5.00	2.00	55.00	22.00

Vehicle fare forms the state revenue.

Maintenance fee is kept for maintenance of the tourism infrastructure, road and routes, and guides fee is provided to the employed guides directly.

iii) Camera Fee

- a) Still camera fee Rs. 25
- b) Video camera fee Rs. 250/-

Limitations

- Road connecting the spot with Daltenganj & Netarhat is narrow at times it is tough for the heavy vehicles to pass.

- No amenities for nightlife as most of the tourist are overnight and they find night boring without any attraction.
- Public transport is not frequent for Daltenganj as well as Netarhat during off peak season.
- Forest erosion affects the flora & fauna of the Park in turn making the visits uninteresting.

DASSAM FALL

Location

- ∞ Approx. 40 km from Ranchi near Taimara village on Ranchi-Tata road.

Identity

- ∞ The Kanchi River falls from the height of 144 ft. and makes a pretty scene.
- ∞ Encircled with charming scenes this site is a natural hub of scenic beauty.
- ∞ It is not a safe place to enjoy bathing as the stones are slippery and streams are fast.

Connectivity

- ∞ Well connected through road but public transport is not available for this spot. Buses going towards Bundu cross through connecting highway. Service road of approx. 10 Km connects this spot with the Highway.
- ∞ No public transport is available for this service road.

Amenities

- ∞ No amenities are available during the lean season but temporary stalls setup during the winter season when traffic flow increases.

Limitation

- ∞ Safety measures are not effective & appropriate at this spot and occurrences of past are not favorable for new visitors.
- ∞ Approach road is tar road and not well surfaced making the drive difficult.
- ∞ Food & other amenities are not regularly available.

SUN TEMPLE

Location

- ☞ It is situated about 39 km. from Ranchi on Tata road in Bundu.



Figure 3.7: The Sun Temple

Connectivity

- ☞ One may go there by daily services private Bus or Jeep from Khaddar bus stand.
- ☞ All weather motorable roads up to the temple premises attract tourists in good number.

Identity

- ☞ There is a village near temple called Bundu.
- ☞ There is a statue of a RATH attached with 18 wheels and 7 horses.
- ☞ Sanskrit Vihar headed by Shri Ram Maroo (the managing director of Ranchi Express) has built it.

Amenities

- ☞ Newly built Sun Temple captivates the tourist to behold it in placid and serene surrounding leading to its celestial beauties.
- ☞ There is a beautiful Dharamshala for the visitor to stay & enjoy in the vicinity of temple.
- ☞ There is a pond near the temple; visitors have a good time over there.

d) DEOGHAR**Area**

2479 sq. Kms.

Identity:

Deoghar (Adobe of God) was formed after the reconstitution of Santhal Paragnas. This place is an important center of Hindu Pilgrimage. Besides Edgar the other towns in the district are Jasidih and Madhupur. The district has seven blocks - Edgar, Karon, Madhupur, Mohanpur, Palojori, Sarath and Sarwan. Total population of district is 933113.

Connectivity

- ☞ Nearest airport is Gaya at Bihar; flights are operational for Delhi-Kolkatta-Mumbai from this place. Commutation is also available from Ranchi airport.
- ☞ The nearest Railway Station is Baidyanath Dham (Edgar), terminal station of 7 kms branch line originating from Jasidih Jn. This is on Howrah-Patna rail line of Eastern Railway and trains are operational for all parts of nation.
- ☞ Well connected by road with major cities like Ranchi (255 km), Calcutta (373 km), Giridih (112 km), Patna (281 km), Dumka (67 km), Madhupur (57 km), Chirimhala



Figure 3.8: The famous temples at Deoghar

(53 km) etc. Long distance buses connect Baidyanath Dham with Bhagalpur, Hazaribagh, Ranchi, Tatanagar, and Gaya etc.

☞ For internal transport Unmetered Taxis, Scooters, Cycle Rickshaws are available.

Climate: Temperature: Summer - 23⁰ - 36.9⁰

Winter 7.4⁰ - 27.7⁰

Best Season: October to February.

Attractions

BAIDYNATHDHAM

Location

☞ In the heart of city Baidynath Dham is a very famous religious place of Hindu religion.

Identity

☞ This place is also known as Babadham. There is a famous temple of Lord Shiva has Kamna Ling, on which holly JAL (water) is offered throughout the year especially on the every Monday.

☞ In Shravan month, lacs of devotees come on foot from all over India to offer the holy water of river Ganga (Sultanganj about 100 km. far from Babadham).

☞ Main mandir complex was built in 1516 and there are eleven temples in it. Other mandir besides Baidynath dham are:

- **Laxmi Naryan Mandir**
- **Parbati Mandir.**
- **Kali Mandir.**
- **Tara Mandir.**
- **Surya Mandir.**
- **Ganesh Mandir.**
- **Saraswati Mandir**
- **Bagla Mukhi Mandir.**
- **Annapurna Mandir.**
- **Anandu Bhairabi Mandir.**

Connectivity

- ☞ Well connected with major parts of city. One can reach by train or by bus also.
- ☞ Unmetered auto & cycle rickshaws are recurrently available from all parts of town.

Amenities

- ☞ Varied accommodation options are offered to the tourists. Star & Budget hotels are operational in town. In addition BSTDC tourist bungalow is available for another option.
- ☞ Exotic range of food & other snacks are available at multi cuisine restaurants.
- ☞ All medium of Communication exists in the vicinity of town.
- ☞ Shopping centers like Bihar State Handloom Emporium, Santhal Parganas Gramoudyog Samittee, and Santhal Pargana Khadi Gramoudyog Bhavan are available at economical price for the tourists.
- ☞ A pond is built approx 200 meters from the temple named **Shivganga**; devotees take bath before offering prayer to Lord Shiva.

Limitations

- ☞ Entrance of the temple is through narrow lanes that are already crowded with stalls.
- ☞ Shopkeepers & hawkers harass the visitors.
- ☞ Priests & local guides make money by cheating the tourists. Most of the foreign tourists have faced this awkward situation in the temple complex.
- ☞ Sale of illegal drugs has flourished in Edgar, at times religious visitors had to face problems in the markets.

YOGA ASHRAM

Location

- ☞ It is 7 km from Baidyanath Dham railway station.

Identity

- ☞ Guruji Paramansha Swami Satyananda Saraswati built yoga Ashram in 1989. Ashram committee controls the Ashram with his disciples are from all over the world.
- ☞ Ashram committee organizes meditation classes every day.
- ☞ Great Milan meal is held in December every year. Thousands of foreign disciples come here to attend the mela. Local inhabitants also come here and enjoy this mela.
- ☞ Every year the mela committee gives foods cloths to the poor people.

Amenities

- ☞ A building was constructed near the ashram by the Jharkhand tourism for the foreign tourist.
- ☞ The ashram committee provides food & other articles to the visitors.
- ☞ Scenic & natural exquisites are in abundance at this ashram.

Connectivity

- ☞ Well connected with all parts of city, Unmetered auto & cycle rickshaws are recurrently available form all parts of town.

Limitations

- ☞ Foreigner visits yoga ashram only besides this they occasionally opt for other spots in State. They are keen to know more about the cultural & heritage of Jharkhand but lack of information and hype of social problems limits their expectations.

SATSANGHA ASHRAM

Location

- ☞ It is 2 km from Baidynath Dham mandir.

Connectivity

- ☞ There is a railway halt inside the ashram and local trains halts at this place.
- ☞ Public transport is available for the ashram.

Identity

- ☞ Spread in approx 7 acre of land the ashram is most respected place in the pilgrimage city of Edgar.
- ☞ Sri Thakur Anukul Chandra established this ashram on 1st September 1946. Presently varied institutions are operational in Ashram and have more than 2000 branches across the world.
 - *Satsangha computer center*: With the support of Barda computer networking institute.
 - *Ananda Bazaar*: A religious restaurant where every day thousands of people take on their meal free of cost. lakhs of people visit this place to celebrate their **Utsav** twice in a year; at that time Ananda Bazaar takes care of their food and lodging.
 - *Satsangha Vesajauddan*: Rare species of tree collected from various part of the world are planted here. There is a biological lab for conducting nature related research.
 - *Satsangha water supply department*: This controls water distribution all over the Satsangha Nagar through pump & from Daroa River.

Beside all these Satsangha Engineering Works, Satsangha, Carpentry, Satsangha electricity supply, Satsangha Hospital (60 Bed), Zoo and a playground is also there.

NAV DURGA MANDIR

Location:

- ☞ Nav Durga Mandir is 2 km from Baidyanath Dham railway station.

Identity

- ☞ The temple is also known as “**Debsangha**”. Param Gyane Swami Narendranath Brahmachari built this temple.
- ☞ Shrine “Nabadurga Murti” is the highly regarded and popular attraction for the visitors.
- ☞ Every year in Durga Puja Mandir committee arrange puja of “Nabadurga”. Lakhs of pilgrimage visit the temple during this period.
- ☞ Nav Durga Mandir Committee performs varied social work. They have built a school, dispensary to serve the poor people ever year in Durga Puja they arrange food and cloth to distribute them to poor at free of cost.
- ☞ Visitors are not only from India but international tourist also take out their time to visit this temple.

NANDAN PAHAR



Figure 3.9: A Famous Recreation Park

Location

- ☞ Nandan Pahar is 3 km away from Baidyanath Dham railway station.

Identity

- ☞ Temple of Lord Shiva, Devi Parvati, Lord Ganesh and Kartik are situated at the hilltop.
- ☞ View of sunrise & sunset from hilltop is panoramic.
- ☞ Water tanks at hilltop supply drinking water to Edgar and this is connected to Darowa River.
- ☞ A children park is built near the hill, this is perceived as real park by the tourists. Rides at the park excite the children visiting there.
- ☞ Food & other amenities are available at the spot.

TAPOBAN

Location:

- ☞ Tapoban is 10 km from Baidyanath Dham railway station.

Identity

- ☞ Ancient days saints resided here and devoted their life on “Sadhana of Lord Mahadev”.
- ☞ Temple of Lord Mahadev & Sulkunda is situated inside the campus. Adage is that Dharsan and bathing of Sulkunda cover the sin performed by him.
- ☞ Height is about 700 feet with total surrounding area about 6km. Village surrounding it Krishnadehi, Jammua, Simlapok, Narchi, Chirdhuniya, Dhakuri.
- ☞ Mata Sita use to take bath at this Sulkunda.
- ☞ Maharashi Balanda Bramhachari established the Ashram and got “**Siddhi**”. Balananda Swami built Mandir with the help of Laxmi (Riyasat Maharani).
- ☞ Lord Hanuman temple is situated at hilltop.
- ☞ Food & Snacks stalls are operational within the area; some stalls selling puja articles are also sold in proximity of Temples.

Limitations

- ☞ There is single route to go to mandir, that also narrow and un-surfaced.
- ☞ Other way to reach the top is through rock climbing & that involves risk on visitors part.

RAMAKRISHNA MISSION

Location

- ☞ It is one and half kilometers from Edgar station.

Identity

- ☞ It was established in 1922 with an area of 7 Bigha.
- ☞ There are two large playgrounds and an exquisite garden.
- ☞ Mandir is decorated with the photo of Ramakrishna paramhans, Saroda ma & Vivekananda.
- ☞ Dr. A.K. Kidwai in 1996, the former Governor of Bihar, inaugurated a bronze statue of Swami Vivekananda.
- ☞ The ashram provides livelihood to hundreds of local inhabitants through its various activities. The activities are as follows:
 - ☞ Daily worship conducted in the temple of Sri Ramakrishna.
 - ☞ A residential Senior Secondary school, affiliated to the CBSE New Delhi.
 - ☞ Library – one each in secondary and senior secondary section.
 - i) Free study coaching unit (academic and vocational) for schedule cast and schedule tribes, Backward class children from class I to Class X who are supplied with books, dresses etc.
 - ii) Inter-institutional competition, Seminars for school and college students.
 - iii) Periodical seminar for Teacher of different institutions.
 - iv) Publications
 - v) Propagation of the idea and ideals of Ramakrishna Vivekananda.
 - vi) Computer Education Unit
 - ☞ Charitable allopathic and Homeopathic dispensary with diagnostic facilities like X-Ray, E.C.G., Pathological investigation (computerized), Dental treatment etc.
 - ☞ One Tribal Museum
 - ☞ Modern Dairy

TRIKUT PARBAT

Location

- ☞ Trikut Parbat is 18 km from Edgar railway station.

Identity

- ☞ Three peaks of these hills are named: one is Brahma second is Vishnu and the third is Maheshwar.
- ☞ Hills are spread in an area of 2110.28 acres and highest peak is 2470 feet. There is a temple of Lord Maheshwar on the highest peak.
- ☞ Top of the hills is plane and is called “ Sita Chatal”. There is a fall in front of Maharishi Dayananda Ashram named “Guru Sidhu Fall”. “Siddha Baramachari Bombom Baba” built this fall.
- ☞ Devi Durga temple was built in 1933. Every year Chaitra Durga Puja is organized at this place. During this period local and outside Jharkhand people visit this place to participate in puja.

NAVLAKHA MANDIR**Location:**

- ☞ Navlakha Mandir is 2km from Baidyanath Dham railway station.



Figure 3.10: The famous Navlakha Mandir

Identity

- ☞ Charusila Dasi constructed the temple in 1963. Ram Charusila Dasi was the wife of Jatindra Gosh from the family of Pathuai ghat Kolkatta.
- ☞ After death of her husband and son she came to Edgar and since then permanently staying in Ashram of the Great Balananda Bramhamchari. The plan of the Mandir was designed by Kalidas Ram another disciple of Balananda Bramhachari.
- ☞ Height of temple is 146 feet.
- ☞ It is quite similar to the temple of Belurmath.
- ☞ Statue of Radha Krishna is situated in the temple.

e) DHANBAD

Area - 2996 Sq. kms.

History

Dhanbad district came into formation in 1956. Earlier it was in Manbhum district. The blocks in the district are: Baliapur, Dhanbad, Gobindpur, Jharia, Nirsa and Tundi. The towns in the district are: Baliapur, Chandraur, Chirkunda, Dhanbad, Gobindpur, Golphalbari, Jharia, Katras, Kumardhubi, Nirsa, Panchet and Sindri. The total population is 2674650.

Connectivity

- ☞ Good road connections all over the district. The Grand Trunk road runs through the district.
- ☞ Dhanbad is connected by Vayudoot Service with Patna and Ranchi that in turn is connected by Indian Airlines services with Calcutta and Delhi.
- ☞ The district also has a network of railway tracks. Dhanbad station is on the main Calcutta-Delhi line. This is an important railway station on Eastern Railway and is very well connected with Patna, Calcutta and other important Cities in India.
- ☞ Dhanbad is well connected by roads with important towns in Jharkhand.

Industry

The district is highly industrialized. With availability of coal in abundance this is the biggest source of income for the area. Fertilizer and Chemicals industry and a Super phosphate factory are also there. The other important industries are firebricks industries, glass industry, cement plants etc.

Infrastructure

Dhanbad is a hub for major industrial activities in Jharkhand. Internal infrastructure in the town is good and facilities are optimum for the visitors. Details of accommodation is as below:

Hotel Name	Location	Category	Room Strength	Tariff	Amenities
Hotel Gulshan	Topchachi, Dhanbad	Budget	6		TV in dinning hall, Room Service.
CMDA Ban Bungalow	GT Road, Dhanbad	Tourist Bungalow	5	200	Generator, Lift,
Hotel Skylark	Bank Morh Dhanbad	Budget	48	930	TV in dinning hall, Room Service.
Hotel VIP	Bank Morh Dhanbad	Budget	14	700	EPBAX, Laundry, Air & railway reservation .
Hotel Black Rock	Bank Morh Dhanbad	Budget	44	1095	Generator, Lift,

(Source: ORG - MARG Survey)

Attractions

MAITHON DAM

Location

- ☞ 52 km from Dhanbad, It is situated at the border of Jharkhand and West Bengal.

Identity

- ☞ The lake is spread in area of 65 km. Total dam area is 2km but main portion (means log gate portion) is 1 km.
- ☞ The Jawaharlal Nehru, Prime Minister of India, inaugurated it in 1949. Maithon can also be termed as “Mother’s Adobe”.
- ☞ Deer Park & Bird sanctuary adds exquisite look to this spot.
- ☞ It is on the Barakar River. Endless beauty of nature and construction of Dam attracts people from all over the country.
- ☞ This is the biggest reservoir in Damodar Valley Corporation and is famous for its underground power station. This was first of its kind in South East Asia.

Connectivity

- ☞ Nearest railway station is Kumardulai (Jharkhand) 9 km away from dam. Trains for West Bengal, Orissa are available frequently.
- ☞ Public transport is not available frequently for this place but auto or private taxi can be hired for the railway station.
- ☞ Well connected through road with Aasansol (West Bengal) it is 25km; Public transport is available frequently for this spot. Minibus charges are INR 10 and private taxi charges INR 400.

Amenities

- ☞ Two Hotels are operational for the tourists, one from D.V.C. (Mazumdar lodge) and other from West Bengal Tourism Development Corporation.
- ☞ Boating facility at Millennium Park is also available for the tourist.
- ☞ A hospital from D.V.C provides relief to local inhabitants as well as visitors.
- ☞ Canteen is available for Food & snacks for visitors.

Limitations

- ☞ Telecommunication facility is not good.
- ☞ Parking space is not sufficient for the number of vehicles visiting that spot.
- ☞ Public transport is not available frequently for this spot from connecting points.

TOPCHACHI FALL***Location***

- ☞ 35 km from Botarned Bus stand of Dhanbad.

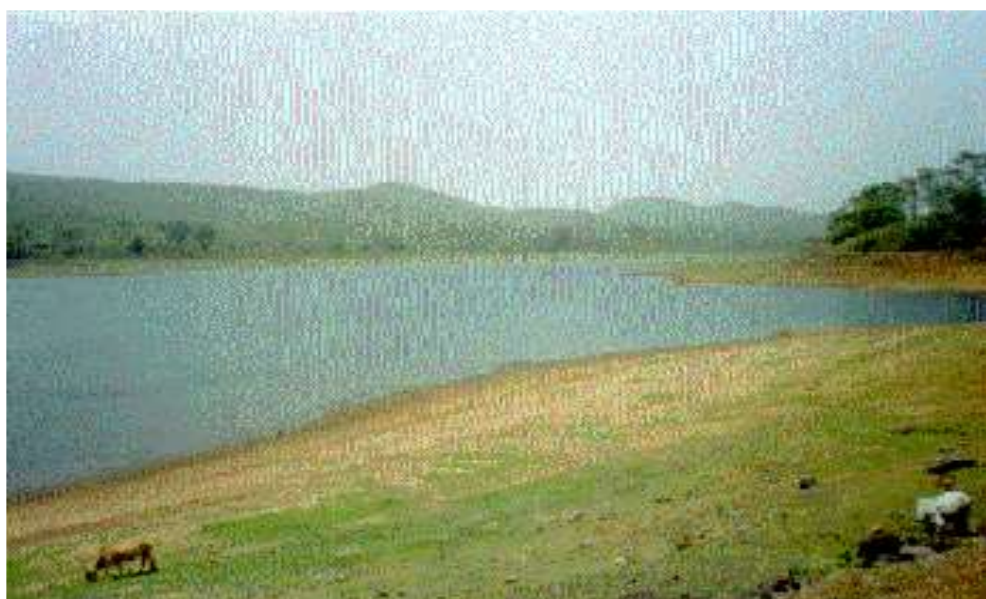


Figure 3.11: The Serene Settings beside the Damodar

Identity

- ☞ British Authorities has excavated the Lake in 1924.
- ☞ The British made a Ban Bungalow in 1918 for staying of engineers who supervise the work of lake.
- ☞ Area of the lake is about 7 km and is covered by tar road. A dam is built on the lake to supply the water to Dhanbad, Katrar, and Jhariya.
- ☞ The scenic beauty and hillside view of the lake is incomparable and major attraction for the visitors.
- ☞ Wild animals like cheetah, deer, elephant and many others visit the lake during night. This attracts the adventure as well as wild life tourists to the spot.

Amenities:

- ☞ Two bungalows are there for the tourists one of BSTDC and another is private.
- ☞ Restaurants are available in surrounding proximity of the lake. Tourists enjoy the beauty of lake while enjoying food in restaurants.
- ☞ The local authority facilitates photography.
- ☞ Varied medium of communication is available at the spot.

Limitations

- ☞ Visitors are skeptical regarding the safety arrangement by local authorities from Naxals.
- ☞ Due to poor maintenance of the spot migratory birds and other wild animals are not arriving as earlier.

PARNASNATH HILLS

Location

- Its approx. 190 Km from Ranchi in Giridih district.

Connectivity

- Road connection is through either Chas/Dhanbad/Rajabhita or Hazaribagh/Bagodar. Buses are available for both route from Ranchi as well as local points.
- Rail connectivity through Dhanbad as well as Ranchi.
- Air route is through Ranchi.

Identity

- There is a Jain temple on hilltop and is a pilgrimage for Jain community. It is said that 23rd Jain Tirthankara Praswanath, attended nirvana over here.
- Height of the hill is 1335 meter. Panoramic view from Hilltop is beyond any comparison.

Amenities

- Food stalls stocking ready to eat stuff are available at the hilltop.
- Guides are available for the tourists.

Limitations

- Transport is major impediment as very less public vehicles are available from the connecting points.
- Local authorities do not facilitate photography.
- Accommodation is not available at the hilltop as well as near the Hill.

VAITINDA FALLS

Location

- ☞ One of the most ancient falls in West Jharia, it is about 20 km from Dhanbad

Connectivity

- ☞ Regular public transport is available till Putki 10 km from Dhanbad. But no means is available from Putki-Vaitinda (10 Km).



Figure 3.12 : The Majestic Vaitinda Falls

Identity

- ☞ This falls situated on Vaitinda River.
- ☞ Height of the falls is 350ft. meter from the ground level.
- ☞ Temple of Lord Shiva is built on the top of the falls. Front side of the falls is Tatangabad and the backside is Vardhao village.
- ☞ On the way of Putki-Vaitinda there is a coalmine named “Munide” of Central Coalfields Limited.

Amenities

- ☞ No accommodation facility is available at the fall
- ☞ Local inhabitants are dependent of the coalmine and for their livelihood.
- ☞ Peak time for visitors is Dec-Jan as they come for picnic as well as to enjoy the spot.

Limitations

- ☞ Putki-Vatinda falls 10km road is fully damage & narrow.

PANCHET DAM***Location:***

- ☞ Constructed on Damodar River, it is 32km from Kumardumbhi and 45km from Asansol.

Identity

- ☞ This dam is similar to Maithon Dam and situated on the Border of West Bengal and Jharkhand.
- ☞ Jawaharlal Nehru inaugurated it in 1949.
- ☞ Total dam area 1.5km and the main portion (i.e. gate portion) is ½ km. No. of gates are six.
- ☞ Beauty of the lake and small tilas are the main attraction.
- ☞ A Hydel station is constructed against the background of Panchet Hill in the eastern side of the Dam.

Amenities

- ☞ Accommodation not available in proximity of the Dam.

Limitations

- ☞ Shops of food & other article are not available.
- ☞ No. S.T.D., the local authorities provide I.S.D. facility.
- ☞ Parking is not sufficient.
- ☞ Conveyance is not available after the sunset.
- ☞ Guide & Photography facility is not available.

f) Saranda***Location***

- ☞ It is located in the West Singhbhum District in the State.

Identity

- ☞ Unspoilt world, where nature reigns supreme.
- ☞ In Ho Language it means “Land of 700 Hills”.
- ☞ Exciting and colourful flora and fauna present.
- ☞ Sal is the most dominating tree species. Rare herbs, shrubs also feature amongst the floral species.
- ☞ Mammals, Birds and Reptiles feature amongst the fauna.
- ☞ Has a wonderful array of Natural Resources (**Kiriburu – Thalkobad Ligirda Swamp – Toybo Falls – Loyall’s View**) as well as Spiritual Delights (the likes of **Sameej Ashram – Mahadev Sal – Maa Giri Rajeshwari**)

Connectivity

- ☞ It is well accessible from Delhi, Mumbai, Puri and Kolkata
- ☞ Accessible from Jamshedpur and Ranchi.
- ☞ One has to move towards Chaibasa (60 Kms from Jamshedpur and 140 Kms from Ranchi) and travel 80 Kms (enroute Jhinkpani – Hatgamariya – Badajamda – Baraiburu - Kiriburu)

Amenities

- ☞ One can have a bird’s eye view of the entire forest from Kiriburu.
- ☞ One can avail accommodation at the Sail Guest House at the aforesaid spot.

CHAPTER - 4**TOURISM PERSPECTIVE PLAN & IMPLEMENTATION SCHEDULE**

4.1.0 AREAS & ASPECTS

4.1.1 In Jharkhand the tourism development should be focused and concentrated on certain areas and aspects that have to be reviewed from time to time.

A) DEVELOPMENT OF BASIC INFRASTRUCTURE

Being key driver of economy and society, this holds control of every other facility and developmental schemes. Lack of operational infrastructure makes a negative impact on the visitor experience; in turn they spread a negative word of mouth. Ultimately this limits the steady inflow of visitors.

DEVELOPMENT OF ROAD**➤ National Highways**

- All the 4 National Highways crossing through state regions require complete rehauling in terms of width and surface.
- Total length of National Highways is not proportionate of the national average. To add to this, Northeastern & Northwestern parts of the state does not host any National Highway.
- Grand Trunk road passing through Dhanbad is filled with holes & breakage at various places. Repair should be done after a proper survey.

➤ **Ranchi – Jamshedpur Highway**

- This is among most developed highways in Jharkhand. Traffic is highest on this route due to attractions like Dassam fall, Sun Temple, Dalma National Park. Jamshedpur being the industrial capital of state promulgates more business visits. Two more lanes should be added to the existing lanes in order to accommodate the traffic.

➤ **Ranchi-Hazaribagh Highway**

- This envelops highest number of tourist spots in its lap and since it is connected with Ranchi - Patna route, controls major traffic volume. Highway crossing through this place doesn't have divider and leveling is questionable.

➤ **Daltanganj- Betla- Netarhat Highway**

- This is complete single lane highway for 145-Km drive. Surface of the road is satisfactory but the width remains a major drawback. This route hosts highest number of traffic influx, thus an urgent attention is must from the authorities.

➤ **Ranchi - Netarhat Highway**

- Connectivity is major drawback of this route as no National highway is available for the tourists. Complete route is through single lane highway for 165-Km drive. Surface of the road is satisfactory till Lohardaga. After that the route is horrible for the visitors. On an average bus takes 90 minutes to cross a valley stretch of 22 Km. Driving is very risky & makes the visitors scared by the cuts during drive. Rest all is done by the Bauxite loaded trucks passing through same valley. Approach road width is just 10 ft.

➤ **Approach road to Hundru, Panchgagh, Lodh Falls**

- All these are attractive recreational spots but only groups can visit these spots economically because no transport is available on the approach roads. Distances are so apart that no one can think off going through foot. In addition, condition of the road puts a question mark on the experience of the visitors. This hurdle should be conquered prior to any other activity.
- Tilaiya is well connected with NH 2 as well as NH 33 both the Highways hold good traffic and thus badly requires to be strengthened. This is double bone road. Only approx. 500 buses travel through this daily.
- NH 23 is in a slightly better position than that of the others in Jharkhand because minerals are routed through this route. Most of the mining companies contribute to the surfacing and leveling of these.
- Connecting road to Hundru for 22km is just 2m wide and single lane. Vehicles can operate both ways, for 2-3km the Kaccha road is completely broken. (SH-58)
- Jonah is 5km from state highway, connecting NH 32 to West Bengal. Condition of service road is questionable and requires urgent repair.
- Same condition exists with Panchgagh and Dassam, where no public transport operates mainly due to bad condition of the connecting roads. Transport is available on the main road for another connecting city only.
- City roads connecting various local spots like Jagannath Mandir, Tagore hill, are not in a condition to absorb voluminous traffic inflow. Driving is an herculean exercise for the tourists.

AIR TRANSPORT

- Ranchi is the only airport that hosts single Indian Airlines flight that is routed through Mumbai-Delhi-Patna-Ranchi. Each halt is for at least 30 minutes and takes that much time to land & fly. So travel period is multiplied with respect to the actual time required making the trip.
- Fare is also fixed; as per the route i.e. a tourist coming from Delhi-Patna has to pay the fare for the route fare of Delhi-Ranchi-Patna. Fare should be fixed on destinations and no hopping fare should be charged to the visitors.
- Jamshedpur can be developed into a full - fledged airport.

RAIL TRANSPORT

- The land is undulating, this makes the laying of rail network a tough task. Still government is carrying on with Projects that will spread the rail network for more coverage. Ranchi, the capital of the state is well connected with SE railways and hosts some 10 trains from WB and Delhi mainly.
- Rail connection is available for limited towns namely Ranchi, Jamshedpur, Dhanbad, Bokaro, Daltenganj. Number of trains are also not sufficient to absorb the traffic. This makes the trip horrible for the tourists. They have to plan in advance and get their seats reserved at least 30 days in advance.
- Train takes much more time than required due to improper route for the trains.
- Single train is available for South India from Bokaro where as inhabitants proportion is quite high compare to this. Visitors are also from Chennai, Kerala, hence, more trains should be planned for South as well as western part of India.
- Daltenganj is connected through Eastern Railways Mugalsarai and Varanasi. The connection is of meter

gauge and holds local trains for Dehri-on-sone. There are 2 Express and 3 Passenger Trains from Daltanganj - Dehri. One passenger train goes to Mugalsarai. Timings are in the morning at Mugalsarai and reaches in evening. It is

Mugalsarai- Daltanganj	-	(8am –4pm)
Daltanganj – Mugalsarai	-	(8am–4pm)

Takes approximately 8 hours for a distance of 300-km (approx.)

ACCESSIBILITY TO POWER

➤ Spread of supply of electricity

- During the primary survey it was found that most of the spots do not have any power connection. Almost 90% of the spots are without an electricity connection, despite power projects being established in the vicinity of that spot. Efforts should be made to complete the connection part as early as possible.
- Electricity is a must for human life in the modern times, when the production is in house. State government should plan the steps in order to improve the spreadth as well as connectivity.
- During our primary survey it was identified that very less highways have any streetlights on them. Driving is risky in the night but still vechiles are operational, this creates a negative impact on the mind of tourists. Streetlights should be installed and proper maintenance should be carried out for long-term usage.

➤ **Hundru (Ranchi)**

- This fall is a major excursion in and around the state capital and non-availability of power at this spot is an impediment in the traffic flow. Hundru is the best example of “Chirag Tale Andehra” as it hosts two power plants of 64 kW.

➤ **Daltenganj-Betla-Netarhat**

- Major spots on this circuit are not connected with electricity. This creates a negative impact in the minds of overnight stayers. Tourists opt to complete the trip during the day only, otherwise escape it in spite of a strong desire to see the spot.

➤ **Dhanbad**

- Highest number of power plants is installed in the proximity of this district. Still power is not available regularly to the inhabitants. This creates a more negative impact on the visitors.

ENHANCEMENT OF COMMUNICATION

- This requires a complete changeover since communications have become a very integral part of day to day activities. This segment needs to be given high importance in the state of Jharkhand, since the system is in a very bad shape. In an era when the globe is shrinking, due to fast and effective communication, if one can't establish a contact with nearest town, then it's a bane for that place.
- Availability of communication kiosks is a major limitation for any tourist spot as all the tourists, in these days want to remain in touch with their near & dear ones. During the primary survey very few spots were identified that have any STD facility in their proximity. Most attractive wild life spot, Betla National Park doesn't have any public booth nearby. Tourist has to travel to Daltenganj (26 Km) in order to access any STD facility.
- None of the accommodation facility near spots lamented has cable connectivity in this jet age. As a result tourists find themselves completely cut off from the external world at these places.
- Hundru / Jonah and other falls do not have any communication kiosks despite its proximity to state capital.

- Jharkhand has most natural spots and they are situated either in forest area or on a hill-top. Both places have difficult connectivity. Old system of connectivity through wire or any other physical medium won't be feasible, as unutilized portion of the cable would be much larger than the portion utilized.
- Advent of wireless techniques has thrown opportunity to utilize this medium for commercial development. This requires one time investment but generates recurring return to state exchequer.
- No STD and other facility at Netarhat /Topchnachi Lake /Maithon Dam /Parasnath Hill.

OTHER AMENITIES THAT REQUIRE UPGRADATION

- Basic amenities like sanitation, drinking water, parking place etc are scarce in almost 75% the spots. Due to proximity with nature, sanitation is at times easy but drinking water scarcity was badly felt at these spots.
- Most of the spots are recreational and tourists visit this place to spend their time in leisure but they have to face tough time for parking the vehicles. All these seem to be minor gaps but impact is very bad on the repeat visit as well as reference visit at the spot.
- Food stalls are not hygienic and have cleanliness as a major limitation. Most of them don't have proper storage facility and cycle time is at least 3-5 days because market is distant and buying the goods on a regular basis is tough for the vendor. Steps should be taken to tackle this amicably.
- Stairs at the waterfalls are ill managed and are dangerous for the visitors. They don't have any support to hold the person as well as no surfacing is done.

B) AUGMENTATION FACILITIES AT TOURISM CIRCUITS & SPOTS

Daltenganj-Betla-Lodh-Netarhat

- This circuit doesn't host any NH only single state highway is available for transportation.
- Netarhat is not connected with any state highway just a single road connects Netarhat with Mahuadandh as well as Ghaghri down the valley. (SH 55 for 22Km).
- Condition of road can be understood by this fact only that no NH passes through north Jharkhand. Daltenganj, Netarhat, Lohardaga. Latehar, Kani, Mandar all places are connected through State Highway only.
- Width of State Highway is approximately 3-4 meters all over the route and surface condition is very poor. Pitfalls pop-up if any rain is there in the area.
- No road is available from Mahuadandh to Lodh fall (18 km).
- Daltenganj-Betla (25Km) State Highway road has more nos. of pitfalls than plain portion. Surfaced with **Charcoal** this road depicts the maintenance efforts put on by state government.
- State Highways on Betla- Mahudandh should be refurbished in order to develop Lodh Falls as a major attraction point. Non-availability of rail leaves road, as only medium of commutation.
- All the major tourist attractions are lying in proximity of NH 2 and NH 33 so both these should be refurbished on war footing.
- Deogarh is well connected through rail, only very few people opt for road route for this place.
- Road connectivity is available through WB but not through Ranchi or northern part of Jharkhand. Local roads are available from Maheshmund - Madhupur (Connecting Point) and from Madhupur-Deogarh State Highway is available.

- No internal transport is available Netarhat to visit local sights. All the sights are in radius of 5-7km. So cycle rickshaw or autos can manage this distance.
- Guide facility is not available there at Betla or at Netarhat so visitors are unable to make most of their trip. This is most important factor to promote this circuit steps should be taken immediately to authorize some local entrepreneurs to take on this assignment. Some of them had shown their interest during primary survey.

Ranchi-Hazaribagh-Tilaiya

- This circuit holds multifaceted spots, thus attracts diverse tourists also. Base town for this circuit is Ranchi where all the facilities are available to the tourists. They require guidance in the itinerary and amenities available at various spot. No authorized tour operator is available for them.
- Sulpharni Dam, Hazaribagh Sanctuary connections are not through Public transport and private vehicles are costly for individuals. This is a major limitation causing the growth of tourists. Individuals/small group visitors can't afford the taxis, so non-one/two public vehicle should be operated from Hazaribagh. If they are not able to get the tourist in good number.
- Photography is banned at some spots Tilaiya Dam, Sulpharni Dam etc. So the tourists are not able to capture the picturistic beauty of nature.
- Hazaribagh is 130 km and Tilaiya 200 km from Ranchi. No good budget hotels are available for the tourists. Night driving is not possible in Jharkhand, so tourists have to plan accordingly. Driving is not possible for more than 300km so tourists are skeptical in visiting all spots.

- Available public transport system is largely lethargic and takes excess time than required in order to reach the destination. Buses are old and damaged, seats are dirty, loading more no. of people than adjustable. For 130 km (Ranchi-Hazaribagh) bus takes 4-5 hours. All this makes the journey horrible be planned. For this circuit, bus that departs from Ranchi in the early morning and departs from Tilaiya after sunset.
- Hazaribagh is major connecting point of Ranchi-Patna route. Quality and other amenities are negligible in the city. Visitors aren't able to enjoy their trip. So some food joint can be planned through private participation. Besides the tourist spots Hazaribagh is famous for its police academy and forest areas. Some cultural programs and folk dances should be organized to motivate the visitor for overnight stay. This will have favorable impact on state exchequer.
- No public transport is available.

Ranchi

- Conveyance means are not frequently available to various spots in the city either they are available till some distance before the spot or one has to two more than one stop to reach the spot.
- Public transport is not available for Angara- Hundru (12Km), Amrudbagan-Jonha (4km), Dasam (10km), so private taxi has to be booked to visit these sports. This medium is costly for individuals (small group) hence shuttle service should be planned through private participation. This service should be operational through out the day and visitors should be informed regarding their schedule.
- Good number of restaurants are available for the tourist in capital. Most of them are multi cuisine and semi + premium. Some more food joints should be opened in outer range of city or in approach road to Khunti, Bundu.

- Drinking water, sanitation, food is not available at the falls in and around Ranchi. The visitors find it awkward to opt into the open area. Some portable instruments should be installed at these spots.
- Rock garden is the most visited spot in vicinity of Ranchi town. Visitors are mainly local inhabitants and business visitors, who wish to enjoy their time in natural beauty. There is a lake at one corner of park, where boating can be provided for the tourists to spend more time at the spot. In addition more traffic in night. Lighting and foundation should be planned to add attraction.
- Nearby Rock garden, a fresh aquarium is another major attraction point for the tourists. They visit this place in the evening and opt for dinner at the multi cuisine restaurant inside the aquarium. Variants of fish is good still if some more variants can be kept inside it will excite the visitors. Lighting should be more decorative because inflow is high during night.
- Archeological department has taken over Jagannath temple for restoration and rejuvenation. The spot is as similar to Puri Mandir. Approx. 90% of tourist in Jharkhand are from W.B and Orissa, so they definitely plan a trip to this temple. State government should take initiative in developing more amenities like sheds for rest, cafeterias, parking place etc.
- There are approximately 10 spots of tourist interest in Ranchi city. Almost every tourist plan to visit all there but lack of transport system is an major impediment. RTVs can be planned through good hotels/tour operator for city tours so, that every visitor can have a option to plan his trip.

- Since formation of Jharkhand, inflow of business and other categories of visitors has increased considerably. They are not only from W.B but from other parts of India as well. They wish to know more about this site and plan to visit few spots. But lack of guidance hinder their expectations to a great extent. No authorized tour operator is present in Ranchi city. None of the Hotels have any handbook of the tourist spots and its connectivity alongwith available transport or 4-5 tour operators should be authorized to promote tourism.

Ranchi-Bundu-Jamshedpur

- Most well connected circuit in the state with NH 33 connecting most of the spots from origin to destination. Buses are frequently available to and fro in this circuit. Both Ranchi and Jamshedpur are most developed city in the state, so tourists have to connivance to opt for base at any of these. Mid way refreshments are available but still requires major improvements in terms of quality and hygiene.
- Jamshedpur is another active connecting station in Jharkhand. This is an industrial belt and hosts the TATA's. This is well connected with Bhubaneswar (10 hours journey), Kolkata (4 hours Journey), Patna (2 trains daily). Besides these there are few weekly trains for Chennai and Delhi.
- This circuit is not known to the tourist as they either opt for Ranchi or Jamshedpur. Jamshedpur has its own significance due to TATA's. It is perceived as Tata town only. State government with convergence of Dalma Sanctuary into Elephant Park, many adventurous and wild life tourists are projected to visit this spot. They will definitely plan to visit surrounding spots also. So approach road to other spots should be repaired and transport facility should be installed in order to push them.

- Dassam Fall is hyped as most dangerous spot among all falls in Ranchi. Incidence in past strengthen this perception of tourists. State government should make same safety measures like boundary at the bottom of fall and bathing space at the spot. Approach road from Taimara-Dasam is in a very bad shape corrective measure should be taken in this concern.
- Availability of refreshments is major impediments at most of the spots in this circuit. Careerists should be installed near all spots. Private participation should be invited in order to participate so to both way developments.
- Being in inception stage this circuit requires support to grow. Some soap for development can be JTDC Bunglow at Dalma or Dimna lake. Safari to Elephant Park, JTDC midway cafeteria, Deluxe buses for the circuit etc.

Deoghar

- As a standalone point this city is well connected by Delhi-Howrah main line. Trains are available frequently for major connecting point outside Jharkhand.
- For accommodation various budget hotels like Yatri Hotel, Jagdamba Hotels are available to the tourist. In addition BSTDC tourist bungalow is also available for the Tourists.
- 7-km road connects Deogarh with Jasidih and frequent public transport is available both ways. Experiencing the traffic flow the road should be widened so that it can adjust the increased traffic load.
- During primary survey it was identified that most of the tourists were staying either in ashram or at any relative place. They said that they were unable to locate any commercial place to stay suitable for them. Deogarh- Jasidih connectivity is most active part of city, some motels can be planned through building an expressway. This will motivate the local people also to move out and enjoy the food in nature's lap.

- There are 9 spots in Deoghar of tourist interest and every tourist coming to Deoghar stays at least for 2 nights and visits all these places. Due to religious importance very few of them escape any spot. There is no entertainment amenity during night; some options should be formulated for the tourists. Cultural festivals can be one catalyst to motivate the visitors.
- During Shravan, lakhs of tourists visit Baidhyanath Dham. This is most respected and prayed spot during that month, visitors travel almost 100 km for Paying their homage to Lord Shiva. They carry “Ganga Jal” from Sultanpur to Badiyananath Dham on their shoulders. State government should develop some joints to serve them and attracts other type of tourists. Crowd at entry gate of Mandir depicts the faith view of this is memorable.

Dhanbad

- Being mineral hub of Jharkhand, this city has attractions for tourist also. Damodar river has created some reservoirs that holds services as well as wild life beauty in itself. Tourists are mainly from West Bengal & Orissa and visit this place for some business objective. After working whole day in the city they plant to spend evening more freely but lack of any good restaurant/Bar is an impediment for the tourism industry. This should be developed so that they enjoy their time over here.
- Only Budget hotels are available for the tourists no start hotel is there in the town. Business class visitors find it difficult and opt for various guesthouses of Mines/Govt. Offices. Govt. should invite private participation for development of this facility with room strength of at least 60 rooms.
- Besides scenic beauty at spots no other amenity for tourist. Products should be formulated to attract more tourist i.e., boating, binocular view of Sunrise and sunset.

- Dhanbad holds major significance for adventure/wildlife tourists. Reservoir Maithan and Panchet are largest reservoir in the state and support some large power projects. Guide facility and tour packages should be planned to attract tourists.

Tour Packages

- No public conveyance is available for the tourists to visit spots in this circuit neither from Ranchi nor from Daltenganj. Jeep can be booked from Betla/Daltenganj for INR 1,000/- to visit the various spots for whole day. This is economical for a group but no means are available for the individual/2-3 people. Some options can be depicted as:
 - Shuttle Service from Betla-Sugabandh- Lodh Fall- Netarhat. This will start by morning 8 am and reach Sugabandh (69km) by 10 am then, after spending 1-2hrs over there bus should move for Lodh fall (45km). There they should spend 2-3 hrs and have lunch, after that they should move to Netarhat (69km) and reach over to view sunset at Mangolia point and then dropped to any tourist lodge or any other hotel over there.
 - Similar shuttle can be planned from Neturhat also. The shuttle coming from netarhat should stay overnight at Betla and shuttle from betla can stay at Netarhat. The same cycle can rotate subsequently.

This option will require assistance from BSTDC tourist bungalows since it was planned in consultation with them. This will cost each tourists (in a group of 10) around INR 800 all-inclusive. The cost is inclusive of food, accommodation, excursions, local sight seeing and drop at exit destination. Break up is as below:

Daltenganj – Betla	INR 200 (10 person)
Breakfast + Lunch (2 days)	INR 2000
Visit at Betla	INR 200
Jeep for trip	INR 3000 (two day)
Halting Charge	INR 150
Night Dinner	INR 1000
Folk Dance and Other excursions	INR 1000
Total Cost	INR 7650

Most of the spots lying in this circuit comes under Forest department, so both the department should co-ordinate to crush major barrier i.e, road connectivity. Road to Loadh and Netarhat is not at all compatible for any vehicle. Till now only jeep is able to run on the unsurfaced tracks. That why tourist are unable to arrange any private vehicle from Ranchi or any other major city in state. Road to Lodhfall is nothing but a trekking expedition for the tourists.

- Mahuadand is a block that connects Lodh fall with of Netarhat Road. This place has all the potential to be converted in to mid way for this circuit. Some food joints and other article shops are available over there. With support from govt. private parties are interested to establish eating joints so the tourist can have their food near by Lodh fall.

- Till date visitors inflow is through W.B. only but as Varanasi is just 300 km from Betla and June passenger trains are also operational from Mughal Sarai-Daltenganj. This route should also be explored to attract international tourists visiting Varanasi. Some tour packages should be worked out to attract them.

- Unexplored railway station is Barwadih (13 km from Betla) on main line of SE railway. This can be developed as halt station for trains destined to Daltenganj and then Jeep/MUV can pick up tourists directly from the railway station.

C) PRODUCT DEVELOPMENT**1) URBAN HAAT AT RANCHI & JAMSHEDPUR****Introduction**

It is proposed that an Urban Haat be built at Ranchi and Jamshedpur. This modern concept would enable the actual artisans in the respective regions to display their crafts to the visitors. More precisely, the artisans shall get a platform to exhibit their talent hitherto unknown to the world and the domestic as well as foreign visitors shall get a chance to visit an one - stop shop exhibiting rural handicrafts.

The participating crafts-persons/weavers shall sell handicrafts/handloom products directly to the customers. This shall provide adequate direct marketing facilities to the crafts-persons/weavers and eliminate the involvement of any middle agencies. Another feature of the haat is that there shall be adequate stalls, selling authentic Indian cuisines typical to various regions in the country by rotation. The food and craft bazaar shall provide leisure and recreational facilities for both Domestic and International tourist in line with Dilli Haat, which has reached International status in just three years of its existence.

Design Concept of the Haat

The Urban Haat shall be set up at a strategic location in Ranchi and Jamshedpur in consultation with the local authorities. The area should be developed providing the ambience suited to such a haat, with the creation of green belts in and around the haat. The haat should have sufficient open spaces as well. The area of haat may vary, depending upon availability of land. It may however not be

less than 15000 sq. meters. The responsibility of providing developed land shall vest on the state government.

The entire complex shall be designed in order to keep a low profile in harmony with the surrounding environment and stalls themselves shall be constructed in order to reflect local culture.

The entire area shall be extensively landscaped in order to provide a conducive environment for recreation and also for leisure. The area shall be developed as a park, where constructed area would be limited to around 10% of the total area i.e. 1500 sq. meters. The courtyards in between the shops shall be paved in stone, inter-spread with grass to retain visual softness. A tentative layout of the Urban Haat is provided in the Annexure.

- A) Museum cum Administrative Unit:-** A museum and an office cum meeting room of moderate size to cater to the administrative requirement of the Haat.
- B) Handicraft Stalls:-** It is proposed that the shops/stalls shall be set up on platforms, which would act as a link in the Haat Design. It is planned to have 40 to 50 stalls, where the crafts-person/weavers shall sell their crafted items directly to the buyers. The stalls shall be provided to the artisans on a rotational basis for fifteen days on nominal charges per day.
- C) Amphitheatre -** The complex shall also have tensile structures for cultural programmes, performing arts, exhibitions etc.
- D) Food Stalls:-** The food side of the Haat will have properly serviced 5-7 stalls with counters and space to accommodate kitchen equipments and with eating space for the visitors.

Proposed Floor Area:- The proposed floor area of various buildings in each of the proposed Haats would be as shown in the Table below.

Table 4.1: Proposed Floor Area of the Buildings

Name of Building	Area (Sq. Mtrs.)
Museum cum Administrative Unit	450
Handicraft Stalls	600
Amphitheatre	300
Food Stalls	150
Total	1500

Administration of the Haat

It is essential that the Urban Haat should be professionally managed and sufficient technical staff be provided for its smooth and efficient functioning.

The following positions are suggested

- a) Manager
- b) Dy. Manager
- c) 5 Utility Workers
- d) 1 Accountant / Asstt.
- e) 1 Electrician / Maintenance Asstt.
- f) 1 Security Officer
- g) 6 Security Guards
- h) 1 Typist
- i) 1 Peon

Management Committee of the Haat

The overall responsibility for successful functioning of the Urban Haat will be of the "Management Committee" whose composition will be as shown in the figure below. Management Committee shall be responsible for policy formulation, overall control and functioning of the haat.

CHAIRMAN	⇒ Secretary, Handloom/Handicraft, Govt. of Jharkhand
MEMBERS	⇒ Secretary (Tourism), Govt. of Jharkhand ⇒ Director, Handlooms/Handicraft, Jharkhand ⇒ Representative of Finance Deptt. of Jharkhand ⇒ Nominee of DC(Handlooms), Ministry of Textiles ⇒ 4 Nominated Eminent people in the field of Handicrafts/Handloom

The different cost parameters of the project as understood from the industry experts, for each Urban Haat are as indicated under the different heads as shown below:-

Development of Site

Total Area – 15000 sq. m

Development Cost - @ Rs 133 / sq. m

Total Cost – Approximately Rs. 20,00,000

Civil Cost –The civil cost to be incurred in order to develop the different units of the proposed Urban Haat.

Table 4.2: Tentative Cost of construction of the Buildings

Parameters	Area (in Sq.m.)	Total Cost (in Rs.)
Museum cum Administrative Unit	450	1935000
Handicraft Stalls	600	967500
Amphitheatre	300	1612500
Food Stalls	150	322500
Road Development		100000
Green Belt Development	4000	480000
Total		5417500

Preliminary Expenditures – The tentative preliminary expenses of the aforesaid project and its tentative break ups are as shown in the Table below:-

Table 4.3: Tentative Preliminary Expenses

Parameters	Tentative Cost (in Rs.)
Technical Consultant's Fees	250000
Other Preliminary & Pre-Operative Expenses	450000
Sub Total	700000

Equipment Cost – The tentative cost for the different equipments that would be required at the Urban Haat are as shown in the Table below.

Table 4.4: Tentative Cost of Equipments

Parameters	Cost (In Rs.)
Sanitary and Water Supply	1200000
Electricals	900000
Plant and Machinery Cost	1900000
Furniture and Fixtures	400000
Sub Total	4400000

Operating Expenses – The tentative annual operating expenses would be in the tune as shown in the Table below.

Table 4.5: Tentative Cost of Operations

Parameters	Cost (in Rs.)
Employee Remuneration	410000
Other Expenditures	90000
Sub Total	500000

Total Cost – The total cost of the Urban Haat project, based on the estimates above are as shown in the Table below

Table 4.6: Tentative Total Initial Expenditure

Parameters	Cost (in Rs.)
Sub Total – Land Development	2000000
Sub Total – Civil Cost	5417500
Sub Total – Preliminary Expenses	700000
Sub Total – Equipment Cost	4400000
Total Expenditures	12517500
Contingencies (10%)	1251750
Total	13769250

Means of Finance

The capital cost of the project, which is expected to be in the tune of Rs. 103 lakhs, is proposed to be financed, as shown herein:

Ministry of Textile (70%)

State Govt. (15%)

Entrepreneur's Contribution (15%)

Besides the above mentioned sources, a lump sum grant of Rs. 10 lakh in the first year and Rs. 5 lakh in the second year is allowed from Govt. of India, Ministry of Textiles, for publicity of the project.

Sources of Income from the Haat

It is desirable that the Urban Haat should have a in-built mechanism to sustain its operation. Though the management committee shall remain responsible for efficient functioning of the Haat, and to formulate modalities for income generation, yet the sources of income that can be operationalised from various sources are indicated below. This is primarily suggestive in nature.

Rental Income from Artisans – Based on the assumptions indicated below, the income from the artisans who would sell their craft are as shown in the Table below:-

Table 4.7: Rental Income from Artisans

Components	Income (in Rs./ Annum)
Artisans per fortnight (on an average)	40
Charges per day	50
Total charges per day (40×50)	2000
Annual Income (250 ×2000)	5,00,000
Expected dropouts – 10%	73,000
Sub total	4,27,000

Income from Food Stalls –**Table 4.8: Income from Food Stalls**

Components	Income (in Rs./ Annum)
Rate per month	5,000
No. of Food Stalls	5
Per month income	25,000
Total income (Presuming occupancy for 10 months in a year)	Rs. 2,50,000

Income from Entry Tickets

If it is assumed that on average 200 visitors visit the Haat in a day @ Rs. 5/- as entry ticket and presuming 200 visitors to come for 250 days.

Total Income from Entry Tickets - $200 \times 5 \times 250 = 2,50,000/-$

Total Income - Based on the above estimates the total income per annum from the Urban Haat would be as shown in the Table below:-

Table 4.9: Tentative Total Income from the Haat

Components	Income (in Rs./ Annum)
Rental Income from Artisans	4,27,000
Income from Food Stalls	2,50,000
Income from Entry Tickets	2,50,000
Income from Parking (10% of Total Income)	92,700
Total	10,19,700

2) HOT AIR BALLOONING AT BETLA

The Consultant proposes to have Ballooning facility at Betla National Park, which is, One of India's largest tiger reserve and only one in Jharkhand.

- Amongst the Faunal species present at Betla - Leopards, elephants, monkeys and deer abound here. Other fauna include the Wild dog, Wolf, Stiped-necked Mongoose, Honey badger, Small Indian Otter, Indian Otter, Sloth bear, Barking deer, Wild boar, Pangolin, Rhesus macaque, Hanuman langur, Common giant flying squirrel and Porcupine.
- Because of the wide variety in the habitats and fauna composition of the reserve is also varied and rich. Some of the most endangered species like Ratel Mouse deer, Python, Pangolin, Black-necked crane; Four-hornec antelope etc. are represented in the area.
- It has very wide range of bio-diversity and many endangered, rare and threatened species of flora and fauna are found. 47 Species of mammals (39 Genera and 21 families), 174 Species of birds, 190 Species of flora, 25 Species of climbers, 46 Species of Shrubs many species of Grasses and 56 Species of valuable medicinal plants have been recorded.
- The grasslands and the savannas provide grazing grounds for the herbivores and hiding place to the carnivores. The forest boasts of innumerable medicinal and aromatic plants, which provide a source of earning for the tribal.
- The vast expanse and changing topography and the vegetation and climatic variations in Betla have been one of the major reasons for the successful breeding of the flora and fauna.
- Betla offers an excellent exposure to the delights not only of its wildlife, but also of its wonderful natural beauty. Scenic beauty of the lush forests and mountains and valleys is as extravagant as it is varied.

The Product – Hot Air Balloon

Hot air balloon as a device of air travel dates back to the year 1783, when a balloon, named “Aerostat Reveillon”, carrying scientist Jean Francois Pilatre de Rozier along with his companion Marquis d’Arlandes, rose to the end of its 250 foot tether. This sparked off an era, the one “to conquer the atmosphere”. Though in this jet age, a hot air balloon remains a fairly impractical vehicle, since it cannot be steered and is heavily dependent upon the speed of wind. However, man’s interest in ballooning has grown leaps and bounds, since most of the balloon travellers have referred to the experience as one of the most serene, enjoyable activities they’ve ever encountered. This has, in-fact, promulgated incorporation of latest technology within this age-old system of flying.

Hot Air Balloons are based on a very basic scientific principle: warmer air is lighter than cooler air, since it has less mass per unit volume and hence it rises.

The Experience of Ballooning

Standing in a swaying but secure basket high above the ground and suspended under a colorful canopy filled with hot air provide an exhilarating experience. As the giant hot air balloon slowly drifts through the sky, one can have a bird’s eye view of the surroundings and also enjoy the panoramic view of mighty Betla and enjoy it from the vantage position.

About the Hot Air Balloon

A Hot Air Balloon has the following major parts:-

- a) **The Envelope** – The envelope of a balloon is a colourful bag usually made up of fire-resistant rip stop nylon fabric, to hold the hot air inside it. When the air inside the envelope is heated, the balloon rises. In most modern hot air balloons, the envelope is constructed from **long nylon gores**, reinforced with sewn-in webbing. The gores, which extend from the base of the envelope to the **crown**, comprise of a number of smaller **panels**. Nylon works very well in balloons since it is lightweight and also fairly sturdy and has a high melting temperature. The **skirt**, the nylon at the base of the envelope, is coated with special fire-resistant material, known as **Nomex**, in order to keep the flame from igniting the balloon. The hot air won't escape from the hole at the bottom of the envelope because buoyancy keeps it moving up constantly.

- b) **The Burner** – The burner is located above the passenger's head and produces huge flame to heat the air inside the envelope. Modern hot air balloons heat the air by burning **propane** or **butane**. The heating of the Air inside the envelope takes place in the way as shown in the Flow chart below.

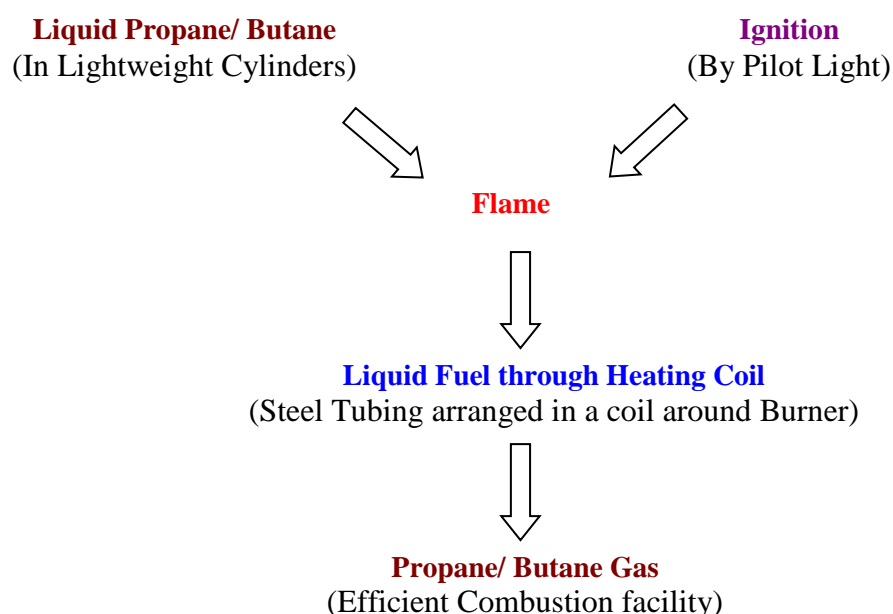


Figure 4.2: Burner of a Balloon in action

- c) **The Basket/ Gandola:-** Most hot air balloons use a basket made from resilient wicker enforced with a mesh of steel wire ropes, for housing the passengers. Wicker works very well because it is sturdy, flexible and relatively lightweight. The flexibility helps with balloon landings: In a basket made of more rigid material, passengers would feel the brunt of the impact force. Wicker material flexes a little, absorbing some of the energy. The Gondola carries a simple instrument panel consisting of a compass and an altimeter to guide the crew.
- d) **The Ropes:-** Different types of ropes are in use in a hot air balloon. These are:-
- **Crown Line** – Top of the Balloon in order to stabilize inflation
 - **Drop Line** – Released by the Pilot before landing so that the ground crew can pull.

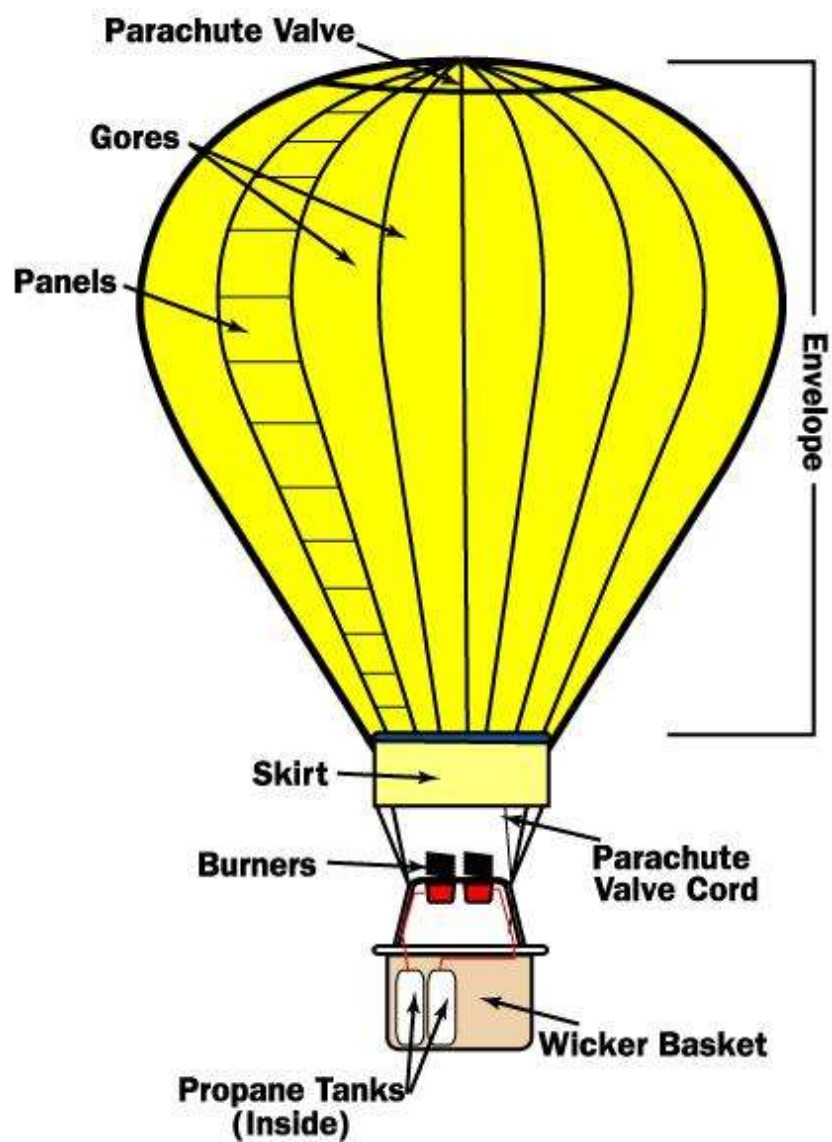


Figure 4.3: Parts of a Hot Air Balloon

Launching and Landing

A lot of the work in hot air ballooning comes at the beginning and the end of the flight, when the crew inflates and deflates the balloon. For the spectator, this is a much more spectacular show than the actual balloon flight.

a) Inflation

The Stages of Inflation of the Hot Air Balloons are shown below:-

- Once the crew has found a suitable launching point, they attach the burner system to the basket.
- Next, they attach the balloon envelope and begin laying it out on the ground.
- Once the envelope is laid out, the crew begins inflating it, using a powerful fan at the base of the envelope.
- When there is enough air in the balloon, the crew blasts the burner flame into the envelope mouth. This heats the air, building pressure until the balloon inflates all the way and starts to lift off the ground.
- The ground crew members hold the basket down until the launch crew is on board. The balloon basket is also attached to the ground crew vehicle until the last minute, so the balloon won't be blown away before it is ready to launch.
- When everything is set, the ground crew releases the balloon and the pilot fires a steady flame from the burner. As the air heats up, the balloon lifts right off the ground.

The entire process takes only 10 or 15 minutes.

b) Operation during Flight

Piloting a balloon requires skill, but the controls are actually very simple.

To lift the balloon, the pilot moves a control that opens up the propane/butane valve. As he turns it, the flow of gas increases, so that the flame grows in size. The pilot can increase the vertical speed by blasting a larger flame to heat the air more rapidly.

Hot air balloons also have a cord to open the **parachute valve** at the top of the envelope). When the pilot pulls the attached cord, the crown line, some hot air can escape from the envelope, decreasing the inner air temperature. This causes the balloon to slow its ascent. If the pilot keeps the valve open long enough, the balloon will sink.

Essentially, these are the only controls -- heat to make the balloon rise and venting to make it sink. As it turns out, pilots can manoeuvre horizontally by changing their vertical position, since wind blows in different directions at different altitudes. To move in a particular direction, a pilot ascends and descends to the appropriate level, and rides with the wind. Since wind speed generally increases as you get higher in the atmosphere, pilots can also control horizontal speed by changing altitude.

Of course, even the most experienced pilot doesn't have complete control over the balloon's flight path. Usually, wind conditions give the pilot very few options. Consequently, you can't really pilot a hot air balloon along an exact course. And it's very rare that you would be able

to pilot the balloon back to your starting point. So, unlike flying an airplane, hot air balloon piloting is largely improvised, moment to moment. For this reason, some members of a hot air balloon crew have to stay on the ground, following the balloon by car to see where it lands. Then, they can be there to collect the passengers and equipment.

c) Deflation

The landing process, combined with deflating and re-packing the balloon envelope is accomplished sequentially in the following process as shown below:-

- When the pilot is ready to land, he or she discusses possible landing sites with the ground crew (via an onboard radio).
- They need to find a wide - open space, where there are no power lines, tall trees etc. and plenty of room to lay out the balloon.
- The ground crew shall hold the basket down once it has landed.
- The ground crew sets out a ground tarp, in order to protect the balloon from wear and tear. Then the pilot opens the parachute valve all the way, so the air can escape out the top of the balloon. The ground crew grabs a cord attached to the top of the balloon, and pulls the envelope over onto the tarp.
- Once the balloon envelope is down on the ground, the crew begins pushing the air out. When the balloon is flattened, the crew packs it into a stuff sack. This whole process is a lot like packing up a giant sleeping bag.

Ideal Conditions for Balloon Flight

Seasonality:- The best time for hot air ballooning in India is from October to March, when the ambient temperature remains cooler. The cold climate enables the hot air inside the balloon to become lighter and enables it to rise and stay up for a longer period of time.

Time:- Usually early in the morning, right after sunrise, between 7 a.m. to 9 a.m. and late in the day, right before sunset, between 4 p.m. to 6p.m. Less turbulence in atmosphere is observed during the time period.

Some Essential Activities to be undertaken before the project should be undertaken

- i. Identification of Balloon Launching Site
- ii. Identification of Flight Trail
- iii. Training of Pilot & Crew
- iv. Permissions Required - A number of clearances are required in order to fly hot air balloons at any location of India, as per the Ballooning Club of India.
 - ✓ Director General of Civil Aviation
 - ✓ Airports Authority of India
 - ✓ Ministry of Home, Govt. of India
 - ✓ Department of Internal Security
 - ✓ Defence Establishment

Additionally, since Betla, the proposed location is an eco-sensitive zone, an Environment Impact Assessment Report, with sound Environment Management Plan requires to be submitted to the Ministry of Environment and Forests for their clearance to the proposed project.

No. of Balloons

To begin with, it is proposed that a single hot air ballooning facility be installed at the place. The Balloon should have a capacity of 77,000 cubic feet. An entrepreneur can think of procuring the equipments from the Ballooning Club of India, or think of importing the same from abroad.

Cost Estimates

A tentative cost of the aforesaid project has been worked out based on the market prices and from the opinion of industry experts. The details are as shown in the subsequent headings below.

Table 4.10: Equipment Cost - Cost of the Balloon

Equipment	Cost (in Rs.)
Envelope with Rotation vent × 2 and Nomex Scoop	13,80,000
Burner	
Basket with Cover including cylinder belt and fire extinguishers	
2 Stainless Steel Cylinders with Jacket	
Inflator Fan 5.5 HP	
Tether Rope	
Instrument Panel	78,000
A 2 Radio	28,000
Quick Release System	17,000
Artwork on Balloon	25,000
Total Cost of the Balloon	15,28,000

Table 4.11: Other Preliminary Expenditures

Cost Parameters	Cost (in Rs.)
Cost of Preparation of EIA Report	3,00,000
Training of 2 Pilots (@ Rs. 35,000 + Incidental Expenses)	1,00,000
Total Cost	4,00,000

Table 4.12: Tentative Civil Cost

Cost Parameters	Cost (in Rs.)
Ground Preparation of Balloon Launching Site (200 Sq. m. @ Rs. 200/ Sq. m.)	40,000
Construction of waiting room with basic furnishings (200 Sq. m. @ Rs. 100/ Sq. m.)	20,000
Total Civil Cost	60,000

Operating Expenditures (Cost of Fuel, Maintenance Cost & Spares, Remuneration of Employees) - **Rs. 6,00,000/ Year**

Miscellaneous Expenditures – Rs. 20,000/ Year

Total Cost – The tentative total cost of the Project based on the above calculations would be as indicated in the Table below:-

Table 4.13: Tentative Total Initial Cost

Cost Parameters	Cost
Equipment Cost	15,28,000
Preliminary Expenditures	4,00,000
Civil Cost	60,000
Other Miscellaneous Expenditures	20,000
Contingencies (10%)	2,60,800
Total	21,86,800

Income from Hot Air Ballooning– The tentative income from the Hot Air Ballooning Trips are as shown below:-

- a) In typical Indian weather conditions, one can carry out Hot Air Ballooning from October to March. However, Betla remains open from November to June. Hence, in totality, approximately **5 months** or **150 days** are available for Ballooning purpose.
- b) Assuming for 10 days the weather remains turbulent for Ballooning Flight. Hence, total ballooning days available = **150 – 10 = 140 days**.
- c) 4 hot air balloon flights each lasting for an hour can be taken up per day. Therefore, total flying hour per season = **140 × 4 = 560 hours**
- d) Assuming Rs. 250 be charged from 1 tourist and in each flight 3 tourist can be taken up, then income from each flight would be = **450 × 3 = Rs. 750**
- e) Total Income from total flight hours = **Rs. 1350 × 560 = Rs. 7,56,000**

3) AYURVEDA CENTRE NEAR BETLA

An Ayurveda Center is proposed near Betla to take advantage of the natural herbs and other medicinal plants locally available. As heard as well as witnessed with the success in certain parts of the country which are rich in natural resources (herbs), the attraction among the tourists is healing through preaching and relaxation of mind & soul. The proposed Ayurvedic Centre would have a complex type infrastructure, with the facility of treating 50 persons at a time, with the following major blocks as shown below.

- A) Main Block** - The main hall would house the Reception, Accounts and Administration Office of the Centre, which would look after of all the activities and act as the cardinal point of the organisation. The Main Block would also house shops, which would sell herbal extracts having medicinal importance and other relevant items.
- B) Accommodation / Dwelling Block** - The proposed accommodation facility would be of following types.
 - i) For Essential Staffs** – Accommodation facility for essential staffs are proposed within the complex, so that each block has 2 different units. At the beginning, it is proposed that the accommodation facility shall comprise of a single floor. However, provision for expansion of another floor in future should also be kept in due consideration.
 - ii) For Medium/ Budget Tourists** – A dormitory of sorts with separate facilities for male and female tourists is proposed.
 - iii) For Affluent Tourists** – In form of cottages with a kitchenette and an attached toilet to cater the upmarket customers.

- iv) **Toilets** – The Block would house Toilets for Budget Tourists and Essential Staffs, who would stay at the Ayurveda Centre.
- C) **Food Block** - The proposed food block should have the following 2 subdivisions:-
- i) **Kitchen** – For a visitor undergoing cleansing and rejuvenation, food is an essential element and therefore it has to be of the finest quality. The kitchen at the proposed Ayurvedic Centre would be able to provide a simple yet sumptuous vegetarian fare for its visitors. It should be a spotlessly clean outfit located close to the restaurant, having access to the garden situated close by.
 - ii) **Kitchen Garden** – A vegetable garden is proposed near the vicinity of the kitchen. It is proposed that all the vegetables and herbs required for cuisine should be grown organically.
 - iii) **Restaurant** – The restaurant should be in the form of a Hall with capacity to accommodate 100 individuals at a time.
- D) **Health Block** - The proposed health unit is suggested over a built-up area of 200 sq. mts. It is proposed that it should be a single storied structure and would comprise of the following sub blocks.
- i) **Consultation/ Treatment Rooms for Doctors**
 - ii) **Separate Changing Rooms for male and female**
 - iii) **Massage Rooms**
 - iv) **Bathing Area** – The bathing area is proposed around a bean shaped tank with changing rooms, toilets etc. Access to this area would be made by means of a 1.5m wide path paved with locally available stones.

- E) Meditation Hall** – A meditation hall for conducting Yoga and Meditation is proposed at the Centre. Yoga, an oldest form of personal development, includes mind, body and spirit within its fold. As per ayurveda, the practice of yoga is a very important natural and preventive measure to good health. The proposed area of the Meditation Hall would be around 500 sq. m.
- F) Parking Lots** – The parking lots are proposed at a distance from the “heart of the ayurvedic centre”. The main idea behind proposing the location at a distance would be to restrict vehicular traffic at a certain point and prevent noise and pollutant emissions inside the premises.
- G) Landscaped Spaces** – The setting of the Ayurveda Centre should be serene, so as to elevate the mindset of the tourists into a spiritual bliss. Extensively landscaped spaces, suitably screened by a green belt to ward off dust, emissions and noise should be provided. A pedestrian linkage system, connecting all the important blocks to the strategic points (like vehicular parking lots), should be paved with locally available stones. The rest area should be covered with finely trimmed grass. Flowering plants to be planted at intervals to boost aesthetics.
- H) Herbal Garden** - A herbal garden is proposed within the premises of the Ayurvedic Centre, in order to cultivate the different variety of medicinal plants/ herbs. It is proposed that all the herbs in the garden should be cultivated organically.
- I) Water Treatment Plant** – A water treatment plant is proposed for supplying the Ayurvedic Centre with potable water. The water source can only be pointed out after undertaking a vivid hydrological study in the EIA.

- J) Waste Disposal Facility** – A waste disposal facility is also proposed at the centre, in order to treat the wastes generated from the various sources. It is proposed that the wastes be recycled in indigenous way in order to produce organic manure for the Herbal and Kitchen gardens.
- K) Waste Water Treatment Plant** - The Treatment plant would treat all the waste water generated from the Centre. The recycled water shall be used for gardening and for use in Toilet.
- L) DG Set** – A DG Set is required for supplying power to the proposed Ayurvedic Centre.

The tentative plan of the proposed Ayurvedic Centre is enclosed in the Annexure.

Some important features of the proposed Ayurvedic Centre

The Staff types of the proposed Ayurvedic Centre would be as depicted below: -

- Administrative Staff
- Front Office Staff – To look after Accounts
- Doctors
- Nurses
- Masseurs
- Gardeners for development and maintenance of Herbal gardens
- Gardeners for development and maintenance of Kitchen gardens
- Chefs
- Housekeeping Staffs
- Security Staffs

It is proposed that local manpower be employed at the Ayurvedic Centre except for the specialist positions mentioned above.

Cost Estimates

The cost break-up of the proposed Ayurvedic Centre with a capacity of accommodating 50 persons at a time is as elucidated below. The costs are based on estimates provided by the Industry experts and is primarily suggestive in nature.

Land Development – The proposed Ayurvedic Centre shall be approximately 13000 sq. mts. in totality. Cost of developing the same @ Rs. 130/ sq. m. = $13,000 \times 130 = \text{Rs. } 16,90,000$

Civil Cost - The tentative civil cost of the above units based on prevailing rates are as shown in the Table below.

Table 4.14: Tentative Civil Cost

Item	Area (M ²)	Total Cost
Reception	10	32250
Shops	80	215000
Accounts	20	75250
Administration	100	430000
Kitchen	50	134375
Restaurant	150	765937.5
Consultation Chambers	300	806250
Changing Rooms	20	43000
Message Room	100	268750
Bathing Area	80	172000
Cottages	130	559000
Budget Accommodation	125	470312.5
Staff Quarter	600	2580000
Toilets	100	322500
Meditation Hall	200	645000
Parking Lots	200	107500
Development of Herbal Garden	500	806250
Development of Kitchen Garden	250	268750
Development of Green Belt (in Mtrs)	1500	1612500
Sub Total		10314625

Decoration Cost – The tentative decoration cost including furnishings and electricals for the different units of the Ayurvedic Centre would be in the tune as mentioned below:-

Table 4.15: Tentative Cost of Decoration

Item	Area (M2)	Cost/ M2	Total Cost (in Rs.)
Cottage	130	300	39000
Staff Quarter	600	200	120000
Budget Accommodation	125	50	6250
Toilet	100	100	10000
Reception	10	100	1000
Administration	100	150	15000
Accounts	20	100	2000
Shops	80	80	6400
Meditation Hall	200	30	6000
Food Block	200	50	10000
Consultation Chambers	300	120	36000
Sub Total			251650

Plant and Equipment Cost:- The other costs to be incurred at the onset would also incur the following expenditures as well.

Table 4.16: Tentative Cost of Plant & Equipment

Items	Total Cost (in Rs.)
Utensils for Kitchen	30000
Public Address System for Meditation Hall	60000
Lighting Arrangement	200000
Water Treatment Plant	350000
Waste Water Treatment Plant	350000
Sewerage Disposal Facility	200000
DG Set	200000
Sub Total	1390000

Operating Expenditures (Includes Remuneration of Employees, Fuel Cost etc.) – **Rs.14,65,600/ Annum**

Miscellaneous Expenditures – Rs. 1,00,000/ Annum

Income from the Ayurvedic Centre

Income of the Ayurvedic Centre can be from the following sources:-

Income from Ayurvedic Treatment Packages

The Treatment Package for the tourists would be inclusive of Boarding and Lodging, Consultation and Massage Charges. The prevailing rates can be of the following types as shown in the Table below:-

Table 4.17: Cost of Accommodation

Package	Budget Accommodation (Rs. per person)	Cottage Accommodation (Rs. Per person)
07 Days Package	3500	5000
14 Days Package	3200	4500
21 Days Package	3000	4200
35 Days Package	2800	4000

Assuming the following no. of people attend the different packages per year,

Table 4.18: No. of People attending Courses

Package	No. of People attending in Budget Category	No. of People attending in Cottage Category
07 Days Package	45	5
14 Days Package	20	5
21 Days Package	12	3
35 Days Package	8	2

The income generation from the proposed Ayurvedic Centre would be in tune as shown below: -

Table 4.19: Tentative amount of Revenue Generated

Package	Revenue from People attending in Budget Category	Revenue from People attending in Cottage Category
07 Days Package	157500	25000
14 Days Package	64000	22500
21 Days Package	36000	12600
35 Days Package	22400	8000
Sub Total	279900	68100

Total income/ Year = 2,79,900+68,100 = 3,48,000

Income from Sale of Herbal Products

Handsome income can be earned from the sale of herbal products, which can be developed from the herbs cultivated in the herbal gardens. Ayurvedic products worth **Rs. 5,00,000** can be sold out per year to the tourists visiting the centre for treatment or otherwise to begin with.

Income from Massages of various types

Various types of massages can be offered to the visitors, who would come here to avail this facility only. The charges are exclusive of lodging facility. The different types of massages and tentative monthly income from the same are as shown in the Table below:-

Table 4.20: Revenue from Massages of various types

Types	Charges/ in Rs./ Hr.)	Tourists per month	Total Income per month
General Body Massage	400	20	8000
Whole body Herbal Oil Massage	1000	10	10000
Body massage with Herbal Powder	750	8	6000
Pouring oil in continuous stream on selected body points	550	10	5500
Retention of Luke Warm herbal oil on head	1200	5	6000
Controlled massage with herbal oil	300	25	7500
Sub Total			43000

Therefore total annual income from the Ayurvedic Centre would be :-

$$\text{Rs. } 43,000 \times 12 = \text{Rs. } 5,16,000$$

Total income from the Ayurvedic Centre

Based on the calculations performed above, the Ayurvedic Centre is likely to generate a total annual income of the centre would be as shown in the Table below: -

Table 4.21: Tentative Total Income from the Centre

Types	Income (in Rs.)
From Treatment Packages	348000
From Sale of Herbal Products	500000
From Massage	516000
Total Income per annum	13,64,000

4) **ROCK CLIMBING**

Rock climbing as a spot is proposed at plateau of Netarhat and Ramgarh in order to take advantage of the natural rock formation and scenic beauty available locally.

As heard as well as witnessed with the success in certain parts of the country which are rich in natural resources (herbs), the attraction among the tourists is healing through preaching and relaxation of mind & soul.

Development Concept

Rock-climbing is largely balance, not strength of a human being. Balance also determines the value of strength by how much energy you expend climbing. Rock-climbing can become complex because it involves the interplay of many elements like one's partner, one's gear, one's skill and technique.

Best Season to rock climb activity

- October to February.
- Summers can be very warm during the daytime and dodging the sun on climbs is a skill.

Requirement for rock climbing

Equipment required for this sports vary with the climber's stage and rock formation in the area but in general following should accompany the climbers:

1. Nylon Rope
2. Crush Pad
3. Shoes (specially made for this sport)

Safety

Climbing is relatively safe, but only because it will infuse a degree of obsession in all climbers, Government may come forward take necessary precautions for safe climbing. Trainers should make implicit assumptions that the worst (not quite) will happen and train (techniques like belaying and self-arrest) the visitor to deal with these situations. Climbers are not oblivious to heights. Guides and trainers should be arranged before launching this sport at the proposed place.

The usual climbing response is that safety taken to its logical extreme means living inside in a padded cell. Which is okay for some people. To experienced climbers, climbing is "safe enough." The issue is not adrenaline. Most climbers are not adrenaline junkies.

Cost

As the amenities available are natural so no establishment cost will be borne by the state government. Rather the Government may come forward for promotion of that particular place through media and tour operators.

5) ETHNIC TOUR OF JHARKHAND

The consultant proposes developing sustainable tourism involving the rich tribal assets of the state. As understood during the primary survey, the tribes of Jharkhand hold a major charm amongst the international visitors, especially the festivals attract them. A judicious mix of the Major, Minor as well as Primitive tribes (elaborated in Chapter 2) are proposed to be incorporated within the itinerary, in order to provide the international visitors with a taste of the virile culture of tribal India and its unique socio-cultural life.

However, it is to be kept in mind that each tribe is different from the other one. While some tribes consider tourism to be an integral part of their economic development, some tolerate visitations, i.e., allow outsiders to visit their place, but do not want to increase the number of outsiders. These approaches are as unique as the tribes themselves. Hence, before providing final touches to the concept, careful exercise has to be undertaken to gauge the perception of the tribes involved.

The concept is a wonderful admixture of Nature based, Cultural as well as Heritage Tourism. The concept would not only sustain the tribal communities as well as the visitors, but also create avenues for economic, environmental and social benefits for them simultaneously.

Major benefits of involving the tribal communities:-

- ❑ Protect people, land and culture from exploitation.
- ❑ Balance visitor entertainment with well planned education to break down stereotypes.
- ❑ Increase in self reliance (less reliance on outside sources, more participation on the tribes themselves)
- ❑ Accruing benefits for the tribal communities – financial, environmental and social.

Steps to be taken in order to develop Tribal Tourism:-

Step 1 : The initial step

Conducting a survey amongst the different tribes of Jharkhand, in order to find out their acceptability towards the concept. The data collected shall not only bring out the acceptability of the tribes to the concept but also earmark the areas where the concept can be implemented. The results can be collated as indicated in the Matrix below:-

Skeptical Doubts Benefits, Outweighs Costs	Interested Benefits outweigh costs, but does not have a Tourism Plan
Developing Some efforts to develop tourism already underway	Established Organised & Functioning Tourism Industry, creating more jobs over time

Figure 4.4: Matrix for identifying perception of Tribals

It is evident that most of the respondents would fall in either the ***Skeptical*** or the ***Interested*** categories.

Step 2: Demarcation of the Tribes according to their Command Area

The geographical spread of the ***Interested*** category needs to be earmarked and at the same time appropriate motivational programmes needs to be organised for the ***Skepticals*** so that they participate wholeheartedly in the process of tourism development.

Step 3: Formation of an Action / Host Committee in participating villages

The aforesaid committee shall have to be lead by the Director, Tourism, Government of Jharkhand. He would recruit 10-25 people from within the tribe, who have leadership skill or play a similar role. The characteristics of the member would be as shown below

Characteristics of Action Committee Members

- Strong desire to contribute to community improvement
- Commitment to stay with the process until completed.
- Experience as a volunteer
- Respect for view of others
- Recognition as leader by other parts of the tribe
- Ability to work with others as part of a team
- Ability to meet needs and get their work done
- Attributes beyond expertise

Duties of Action Committee Members

- Attend regularly scheduled meetings
- Identify and develop any local and outside resources needed for each step.
- Develop and oversee completion of work plans
- Encourage community wide awareness in all steps
- Publicise intent and findings in each step
- Keep written records for committee sessions
- Conduct community meetings to review major recommendations

Each committee member shall select a role within the overall group that contributes to its success and one that they feel comfortable in performing. Some essential tasks that needs to be performed by the key group members in the committee are:-

- ◆ *Moderator* – To resolve conflicts
- ◆ *Timekeeper* – To maintain punctuality
- ◆ *Recorder* – To record major points of discussion
- ◆ *Coach* – To motivate
- ◆ *Planner* – To think ahead & planning next step
- ◆ *Logistics* – To think about “who”, “when”, “where”, “how” of meetings and actions
- ◆ *Technology* - To understand how to work on any equipment to be used
- ◆ *Details person* – To concentrate on minor, major, details of plans and actions
- ◆ *Artist* – To sketch map, scenery, buildings
- ◆ *Advisor* – To research how each step has to be done successfully, particularly intra and inter tribe involvement.
- ◆ *Writer* – To take the recorder’s work and translate it into articles, official documents and to help with writing grant applications.
- ◆ *Promoter* – To work with residents and officials in local community.

Step 4: Planning and completing a tribal community inventory

This would involve the following sub – steps: -

Task 1: - Compilation of a list of tribe's natural, cultural, historic recreational and human assets.

Task 2: - Shortlisting the assets which have greatest potential to improve quality of life of communities and augment tourist satisfaction.

Task 3: - Conducting “Windshield Tours” with Committee Members and Community Representatives.

Step 5: Conducting Resident Attitude Survey

Since, the tribe community members are experts of the areas they reside in, they should be allowed to express their opinion openly. This participation should not only bolster their confidence, but should also help in earmarking the particular areas within a village, where the foreign tourists can visit.

Step 6: Analyzing current market in which tribal tourism is popular

This would involve conducting market research exercises amongst the foreign tourists in order to gauge their likings and dislikings based on population, market profile and expenditure profiles.

Step 7: Establishing Priorities and Goals

Based on steps 4,5 and 6, development of priorities for the enhancement of Scenic, Natural, Historic, Cultural and Recreational assets of the tribes are to be drawn up. For those priorities, short term (tenure – 1 to 12 months), medium term (1 to 5 years) and long term (5-10 years) goals should be

drawn up for tribal tourism enhancement, management and marketing.

Step 8: Develop Strategies and Identify Resources to meet goals

With reference to the goals set in the above step, resources need to be identified within the community so that the goals are met in the least possible time.

Step 9: Analyse impacts

Any new project should take into consideration the Environmental, Social and other impacts, promulgated by the visit of the tourists. Any beneficial impact brought about has to be promoted and any negative impact has to be amicably prevented.

Step 10: Seeking formal endorsement

The priority projects earmarked earlier has to seek for formal endorsement from the members of tribal community at large.

Step 11: Implementation of the Plan

The Plans should be modified until it is accepted and endorsed by all the tribal communities, who are thought to be an inherent part of the Tribal Tourism circuit.

Some important facts to be kept under consideration during promotion of Tribal Tourism

On an average each group of tourist intending to undertake such a vacation should consist of 10-12 persons but it would be flexible as per demand & supply ratio and seasonality.

Usually, visitors mostly from Russia, Italy; Germany, Holland, US & UK have shown avid interest in Tribal Tourism in India since last 2–3 years.

Tour is planned by car with occupancy of 10 people.

Charges for Non AC Car is INR 6-7/Km and for AC Car it is INR 10-12/Km. Travel is planned accordingly so that tourist should make a drive for not more than 300 Km in a day.

6) ECO TOURISM IN SARANDA

Saranda is a prominent ecological spot in the state. Owing to its diverse floral and faunal assemblage alongwith congregation of diverse types of ecosystem and natural wonders, it can be regarded as a prime area to promote Eco – Tourism in the State. The Consultant proposes to develop Eco- Tours for selected group of tourists at Saranda.

What is Eco- Tourism?

Eco- Tourism can be defined as *“Travel to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery of its wild plants and animals, as well as any existing cultural aspects found in these areas.”*

How is Eco- Tourism different from Conventional Tourism?

Eco tourism is considerably different from the existing conventional modes of tourism. While the conventional tourists eye for extra bit of leisure, eco – tourists prefer oneness with the nature and accept physical hardships in order to make their experience a long lasting one.

However, Eco tourism cannot be regarded fully as nature tourism. While nature tourism presents before the tourist an immense flurry of natural resources, the eco tourism concept carries it a step forward. The concept takes into consideration, the visitors, the residing communities and the impacts brought about by them to the nature. The prime discriminants are presented in the figure below.



Fig 4.5: Tourism, Nature Tourism and Eco- Tourism – The differences

Different stakeholders – their contribution & benefits involved

The different stakeholders, their contribution to and benefits involved in an eco-tourism project are elaborated in the Table below.

Table 4.22: Stakeholders contribution and Benefit in Eco- Tourism

Stakeholders	Contribution	Benefits
Location	Natural Resources	<ul style="list-style-type: none"> • Environmentally Sound Development • Non Degradation of Resources • Long Term benefits - Economic & Non – Economic

Table 4.22 (Contd.): Stakeholders contribution and Benefit in Eco- Tourism

Stakeholders	Contribution	Benefits
Visitors	Revenue	<ul style="list-style-type: none"> • First hand Experience • Participatory Conservation Practices • Recognition of intrinsic value of resources • Education – Nature & Culture • Acceptance of Resource within Limits • Contribution towards Local Development
Community	Experience to deal with nature	<ul style="list-style-type: none"> • Long Term Benefits - Economic & Non Economic • Participatory Conservation Practices • Participatory Development Activity • Education & Employment • Promotion – Ethical Responsibilities • Behaviour Promotion - Natural Environment • Behaviour Promotion - Cultural Environment
Agencies (Govt., NGO's, Tourism Industry)	Promotional Activity	<ul style="list-style-type: none"> • Education • Long term Benefits - Economic • Fostering Understandings and Partnerships • Participation in Developmental Activity

Why Saranda?

Saranda is the most appropriate spot to develop Eco- Tourism in the State of Jharkhand. This is due to some of its unique characteristics, which makes it so special amongst the wide array of forests that Jharkhand can boast of. The characteristics are:-

- Unspoilt natural resources at various places.
- Presence of exciting and colourful flora and fauna.
- Tall and Majestic Sal Forests.
- Numerous Spots - Visual delight as well as ecologically significant . The likes of :-
 - **Kiriburu** – The highest point of Saranda, from where one can have a bird's eye view of the entire picturesque Saranda valley and adjoining hills
 - **Thalkobad** – Can be referred to as the “Heartland of Saranda”. Moonlit wintery night in Thalkobad is a divine experience
 - **Ligirda Swamp** – The ecosystem at the swamp is an ecologist's paradise as well as a botanist's delight.
 - **Toybo Falls** – An waterfall that imparts visual pleasure at its maximum.
 - **Loyall's View** – Deep woods at the place are a spectacle of wilderness that is a delight for the visitors.

How to develop Eco- Tourism at Saranda?

Developing Eco- Tourism at Saranda is a huge task by itself and has to be separately undertaken. However, a rough sketch as to how to develop Eco- Tourism is enclosed below.

Step 1: Thorough understanding of potential spots in Saranda, which can be developed as potential Eco Tourism Sites.

Step 2: Evaluation of Nature, Scope, Scale and Mix of activities required in order to develop Eco – Tourist Zones within Saranda.

Step 3: Assessment of Economic impact of ongoing activities and getting an idea of their immediate effect imparted.

Step 4: Assessment of Economic impact of future activities and multiplier effect imparted by them.

Step 5: Assessment of Environmental sensitivity of the area under consideration, on basis of activities being undertaken at present and activities to be undertaken in future.

Step 6: Categorisation of the different zones based on their environmental sensitivity and creating a code of activities specific to the sensitivity zone.

In other words, Eco- Tourism development at Saranda would revolve around the central theme alongwith 3 approaches, as shown in the diagram below:-

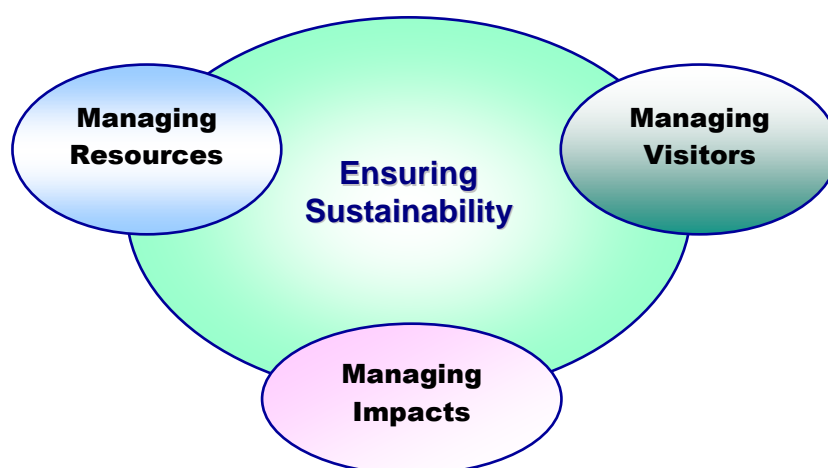


Fig. 4.6: Theme of Eco- Tourism Development at Saranda

The focus of Eco - Tourism development at Saranda shall revolve round 3 main areas as shown in the diagram below:-

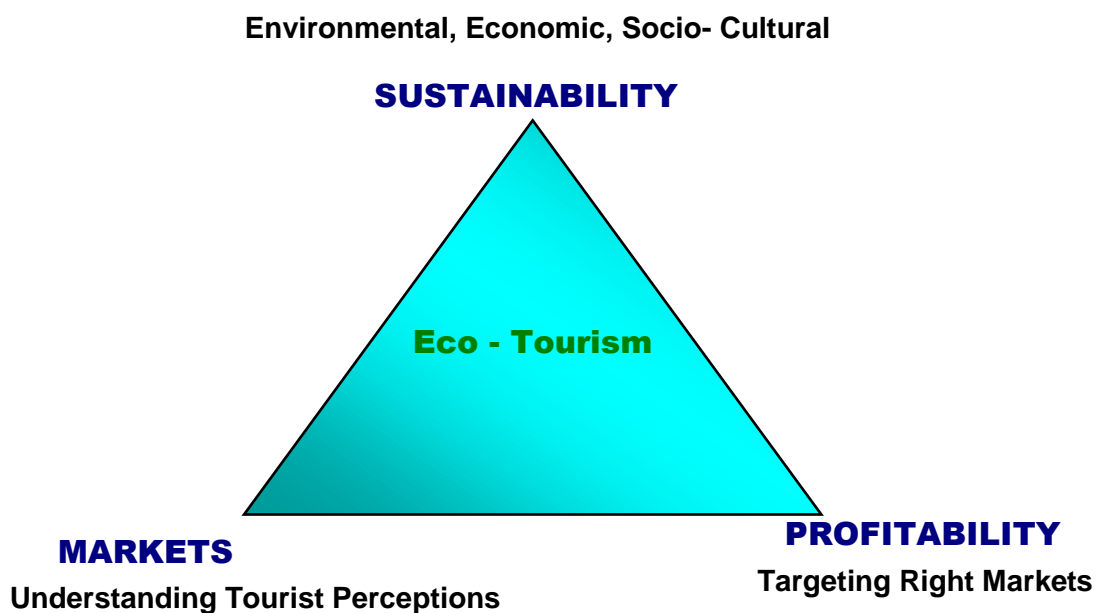


Fig. 4.7: The focus of Eco- Tourism Development at Saranda

7) SPIRITUAL TOUR OF JHARKHAND

The consultant proposes that a network connecting the various spiritual sites of Jharkhand be brought under 1 umbrella. Deoghar should be promoted as the spiritual capital of the State and its attractions, as mentioned in Chapter 3, are to be promoted actively, especially to the Foreign Tourists. Other important spiritual sites, the likes of Parashnath Hills, Rajarappa Temple, Jagannath Temple and Sun Temple can be connected with Deoghar in order to make the visitor experience a fulfilling one.

8) WONDERS OF JHARKHAND

The consultant proposes a tourist circuit comprising of the different falls and dams, which are splendid tourist spots. The falls (the likes of Psycho – Toybo – Hundru – Johna – Dassam – Lodh – Vatinda) and dams (the likes of Tilaiya – Panchet – Hatia – Konar – Salpherni – Kanke – Getalsud) are rare splendors by their own merit and can reap rich dividends if promoted in the best possible way.

9) HERITAGE TOURISM OF JHARKHAND

The consultant proposes to develop heritage tourism at McCluskieganj, the sleepy small hamlet, on the outskirts of Ranchi on the State Highway 47.

The site was originally designed as a haven for Anglo-Indians. It is a lesser-known site now, as the people for whom it was made initially, have left. Yet, some of its garden cottages are spectacle of its past glory and tradition.

The place evokes nostalgia when one thinks of the days when Anglo-Indians inhabited the place. Filmmakers have already taken note not only of the spectacular natural beauty, clean air, and extravagant greenery, but also of the village itself, a heady mix of the untamed and the sophisticated. The quiet and pleasant walks along the wooded paths are alluring enough to attract the visitors to visit this place. Quite a few make their way here to savor its vaguely Victorian ambience and the thorough flower gardens and orchards separated by large tracts of tall sal trees. Some of the houses here have retained their English names together with the epithet of 'haunted house'. During the 1950s, there were no less than 100 Anglo-Indian families living in their typical cottages, clubs, and shops lived in the village.

What is Heritage Tourism?

Heritage Tourism is a type of travel that is motivated by a desire to experience the authentic natural, historic and cultural resources of a community or region.

Presently, as heritage tourism has evolved into the fastest growing segment of the travel market worldwide. It has also become a major component of the economic development efforts for rural and metropolitan areas alike. Hence, it is proposed that this unique concept be applied to this wonderful place, which would actively contribute to the economic development of the State.

Why McCluskieganj?

The natural scenic beauty, unique history of McCluskieganj are the assets by their own virtue. Hence, it is the place, best suited, to develop the concept.

Steps to develop Heritage Tourism at McCluskieganj

The broad steps of developing heritage tourism at McCluskieganj are elaborated below. Essentially, the strategic plan of developing Heritage Tourism has 4 cardinal points, as shown below:-

Preservation – As narrated in Steps II and III.

Interpretation - Communication of the themes of local history, heritage, and culture to residents and visitors through an interpretive framework (As narrated in Step IV)

Marketing - Identify and attract targeted market segments

Business Development - Creating, Retaining, and assisting heritage businesses.

Step I: Preparation of heritage inventories at McCluskieganj

Step II: Categorisation of Heritage Items.

Step III: Identifying the need of restoration of heritage property (if any)

Step IV: Dissemination of Concept of Heritage Tourism amongst the local residents and collection of their feedback.

Step V: Motivating the residents to introduce paying guest facility at the location, which would allow them to narrate their experiences of their forefathers in the best possible way, as also help them in accruing revenue.

Step VI: Augmentation of connectivity and related infrastructure.

Step VII: Dissemination of Information in the Internet, in tourist information bureaus at strategic locations and various places about the unique resources of the location.

4.1.2 Economic Impact

Like any tourism promotion plan the Jharkhand Tourism Perspective Plan also shall have economic, social and environment impact.

4.1.3 There are certain direct benefits associated with increased tourist spending in the State due to increase in the number of arrivals in the area. This is in turn calculated by allocating the tourist expenditure to the various sectors that receive them. Further due to the additional facilities and infrastructure being created, the average spending of a tourist shall increase, since the length of the stay at a site shall also in turn be more. The amount spent by the tourists shall be received by different segments of the tourism industry which shall provide the various services and facilities. There is a scope for imposing charges for the use of these various tourist facilities proposed at different locations.

There are various parameters attached with the economy such as

- Daily expenditure
- Traffic

Table 4.23: Projected Traffic flow in the State

Year	Domestic	Foreign	Total
2002	3843992	4022	3848014
2003	3959312	4102	3963414
2004	4078091	4184	4082275
2005	4200434	4268	4204702
2006	4326447	4354	4330800
2007	4456240	4441	4460681
2008	4589927	4529	4594457
2009	4727625	4620	4732245
2010	4869454	4712	4874166
2011	5015537	4807	5020344
2012	5166003	4903	5170906
2013	5320984	5001	5325984
2014	5480613	5101	5485714
2015	5645031	5203	5650234
2016	5814382	5307	5819689
2017	5988814	5413	5994227
2018	6168478	5521	6174000
2019	6353533	5632	6359164
2020	6544139	5744	6549883

The above projection is based on the tourist visits at prime tourist locations of the State as received from **Bihar State Tourism Development Corporation**, which used to look after all the tourist spots of the State of Jharkhand, prior to the separation from Bihar.

The CAGR of tourist traffic is different for domestic and international passengers.

The Expenditure Pattern shall also vary for domestic and international tourists. The share of expenditure on different segments is different in both the cases i.e.

- Boarding & Lodging
- Shopping
- Sight seeing
- Entertainment
- Others

4.1.4 There are certain indirect benefits of the spending in the state by different segments of the tourist industry, as they have to outsource the services from other sectors of the industry to fulfil the tourist requirements. This additional requirement of the tourism segment from other sectors of the industry is known as indirect impact / benefit of tourism.

4.1.5 Employment generation

The tourism industry is a labor intensive industry compared to other industry. As indicated in the Report on working group on tourism for the IX plan (1997-2002) every 1.2 international tourist provides employment to 1 person and on the same lines 17 domestic tourists generate employment for one person. Based on the above figures, the above tourist traffic would employ approximately 4 Lakh people by the year 2020.

4.2.0 Social Impact

- 4.2.1** There are certain heritage sites in the state such as the Malumati Temple, Shahpur Quila, Durga Temple, Kuleshwari Mandir, Nagfheni Mandir, Kapileshwari Mandir, which needs preservation and restoration. This involves local people as well as of nearby areas so as to achieve the sustainability in future.
- 4.2.2** As suggested in the development plan, strengthening / expansion of certain stretches of the main road, service road as well as building of cafeteria, wayside amenities, budget accommodation develop certain new products (as suggested). All the above activities shall involve employment & thereby improve the social status of the local people as well as of nearby localities.
- 4.2.3** The improved infrastructure facilities & demand created by increase in traffic would further accelerate the economic development of the area and new economic activities shall also come – up around specific identified spots / circuits over a period of time.

4.3.0 Implementation Schedule

Though the entire state has a lot of tourism potentials. It shall not be appropriate to start development all over the state simultaneously due to fund constraints and other limitations.

The consultants have worked out three phases for development based on demand priority for development and magnitude of various developmental projects. The total duration of all the phases collectively is 20 years indicated as Short-term (2002-2007), Medium-term (2007-2012), Long-term (2012-2022).

4.3.1 Short Term Plan (2000-07)

- With reference to point no. 4.1.1 we propose to develop operational infrastructure in the state. FDC and JTDC should work on a joint platform to get things installed in initial phase.
 - (a) Mourn roads for approach roads at spots should be planned.
 - (b) Sanitation at spots and midways.
 - (c) Drinking water facility at various points.
 - (d) Power supply in the locality in which the tourist spots are based.
- Connectivity is a bane for Jharkhand, so efforts should be put on to develop basic infrastructure for connectivity. This objective will require co-operative effort from central as well as state government plans are into operationlize Ranchi-Hazaribagh rail connection by 2005. Similarly on this pattern some more areas like Palamu and Lohardaga should be connected through rail.
- Dhanbad and Deogarh are on main line, so local fast trains should be planned from connecting points like W.B. and Bihar.
- Road condition is miserable in the state and with reference to our suggestions in section 4.1.1, State government should plan and coordinate with PM funded Gramin Sadak Yojana and take up surfacing and widening of following stretch:
 - (a) Netarhat - Ghaghra
 - (b) Mahuadanad - Lodhfall
 - (c) Ormanjhi - Crocodile Park
 - (d) Dhabad - Maithon Dam.

- All 3 major circuits identified hold great potential to be an attractive spot for domestic as well as international tourists. But lack of guide facility and tour operators hinders the prospects, as visitors are not able to gather relevant information as and when required. There are just 2 tour operators are authorized by JTDC. No IATA authorized agents is operational in state. Some ticket and foreign exchange agents are base din major towns of Ranchi and Jamshedpur but none of them are assisting the visitors openly. Effort should be made to motivate these agents to operate some package tour also.
- NH and SH are in a really bad condition all over the state. Central govt. plans for development of NH is on but at the same time state government should take initiatives to develop those. Northern and Southern part of state is hub for wildlife and most potential circuit of Betla and Netarhat. Roads should be refurbished in these and connectivity with adjacent states of Chattisgarh and U.P. This way some tourists might give a though is good connectivity is available.
- Most of the tourist spots are nature based and involve forest area that is under control of Forest Department. FDC is an active body of state Government involves in development plans for forest and adjacent areas. Nearly 10,000-km roads exist in forest locations of Jharkhand. Out of 8 sanctuaries nearly 4 are not spots of tourists. Betla, Dalma, Mahudandh and Hazaribagh. JTDC should develop a workplace in tandem with them to develop basic infrastructure to these spots. This can include (1) building tourist bungalows (2) arrangement of nigh entertainment at sanctuaries (3) repair and surfacing of approach as well as tourist roads inside the sanctuary (4) training of local inhabitants for guiding tourists groups (5) arrangement of amenities for small as well as individual tourists at an economical rates. This can be done by operating RTV from the sanctuaries to connecting point for villagers as well as visitor all over the day.

- Power is one of the impediment in this is much less than national average. Of 16% tourism growth. Almost 40% of total villages not have power supply. Tourism doesn't have the electricity so development is like a dream for them. Many spots were identified like this as like Hundu, Jonha, Lodh, Topchanchi etc. All these are based near one or the other power plant still the deprive for power. State government should work on this plan and with participation of the villagers as well as private investors develop these spots
- Drinking water supply is not available at all spots in Jharkhand whereas dams and canals located in the state of Jharkhand hold nearly 29,000 Cu. Mt. Water (both surface and underground) supply is still improper. The shortage is mostly at falls and religious points. The most unfortunate part of this is that some potable drinking water facility should be developed for the tourists as well as local inhabitants.
- Wild life at various sanctuaries is going back from the tourist area towards reserve areas, tourists are fortunate to have a glimpse of wild life in the sanctuaries. Efforts are required to attract them towards tourist area by the Local authorities. WWF supports development efforts for this purpose. Betla is one of the 7 protected areas in TCP (Tiger Conservation Programme) since 1997. Highlights of plans are
 - ✓ Providing infrastructure supports to the government for strengthening management capacity.
 - ✓ Assessment and monitoring of tiger habitat
 - ✓ Strengthening political will and intensification of public awareness
 - ✓ Sustained generation of conservation finance for support to tiger conservation
 - ✓ Facilitating international cooperation.

- Amenities available at various spots should be thoroughly checked. Unless these are properly developed tourists can't be motivated to plan their trip. Some of these are hygienic food joints, clean atmosphere, proper lighting, facility to spend time in leisure sanitary options etc. Parallel to this the surrounding should also be developed so that local inhabitant can support these developments. (No development can be planned without them). Spots that require urgent attention are Lodh fall, Hundru fall, Panchgagh, Muggar Fertility Center, Top Chanchi Lake, Surajkund, Salpharni dam etc.
- Lack of medical facilities indirectly hampers the Tourism growth in any state. In this advance phase of medical science people are dying of "Malaria". Netarhat that hosts one of the best residential school of India is a best example for this. No medical support is available at Netarhat, if any one requires medical attention one has to get it from "Ghaghra" (22km down the valley). No doctor is based at local dispensary on the hill. Even at the school medical facility is not available for the students.

Students have died due to Malaria in past. This area is termed, as "Forest of Fear" by the local inhabitants. Certain war footing steps should be implemented to cure this from the root.

At present the existing scenario of medical facility in Jharkhand is as under:

No. of patients per government Hospital –13.18 (Lakhs)
No. of patients Primary Health Center (PHC) 43.93 (Thousand)
No. of patients per medical officer: 22

The above figures display very low availability of medical services in state compared to Bihar.

- Tribal population is nearly 90% in Jharkhand, so any development cannot be planned excluding them. Proper plans should be laid down for their development. The plans should include education, housing, employment etc. Local inhabitants should be given priority when any thing is planned for tourist spots. Various funding schemes are available to assist the entrepreneurs and development work. In Jharkhand various missions are active since ages for social development, they provide training and other upliftment schemes to tribals. State government should co-relate the tourism development plans with tribal development also. Some state run institutions are already active in this area they are TCDC, TWRI etc.
- Tourist should be offered more avenues, than just enjoying the scenic and natural beauty of the spots. Tribal sculptures, handicrafts, forest goods, precious species and many other things that signifies the originality of Jharkhand. These products should be made available through TCDC, an active origin tribal development.
- Tourism department should support TCDC to promote product source through various co-operatives in villages. Local Tribal hats should be regularized (like Orissa) to make the tribal do their own business. This concept can be immediately planned at Panchgagh fall, Netarhat, Devgarh, Hundru, Sugabandh, Sun Temple, Tilaiya Dam.
- Security is another major impediment for Jharkhand tourism. Naxal movement was base for formation of state. Images of economic blocks other bans are still in minds of local inhabitants as well as other parts of nation. State government should take proper initiative to curb this and spread a positive word of mouth. Formation of Tourism task force is a forward step in this direction. But the implementation should be also effective.

A synopsis of the Short Term Plan is shown below:-

Name of the Plan	Short Term Plan	
Implementation Period	2002-07	
Key Criteria	Development of Operational Infrastructure	
Nodal Agency	FDC & JTDC on a Joint Platform	
Amenities	To be looked after by	Support
Development of National Highways	Ministry of Surface Transport, Govt. of India	
Development of State Highways	Department of PWD (Roads), Govt. of Jharkhand	
Approach roads to various spots	Department of PWD (Roads), Govt. of Jharkhand	PM funded Gramin Sadak Yojana
Surfacing and widening of following stretches of Road (a) Netarhat – Ghaghra (b) Mahuadand – Lodhfall (c) Ormanjhi - Crocodile Park (d) Dhanbad – Maithon Dam.	Department of Surface Transport, Govt. of Jharkhand	PM funded Gramin Sadak Yojana
Augmenting facility for Tourists:- ▪ Hygienic food joints, ▪ Proper lighting, ▪ Facility to spend leisure time, ▪ Sanitary options ▪ Tribal sculptures ▪ Handicrafts ▪ Forest goods	JTDC, TCDC	Private Entrepreneurs

Contd. Next Page

Amenities	To be looked after by	Support
Promulgating Railway Connection between :- <ul style="list-style-type: none"> ▪ Ranchi & Hazaribag ▪ Palamau & Lohardaga ▪ Introduction of Fast Trains for Dhanbad & Deogarh 	Ministry of Railways	Local Authorities & State Government
Authorisation of Tour Operators	JTDC	
Development of Forest areas as Tourist spots <ul style="list-style-type: none"> ▪ Building tourist bungalows ▪ Arrangement of night entertainment at sanctuaries ▪ Repair and surfacing of approach as well as tourist roads inside the sanctuary ▪ Training of local inhabitants for guiding tourists groups ▪ Arrangement of RTV's for Tourist transit. ▪ Promotion of the Spot 	FDC & JTDC	World wide Fund for Nature supports the promotional activity
Augmentation of Power Supply	Ministry of Power, Govt. of Jharkhand	<ul style="list-style-type: none"> ▪ Local Participation ▪ Private Investors
Availability of Potable Water	Public Health Engineering Department	<ul style="list-style-type: none"> ▪ Local Civic Authorities
Medical Facility	Department of Health, Govt. of Jharkhand	
Development of Local People <ul style="list-style-type: none"> ▪ Education ▪ Housing ▪ Employment 	Concerned Ministries of State Government, TCDC, TWRI	Ministry of Culture & Rural Development, Government of India
Arrangement of Tribal Haats at:- Panchgagh fall, Netarhat, Devgarh, Hundru, Sugabandh, Sun Temple, Tilaiya Dam	TCDC	JTDC
Ensuring Safety of the Tourists	Tourism Task force to be constituted comprising of :- JTDC, Ministry of Home Affairs, central Govt. and Govt. of Jharkhand.	
Monitoring Activity	JTDC	Professional Agencies

Medium Plan (2007-2012)

Emphasis should be given on qualitative development rather than quantitative. These measures will have longer impact on industry. In this phase the govt. should take some infrastructure and communication initiatives to strengthen tourism industry.

- State government should develop tourist bungalows at high traffic spots like Betla, Hazaribagh Sanctuary, Deogarh, and Jasidih Highway (developed during short-term plan). This will motivate the tourists to plan an overnight trip as well as tour operators will also have an opportunity to plan new packages for various sub-groups of tourists.
- Implement the products suggested by Consultant at various spots.
- Improve the communication infrastructure like satellite connectivity, telephone spread, Mobile connectivity at various spots, cable connection to various break points etc.
- Information sharing and networking of various department should be implemented so that anyone from anywhere can have access to relevant and required information will strengthen the image of state regulatory body in turn attract more aware visitors to state.
- Emphasis should be given in establishing some development institutions for tourism & hospitality industry. The culture should be refurnished according to tourist expectations. Regular satisfaction ratings should be maintained and analyzed. This function should be performed through local inhabitants to serve both the purpose of area development as well as tourism development.
- Eco tourism plan should be reviewed and corrective measures should be formulated on past experiences. These plans should

take care of tribal participation and development state government plan to shares earning from forest reserves with tribals should be reviewed on viability parameters and achievements should be communicated to both parties. This will help them to retain positive features and works on lag points.

- State funding in infrastructure should be broadened through building highways developing 6-lane expressway for Ranchi-Jamshedpur, New Resorts for accommodation. Leisure parks at Khunti, Lake View Hotel at Tilaiya dam, Watch Tower at Netarhat etc.
- A 4-runway airport that can host at least 8-10 domestic flights per day should be developed in Ranchi. In addition two more at Jamshedpur and Daltenganj should be an added means of communication for tourists. Both of these can be small airports. State government should co-ordinate with AAI and central government.
- Rail connectivity should be properly funded and almost all the district headquarters should be connected by broad gauge line. Trains should be efficiently routed through Indian railway. Konkan railway was a herculean task in initial phase but now the route itself is an adventure trip for the visitors and impact can be viewed on tourist inflow. Jharkhand should also have a rail service of those characteristics.

A synopsis of the Medium Term Plan is presented below.

Name of the Plan	Medium Term Plan	
Implementation Period	2007-12	
Key Criteria	Consolidation of Infrastructure & Communication	
Nodal Agency	JTDC	
Amenities	To be looked after by	Support
<ul style="list-style-type: none"> ▪ Tourist Bungalows near high traffic spots ▪ 6-lane expressway for Ranchi-Jamshedpur ▪ New Resorts for accommodation ▪ Leisure parks at Khunti ▪ Lake View Hotel at Tilaiya dam ▪ Watch Tower at Netarhat 	JTDC	
4 Runway Airport at Ranchi to accommodate at least 8-10 domestic flights 2 more Airports at Daltenganj & Jamshedpur	Ministry of Civil Aviation & Airport Authority of India	Govt. of Jharkhand
All District Headquarters to be connected by Broad Gauge Railway. Trains to be efficiently routed	Ministry of Railways, Government of India	Govt. of Jharkhand
Implementation of the products suggested by Consultants at various spots	JTDC	Private Entrepreneurs
Improvement of Communication Infrastructure like :- <ul style="list-style-type: none"> ▪ Satellite Connectivity ▪ Telephone spread ▪ Internet Connectivity ▪ Mobile Connection ▪ Cable Connection 	Task force comprising of Ministry of Telecommunications, Govt. of India, State Government and JTDC	Private Operators
Dissemination of Tourism related Information	JTDC	
Gauging satisfaction of the tourists	JTDC	Professionals & Local inhabitants
Involving tribals in a more positive way with the Tourism Development Plan	JTDC	TCDC, LAMPS
Monitoring Activity	JTDC	Professional Agencies

LONG TERM PLAN (2012-2022)

- Performance appraisal of strategies implemented during Short as well as Medium term plan.
- Though the traffic has been projected till 2022 but due to uncertainty in economic & political scenario of India the anticipated traffic may not be as per the projections hence it is necessary to review the various stages in the medium term plan & keep a close watch on the developments.
- Spread of State Highway in Eastern and Western part of Jharkhand should be reviewed. Some new highways should be constructed to improve the ratio of roads/ thousand populations.
- Power Load factor (PLF) of different Power projects is an impediment that affects not only state development but also tourism industry as a whole. Most of the plants are PSU operated, strategy should be implemented to improve the ratio with changes in capital assets as well as sops offered to them.
- Tourism department should undertake community development plans and co-ordinate with other related departments in order to generate most of the strategies implemented during short and medium term.
- Damodar & Swarnrekha River is most polluted river of state and environmental experts projects degradation of water & its level, if no corrective measures are taken by the concerned authorities. Tourism Department should motivate a speedy implementation of these measures.
- Spots should be reclassified according to Tourist interest and respective inflow. Identified hot spots should be rightly promoted to attract more diverse tourists.
- Amenities at various spots like Waterfalls, Lakes, and Hills should be refurnished to give rejuvenation to the particular spots.

A synopsis of the Long Term Plan is presented below:-

Name of the Plan	Long Term Plan	
Implementation Period	2012-22	
Key Criteria	Performance Appraisal of Strategies adopted in the earlier plans	
Nodal Agency	JTDC	
Amenities	To be looked after by	Support
Review of spreadth of State Highway in Eastern and Western part of Jharkhand	JTDC and Dept. of PWD (Roads)	
Strategy to be implemented in order to improve Power Load Factor with changes in capital assets as well as sops offered to them	Ministry of Power, Govt. of Jharkhand	
Community Development plans to be implemented	JTDC	Ministry of Human Resource Development
Reduction of Environmental Pollution and recharging water level	Ministry of Environment of Forests, Govt. of Jharkhand	JTDC
Amenities at various tourist spots to be refurnished & rejuvenated (if required)	JTDC	Development Agencies

CHAPTER - 5

ENVIRONMENT IMPACT ASSESSMENT

5.1.0 Introduction

5.1.1 The basic objective of center under MOEF are :

- Conservation and Survey of flora, fauna, forests and wildlife.
- Prevention and control of pollution.
- Afforestation and regeneration of degraded areas and
- Protection of environment

These objectives are to be fulfilled by

- Environmental Impact Assessment (EIA)
- Eco-regeneration
- Assistance to organizations implementing environmental and forestry programmes
- Promotion of environmental and forestry research
- Dissemination of environmental information
- International cooperation
- Creation of environmental awareness among all sectors

5.1.2 Under the provision of Environmental Impact Assessment (EIA) Notification, various expert committees were reconstituted for different sectors for appraisal of projects received for environmental clearance.

5.1.3 Keeping in view the size of the projects and their environmental impact, the Ministry has further amended the Coastal Regulation Zone (CRZ) notification, in August, 2001 to dispense with the requirement of public hearing in various categories of projects like widening and strengthening of highways, mining projects with lease area of up to 25 ha. Units located in export processing zones. Special economic zones, modernization of existing irrigation canals,

small-scale industrial undertakings located in industrial estates/areas or under the jurisdiction of industrial development authorities.

5.1.4 In order to make the provisions of wildlife (protection) Act, 192 more effective, a draft Amendment Bill was prepared by the Ministry and was vetted by Ministry of Law.

5.1.5 There are 89 natural parks and 497 wildlife sanctuaries in the country covering an area of 1.56 lakh sq. kms.

5.2.0 EIA

5.2.1 Most of the developmental activities use natural resources as raw material and waste generated is disposed into different environmental media. The signs of stress on the scarce natural resources are evident from the deteriorating air quality, soil degradation, polluted river and streams and in general status of environment in various regions. It is now well recognized that, for sustainable development and optimal use of natural resources, environmental considerations are required to be integrated in planning, designing and implementation of development projects. The envisaged benefits from development projects cannot be fully realized unless they are environmentally and socially sound and sustainable

5.2.2 Environmental Impact Assessment (EIA) is one of the proven management tools for incorporating environmental concerns in development process and also in improved decision-making. The growing awareness, over the years, on environmental protection and sustainable development has further given the needed emphasis on requirement of sound environmental management practices through preparation of Environment Management Plans for minimizing the impact from developmental activities. The process of Environment Impact Assessment is pictorially depicted in the diagram below: -

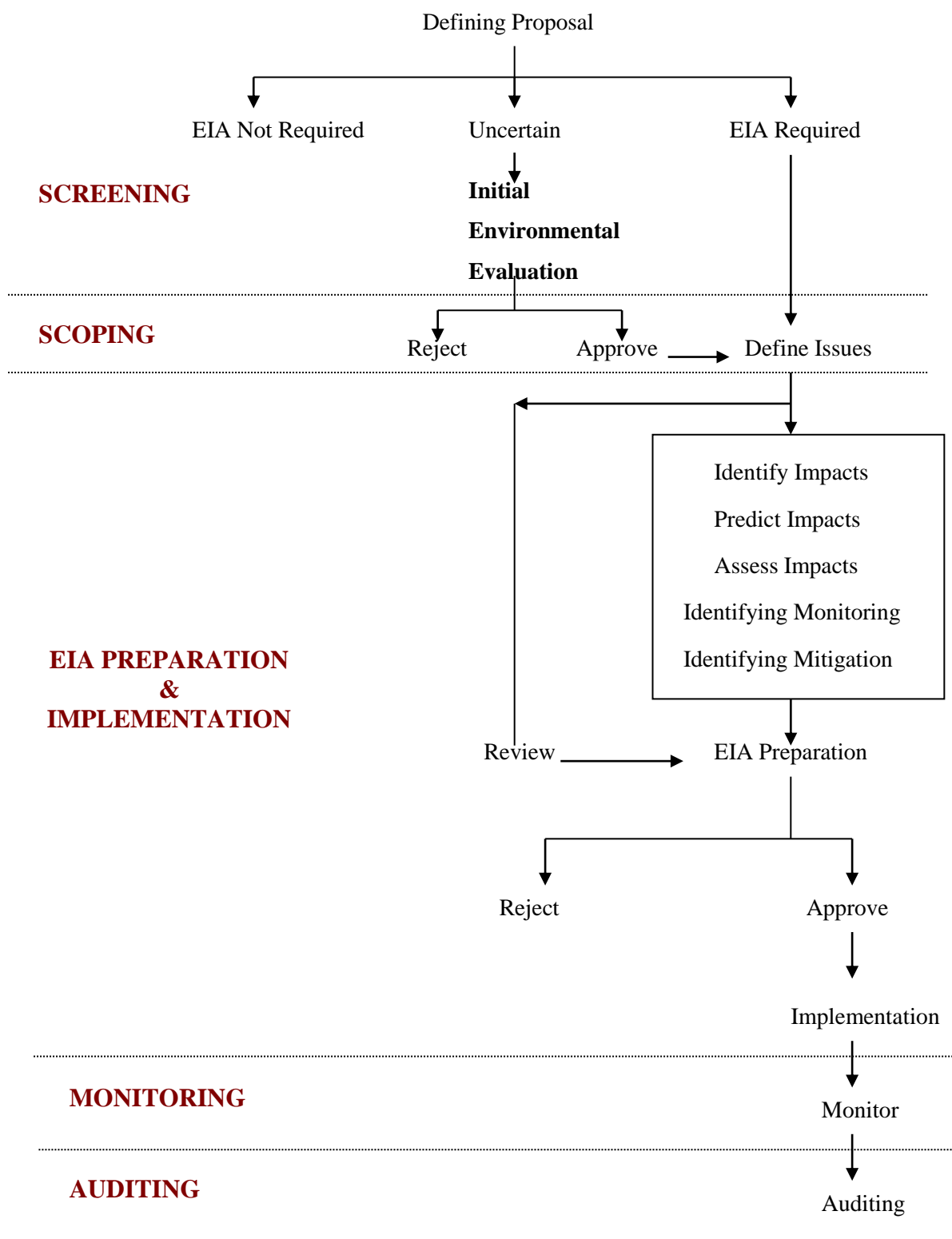


Fig. 5.1: Stages of EIA Process

It is desirable that new tourism projects should not bring about any impairment to the environment. Hence the consultant feels that due cognizance be given to the environmental aspects and proposes that environment impact assessment should be made an integral part of all forthcoming projects. The EIA matrices of all the new products suggested in Chapter 4 are enclosed herein.

Key to the Matrices

+ = Beneficial Effect

- = Negative Effect

1 = Marginal impact

2 = Controllable impact

3 = Appreciable impact

4 = Severe impact

Table 5.1: Impact Identification Matrix for proposed Urban Haat at Ranchi & Jamshedpur

Environmental Aspects	Air	Water	Soil	Noise	Flora/ Fauna	Deforestation	Socio- Economics	Aesthetics
Activities								
Land Development	-2	-2	-2	-2	-2	-2	+2	-2
Construction Activities	-2	-1	-2	-2	-2	-2	+3	-2
Landscaping			+2		+2		+3	
Development of Green Belt	+2		+2	+3	+2		+3	+3
Haat in Operation	+2				+2		+3	+3

Table 5.2: Impact Identification Matrix for proposed Hot Air Ballooning at Betla

Environmental Aspects									
Activities	Air	Water	Soil	Noise	Land - Use	Deforestation	Flora/ Fauna	Socio- Economics	Aesthetics
Preparation of Launching Site	-1		-1	-1	+1	-1	-1	+3	+3
Training of Pilot								+3	
Training of Ground Staff								+3	
Flight Plan identification							-1		
Test Flights							-1		+1
Inflation of Balloon				-1					
Launching of Balloon	-1								
Balloon in Flight									+3
Deflation of Balloon	-1								
Ground Crew Activities				-1			-1		

Table 5.3: Impact Identification Matrix for proposed Ayurvedic Centre at Betla

Activities	Environmental Aspects								
	Air	Water	Soil	Noise	Land - Use	Deforestation	Flora/ Fauna	Socio- Economics	Aesthetics
Land Acquisition						-2	-2		
Land Development	-2	-2	-2	-2	+2	-2	-2	+3	+3
Construction Activities	-2		-2	-2		-2	-2	+3	
Erection of Waste Disposal & Treatment Facility				-2		-2	-2		
Erection of Water Treatment Plant				-2		-2			
Development of Gardens			+3				+3	+3	+2
Landscaping Activities					+1		+2	+3	+3
Operation of the Centre	-2	-2	-2	-1				+3	+2

5.3.0 STEPS FOR CONSERVATION OF NATURAL RESOURCES INCLUDING FORESTRY AND WILDLIFE

5.3.1 Biosphere Reserves

- A total of 13 Biospheres Reserves have been set up so far in the country in order to protect representative eco-systems and to serve as laboratories for evolving alternative models of development.

5.3.2 Wetlands, Mangroves and Coral Reefs

- Management Action Plans were prepared for 19 wetlands so far for conservation and management and two research projects were also approved to Supplement Management Action Plans. In order to designate more wetlands as Ramsar sites in the country, India has sent details of 16 wetlands to Ramsar Bureau after getting authentication of maps from Survey of India, Dehradun.
- The National Committee on Mangroves and Coral Reefs endorsed the recommendation of the sub-committee and financial assistance was provided to identified mangrove areas in the respective states.
- The Bio-safety protocol has been signed by 105 countries, of which, eight have ratified it. India signed the protocol on 23-1-2001 and actions are being initiated to ratify the same.

5.3.3 Govt. of India have launched a centrally sponsored scheme entitled ‘Eco-development around National Parks and Sanctuaries’ including Tiger Reserves in the year 1991-92. The basic objective of the Eco-development program is to reduce biotic pressure in the Protected Areas (PAs) by alleviating the hardship faced by the villagers living in and around the National Parks and Sanctuaries. This happens due to curtailment of their access for grazing, fuel wood, fodder and collection of various non-timber forest products.

5.3.4 Threatened Species

India contains 172 species of animals considered globally threatened by IUCNB, or 2.9% of the world’s total of number of threatened species (Groombridge, 1993). These include 53 species of mammals, 69 birds, 23 reptiles and 3 amphibians. India contains globally important populations of some of Asia’s rarest animals, such as Bengal Fox, Asiatic Cheetah, Marbled Cat, Asiatic Lion, Indian Elephant, Asiatic Wild Ass, Indian Rhinoceros, Markhor, Gaur, Wild Asiatic Water Buffalo.

The protection of wildlife has a long tradition in Indian history. Wise use of natural resource was a prerequisite for army hunter societies, which dates back to at least 6000 BC. As more and more land become settled or cultivated., so these hunting reserves were subsequently declared as national parks or sanctuaries, mostly after indpenedence in 1947.

5.3.5 Activities under Eco-development Programme

Keeping in view the primary objectives of satisfying the basic need of local people and improving the productivity of buffer zone of protected areas, following socio-economic welfare activities are envisaged in Eco-development programme.

1. Raising of fuel-wood and fodder plantations of fast growing indigenous species.
2. Soil Water conservation measures in cultivated fields.
3. Setting up of small irrigation dams/ circuits
4. Fixing of solar street lights in the village
5. Supply of improved chullahs, solar cookers and gobar gas plants
6. Setting up of fixed/mobile dispensaries including vaccination/family-planning clinics.
7. Setting up of livestock veterinary centers.
8. Providing safe drinking water
9. Setting up cottage industries based on appropriate technology.
10. Development of agriculture, sericulture, pisciculture etc.
11. Training of staff, volunteers, village level workers in Eco-development and related activities/techniques.

Funding

Govt. of India under its centrally sponsored scheme extends 100% financial assistance to the State Governments for implementing the programme in P.As. During 1992-93, 1993-94, 1994-95 and 1995-96 financial assistance of Rs. 4.20 crores, Rs. 4.84 crores, Rs. 3.46 crores and Rs. 4.67 crores was extended respectively to various state governments.

5.4.0 Project Tiger

5.4.1 Twenty-seven Tiger Reserves have so far been set up in various states covering an area of about 37,761 sq. km. in the country. An amount of Rs. 18.35 crores was released to the various Tiger Range states including North Eastern states, as on December 2001 under the project tiger scheme.

Palamau Tiger Reserve is located in the district of Palamu in the State, situated in Chhotanagpur plateau between latitudes 23°25' - 23°55' North and longitudes 83°50'E - 84°36' E in the state of Jharkhand.

It was created on 4th June, 1974 when initially only 9 sites were selected under Tiger preservation programme. There are two forest divisions, divided into Ranges, beats and sub beats.

- i) **Project Tiger Division:** Betla Range, Chhipadohar East Range, Chhipadohar West Range and Kutku Range. Area of this Division spreads over 575 sq. kms.
- ii) **Daltonganj South Forest Division:** Garu East Range, Garu West Range, barasand Range and Mahuadanr Range. Total area of Daltonganj South Division spreads over 730 sq. km, including Mahuadanr Range, which is outside the tiger reserve.

The total of the Project Tiger Circle is 1306 sq. kms. All the Zamindari forests were notified as protected forests under the provision of Indian Forest Act 1927 vide various notifications from 1953 to 1966. All these protected forests are right burdened forests. A total of 979.67 sq. km area of Palamu Tiger Reserve has been declared Palamu wildlife sanctuary under section 18(1) of the Wildlife (Protection) Act 1972 vide S.O no. 1224 dated 17.7.79. Out of that an area of 226.32 sq. km has been notified as Betla National Park in 1996.

Palamu Tiger Reserve has wide range of biological diversity. It is located in Deccan Peninsula Biogeographic zone, in the Chhotanagpur Plateau Province (6D). Tiger is the main species of vital importance. Population of tiger has gradually increased during last 35 years due to improvement of ecosystem. Some of the most endangered species like Ratel Mouse deer, Python, Pangolin, Black-necked crane, Four-horned antelope etc. are represented in the area.

In addition to the above it is catchment of three river – North Koel, Aurange and Burha. Forests of the Reserve intercepts rainfall and increases ground water recharge. It protect the rivers, streams against siltation by minimizing soil erosion.

Tiger (*Panthera tigris*)
Leopard (*Panthera pardus*)
Bison/Indian gaur (*Bos gaurus*)
Elephant (*Elephas maximus*)
Giant squirrel (*Ratufa macroura*)
Pangolin (*Manis Crassicaudata*)
Python (*Python molurus*)
Indian Wolf (*Canis Lupas Pallipes*)
Sloth bear (*Melursus ursinus*)
Black-necked crane (*Grus Nigricollis*)
Malabard pied hornbill (*Anthracoceros coronatus*)
Pea-fowl (*Pavo cristatus*)
Jungle Cate (*Felis chaus*)
Leopard cat (*Felis bengalensis*)
Ratel (*Mellivora capensis*)
Indian Shikra (*Accipiter badius*)
Monitor lizard (*Ivaranus Bengalensis*)
Four-horned antelope (*Tetracerus Quadricornis*)

Palamu Tiger Reserve is very rich in biodiversity and various wild life species have been included in Red data book of the I.U.C.N. (International Union for Conservation of Nature and Natural Resources) and the appendices of C.I.T.E.S (Convention on International Trade in Endangered Species of Flora and Fauna).

The people living in and around the reserve gets their requirements of fuel-wood, fodder, small timber, thatch, bamboo, edible mushroom, honey, myrabolans, Tendu leaves, medicinal plants etc. In lieu they protect and preserve the flora of the serve. It acts as recreation center for Daltonganj town and the neighbouring areas.

Earlier employment was available to the villagers in forest extraction work. They were engaged in extraction of Bamboo and Kendu leaves, tiber etc. Bamboo of the area is very dense and widely spread and was a major source of raw material for paper industries. For last 2-3 years the work has stopped. The villagers get employment in different forestry work. Development works are also implanted by district administration, which given them employment.

Tourism is also a source of benefit as in the Betla area. Many tourist guides have come up and some jeeps of private persons are engaged for tourim purpose.

It has very wide range of bio-diversity and many endangered, rare and threatened species of flora and fauna are found.

- 47 Species of mammals (39 Genera and 21 families)
- 174 Species of birds
- 970 Species of flora
- 25 Species of climbers
- 46 Species of Shrubs, many species of Grasses and
- 56 Species of valuable medicinal plants have been recorded.

- i) Northern Indian Moist Deciduous Forest, Moist and Dry Peninsular Sal Forest, Northern Dry mixed Deciduous Forest, Aegle Forest, Dry bamboo brakes etc.
- ii) Supports significant population of wild life species specially Indian Tiger, Asian Elephants, Elpards, Indian Gaur etc. which are endangered species.
- iii) Catchment conservation of North Koel, Auranga and Burha river and its tributaries. Stable Eco-system with tremendous regeneration, self supporting and self capability.
- iv) Supports local tribal population (More than 50% of total population of the area).
- v) Potential for Wildlife tourism, aesthetic value, Nature interception and education to tourists.
- vi) Immense scope of wildlife research and educaton.
- vii) Excellent habitat for top carniovores – Tiger and Leopard.

The reserve is surrounded on three sides by Forests of Latehar Forest Division, Ranchi West Forest Division, Garhwa South Forest Division and Sarguja district of Madhya Pradesh, however northern side is mostly cultivated area and Daltonganj township is only 20 kms from the boundary of the reserve. The population of Tiger, Leopard, Gaur Elephant etc. moves in and around the boundaries of the reserve. Mostly elephants migrate even 10-15 kms, from the reserve in the Latehar, Garhwa South Divisions, and Ranchi West Division. They also migrate to Sarguja district of Chhathisgarh.

The reserve is very rich in mammalian population. The population dynamics of animals found in the reserve is given below:

Species	Estimated Number				
	1994	1995	1996	1997	1999
Tiger	49	50	41	44	37-46
Leopard	60	61	60	64	53-55
Elephant	140	155	158	-	252
Bison	740	593	517	-	361
Cheetal	15318	15859	13014	-	13134
Sambhar	3029	1881	2158	-	2824
Wild Boar	6890	6943	8598	-	8679
Barking Deer	1834	1861	1841	-	2092
Nilgai	52	59	73	-	79
Langur	28894	42563	28788	-	25007
Red Faced	38035	37983	42438	-	33257
Sloth Bear	369	310	200	-	363
Wild Dog	646	409	186	-	422
Wolf	290	204	306	-	105
Hyena	41	-	120	-	125
Peafowl	4705	-	4196	-	3630

Poaching of wild animals by outside was totally contained by providing chained gages on all enterance points in the core and buffer. Villagers were provided with crackers, kerosene oil, mashals and crop-protection watchers to save their crops from depredation by wild animals. The sympathy of villagers was also obtained.

Villages inside and outside the PA – Ethnic Identities, Traditions, Customs, Relationship between distinct groups of people, relationship with Forests.

Village

There are 35 villages within 5 kms radius of Palamu Tiger Reserve i.e, zone of influence. The reserve is a resource catchment for more than 199 villages. Three villages are situated in core zone, 161 villages are located within multiple use zone and habitat management zone.

1,05,094 people residing in these 199 villages are almost completely dependent on the PA for fuel wood, small timber, MFP and grazing. The poor, landless masses have no other source of livelihood.

Population pressure intensity is evenly distributed. Forests of northern part of the PA are under severe pressure. Forests of southern part of the reserve are comparatively less burdened.

Population density is less than 87 persons per sq. km. There is enough cultivable wastelands that can be developed into Orchard, Grasslands or agricultural fields to mitigate pressure on PA.

Water scarcity during pinch period.

There are 322 identified water holes. Many gets dried up during summer season. There is need for maintaining and improving by digging and desilting.

Invasion of weed

Species like Lantana camera, Flemingia, Cassia tora, Parthenium, Ocimum, Ageratum, conyzoides etc. and few climbers have invaded in many areas. It causing hinderance for young regeneration and competing with them.

Other related problem of wildlife management

- a) Man animal conflict : Man animal conflict arises due to mainly :
- Cattle lifting by Tiger and Leopard
 - Crop raiding
 - Straying of wild animals in the fringe villages
 - Killing and causing injury to human and damager to their property.
- b) Wildlife health, diseases: No epidemic has been reported in the reserve, however, there are reports of spread of disease from cattle to wild animals.
- c) Untrained officers and staff to manage Wildlife: Most of the officers and staff posted in PTR are untrained in wildlife management. They do not have orientation towards wildlife. IN some fields of activity it result in improper or inefficient implementation of management practices.
- d) Population explosion and inadequate conservation awareness: Due to increase of human population and lack of awareness among local populace destruction of wildlife is noticed.
- e) Insufficient Infrastructure
- Lack of strike force with sophisticated arms to tackle with modern poachers, smugglers etc.
 - Lack of research and training facility
 - Lack of improved road network.
 - Lack of elephant proof trenches or electric fences in the areas where elephant damages the crop.
 - There are 20 regisered awmillins and two timber depots in Daltonganj, two deposts in Barwadih, two depots in Chhipadohar. Illegal timber from the reserve are being used for house building, furniture and other purposes.
 - There are 3 forest villages inside the core area of the reserve that have not been rehabilitated. They all depend on the forest for firewood small timber and fodder for their cattle. Besides, there are

161 enclaved villages, whose people have rights to graze the cattle, collect fuel wood and small timber and N.W.F.Ps from the reserve.

Presently the Palamu Tiger Reserve extends over an area of 1026 sq. km. There are 44 compartments – 124 KRFs, Old P.F and new P.F which are demarcated by boundary pillars.

Zonation

In the previous management Plan, zonation of the area for specific management practices was done.

- | | | | |
|----|----------------------------------|---|--------------|
| 1. | Core zone or wilderness zone | - | 213 sq km |
| 2. | Buffer zone or multiple use zone | - | 813 sq. km |
| 3. | Tourism zone | - | 53.78 sq. km |

(Over lapping) Eco-tourism zone

It is proposed to extend the area of PTR from 1026 sq. kms to 1169.01 sq. kms. Some of the area falling within the Garu East Range, Betla Range and Chhipadohar East/West Range has been included which were earlier not incorporated.

Presently, it is proposed to have following zones.

1. Wilderness Zone or Core Zone
2. Habitat Management Zone
3. Multiple use Zone or Buffer Zone
4. Tourism (overlapping) zone

Objectives of Management

The objectives of management for this zone are to preserve it by giving protection against all form of biotic interference.

This zone will be used for providing protection from biotic interference. The area is rich in biodiversity and has got rights of the villages. There are 161 villages enclave this zone.

1. To protect the forest in the zone.
2. To meet the demand of fuel wood, bamboo, timber etc. of the local people and others.
3. To implement Eco-development activities in the villages.
4. To improve and maintain the area congenial for wildlife.

Theme Plan

Strategies common for all zones have been discussed in this part of the plan. The following are the strategies prepared for achieving the objectives.

Habitat Improvement: Habitat improvement works in any of the zone will be based on following consideration.

- a) Protecting, preserving and improving works inany of the zone will be based on following consideration.
- b) Protecting the habitat against factors causing degradation.
- c) Providing conducive conditions suitable for target species.
- d) Raising local, palatable and suitable grasses in the degraded and blank areas.

Eco-development is an important aspect of management of Palamu Tiger Reserve. It has an important role in support of tiger conservation programme because it can expose diverse categories of tourists to the process of study of Tiger, its habitat and associated flora and fauna. The tourists form a cross-section of society and thus they can help to generate substantial positive pressure and favorable public opinion towards PA management and bio-diversity conservation values.

It is proposed to create a tourist complex at Barwadih. Barwadih is an important railway station where all trains stop. It has police station, post office, market, health facilities and block headquarter.

The Palamu Tiger Reserve has a great potential for tourism. However, the tourism has to be planned in such a way that it does not disturb the Bio-diversity habitat and the delicate balance of ecological processes. Therefore it is suggested to limit the tourist traffic in able tourism zone only.

To enable the people in general and tourists in particular to know about the value of biodiversity conservation and management of Palamu Tiger Reserve.

To provide employment opportunities to the local population in and around the tourism zone so that they benefited from eco-tourism in Palamu Tiger Reserve.

Palamu Tiger has been called treasure trove of biodiversity. Human settlements in and around the Reserve put greater pressure than he sustaining capacity. Therefore the objective of eco-development programmes is for reducing the dependency of forest side communities on the natural resources of protected (PAS).

Conservation of natural resources of the reserve is the overall target of eco-development project. The strategy of eco-development aims to

conserve biodiversity by mitigating negative impacts of local people on the PTR and the PTR on local people. The project has been designed for improvement and involvement of local people.

The general objectives of Eco-development is as given under:

- i) To reduce negative impacts of local people on biodiversity, reduce negative impacts of Pas on local people and increase collaboration of local people in conservation.
- ii) To develop more effective and extensive support for eco – development.

In addition to the above mentioned general objectives of Eco-development the site specific main objectives of Eco-development can be enumerated as mentioned below:

- i) To promote people participation in conservation, management and protection.
- ii) To improve capability of EDC, NGOs, NGIs etc. by providing suitable training and organizing study tours etc.
- iii) To provide support and assistance of expert services by contracted NGOs and NGIs.
- iii) To prepare eco- microplans of 199 villages situated in and around of the Reserve by ensuring people participation based on PAMIA exercises.
- iv) To evolve with the participation of local people, workable mechanism to mitigate Mutual Negative Impacts (i.e, impact of people on PA and of PA on people) and to incorporate these mechanism in the microplans.
- v) To find out implement sustainable models of economic activities for the poor people to minimize their dependence on P.A.
- vi) To minimize man animal conflict by constructing suitable barrier like ET and electric fencing and also by paying compensation in time.

- vii) To ascertain suitable mechanism of Updation or making changes in Micro Plan in accordance with findings and of monitoring and research.

ENVIRONMENT RELATED TOURISM

Some spots earmarked for promotion of Environment Related Tourism

These ecosystems have become the major resource for ecotourism in India.

1. Biosphere Reserves
2. Mangroves
3. Coral Reefs
4. Deserts
5. Mountains and Forests
6. Flora and Fauna
7. Seas, Lakes and Rivers
8. Caves

Biosphere reserves are multipurpose protected areas for preservation of the genetic diversity and integrity of plants, animals and microorganisms in representative ecosystems.

Mangroves are very specialized forest ecosystems of tropical and subtropical regions bordering sheltered sea coasts and estuaries.

Major mangroves areas are :

- i) Northern Andaman and Nicobar islands
- ii) Sunderbans (West Bengal)
- iii) Bhitarkanika and Mahanadi Delta (Jharkhand)
- iv) Coringa, Godavari Delta and Krishna Estuary (Andhra Pradesh)
- v) Pichavaram and Point Calimere (Tamil Nadu)
- vi) Goa
- vii) Gulf of Kutch (Gujarat)
- viii) Coondapur (Karnataka)
- ix) Vembanad (Kerala)

- Establish standards, building codes and other regulations.
- Specify environmental, physical and social carrying capacities to limit development activities.
- Ensure continuous monitoring of adverse effects of tourism activities and initiate suitable corrective measures.
- Recognise and award quality labels to ecotourism operators.
- Provide visitor information and interpretation services covering particularly (i) what to see (ii) How to see (iii) how to behave. It be by way of brochures, leaflets, specialized guides, visitor information centers and such.
- Prepare and widely distribute codes of conduct to all visitors.

5.5.0 CONCLUSIONS

5.5.1 All the Tiger Reserves face increasing biotic pressure. To resolve it site specific eco-development plans should be formulated to ensure the participation of the local communities in the protection of these vial natural resources.

- Ensure their survival
- Reduce the pressures on them and
- Create a genuine harmony between local communities and the tiger reserve.

5.5.2 Project Tiger Reserves and all the biodiversity that abounds in them will not be harvested for commercial exploitation used for dam sites or other mega or mini projects.

5.5.3 All Tiger Reserve face increasing threats from the poachers and smugglers of animals, wood and other vital forest produce.

5.5.4 All the tiger-bone trade booms in the Far East, India will take vital steps not only to ensure that her tigers are safe from external threats but also rally world communities to oppose the use of tiger bones in eastern medicine.

5.5.5 A new strategy will unfold to strengthen the protection of these areas in the light of new pressures and effective legal procedures formulated for quick and timely action.

5.5.6 A focus on research, on specific wildlife training and on increasing the motivation of the staff towards their duties in already a part of new strategies for better and more effective management.

5.5.7 Local communities, their participation, involvement and commitment are vital for the future safety of these areas.

- 5.5.8 A major educational effort has to be made to increase the level of awareness of urban dwellers who appear to have grown distant from nature because of the prevailing lifestyle in the citities that exact a heavy toll the natural resources.
- 5.5.9 Project Tiger will therefore refocus, restructure and reformulate its strategies , but ultimately it is only through a collective approach where the local people, the urban dwellers and the state governments play a conservative role, together, that a new and dynamic era in tiger conservations will commence, to save the tiger and his habitat.
- 5.5.10 In recent years, it has been observed that Joint Forest Management (JFM) has been successful, by and large in managing forests in a sustainable manner in various parts of the country. This approach has exemplified fruitful collaborative efforts of the forest department. And the local communities in expediting the process of forest conservation. Local communities have been motivated to protect a section of the forests for a fixed time along with the Forest Department and in lieu of which they have been permitted to have access to various forest. Similar laws, which contain tenure and profit sharing incentives, have been passed in favor of improved conservation in the buffer zone areas of the existing protected areas. All of such community based management regimes have met the subsistence and income generating needs of the local communities and provided them with the tenure security they need to protect the forest resource base.

These approaches are now in dire need of the integration of strict conservation objectives that would compliment and enhance livelihoods. WWF - India intends to evolve a paradigm by using the JFM approach whereby communities gain incentives and technical skills to conserve critical habitat of globally and locally significant species of animals and plants, while managing the resource base in a manner that will meet subsistence needs and increase household incomes.

CHAPTER - 6**FINANCIAL PLAN AND FUNDING****6.1.0 List of Projects undertaken during the IX th Plan Period****6.1.1 IX th Five Year Plan Period Outlay**

As per the Data collected from Department of Tourism, Government of Jharkhand, 5 Tourism development schemes have already received fund during the IX th Plan period. The outlay, Central and State government shares and status are indicated in the Table below:-

Table 6.1: IXth Plan Outlay for the State of Jharkhand*(All figures in Rs. Lakhs)*

Name of the Scheme	Pattern of Funding		IX th Plan Outlay (1997-2002)		Staus
	Central Share	State Share	Central Share	State Share	
Tourist Complex Topchanchi	16,88,000	2,26,000	8,00,000	2,13,000	*
Tourist Complex Chandil	26,56,000	3,43,000	5,98,500	-	*
Tourist Resort – Getalsud	45,00,000	4,50,000	23,93,800	-	*
Tourist Resort – Palna, Jamshedpur	27,49,000	2,50,000	1296,900	-	*
Wayside Facility – Lohardaga	28,52,000	7,40,000	0.50,000	-	*

(Source: Department of Tourism, Government of Jharkhand)

* - Project did not get underway in the year 2001-02 due to non-availability of land and has been carried forward to the proposed Xth Plan period as elaborated below.

Draft Xth Plan Outlay

The draft Xth Plan Outlay for the State of Jharkhand containing all the Tourism Development Schemes carried forward from the IX th Plan period as also new schemes propounded in the Xth Plan period.

**Table 6.2: Xth Plan Outlay proposed for development of Tourism
in the State of Jharkhand**

(All figures in Rs. Lakhs)

Sl No.	Name of the Scheme	X th Plan Outlay (2002-2007)	
		Central Share	State Share
1	Tourist Complex Topchanchi	16,88,000	2,26,000
2	Tourist Complex Chandil	26,56,000	3,43,000
3	Tourist Resort – Getalsud	45,00,000	4,50,000
4	Tourist Resort – Palna, Jamshedpur	27,49,000	2,50,000
5	Wayside Facility – Lohardaga	28,52,000	7,40,000
6	Purchase of Equipments for Water Sports in Tilaiya, Rukha, Khanddidam	2,00,00,000	
7	Purchase of Equipments for Hot Air Ballooning and Para Sailing at Betla, Natarhat and Gua	2,00,00,000	
8	Purchase of Equipments for Light and Sound Show in Betla Fort	1,00,00,000	
9	Construction of Ropeway from:- Tagone Hill to Rock Garden in Ranchi	10,00,00,000	10,00,00,000
10	Wayside amenities along Highways: 1. Jamshedpur – Bahragora Highway 2. Ranchi – Gumla – Rourkela Highway 3. Ranchi – Lohardaga – Neterhat Highway 4. Ranchi – Jamshedpur Highway 5. Ranchi – Chaibasa Highway 6. Ranchi – Koderma Highway	4,80,00,000	1,20,00,000
Total		21,24,45,000	11,40,09,000

(Source: Department of Tourism, Government of Jharkhand)

Note: The serial Nos. 1 to 5 indicate the Tourism Projects that have been carried forward from the IX th Plan period and the New Tourism Projects identified under Xth Plan are elucidated from serial no. 6 to 10. The annual plans for tentative implementation are shown in the Table below:-

Table 6.3: Annual Plan for the New Schemes for Development of Tourism in the State of Jharkhand

(All figures in Rs. Lakhs)

Particulars	Year of Commencement	Cost Estimates in Lakhs	Xth Plan (Proposed Outlay)	Annual Plan 02-03 (Proposed Outlay)
Purchase of Equipments for Water Sports in Tilaiya, Rukha, Khanddidam	2002	200	200	200
Purchase of Equipments for Hot Air Ballooning and Para Sailing at Betla, Natarhat and Gua	2002	200	200	200
Purchase of Equipments for Light and Sound Show in Betla Fort	2003	100	100	-
Construction of Ropeway from:- Tagone Hill to Rock Garden in Ranchi	2003	2000	2000	-
Wayside amenities along Highways: 1. Jamshedpur – Bahragora Highway 2. Ranchi – Gumla – Rourkela Highway 3. Ranchi – Lohardaga – Neterhat Highway 4. Ranchi – Jamshedpur Highway 5. Ranchi – Chaibasa Highway 6. Ranchi – Koderma Highway	2002	600	600	200
Total		3200	3200	600.00

(Source: Department of Tourism, Government of Jharkhand)

Inventory of State Tourism Properties

The Department of Tourism, Government of Jharkhand are in the process of sorting out the inventory of State Tourism Properties with BSTDC, which looked after tourism development activity prior to the etching out of the State of Jharkhand from Bihar.

Table 6.4: Inventory of Jharkhand State Tourism Properties

Name of the Unit	Location
Hotel Birsa Vihar	Ranchi
Hotel Prabhat Vihar	Netarhat
Tourist Bunglow No. 2	Netarhat
Tourist House	Netarhat
Hotel Ratna Vihar	Dhanbad
Tourist Complex	Dhanbad
Hotel Van Vihar	Betla
Tourist House	Betla
Hotel Aranya Vihar	Hazaribag
Way Side Facility	Barhi
Tourist Complex	Oraon
Hotel Natraj Vihar	Deoghar
Hotel Baidyanath Vihar	Deoghar
Hotel Basuki Vihar	Basukinath
Jatrika Madhuban	Madhubani
Tourist Complex Rikhia	Rikhia

(Source: Department of Tourism, Government of Jharkhand)

6.2.0 FINANCIAL PLAN AND FUND REQUIREMENT

6.2.1 The Plan

The Tourism Perspective Plan mentioned in the previous chapter for development of basic infrastructure, tourism product development and creation of selective tourism circuits requires a sizeable capital investment towards creation of additional facilities to cater the needs of projected flow of tourist traffic.

6.2.2 For working out the plan following structure has been adopted.

i) Costing of Basic Facilities

Table 6.5: Costing of facilities

Facilities	Average Cost (Rs. Lacs)	Locations
Tourist Facilitation Centre	6 - 8	Betla/ Delhi/ Ranchi/ Jamshedpur
Sanitation/Public Conveniences	6 – 7.2	Hazaribagh Sanctuary, Panchgagh Fall /Rock Garden Sugabandh/ Maithon Dam/ Hatia dam
Approach Roads	1100-1200	Lodh Fall/ Hundru Fall / Dasam fall/ Salpharni Dam/ Sugabandh /Vaitinda fall/ Panchgagh /Crocodile park/ Dalma sanctuary
Cafeteria/Wayside Amenities	120-140	Bundu/Khunti/Latehar/ Sugabandh/Mahuadandh/ Angara check post/ Maithon dam/Netarhat/Surajkund/ Konar Dam/ Dalma National Park, Betla National park.

Table 6.5 (Contd.): Costing of Facilities

Facilities	Average Cost (Rs. Lacs)	Locations
Potable water	12-18	Hundru Fall/ Panchgagh/ Rock Garden/Hatia Dam/ Netarhat/ Konar Dam/ Salpharni Dam/ Tilaiya Dam/ Johna falls
Landscaping /Garden	35-40	Rock Garden/ Hatia Dam/ Maithon Dam/ Tilaiya Dam
Parking Area	15-18	Hundru Fall/ Lodh fall/ Baidyanath Temple /Netarhat
Museum / Trico Emporium	50-60	Betla/ Jamshedpur
Security Booth	4-8	Lodh fall/ Hazaribagh sanctuary/Dhanbad
Power Back-up 25 KVA	20-24	Various circuits
Budget Hotels [200-250 rooms]	400	Hazaribagh, Netarhat, Chaibasa, Ranchi.

Description of Facilities**Tourist Facilitation Center**

- A 175 sq. ft. built up area (at desired location) with necessary tourist maps, brochures and other guidance on the spots.
- Communication facility in the form of STD, Fax machine, along with necessary lighting arrangements. Besides this, provision of a water cooler facility, tables for office workers and chairs for visitors.
- Arrangement of shared taxi/shuttle service for the visitors.
- The average expenditure is expected to be Rs. 1.80-2.00 lacs per center.

Sanitation & Public Convenience

- A 100 sq. ft built up area with lavatory & toilet facilities separately for ladies & gents needs to be constructed along with overhead water storage tanks.
- The necessary lighting facilities as well as 2 wash basins to be provided along with SS fittings.
- The average expenditure is expected to be Rs. 1.00 – 1.20 lacs per center.

Cafeteria / Wayside Amenities

- It is proposed to have Highway Motels at the mentioned areas separately for domestic and international visitors having different types of food/snacks with a full-fledged kitchen facility.
- An 800 sq.ft built up area with hygienic interior, necessary lighting and other fixtures, chairs & tables along with a washroom. In certain cases also have a provision of A.C
- The average expenditure is expected to be of the order of 10-14 lacs per center.

Approach road

- An approach tar road 3.75 mt wide (each lane) of two lanes are proposed at Hundru fall, Lodh fall, Crocodile park, Panchgagh. The total road length shall be 60-65 kms.
- An approach morum road 3 mt. wide is proposed at Dasam fall, Jonha fall, Salpharni dam, Dalma national park, Vaitinda fall. Total road length shall be 30-35 kms.
- The approximate cost in case of tar road shall be Rs.1000 lacs plus the cost of morum road shall be around 165-180 lacs.

Budget hotels

- It is estimated to have 15-20 rooms per hotel along with necessary infrastructure facility as well as interiors and parking area.
- The approximate cost shall be Rs.90 lacs per hotel excluding land cost.

6.2.3 Sector wise classification of expenditure includes the following:

- Basic infrastructure
- Manpower
- Marketing and Promotion
- Identified Products
- Selectrive Tourism Spots

The expenditure of the development plan has been segregated into short term; medium term and long term plan on the lines suggested in point no. 4.4.0 of Chapter four.

6.2.4 The annual fund requirement for tourism perspective plan for the state of Jharkhand is indicated in the following Table 6.6.

Table 6.6: Annual fund outlay of Jharkhand

Term	Year	Basic Infrastructure	Product Development	Circuits /Areas	Manpower	Promotion/ Marketing	Total
SHORT	2002	5	-	-	-	-	5
	2003	15	-	10	3	5	33
	2004	200	150	15	3	5	373
	2005	20	250	25	3	4	302
	2006	15	300	30	4	5	354
	2007	-	-	15	4	5	24
	Subtotal	255	700	95	17	24	1091
MEDIUM	2008	5000	1000	300	10	5	6315
	2009	2000	1500	2000	15	5	5520
	2010	8000	2500	2500	10	5	13015
	2011	-	3500	-	10	10	3520
	2012	5000	-	-	10	8	5018
	Subtotal	20000	8500	4800	55	33	33388
LONG	2013	-	1500	-	5	5	1510
	2014	-	500	1500	4	5	2009
	2015	-	500	1500	4	5	2009
	2016	-	-	2000	4	-	2004
	2017	-	-	2000	4	-	2004
	2018	-	-	2500	4	-	2504
	2019	-	-	3500	4		3504
	2020	-	-	3500	4		3504
	2021	-	-	-			-
	2022	-	-	-			-
	Subtotal		2500	16500	33	15	19048
GRAND TOTAL		20255	11700	21395	105	72	53527

Thus the total plan outlay is of the order of **Rs. 535 Crores**.

6.3.0 Funding

Development of tourism infrastructure and improvement of tourism products mainly consist of the following:

- i) Central Financial Assistance for integrated infrastructure development.
- ii) Central Assistance to State government for developing tourist circuits and also for product development.
- iii) Institutional Assistance
- iv) Package of incentives for promoting private investment in the tourism sector

The different funding schemes of the Central Government are as shown below and elaborated later: -

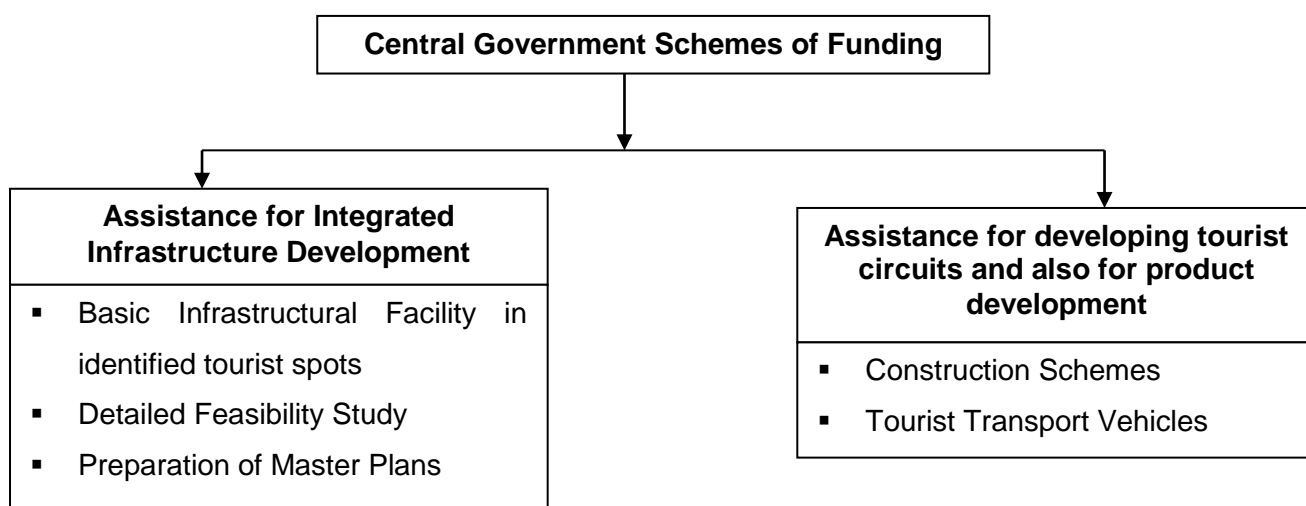


Figure 6.1: Central Govt. Scheme for Funding Tourism

6.3.1 Central Financial Assistance for Integrated Infrastructure Development.

Under this scheme, assistance is granted to provide the requisite basic infrastructure including roads, landscaping, water and electricity supply, drainage, sewerage, waste disposal system etc. in identified tourism spots.

The cost of development for each centre is proved to be shared amongst the central govt state government and financial institutions like Tourist Finance Corporation of India [TFCI], State Finance Corporation etc.

All the detailed feasibility studies and preparation of Master Plan will be funded by the Central Government. The developed land will be allocated to investors for putting up the necessary tourism superstructure in such a way that the loan component of the development cost and the interest thereon is recovered in a period of 8-10 years.

6.3.2 For developing tourist circuits and product development.

Since most of the infrastructure components and delivery systems are within the preview of the state government, providing financial assistance to State Government is mainly developing the infrastructure for tourism. The central Government investment for the improvement and creation of tourism circuits are channelised through the state government on a cost-sharing basis. The specific schemes for which assistance is provided have been subdivided into:-

- a) **Construction Schemes** (forest lodges, tourist complex, wayside amenities, tourist reception centre, public convenience etc.)
- b) **Tourist Transport** (mini buses, jeeps etc. for wild life viewing, cruise boats, ferry launches for water transport, tourist coaches in selected circuits etc.).

The most popular pattern for funding is the 'normal funding' under which, the Deptt. of Tourism, Govt. of India, meets almost the entire expenditure except the cost of land and interior decoration in case of the construction projects. Around 60% of the project cost has to be raised as loan from financial institutions or banks. This method of funding is applicable to bankable projects requiring large investment.

The state government desirous of availing the central assistance follows the following procedure:

- i) Preparation of list of projects proposed to be taken up during a particular year.
- ii) Discussion of the aforesaid list of the projects with the Deptt. of Tourism Govt. of India.
- iii) Short-listing or prioritizing of approved schemes.
- iv) Submission of detailed project reports alongwith required documents i.e. blue print of the project.
- v) Scrutinsation of projects and proposals with reference to the yardsticks of approved schemes, their desirability and availability of resources.
- vi) Approval of projects satisfying guidelines for financial assistance.

Preparation of List of Projects by State Govt.



Discussion with Central Govt.



Shortlisting



Submission of DPR & related Documents



Scrutiny of Projects



Approval of Projects satisfying guidelines

Fig. 6.2: Procedure for Grant of Financial Assistance

Grant of Financial Assistance by Central Government

The grant of assistance to state government for the development of tourism would include the following:

- i) Demand criteria i.e. number of popular tourist destinations and volume of tourist traffic.
- ii) Supply criteria i.e. availability of tourist facilities in respective centers.
- iii) Past performance and capacity criteria
- iv) Unique attractions of the state.
- v) Destination and circuits identified in the National Action Plan

6.3.3 Institutional Assistance

The institutional assistance for developing tourism facilities is available from domestic financial institutions i.e, **TFCI, IFCI, SIDBI, SFCs, IDBI, ICICI.**

TFCI is a specialized all India development finance institution to cater the needs of the tourism and related activities, facilities and services i.e. hotels, restaurants, holiday, resorts, amusement parks and complexes, safari parks, ropeways, cultural centers, convention halls, transport, travel and tour operating agencies, air, taxi services etc. The salient features of providing assistance by the Financial Institutions are:

- i) Providing all forms financial assistance for new, expansion, diversification and renovation projects, related activities, facilities and services.
- ii) Providing assistance by way of rupee loans, direct subscription/underwriting of public issues of shares/debentures.
- iii) Providing financial assistance to projects with capital cost of Rs. 3 crores and above; projects costing upto 3 crores and financed by TFCI alongwith the state level institutions/banks, major projects are financed with other All India Institutions like IFCI, IDBI, ICICI.
- iv) General norms of assistance are:
 - Minimum promoters' contribution 30% of project cost
 - Debt: Equity Ratio 1.5:1
 - Interest Rate bond: 14.5% to 17% p.a.
 - Repayment period 8 to 12 years.

6.3.4 Package of Incentives for Promoting Private Investment in the Tourism

For attracting private investment in the tourism sectors, the following incentives are available.

- i) **Priority status:** Hotels and tourism related activities are declared as priority sector for foreign investment. As a result, 100% foreign equity is permissible in the sector and automatic approvals and also grant by the Reserve Bank of India for foreign equity upto 51% and subject to specified parameters.
- ii) **Interest Subsidy:** Approved hotels upto 3 star category and heritage hotels outside the 4 metro cities (Delhi, Mumbai, Calcutta and Chennai) are eligible for interest subsidy ranging from 3% to 5% in respect of loans taken from IFCI, TFCI and State Financial Corporations. This subsidy increases in the case of hotels constructed in the travel circuits -cum-destinations identified for intensive development under the National Action Plan for Tourism (NAPT).
- iii) **Capital Subsidy for Heritage Hotels:** Capital subsidy of 10% of the project cost or Rs. 5 lakhs, whichever is less is available for developing any structure (palace/fort/haveli etc.) of 75 years or above as a heritage hotel, provided they are located outside the limits of corporations/municipalities and areas having more than 100 hotel rooms.
- iv) **Confessional Customs Duty:** Customs duty on specified items has been reduced to the level as applicable to project imports i.e., 25% provided the goods imported are required for the initial setting up of the hotel or for any substantial expansion of the hotel. Equipment for adventure sports can also be imported at a concessional rate of duty. Customs duty on specialised food items have also been reduced to 25%.
- v) **Income Tax Exemptions:** 50% of the profits derived by hotels, travel agents and tour operators in foreign exchange are exempt

from income tax under section 80 HHD of the Income Tax Act. The remaining profits in foreign exchange are also exempt if reinvested in tourism related projects. In respect of hotels that start operating in other places except Delhi, Calcutta, Mumbai and Chennai, the deduction allowed is 30% only (for 10 assessment year).

- vi) **Import of Essential Goods:** Hotels and travel agents/tour operators and restaurants approved by the department of tourism, govt. of India are entitled to import essential goods relating to the hotel and tourism industry upto a value of 25% and 10% respectively of the foreign exchange earned by them during the preceding licensing year.
- vii) **Export Promotion Capital Goods (EPCG) Scheme:** the import of capital equipment (including upto 10% under scheme at sl. No. (v) above) by hotels and restaurants, travel agents and tour operators is allowed at concessional rate of customs duty of 10% subject to an export obligation four times of cost, insurance and freight (CIF) value of the imports to be fulfilled in a period of 5 years. In case of CIF value of the imports of 20 crores or more, no duty is payable subject to export obligation to be 6 times the CIF value and the period to be 8 years.
- viii) **Liberalized Exchange Rate Management Scheme (LERMS):** Hotels, travel agents, tour operators and other organisations connected with the tourist trade are covered under LERMS. Authorised dealers can release foreign exchange for business visits, participation in conferences, seminars, training etc. with prior approval of the department of tourism. Under the Exchange Earners Foreign Currency (EEFC) Accounts Scheme (extended to hotels, travel agents, tour operators etc.), 25% of inward remittances in foreign exchange can be credited to this account and utilised for specified purposes.
- ix) **Assistance for Development of International tourism (ADIT):** Travel agents and tour operators in the country are being given

assistance under the scheme for market research, promotional visits abroad etc. to develop markets abroad.

- x) **Investment Facilitation Cell** : This cell has been setup in the Department of tourism, Govt. of India, for providing assistance of perspective entrepreneurs including the following :
- a) Prepare investment profile for each state
 - b) Establishing linkages with embassies and other institutions
 - c) Process investment proposals received from both local and foreign investors and obtain various approvals and clearances from various agencies like FIB, SIA, MOEF etc.
 - d) Assist entrepreneurs in getting import licenses, finance land etc.
 - e) Provide technical assistance.

6.3.5 Private Sector Participation

The following projects would be considered for private sector participation excluding land cost, in line with the different schemes narrated above.

Table 6.7: List of Projects

Sl. No.	Project
1	Ballooning
2	Ayurveda Center
3	Urban Haat

6.3.6 Steps taken by the State Government to perpetrate Tourism in the State

The emphasis of the annual plan is on creating a new infrastructure for Tourism in Jharkhand. Out lays are indicated for various works such as publicity, organizing cultural shows etc. With emphasis on ethnic culture and attracting tourists to various spots and areas of historical importance.

1. INR 30 lakhs have been earmarked for Promotion of Tourism for organization of prominent fairs and festival such as Hizla Mela in Dumka District and Fairs in other districts of Jharkhand state. For publicity INR 15 lakhs are earmarked.
2. For opening of Tourist offices at Calcutta, Varanasi, Delhi, Bombay, and Puri, an outlay of INR 25 lakh are earmarked.
3. For the development of under developed tourist spots, an outlay of 50 lakhs have been earmarked.
4. For renovation of Tourist centres, a total outlay of INR 281 lakhs have been earmarked.
5. INR. 150 lakhs have been provided under TSP
6. INR 1 Crore has been earmarked for Centrally Sponsored Schemes.
7. For modernisation and computerisation of Directorate of Tourism INR 10.00 lakhs have been earmarked.
8. For the Organisation of fairs and festivals and Publicity an outlay of INR 30 lakhs has been earmarked.
9. A total of Rs. 50 lakhs has been earmarked for construction of roads in tourist sector.
10. The department of tourism is also envisaging a preparation of 20 years perspective plan for sustainable tourism.
11. It is proposed to develop Rajrappa, Parasnath, Deoghar, Bastikinath, Jharkhand Dam & Netarhat in to modern tourist centres. The places around the waterfalls at Rajmahal, Sahebganj, Maithan, Tilaiya, Masanjors will also be developed as Tourist Centres.

6.3.7 Development Approach

- All projects assisted by Government of India and most of the State-sponsored projects will be bounded with the thrust areas.
- Tourism Development Projects (in specified spheres to be identified in individual cases) whose management is taken up by Municipal Corporations, Municipalities, Notified Area Councils, Development Authorities, Regional Improvement Trusts, Zila Parishads etc. may be supported with an one time assistance of upto 50% of the estimated cost (not exceeding a fixed ceiling) from the Government, after the projects are completed in all respects.
- Locations hitherto identified, as Tourists Centers shall be reviewed for short listing of viable ones. These locations shall be supported by publicity efforts according to importance.

6.3.8 Funding Initiatives from the State Government

The Directorate of Tourism and State Financing Agencies would make every endeavor to assist the tourism projects in getting adequate financial support from within and outside the state.

6.3.9 Thrust Areas – That require immediate attention

A) Roads

The state will place high priority in planning new roads and maintenance and improvement of existing roads that provide linkage to thrust areas and other identified destinations of tourist importance. The roads from Ranchi- Jamshedpur, Ghaghra- Netarhat – Daltenganj.

The state will take steps to provide adequate transport services for various categories of tourists. Five percent of the accrual from M.V. Taxes will be earmarked for various passenger amenities.

The Private sector shall be encouraged to invest in this field to the maximum extent. Permits can be issued liberally by the Transport Authorities in favor of the Tour Operators for operation of Deluxe and Air-conditioned coaches and car on the identified travel routes. Operation of three-wheelers and car-van rental service shall also be encouraged.

Private entrepreneurs operating tourist taxis shall have to use meter in accordance with the rules prescribed by the Transport Department. Rates will be fixed distance-wise from point to point. Auto-rickshaw will have meters.

For investment in the field of Tourist Transport Service, support of the State Financing Institution and Banks will be organized.

B) Air Connection

Air link is vital to attract investors, spur industrial/commercial activities and also to promote tourism.

The State Government will have to make endeavors to have direct links with important cities of the country.

C) Hotels & Other Tourism related facilities

- In view of the rising trend in the number of tourists visiting the state, special attention will be given to increase the accommodation facilities in important tourist centers in the state.
- Hotels/Motels/Golf courses/Ropeways and Wayside Amenity Centers satisfying the norms/conditions stipulated by the state government.
- Transport facility with air-conditioned car-coaches with minimum capital investment of Rs. 15 lakhs operation in travel circuits identified/certified by the Department of Tourism.

D) Convention Tourism

Hoteliers, industrial/business houses and other private entrepreneurs will be encouraged to establish and maintain convention centers, in order to attract national and international meetings, conferences and cultural events. A large convention complex will be established at Ranchi / Mc Cluskieganje and efforts would be made to establish facilities at other important centers.

CHAPTER SEVEN

MARKETING AND PROMOTION STRATEGY

7.1.0 Areas Identified

7.1.1 The development priorities of the government are to place the economy on a significantly higher growth path that will deliver greater economic benefits in the context of the new global economic and security order but also enhance human well being, achieve social equity, sustainability and efficiency.

7.1.2 The perspective plan has identified certain areas and aspects that have to be developed and promoted by the Tourism Department in close co-ordination with the concerned departments/bodies/associations from time to time.

7.1.3 There are certain areas which can be focused on the type of tourists i.e.

<i>Ethnic Tourism (Ranchi-Khunti- Chaibasa- Sahebganj)</i>	<i>International Tourists</i>
<i>Adventure Tourism (Betla-Mahuadandh-Lodh)</i>	<i>- Domestic Tourists</i>
<i>Religious Tourism (Deoghar)</i>	<i>- Domestic Tourists</i>
<i>Nature Tourism (Water falls)</i>	<i>- Domestic Tourists</i>

7.1.4 Keeping in view the above areas of development, the strategy has to be focused and type specific, which shall vary & cannot remain an uniform approach. The strategy for the development of tourism should be based on the following

- Connectivity
- Infrastructure
- Hygiene
- Safety & Security
- Affordability
- Accessibility

7.2.0 Strategy

7.2.1 The marketing of the proposed plan should be a 2-tier structure.

1st tier

- Creation of facilities
- Creation of Awareness
- Targeting the tourist communities (state specific)

2nd tier

- Invitation of private participation
- Providing operational incentives

To achieve these following steps need to be adopted

- Project Jharkhand as a major destination within and outside the country.
- Motivate international tourists at Varanasi to extend their trip and enjoy the nature's paradise (Betla - Lodh fall - Netarhat).
- Identify the USP's of various circuits / products.
- Focus on the operators and agents other than JTDC.
- Improve inter destination connectivity.
- Provision of Basic facilities [irrespective of the traffic] needs to be developed at various identified areas.
- Attract high-end tourist and focus on certain themes/products.
- Provide tourist information services before their arrival at the station such as
 - ◆ Historical & cultural background
 - ◆ Climate
 - ◆ Transportation schedules
 - ◆ Packages available
 - ◆ Location of shopping plazas, markets, postal facilities
 - ◆ Banks, medical facilities

◆ Regional institutions

7.2.2 The proposed strategy shall provide benefits if certain tools are provided such as

- Shuttle transport facilities between spots and nearest connecting point.
- Communication linkages
- Tour operators – the main promoter
 - ✓ Eligible Travel Agents should be authorized by State Tourism department.
 - ✓ Provide budget for promotion [brochures, advertising]
 - ✓ Provide franchise for a particular territory.
 - ✓ Sales incentive (1%, 2% commission) on every booking which the state government shall provide.
- Develop a web site indicating the connectivity, infrastructure in terms of accommodation, period to visit, excursion trip, name of operators, availability of guides, and appropriate duration along with cost components for Budget tourist.
- Centralised booking system to be adopted i.e, single window mechanism linking all PWD/ Forest bungalows/Tourist guesthouse & bungalows. In Jharkhand all the Tourist Bungalows are still under BSTDC so state tourism department should co-ordinate with them for a successful implementation of this plan.
- Invite private participation by giving promotional incentives such as:
 - Free land for a period of 8-10years [State owned] for construction of 40 bed-50 bed hotels.
 - Provide operational incentives such as:
 - ◆ LT Transformer [Power line]
 - ◆ Bore well [water]
 - ◆ Vehicle [sales tax off]
 - ◆ Luxury tax and entertainment tax waiver for a period of 5 years.

- Provide free mini buses for transit services wherein provide
 - ◆ Subsidy on interest
 - ◆ Provide/arrange for road licence
 - ◆ Fuel and maintenance to be borne by operator.
- Strengthening of major arteries, take the assistance of centre and state, the NHAI scheme of 50:50 participation.
- For strengthening service roads, approach roads, additional internal roads get assistance from PM Rural scheme [Gramin Sadak Yojana].
- Petrol pumps should be planned on various highways along with a cafeteria to facilitate the trip and midway halt for the Tourists.
- For remote areas, central power backup systems [generator 30-35 KVA] and charge for the same at higher rates than that of the SEB's.
- Promote local inhabitants / tribal people as guides, operators.