

Detailed Project Report



Ecotourism Site Development Plan

Dhanora-Turur

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EXECUTIVE SUMMARY

Ecotourism is about *uniting conservation, communities, and sustainable travel*. Ecotourism activities being implemented should adopt the following principles:

- Minimize physical, social, behavioral, and psychological impacts
- Generate financial benefits for both local people and industry
- Provide direct financial benefits for conservation of environment
- Design, construct and operate low-impact facilities

Well planned and disciplined tourism is need of time as increasing tourism in wildlife areas is putting lot of pressure on those areas. There is lot of emphasis on Ecotourism by both the G.o.I as well as G.o.M.P. especially in the areas surrounding the PA(s) to reduce the tourist pressure on PA(s).

MPSFDC which was incorporated as a Company under Companies Act, 1956 on 24th July 1975 has main business operations of commercial forestry and long term plantations. Ecotourism comes to MPSFDC as an incidental activity to improve its short term and recurring income. **Tourism was also indicated as an ancillary activity in the Memorandum of Association [Section B (Ancillary Objects) Objective no. 21]** at the time of incorporation of MPSFDC and the Corporation has decided to enter into Ecotourism in a big way as a step to diversify its current operations. Corporation is currently managing about 4.26 Lakh hectares of forests and the same area is being used to diversify the operations of the corporation.

The major highlights of the Ecotourism projects to be taken up by MPSFDC are:

- Eco-Tourism site and activities being implemented in such a way as to ensure that it will be virtually **“No Impact Tourism”**.
- **No de-notification of forest land**, no revenue area and no revenue forest utilization is being sought by MPSFDC for the ecotourism activities.
- **No tree felling** will be required at the ecotourism site.
- **Naturally open blank areas** have been identified to develop the tourist facilities.
- **No Landscape change** will be done in the area.
- **Multiple benefits to the local community** in the form of direct and indirect livelihood generation and other ancillary **benefits to local economy**.
- **No Compensatory Afforestation required** as no tree felling will be done.
- **No NPV liability** because of the Ecotourism Project.
- **Proper safety measures** have been planned to ensure safety of tourists and no disturbance to flora and fauna
- **No new roads to be constructed** at the site. Only existing forest trails to be used.
- Renovation of damaged infrastructure have been planned. All such infrastructure were **constructed before 1980**.

Ecotourism site of Mohgaon Project Division in Nainpur & Chiraidongari Forest Ranges is situated along State Highway SH11 & SH11B. SH11 cut across Nainpur Forest Range and SH11B passes through the northern part of Chiraidongari Forest Range connecting it to Khatiya Gate of Kanha Tiger Reserve. The tourist facilities will be built where the open land suitable for project has been identified along an already present forest road used by corporation for its plantation activities.

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1. INTRODUCTION

1.1 About the Project

Mohgaon Project Division, Mandla under MPSFDC was established in 1976. With the merging of Nainpur Project Division in 1995, at present Mohgaon Project Division encompasses 62866.72 hectares of total forest area.

Dhanora Beat is situated in Nainpur Forest Range of Mandla district. Dhanora is endowed with attributes which make it suitable for ecotourism site. The Wainganga-Thanwar river sangam (Nainpur Forest Range, Compartment No: 94A), Gugara waterfall (Nainpur Forest Range, Compartment No: 94A) are some of the ecotourism attractions of the site.

Turur Beat is situated in Chiraidongari Forest Range of Mandla district. Turur is endowed with lush green teak forest. It is enriched with flora & fauna. The undulating terrain & natural nallahs offers wildlife sighting opportunity.

Forest road connecting Dhanora and Turur is suitable for Jungle Safari. It is 23kms long stretch through lush green teak forest connecting Dhanora Forest Rest House with Turur Forest Rest House both on the forest land administered by MPSFDC. One of the three gates of KTR, the Khatiya gate is only 55 kms from the Dhanora Forest Rest House and 30 kms from the Turur Forest Rest House. State Highway (SH11) passes in front of the gate of Dhanora Forest Rest House. Similarly Turur Forest Rest House is also situated near State Highway (SH11B).

Honourable Supreme Court's in the year 2012 had put up a restriction of number of safari vehicle's which enter into a Tiger Reserve. The number of vehicle allowed in each trip area was determined as per the carrying capacity calculated for each Tiger Reserve according to NTCA's guidelines. 75% of the allowed number of safari vehicles are booked through online ticketing system in advance and only 25% safari vehicle are booked at the entry gate of Tiger reserve.

A substantial no. of tourists at KTR are the "walk in" tourists at the reserve i.e. who reach the reserve without any prior booking. A good number of these "walk in" tourists don't get the entry into the reserve as the seats get pre-filled. These tourists who reach the Tiger Reserve but do not get an entry are also referred as "Spill over" tourists. Most of such tourists are ready to take up any other alternate but responsible tourism activity in the vicinity of Kanha Tiger Reserve.

With the strong and potent combination of availability of wildlife in the compartments and having such an advantageous location because of its proximity to KTR this site has been selected for an Ecotourism project by MPSFDC keeping in view the accessibility by road up to the site and likely tourist flow from KTR and from nearby urban centres.

Corporation has conceptualized the site in such a manner so that it can provide a suitable ecotourism site for tourists coming to KTR and provide alternate activities to a Tiger Safari for people who want to connect to nature and wildlife. Corporation will develop the site and activities in a manner that it has least impact on the surrounding and will take suitable steps to increase the presence of wildlife in the area in a responsible manner.

The activities which will be part of ecotourism at Dhanora are:

- Cottage Tent Stay
- Tree House Stay
- Boating/Kayaking
- Wildlife sighting from Watchtower
- Jungle Safari
- Camping Tent Stay
- Forest Walk/Nature Walk
- Cycling on cycle trails
- Bird Watching

All the activities mentioned above are proposed in the first phase and will be undertaken with proper care. Careful designing and implementation will be done to ensure that there is virtually no impact on the surrounding and any changes required at the specific location will be carried out carefully and responsibly, in a non-destructive way for the environment.

Area required for the proposed activities has been carefully identified and only those open areas have been selected which have no or negligible tree cover. Establishment has been planned in such a way that no felling of trees is required and no modification of natural landscape had to be done.

Thus planning for Ecotourism site at Nainpur & Chiraidongari Forest Ranges of the Mohgaon Project Division, Mandla will serve following purposes for MPSFDC:

- Help achieving the vision and mission of MPSFDC in a better way
- Generate better revenues from the area having good potential for ecotourism
- Connecting with the tourist coming to KTR and thereby enhancing MPSFDC's visibility to general public which will eventually help in enhancing the Brand of MPSFDC.

1.2 Background of the ecotourism in MPSFDC

MPSFDC under its renewed long term foresight under its dynamic leadership has started walking on the path of diversification to new operations other than its customary operations of forestry and silvicultural practices. However care is being taken to take up such operations which are aligned with MPSFDC's long term Vision and Mission statement and help MPSFDC in contributing to the society as a whole.

With the above mentioned objective in mind, one of the activities which are being taken up by MPSFDC is of developing Ecotourism sites in its various project divisions

after carefully considering all the aspects, doing proper evaluation and verifying the feasibility of potential sites. After carefully evaluating various sites, the sites which are having good long term potential for ecotourism activities are being proposed for development of such activities.

As already mentioned one such site in the Mohgaon Project Division is Nainpur & Chiraidongari Forest Ranges which is within the vicinity of KTR and can be developed as ecotourism spot near to the KTR due to its potential to attract tourist coming to visit KTR.

1.3 Site at a glance

Dhanora-Turur Ecotourism Project is located in Pench-Kanha corridor and one of the three gates of KTR, the Khatiya gate is only 55 kms from the Dhanora Forest Rest House and 30 kms from the Turur Forest Rest House. 15% of the safari vehicles allowed in the KTR enter from the Khatiya gate and many resorts and hotels catering to tourists visiting the KTR are located in and around Khatiya gate.

With such an advantageous location with respect to presence of wild animals and nearness to KTR, this site posses a huge potential for ecotourism activities namely Boating, Cycling, Nature walk, Jungle Safari, Nature/Eco Camps with Tent Accommodation and Tree Houses, Nature and Wildlife Photography etc.

In KTR the average, annual tourist influx of last three year amounts to about 1.5 lakhs which almost 15% are foreigners. At times, ten to eleven thousands tourists visit the park in a month and on holidays the number sometimes goes up to about thousand persons per day. Some of such peak days are New Year Day (1st Jan), Christmas Day, Independence Day, Republic Day etc.

One of the prominent reasons for huge influx of tourist on a single day to KTR is its closeness to Jabalpur which is 210 kms from KTR. This results in a lot of 'walk-in' tourists to KTR who reach here without any prior safari bookings and look out for all possible activities in and around KTR. Such tourists who are interested in activities beside just tiger safari into the reserve will be our target customers and the recent data shows that large numbers of such tourist reach KTR.

1.4 Potential of ecotourism and various activities

Due to the advantageous location of the proposed location for the ecotourism, it has lot of potential for various ecotourism activities. Also as mentioned above a good number of tourists reaching KTR are the ones who come here without any prior bookings and are on the lookout for all possible activities in and around Kanha. The activities being planned by the MPSFDC have potential to attract a large number of

spill over tourists coming to Kanha but not getting a safari entry into the Reserve, as at a time only 20 safari vehicles are allowed at the Khatiya gate.

Many of such tourists are interested in alternatives which can provide them opportunity to get a glimpse of the wildlife and are ready to take up such activities in the adjoining forest ranges. Various potential activities which can be implemented at the site are as listed below:

Immediate Potential:

- Jungle Safari
- Jungle Camping
- Forest Walks / Nature Walks
- Cycling on Cycle Trails
- Boating / Kayaking
- Angling
- Bird Watching
- Wildlife sighting from Machaan
- Nature / Wildlife Photography
- Children Park
- Basketball Court
- Archery

Potential in Long Term:

- Commando Net
- Rappelling
- Monkey Crawling
- Commando Bridge
- Bamboo Rafting
- Village Visits

1.5 Location specific SWOT Analysis

Below is the SWOT analysis specific to the forest ranges selected for ecotourism project and the activities planned there.

Strengths:

- Nainpur & Chiraidongari Forest Ranges' compartments selected for Ecotourism project are having a mix of pristine Teak Plantations by MPSFDC, patches of natural open areas (with undulating terrain), some patches of natural mixed forest thus being highly rich in Bio Diversity.
- Near to Kanha Tiger Reserve implying good influx of potential customers.
- Strong signs of presence of wild animals and regular sightings of Jackal, Hyena, Nilgai, Wild Boar, Cheetal, Sambar and Barking Deer by local staff.
- Presence and Sightings of Tiger and Leopard from the monsoon season (Month of June) to the month of January/February. Their presence coincides with availability of water in the Ranges.

Weakness:

- Area till now was considered for only plantation activity and is totally undeveloped with respect to Tourism activity.

Opportunity:

- Due to high number of spill over tourist from Kanha this area has access to good number of target customers
- Only few resorts and lodges provide alternate wildlife sighting activities to tourist coming to Kanha. Thus our facilities are likely to have high demand among the tourists.
- By careful planning and implementation of the Ecotourism project MPSFDC can increase its revenue from the area. Also by giving such facilities to tourists MPSFDC's Brand Visibility will improve and it will create awareness about MPSFDC among general public.

Threats:

- Ecotourism activities may cause disturbance to the wildlife. Rules and regulations need to be adhered to by the implementing organizations as well as the tourists visiting the place.
- Safety precautions need to be implemented properly.
- Some of the resorts and/or lodges may come up with similar activities which are lower priced to lure away tourists to their resorts. Periodic reviews of activities and the pricing is recommended.

1.6 Tourism Activity Season

Since our target customers are mainly the spill over tourists from the KTR tourism season for our site will coincide with the tourism season of the KTR.

All Tiger reserves in the M P state are closed for tourism activities during the monsoon season on account of rains and post monsoon repair work. Kanha Tiger Reserve is closed for tourism activity from 01st of July to 15th of October of every year. Our ecotourism site will also operate during the same months as that of the KTR.

2. SITE DETAILS

2.1 Name and Area of the Destination

Details of compartments coming under the Ecotourism project are:

Table-01: Details of compartments coming under the Ecotourism project			
Chiraidongari Forest Range			
Circle	Beat	Compartment	Area (in ha)
Patwahi	Turur	66A	231.500
		66B	174.000
	Uttar Patwahi	75	291.800
		76	409.100
Cheechgaon	Duddm	74A	409.500
		74B	34.000
	Cheechgaon	78	354.100
	Poudi	81	576.300
		82	524.100
Nainpur Forest Range			
Circle	Beat	Compartment	Area (in ha)
Beejegaon	Kohka	83	321.300
		85	345.200
	Keregaon	87	507.100
	Beejegaon	P08	292.300
Dhanora	Gouji	P09	283.060
	Dhanora	93A	588.400
		93B	87.000
		94A	424.400
		94B	179.700

Eco-camping activity will be conducted only in Compartment No. 94 of Nainpur Forest Range. The rest of the compartments are used only for the purpose of Jungle Safari as indicated in **Plate-III**.

2.2 District HQ

Mohgaon Project Division, Mandla

2.3 Status of Land: Forest/Revenue/Non-Forest Revenue

All compartments which will be affected by the proposed ecotourism activities come under the jurisdiction of MPSFDC & notified as **Reserved Forest Land**.

2.4 Villages around the Site

Village	Tola	Range	Circle	Beat	Compartment No	Households
Attaria	Lalbarra	Nainpur	Nainpur	Dhanora	93B	25
	Imlitola	Nainpur	Nainpur	Dhanora	94B	15
Patwahi	Patwahi	Chiraidongari	Cheechgaon	Duddm	74B	15
Turur	Turur	Chiraidongari	Patwahi	Turur	66B	25

2.5 Area identified for Ecotourism site development

The implementation of Dhanora Ecotourism Site Development Project shall entail utilization of forest land which comes under exclusive supervision of MPSFDC. Purpose wise breakup of utilization of forest land is provided in **Appendix-IV** and **Appendix-V**.

The estimated requirement of land is 0.2217 hectares. All the land required falls under the category of forest land administered by MPSFDC. The proposed diversion area which will be used for Ecotourism Activity for this Project is situated is spread in two Forest Ranges, i.e. Nainpur & Chiraidongari Forest Ranges, in following compartments of MPSFDC.

Forest Range	Compartment No.	Total Area of Compartment	Area Required for Ecotourism Project
Nainpur	94A	424.000 ha	0.0917 ha
Chiraidongari	66B	174.000 ha	0.0125 ha

Rest of the area i.e. 0.1175 ha is required in the form of Rapta, Causeways & Watchtower to be constructed in different compartments of Nainpur & Chiraidongari as indicated in **Appendix-V**.

5 kms trekking path / cycling track connecting Dhanora Forest Rest House to Wainganga-Thanmar river sangam passes through 94A & 94B compartments of Nainpur Forest Range. 23 kms Jungle Safari track connecting Dhanora Forest Rest House (Nainpur Forest Range) to Turor Forest Rest House (Chiraidongari Forest Range) passes through compartments listed in Table-01.

For detailed layout of the Dhanora Ecotourism Site Development Project land requirement refer to **Plate-I**.

2.6 Wildlife at the Site

Regular sightings of various wild animals by the local field staff (Forest Guard, Chowkidars) are reported. Also during the field survey done for the feasibility study of the ecotourism and identifying the sites for various activities some of the wildlife was also sighted in the area.

In context of the location selected for the ecotourism site food and water are available sufficiently for wildlife present at the site. As mentioned later in the infrastructure development, both of these resources availability will help in wildlife sighting in the compartment by developing causeway and rapta.

Table below shows some of the animals which have been reported or sighted within Nainpur & Chiraidongari Forest Ranges by local staff deputed at the compartment from time to time.

Table-04: List of Mammals found in Nainpur & Chiraidongari Forest Range		
SI No	Common Name	Scientific Name
01	Tiger	<i>Panthera tigris tigris</i>
02	Leopard	<i>Panthera pardus</i>
03	Jungle cat	<i>Felis chaus</i>
04	Jackal	<i>Canis aureus</i>
05	Indian Fox	<i>Bulpes bengalensis</i>
06	Indian Wild Dog	<i>DholeCuon alpinus</i>
07	Rhesus Macaque	<i>Macaca mulatto</i>
08	Common Langur	<i>Semnopithecus entellus</i>
09	Common Mongoose	<i>Herpestes edwardsi</i>
10	Striped hyena	<i>Hyaena hyaena</i>
11	Sloth Bear	<i>Melursus ursinus</i>
12	Ratel/Honey-Badger	<i>Mellivora capensis</i>
13	Three-striped Palm Squirrel	<i>Funambulus palmatum</i>
14	Indian Porcupine	<i>Hystrix indica</i>
15	Indian House Rat	<i>Rattus rattus</i>
16	Black-naped Hare	<i>Lepus nigricollis nigricollis</i>
17	Gaur	<i>Bos gaurus</i>
18	Nilgai/Blue Bull	<i>Boselaphus tragocamelus</i>
19	Four-houred Antelope	<i>Tetracerus quadricomis</i>
20	Black buck Antelope	<i>Cervicapra</i>
21	Sambar	<i>Cervus unicolor</i>
22	Chital/Spotted Deer	<i>Axis axis</i>
23	Muntjak/Barking deer	<i>Muntiacus muntjak</i>
24	Indian Wild Boar	<i>Sus scrofa</i>

Following tables list the Birds found in the area:

Table-05: List of Birds found in Nainpur & Chiraidongari Forest Range		
SI No	Common Name	Scientific Name
01	Rufoustailed finch lark	<i>Ammomanes phoenicurus</i>
02	Swallow	<i>Hirundo rustica</i>
03	Redwinged bush lark	<i>Mirafra erythroptera</i>
05	Chestnut bellied Nuthatch	<i>Sitta castanea</i>
06	Blue rock pigeon	<i>Columba livia</i>
07	Large cuckoo shrike	<i>Caracara novachollandiae</i>
08	Black winged kite	<i>Elanus caeruleus</i>
09	Grey partidge	<i>Francolinus pondicerianus</i>
10	Black ibis	<i>Pseudibis papillosa</i>
11	Pied kingfisher	<i>Ceryle rudis</i>
12	Indian sandgrouse	<i>Pterocles existus</i>
13	Koel, Cuckoo	<i>Eudynamys scolopatea</i>
16	House sparrow	<i>Passer domesticus</i>
17	Common Grey Hornbill	<i>Tockus birostris</i>
18	Common snipe	<i>Gallinago gallinago</i>
19	Spotted Dove	<i>Streptopelia chinensis</i>
20	Common Indian Nightjar	<i>Caprimulgus asiaticus</i>
21	Common King fisher	<i>Alcedo atthis</i>
23	Redwattled Lapwing	<i>Vanellus indicus</i>
24	Indian Ring Dove	<i>Streptopelia tristis</i>
25	Common Myna	<i>Acridotheres tristis</i>
26	Indian Cluff Swallow	<i>Hirundo fluvicola</i>
27	Indian Roller or Blue Jay	<i>Coracias benghalensis</i>
28	Green Bee-eater	<i>Merops orientalis</i>
29	Golden Oriole	<i>Otiolus oriolus</i>
30	Grey Wagtail	<i>Matacilla caspica</i>
31	Redvented bulbul	<i>Pycnonotus cafer</i>
32	Indian Tree Pie	<i>Dendrocitta vagabanda</i>
33	Crow-pheasant or Coucal	<i>Centropus sinensis</i>
34	Painted Sand grouse	<i>Pterocles indicus</i>
35	Purple Sunbird	<i>Neotarinia asistica</i>
36	Common Babbler	<i>Turdoides candidus</i>
37	Common Green Pigeon	<i>Teron phoenicoptera</i>
38	Asian paradise flycatcher	<i>Terpsiphone paradisi</i>
39	Indian Peafowl	<i>Pavo cristatus</i>
40	Red Junglefowl	<i>Gallus gallus</i>
41	Black Francolin	<i>Francolinus francolinus</i>
42	Grey Francolin	<i>Francolinus pondicerianus</i>

3. INFRASTRUCTURE

3.1 Existing Infrastructure

As mentioned earlier the site till now was utilized only for plantation activity by MPSFDC no infrastructure is present which can be directly utilized for tourism activity. Existing infrastructure such as Forest Rest Houses, Kitchens, Store Rooms and Staff Quarters present in Nainpur & Chiraidongari Forest Ranges need renovation so that they can be used for tourism activity.

Detailed information of location identified for renovation of Existing Infrastructure is presented in **Appendix-IV** & **Appendix-V** and estimated cost for renovation is presented in **Appendix-II**.

3.2 Proposed Development Activities

With the strong and potent combination of availability of wildlife in the compartment and proximity to KTR which already has a huge influx of tourists interested in nature and wildlife, MPSFDC is has vision to develop infrastructure in a such a manner so as to increase the presence of wildlife even during the summer season and thereby attracting more tourist into the area.

This vision will be realized by implementing following steps:

- Identifying and selecting suitable areas which can be used for recreational activities like boating and angling.
- Building causeway cum stop dams at strategic locations which will help in creating a trail for Jungle Safari and better wildlife sighting.
- Water availability will help in improving the presence of wild animals in the area which will eventually increase the wild life sightings for the tourists opting for Jungle Safari and nature walks and photography in the compartment.
- Tree Houses and tenting accommodation for night camping will also be developed for some of the tourists who are willing to stay and spend some quality time in the lap of nature in a wilderness area.
- Jungle Safari trails and nature trail will be developed for the tourist.

3.3 Proposed Infrastructure

- **Natural Trail / Cycling Trail**

Hiking, cycling, trekking, walking and driving in forests is a major tourist activity which, if carried out carefully and responsibly, is non-destructive to environment and provides educational and recreational value to the tourist.

Trails will be developed along a suitable track and carefully so as to have minimum impact on the surroundings. Trails will be developed for Jungle Safari, Nature Walk

and Cycling activities. Trail's starting point will be near to Dhanora Forest Rest House. Creating will involve minimum of alternation of natural environment.

All the trails will be developed in such a way that these will pass through the plantations and suitable near to water bodies to give the tourists to get a glimpse of wildlife wherever possible.

Signage and interpretation along the trails helps the tourists in appreciating local ecology and local culture including use of plant resources. Extensive and carefully designed signage that blends with the surroundings and which is built using local materials will be developed and put in place at strategic points.

- **Eco Camp (Tent accommodation)**

Eco camp which will be tent camping accommodation is basically an outdoor recreational activity. A flat high surface surrounded with less no of trees suitable for setting up camps was identified for camping. Three different types of Tenting accommodation are being proposed:

Table-06: Details of Tenting Accommodation proposed			
SI No	Types of Tents	Quantity	Remarks
01	Swiss Cottage Tent	3	Luxury Accommodation. Fully AC Tents with attached lat bath.
02	Quechua Big Family Tent	2	Basic non luxurious accommodation. Can accommodate a Family of 4 people in one single tent.
03	Quechua Small Tent	2	Basic non luxurious accommodation. Can accommodate 2 persons in one tent.

Thus the Eco Camp facility will be having a variety of staying facility providing both luxury as well as basic economic staying facility. The site which has been selected as the camping site is strategically located near to the Wainganga-Thanwar river sangam (confluence) to provide a stay in the lap of nature in wilderness area to the occupants.

The participants (known as campers) will be able to enjoy the lush green ambience and stay there in tent accommodation which will be provided few basic facilities like drinking water and an option of Tea/Coffee in the morning. However the camping facility will be developed with an idea of providing just one overnight stay to the tourists and not intended for longer duration of the stay.

Tenting site will be equipped with Solar lighting facility with a backup generator in case of emergency to fulfil the lighting requirements. Since the basic staying facility is to be provided basic minimalistic lighting will be provided outside the tents in the area identified for setting up tents.

The tents of the Quechua Company are currently being used by the MP Ecotourism Board for their ecotourism sites and have positive feedback from both the Board and the customers. The tents will be removed after the tourist season is over and kept at the nearest FRH Store Room. These camping sites will be designed so as not to modify the natural landscape, and leave least visible evidence once these have been wound up.

- **Tree House**

Tree house will provide tourist an option to stay in the lap of nature and spend some quite serene time with their family. Proximity of Wainganga-Thanwar river sangam (confluence) will enhance the experience of stay in the lap of nature in wilderness area to the occupants. The tourist residing in the tree houses might get an opportunity to see or hear some of the animals from the safe confinement of the tree house.

The tree houses will be double bedded accommodation with attached dressing and bathrooms with a balcony in the front. These tree houses will be built on an elevated structure to give the occupants an elevated view of the surrounding and feeling of staying on the tree top.

The tree house will have double bed of bamboo or wooden type construction and bamboo or wooden set of two chairs, a small centre table and a wooden almirah. Since the idea is to provide basic non luxurious but close to nature type of accommodation, very basic needs will only be fulfilled.

The proposed tree houses will have dimensions as mentioned below:

Table-07: Details of Tree House proposed		
SI No	Type of Area	Dimension (in feet)
01	Main Room/Bedroom	12" by 10"
02	Dressing Room	5" by 5"
03	Bathroom cum Toilet	7" by 5"
04	Balcony	15" by 4"

- **Machaan (Watch Tower)**

Machaan will be built at strategic location from where wildlife can be sighted from the heighted Machaan and a panoramic view of the compartment can be seen. Two such locations have been identified and the height of the Machaan will be 20 feet. Binoculars will be provided to enhance the sightseeing experience of the tourists and it will be ideal place for Bird watching too. Machaan that will be constructed will have seating arrangement as well to give the tourists an opportunity to sit, enjoy a cup of coffee/tea and have a look at the nature and wildlife.

- **Cafeteria**

A cafeteria site is identified and proposed to be built to provide the tourists coming to our site with options for enjoying some local dishes along with some basic fooding. The proposed cafeteria would be of about 60 square meters (approx.) with suitable no. of tables to seat about 30 customers. Simple furniture of either wooden or plastic type will be procured.

Estimated cost for constructing cafeteria is an indicative figure and includes all construction cost, materials, water fittings, cost of the furniture (simple furniture), utensils etc.

Photograph of the site selected for Cafeteria is below. The site is just next to the camping site identified and proper chain link fencing of 2.5 meter height will be done around the Cafeteria to stop wild animals from entering the cafeteria as they might get attracted to the smell of food.

- **Children Park**

A small children park is proposed to be constructed with 1 swing, 1 slide and 1 Merry-go-round. This will give some kind of recreational activity to the small kids of the tourists coming to our site.

- **Basketball Court**

A Basketball Court will be developed at the camping site to provide some playing activity for the adults who have come to our site. Basketball Court will be constructed within the 4700 sq ft area identified for the camping location at the ecotourism site.

- **Beautification and Aesthetic Plantation**

Some additional trees or climbers will be grown within the plot identified for the camping location to enhance the overall aesthetic beauty of the camping site. A small lotus pond will also be developed to enhance the look to the site.

- **Causeway and Rapta**

As mentioned to ensure better Jungle Safari and wildlife sighting experience, 4 Rapta and 5 Causeways are proposed to be constructed after carefully selecting spot. The spots have been chosen after considering following points:

- the suitable terrain to support the construction
- existence of natural nallah
- large water catchment area
- large enough area for storage of water
- having good cover around for wild animals to approach the water for drinking

- **Chain link fencing**

Protective chain link fencing around the camping site, cafeteria, tree house site and umbrella sitting will be provided to provide a safe and secure area for the tourist stay and movement. Since the area is surrounded by wildlife this will help in minimizing any kind of conflict and accidents.

Chain link fencing to secure the cafeteria and the camping site/tree house location will be of the height of at least 2.5 meters to ensure proper safety around the cafeteria and camping location.

Detailed information of location identified for above mentioned particulars is presented in **Appendix-IV** & **Appendix-V** and estimated cost for constructing the particulars is presented in **Appendix-II**.

4. TOURISM ACTIVITIES

4.1 Existing Activities

As mentioned earlier the site till now was utilized only for plantation (non-irrigated plantation) activity by MPSFDC no tourism activity at present is being done in the compartment.

4.2 Proposed Tourism Activities

Table-08: Details of Proposed Tourism Activities		
SI No	Activity	Remarks
01	Boating	The very slow stream of the rivers at the sangam makes the condition favourable for peddle boating. Life saving gears will be arranged. Locals will be trained to handle this activity. Carrying the peddle boat from the site to store room would be possible in small trucks when required.
02	Jungle Safari	Provision for buying Gypsy has been done which can be used for Jungle Safari in the Nature Trail to be developed. The path traced during proposed Jungle Safari is indicated in Plate-III .
03	Wildlife Sighting from Watch Tower (Machaan)	As mentioned earlier six watch towers will be built at strategic locations near elevated area from where the probability of sighting wildlife will be much easier. These sites will provide the tourists with ample opportunities to stay on the watch tower, for some time and by taking proper care and precautions so as to make negligible disturbance, and spot some of the wild animals in their natural surroundings.
04	Bird Watching	Tourist coming to our site will have ample options to pursue bird watching through cycling or nature walk or Jungle safari. Even the staying facilities like the tents and tree houses are surrounded by natural vegetation which will give the tourists lot of opportunities to spot variety of bird species found the area close to Kanga Tiger Reserve.
05	Nature and Wildlife Photography	Tourist coming to our site will have lot of scope to do nature and wildlife photography on their visit to the site.

06	Trekking	Tourists will trek through the beautiful teak forest from Dhanora FRH towards Wainganga-Thanmar river sangam. The trekking path is approximately 5kms long. Trekking is an integral part of ecotourism activities.
07	Cycling	Cycling activity can be conducted on the same trail which will be developed for Nature Trail. The track's length will be almost 5 kms and the cycles will be provided to the tourists.
08	Camping	As mentioned in the heading 3.3 tent accommodations will be provided for tourists looking for adventurous stay in the area in the form of Tree House, AC Swiss Tent, Cottages and Quechua Tent.
09	Umbrella Seating	At the bank of big nallah, near to the stop dam, a location has been identified for umbrella seating. Arranging umbrella seating is highly cost effective. It can be carried easily to the site and would occupy very less space in the store when folded.
10	Tiger Safari	Provision for buying Gypsy has been done for taking tourists coming to our site for Tiger Safari in Kanha Tiger Reserve. Terms and Conditions for Tiger safari will be discussed with Kanha Tiger Reserve Management and finalized later. <u>NOTE:</u> Terms and Conditions, Revenue sharing, Ticketing etc for Tiger Safari are not in scope for the current version of DPR. Only the provision for Vehicle has been done in this DPR. Other items regarding safari will be finalized later.
11	Other Recreational Activities	<ul style="list-style-type: none"> • Tribal dance performances by local community • Drama / Nukkad-Natak by local community • Children play area • Basketball Court

5. PROJECT IMPLEMENTATION

The following are the principal steps in implementation of the present proposals after the project has been sanctioned.

- Preparation Phase

This phase would include making enabling provisions where required in policy and law and communicating the same to all stakeholders with the intention of promoting at the site proposed. Role clarity will be defined among all the stakeholders through MoUs and/or agreements which will be arrived at in a participatory manner.

This will prepare the MPSFDC, local communities, the local tour operators and the staff for owning up the project after reaching clear understanding of mutual obligations, duties, and responsibilities. Detailed work plans for creation of tourist facilities as well as the standard operation procedures for use and management of these facilities and ancillary services will be clearly spelt out in documents that will be arrived at in a participatory manner.

- Training Phase

In this phase trainings will be organised for various field level actors of different stakeholder. These trainings will be one of the most important parts of the programme and will lead to capacity building in management, as well as enhancing ability to appreciate the importance of ecotourism as a conservation tool. The effectiveness of capacity building exercise will determine the long term sustainability of the project.

- Implementation Phase

In this phase physical infrastructure and facilities will be created. It will be the principle responsibility of MPSFDC and the construction agency involved to ensure proper implementation using proper designs and procedures fitting to the area.

- Operational Phase

Under this phase tourists will start flowing in small of large groups and for various different activities. Local staff will be playing their roles of enabling the tourist activities in an orderly manner and providing services to the tourists.

- Monitoring & Improvement Phase

Constant monitoring will carried out for both tourist responses received through feedbacks, and the impact of the tourist activities on the habitat. A predetermined set of criteria and indicators, developed during the preparation phase in a participatory manner, will be used for measuring and monitoring the impacts and success of the project.

6. TOUR PACKAGE

Different tour packages and itinerary will be offered to the target customers. Separate tariffs for Indian tourist and tourists from other nationalities are proposed. Tentative packages which can be offered to the tourists is as tabulated below:

Table-09: Details of Tour Packages proposed					
Duration	Type of Package		Tariff	Meals	Activities
Single Day	Day Package	No Stay	Rs. 900 (\$22)	Breakfast and Lunch	Boating Nature Walk
One Night One Day	Standard	Standard Camping Tent	Rs. 1690 (\$29)	Breakfast, Lunch and Dinner	Jungle Safari Boating Nature Walk Umbrella Sitting Watch Tower
	Standard Family	Family Camping Tent	Rs. 2490 (\$39)		
	One Day Silver Package	Cottage Tent (AC)	Rs. 3790 (\$54)		
	One Day Gold Package	Tree House (AC)	Rs. 3990 (\$59)		
One Night Two Days	2 Day Standard	Standard Camping Tent	Rs 2190 (\$39)	Breakfast and Lunch (for 2 days) Dinner (for 1 Night)	Jungle Safari Boating Nature Walk Cycling Umbrella Sitting Watch Tower Bird Watching Nature Photography Local Folk Performances
	2 Day Standard Family	Family Camping Tent	Rs 2990 (\$49)		
	2 Day Silver Package	Cottage Tent (AC)	Rs. 4290 (\$64)		
	1 Day Gold Package	Tree House (AC)	Rs. 4490 (\$80)		

7. MARKETING & PUBLICITY

Since our endeavour is not just to develop the site as ecotourism destination but also to earn profits so we develop the site in line with the needs and requirements of our clients. Our target customers include the tourists from the KTR majorly who do not get entry into the park as most of them are the walk-in local tourists who reach here from nearby places including Nagpur and Jabalpur.

Local tour operators and travel agencies, who are handling these tourists, will be contacted and made aware about the activities we intend to provide. If shown interest by local tour operators MPSFDC will tie-up with them so that they include our site in the itinerary of the tourists. Suitable Hoardings, pamphlets and site specific marketing material will be published and hoarding will erected at suitable place and pamphlets will be distributed to tourists coming to KTR in the initial period.

Following table provides a concise illustration of Marketing Strategy to be implemented:

Table-10: Details of Marketing Strategy of the Ecotourism Project		
SI No	Particular	Description
01	Product	Ecotourism site in Nainpur & Chiraidongari Forest Reserve
02	Marketing Medium	<ul style="list-style-type: none"> • Posters • Pamphlets • Signboards • Brochures • Social Media • Newspaper • Radio • Gas Balloons
03	Target Market	Tourists visiting Kanha Tiger Reserve
04	Media Content	<ul style="list-style-type: none"> • Name of Product • Tag Line • Features of Product • Elaborative Photographs • How to Reach • Contact Details
05	Name of Product	Dhanora-Turur Jungle Camp
06	Tag Line	Trek the trails less travelled
07	Features of the Product	<ul style="list-style-type: none"> • Jungle Camping, Boating & Angling • Trekking, Cycling & Jungle Safari • Bird Watching & Wildlife Photography • Glimpse of Folk Culture
08	How to Reach	Location of Ecotourism Site with respect to Khatiya Gate (KTR) indicated with elaborative route map.
09	Contact Details	<ul style="list-style-type: none"> • Dedicated helpline number • Dedicated website • Address of Ecotourism office at the site

For product promotion different marketing medium will reach the target market in following ways:

Table-11: Reaching target market through different marketing medium		
SI No	Marketing Medium	Marketing Location
01	Signboards, Posters, Pamphlets	<ul style="list-style-type: none"> • KTR Gates: Khatiya, Mukki, Sarhi • Jabalpur airport, railway station, bus stand • Nagpur airport, railway station, bus stand • At eating joints on highways connecting to KTR
02	Brochures	<ul style="list-style-type: none"> • Jabalpur & Nagpur Tour & Travel operators' offices • Interpretation Centre of KTR & PTR • Local Hotels & Resorts
03	Newspapers, Radio, Social Media	<ul style="list-style-type: none"> • Newspaper: Dainik Bhaskar, Times of India, Patrika • Radio: Red FM, My FM, Vividh Bharati • Social Media: Facebook, Google
04	Gas Balloons	<ul style="list-style-type: none"> • Dhanora-Turur Ecotourism Site

7.1 Marketing Expenses

Below table provides a rough estimate of marketing expenses to be incurred during first year of this project:

Table-12: Tentative Marketing Expenses Details		
SI No	Marketing Medium	Expenses (in Lakhs)
01	Sign Boards	0.70
02	Gas Balloons	1.00
03	Newspapers	0.90
04	Posters	0.40
05	Brochures	0.20
06	Pamphlets	0.20
07	Radio	0.70
08	Social Media, Website	0.60
09	Other (Helpline, Kiosk etc)	0.30
	Total	5.00

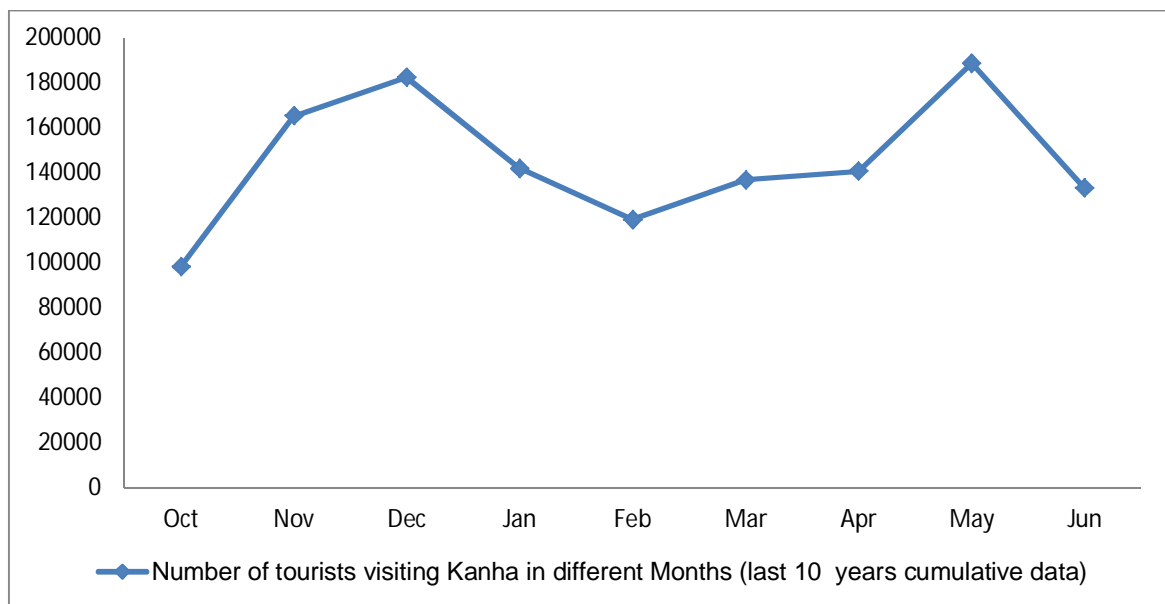
Thus total marketing expenses (tentative under various heads) is: 5.00 Lakhs.

7.2 Season Based Marketing

Kanha Tiger Reserve is closed for tourism activity from 01st of July to 15th of October of every year. For other months the tourist's influx varies according to following data (source: *Kanha Office Report*):

Month	Number of Indian Tourists	Number of Foreign Tourists	Total Number of Tourists
Oct	89150	8995	98145
Nov	135076	30235	165311
Dec	164300	18147	182447
Jan	122338	19614	141952
Feb	84426	34737	119163
Mar	97217	39565	136782
Apr	117223	23495	140718
May	182747	5977	188724
Jun	130587	2689	133276

Graphical representation of the seasonal variation is as below:



The most preferred month of visiting Kanha national park is December and May. Therefore if maximum marketing expense is incurred targeting these months then relatively better response from the tourists to our ecotourism sites can be expected when compared to other seasons.

8. MARKET FEASIBILITY

Under this study we have tried finding out the number of tourists who will be visiting our site for additional activities. Our main target customers are the tourists who come on planned vacation to Kanha however there are some tourists who reach Kanha without any prior bookings which are called the “walk in” tourists. Some of the “walk-in” tourists don’t get admissions into the park due to the capacity getting filled and thus become the “spill-over” tourists. Such tourists are also one of our target customers who can be easily attracted to our Jungle Safari and Nature Walk activities.

Following table gives yearly inflow of tourists at Kanha Tiger Reserve:

Year	Indian	Foreigner	Total	% Change
2004-05	67971	3811	71782	-
2005-06	76774	6490	83264	16%
2006-07	95646	10651	106297	28%
2007-08	113928	18673	132601	25%
2008-09	118002	19293	137295	4%
2009-10	133196	20828	154024	12%
2010-11	140700	34073	174773	13%
2011-12	154951	27403	182354	4%
2012-13	109357	21100	130457	-28%
2013-14	112539	21132	133671	2%

8.1 Breakeven Calculation

Following assumptions were considered before calculating the breakeven point:

- Average percentage increase in the no. of tourists visiting KTR assumed to be 8% based on the trends of last 10 years.
- Assuming that 5% of the total tourist visiting KTR will opt for our site.
- Revenue generated from Indian tourists and International tourists calculated separately. Conversion of revenue done by taking 1 USD = 65 Rupees
- Average revenue per person (Indian National or International Tourists both) from MPSFDC Packages: Rs. 2250
- Inflation rate & Net present value ignored.
- Revenue generation assumed to start from year 2 of the Project Implementation. Income from Tourists if any in year 1 of project implementation ignored.
- Expenses on maintenance, marketing & improving the ecotourism sites ignored.

Table-15: Breakeven Calculation of the Ecotourism Project			
Year	Total Tourists visiting Kanha Tiger Reserve (in Lakhs)	Tourist visiting Ecotourism site (5% of total tourists of Kanha, in Lakhs)	Revenue Generated (in Rs Lakhs)
Year 1	1.44	0.067	150.38
Year 2	1.56	0.072	162.41
Year 3	1.68	0.078	175.40
Total:			488.19

Breakeven reached in 3rd year of the Project after implementation.

8.2 Risk and Uncertainties

Even though ecotourism has been recognised widely as an activity that aids conservation of wildlife, wilderness, and protected areas in general, specific orders of courts and government directives are issued from time to time which may prohibit or restrict scope of the proposed activities.

In order to avoid uncertainties on this count it would be desirable to dispel all doubts that in policy as in practice ecotourism is not prohibited in forest areas provided certain fundamental conditions imposed in interest of conservation of resources are observed by all parties concerned.

Tourist flow anticipated may not eventually be realized in view of changing market scenario and as and when new opportunities may present themselves to tourists in the surrounding area.

8.3 Expected Outcome

It is expected that after implementation of the present ecotourism project inflow of tourists will grow. At present organised ecotourism is absent. There is no flow of revenue on account of tourism, nor do any significant benefits flow to the local communities. The projected quantitative picture of the benefits and outcomes of the project is provided in **Appendix-II**.

8.4 Future Directions

If flow of tourists to these destinations is found to be sustained at high rate, it may in future open possibilities of strengthening and expansion of infrastructure and increasing the capacity for handling larger number of tourists. Such possibilities include increasing the number of tents for camping activity, increasing the number of boating activities, introduction of some of the adventure sports which doesn't create disturbance for the wildlife etc. Investment on these facilities can be considered after taking into account the consistently high flow of tourists without compromising the environmental sustainability of the site.

Appendix II - Cost Benefit Analysis

Table A1: Cost Breakup of Dhanora-Turur Ecotourism Project					
SI No	Particulars	Details	Qty	Rate (lakhs)	Amount (lakhs)
Tourists Camping & Related Items:					
01	Tree House	Cost includes construction of Tree House with Bedroom, Dressing Area and Lat-Bath. Furnishing Cost Included. Dimensions: Length: 6m, Width: 6 m, Height: 10m.	01	8.000	8.000
02	Cottage Tent with AC	Standard Cottage Tents and Attached Lat-Bath with AC.	03	1.000	3.000
03	Platform for tents	Raised RCC Platform (height: 4ft) for Cottage Tents	03	0.600	1.800
04	Cottage Tent Furnishing	Furnishing of the Cottage tent with Double Bed, Mattress, Bed Sheets, Almirah, Chairs, Pillows, Pillow Covers, Towels, Napkins, and Dressing Table etc. Inventory needs to be maintained.	03	1.000	3.000
05	Camping Tent (Family)	Quechua T62 Make Family Tents. One Family tent is capable of occupying 4 people.	02	0.150	0.300
06	Camping Tent (Couple)	Quechua Arpenaz tent2 Make Tents. Double Occupancy	02	0.050	0.100
07	Sleeping Bags	Camping Tents will be provided with Sleeping bags	18	0.025	0.450
08	Bathroom & Toilet	1 Toilet and 1 Bathroom to be constructed near the camping sites	01	1.000	1.000
09	Sceptic Tanks & Sewage System	1 Sceptic Tank to be constructed near Eco-camping area at sangam. Dimensions: Length: 5m, Width: 5 m, Depth: 3m.	01	1.250	1.250
Tourists Activity & Related Items:					
10	Children Park	Children Park of about 150m ² with 2 swings, 1 slide, 1 Merry-go-round, 1 climber and small garden	01	2.000	2.000
11	Basketball Court	1 concrete court of size 94feet by 50 feet	01	10.000	10.000

Appendix II of FCA Proposal: Cost Benefit Analysis

12	Pedal Boats (2 seater)	Two person pedal boats	02	0.150	0.300
13	Pedal Boats (4 seater)	Four person pedal boats	02	0.200	0.400
14	Cycles	Standard cycles for riding rough off-road trails	04	0.100	0.400
15	Gypsy	For Jungle Safari	01	8.000	8.000
16	Watch-towers (Machaan)	Watch Tower to constructed of wooden type with base area 6ft by 6ft	06	3.000	18.000
17	Binoculars	To be used for Bird Watching	06	0.050	0.300
18	Archery	Bow & arrow set for recreational purpose.	01	0.070	0.070
19	Cafeteria	60m ² to seat 20 persons. Simple furniture of either wooden or plastic type to be procured. Cost inclusive of utensils and related items like oven, fridge etc	01	6.000	6.000
20	Umbrella Seating Chairs	To be used for Umbrella Sitting	04	0.025	0.100
21	Chain Link Fencing	Height to be kept to 2 to 2.5 meters to prevent wild animal intrusion. Calculation is done using 300Rs/meter for 6kms perimeter. Area included are Eco-camping area at sangam, Dhanora FRH & Staff Quarters and Turur FRH	-	-	18.000
22	Beautification & Aesthetic Plantation	Beautification of Camping Area, Cottages, Cafeteria, Tree House Area, Children Park. Pathway construction.	-	3.000	3.000
23	Life Saving Jackets	Life jacket vest with triple belt	15	0.020	0.300
24	Fire Extinguishers	ABC type fire extinguisher	15	0.020	0.300
25	Garbage Bins	Garbage Bins to be procured for proper waste disposal. A mix of Large, Medium and Small Garbage Bins to be procured	-	0.500	0.500
26	First Aid Kit	First Aid Kit Box	04	0.020	0.080
Renovation of Existing Infrastructures:					
27	Dhanora Forest Rest House	Partitioning, flooring (tiles), ceiling (asbestos sheet new), lat-bath, water supply, electrification, walls length increment	01	-	4.000
28	Patrolling Camp Building	Water supply, electrification	01	-	0.500

Appendix II of FCA Proposal: Cost Benefit Analysis

29	Dhanora Kitchen	Partitioning, flooring (tiles), ceiling, water supply, electrification, new wall with increased height	01	-	4.000
30	Store Room 1	Flooring, ceiling	01	-	0.050
31	Store Room 2	Flooring, ceiling	01	-	0.050
32	Barrier (naaka)	New barrier structure as Ecotourism site entry	01	-	2.500
33	Staff Quarter 1 to 5	Distempering, flooring (tiles), ceiling(replacing roof with Mangalore tiles), water supply, electrification	01	-	22.000
34	Turoor Kitchen	Partitioning, flooring (tiles), ceiling, water supply, electrification, new wall with increased height	01	-	4.000
Electrical & Water Amenities:					
35	Solar light 1KV	Solar Light of 1KV to run 1 set of Tube light and Fan. To be installed in Tree House(1), Cottages(8), AC Tents (3), Cafeteria(4). Inclusive of Installation Charges and all related items	16	1.000	16.000
36	Solar light 200W	Individual lights for Bathroom, Dressing Area of Tree House(2), Cafeteria(4) and AC Tents(6)	12	0.250	3.000
37	Solar Lantern	To be used in Family Tents(6) and Couple Tents(3)	09	0.025	0.225
38	Gen set 5 KV	For running the AC in the AC Cottage Tents and Tubewell	09	3.000	27.000
39	Street lamp with poles	To be installed at the Camping Sites(6), Tree House Site(2) and on the pathways (4)	12	0.220	2.640
40	RO Water filter	3 Sets of RO Filters without Electricity to be procured.	04	0.200	0.800
41	Tubewell (Bore)	To Provide the water for Drinking	03	2.000	6.000
42	Overhead tank (500 ltr)	For Storage of Water for Drinking , Cafeteria and other purposes	10	0.050	0.500
43	Plumbing & Electrical	To Account for various kinds of fittings expenses	-	2.000	2.000
Up-gradation of Existing Roads:					
44	Trekking Road	5kms Murram road of width	-	-	30.000

Appendix II of FCA Proposal: Cost Benefit Analysis

		3.75m from Dhanora FRH to Wainganga-Tharwar river sangam costing			
45	Safari Road	18kms Murram road of width 3.75m from Dhanora FRH to Pathwahi Village	-	-	100.00
46	Drainage	On both sides of road of size 1ft width & 1 ft depth along Trekking & Safari road for 23kms	-	-	12.000
Construction of Causeways:					
47	Rapta	Submergible bridge of RCC structure. Dimensions: Length: 15m, Breadth: 5 m, Height: 1ft.	4	1.500	6.000
48	Causeway	RCC structure with pillars & slab above. Dimensions: Length: 30m, Breadth: 5 m, Height: 3m.	1	7.000	7.000
49	Causeway cum Stopdam	RCC structure with 4 water gates & slab above. Dimensions: Length: 45m, Breadth: 5 m, Height: 3m.	2	20.000	40.000
50	Causeway cum Stopdam	RCC structure with 4 water gates & slab above. Dimensions: Length: 25m, Breadth: 5 m, Height: 3m.	2	16.000	32.000
Marketing & Other Expenses:					
52	Wages of Employees	The wages include 2.4Lakhs to be paid to the permanent employees (site managers) & 14.244Lakhs to daily wage labours	-	-	16.644
53	Stationary Charges	Signage, other stationary material like ticket books, log books, visitor book etc	-	0.500	0.500
54	Training Charges	Expenses for Training and capacity building	-	0.750	0.750
55	Marketing Charges	For details see section of marketing strategy	-	5.000	5.000
56	Other Misc Expenses	-	-	2.500	2.500
Total Expenditure:					434.309

Appendix II of FCA Proposal: Cost Benefit Analysis

Assuming the life of the Project to be 20 years, Cost benefit analysis of the project was done for 20 years. Factors were taken for doing the Cost Benefit Analysis and calculation of IRR are mentioned below:

Discounting Factor	:	10%
Escalation Factor for cost	:	1.09 (9% Escalation per year)
Escalation Factor for benefit	:	1.11 (11% Escalation per year)

Project Cost Estimates

Total initial investment for the Ecotourism Project has been estimated as Rs. 434.309 Lakhs. The capital investment of the project has been estimated on the basis of Self Funding. Following table gives the summarized cost of the project and the yearly operating cost:

Table-A2: Initial Capital Cost of the Project (summarized)		
SI No	Particular	Value (in Rs Lakhs)
01	Tourists Camping & Related Items	18.900
02	Tourists Activity & Related Items	67.750
03	Renovation of Existing Infrastructures	37.100
04	Electrical & Water Amenities	58.165
05	Up-gradation of Existing Roads	142.000
06	Construction of Causeways	85.000
07	Marketing & Other Expenses	25.394
Total Initial Capital Cost of Project:		434.309

Table-A3: Yearly Operating Cost of the Project		
SI No	Particular	Value (in Rs Lakhs)
01	Site Maintenance	0.850
02	Marketing & Stationary	0.500
03	Running Expenses/Utilities	2.750
04	Other Expenses	0.250
05	Wages to permanent employee	2.400
Total Yearly Operating Cost of Project:		6.750

Capital investment & Operative expenditure of the project:

Table-A4: Capital Investment & Operative Expenditure of the Project		
SI No	Particular	Value(in Rs Lakhs)
01	Initial Capital Investment	434.309
02	Total Operating Cost (from 2 nd Year to 20 th Year)	117.203
Total:		551.512

The project cost (including capital investment) and operating expenses for 20 years of useful life of Ecotourism Project, calculated by applying 10% discounting factor and suitable escalation factor, is Rs. 328.058 Lakhs.

Project Benefit Estimates

Every attempt has been made to quantify the benefits being accrued from the project however there are certain secondary, tertiary, quaternary benefits to the country and tax accrual to both State as well as Central Government, which cannot be quantified in real term.

Table-A5: Evaluation of Benefits of the Project in 1 st year of Operations			
Year	Total Tourists visiting Kanha Tiger Reserve (in Lakhs)	Tourist visiting Ecotourism site (5% of total tourists of Kanha, in Lakhs)	Revenue Generated (in Rs Lakhs)
Year 1	1.44	0.067	150.38

Following table presents the project benefit estimate in its assumed lifespan of 20 years:

Table-A6: Evaluation of Benefits of the Project in 20 years of Operation			
SI No	Parameter	Actual Benefit of the Matiyari Ecotourism Project	Quantified Value (in Rs Lakhs)
01	Increase in productivity attributable to the specific project	Benefits from the Ecotourism Site in terms of revenue generated from the site in 20 years of life span of the project.	2821.35
02	Benefits to the economy	Government of India and Government of M.P. State both will be getting Taxes from the Ecotourism Site. In addition to the above the spending by tourists at the local markets will also	Exact quantification of the value is not possible
03	Number of population benefited	Direct Employment at the Site: MPSFDC shall employ 20 skilled and semi-skilled personnel for the Ecotourism site and will disburse approximately Rs. 12.500 Lakhs as wages per annum to the employees directly employed at the site. Besides these employees, lot of indirect employment will also be generated at the site as mentioned below.	234.518

Appendix II of FCA Proposal: Cost Benefit Analysis

04	Employment potential	<p>The direct employment potential has been provide as 3 <i>supra</i>. But the project shall generate secondary, tertiary and quaternary employment as well viz. Safari Guides, Local Electricians and Plumbers for periodic maintenance, Local Taxi Service Providers, Local shopkeepers etc.</p> <p>In addition to above mentioned services local Vegetables, Milk and Milk products etc will be procured for the Cafeteria from the local markets.</p> <p>In nut-shell the Ecotourism project shall be a useful contributor to the economy of the area.</p>	Exact quantification of value is not possible.
05	Cost of acquisition of facility on non-forest land wherever feasible.	MPSFDC is proposing Ecotourism activity in the areas having good potential for ecotourism activity within the areas of its project division there is no alternative area MPSFDC against the proposed diversion area.	Not Applicable
06	Loss of (a) agricultural & (b) animal husbandry production due to diversion of forest land	There is no loss of agricultural & animal husbandry production due to diversion of forest land.	Not Applicable
07	Cost of rehabilitating the displaced persons as different from compensatory amounts given for displacement	No rehabilitating cost as there are no displacement happening due to the ecotourism project	Not Applicable
08	Cost of supply of free fuel-wood to workers residing in or near forest area during the period of construction		Not Applicable
Total:			3055.868

Cost Benefit Ratio

The project cost (including capital investment) and operating expenses for 20 years of useful life of Ecotourism Project, calculated by applying 10% discounting factor and suitable escalation factor, is Rs. 551.512 Lakhs. The Ecotourism Project shall have tangible economic benefit of Rs. 3055.868 Lakhs. Not only that, there are certain intangible benefits which cannot be quantified in monetary terms.

MADHYA PRADESH RAJYA VAN VIKAS NIGAM LIMITED							
COST BENEFIT ANALYSIS - 20 Years							
Ecotourism Development Plan, Mohgaon Project Division: Mandla							
In Rs Lakhs							
Year	Cost	Benefits (Revenue)	Discounted Cost @10%	Discounted Benefits @10%	Social Benefit	Discounted Social Benefits @10%	N.P.V. @10%
1	434.31		434.31				-434.31
2	7.36	150.38	6.69	136.71	12.50	11.36	130.02
3	8.02	166.92	6.63	137.95	13.88	11.47	131.32
4	8.74	185.28	6.57	139.21	15.40	11.57	132.64
5	9.53	205.66	6.51	140.47	17.10	11.68	133.96
6	10.39	228.29	6.45	141.75	18.98	11.78	135.30
7	11.32	253.40	6.39	143.04	21.06	11.89	136.65
8	12.34	281.27	6.33	144.34	23.38	12.00	138.01
9	13.45	312.21	6.27	145.65	25.95	12.11	139.38
10	14.66	346.56	6.22	146.97	28.81	12.22	140.76
11	15.98	384.68	6.16	148.31	31.98	12.33	142.15
12	17.42	426.99	6.10	149.66	35.49	12.44	143.55
13	18.99	473.96	6.05	151.02	39.40	12.55	144.97
14	20.69	526.10	5.99	152.39	43.73	12.67	146.40
15	22.56	583.97	5.94	153.78	48.54	12.78	147.84
16	24.59	648.20	5.89	155.17	53.88	12.90	149.29
17	26.80	719.51	5.83	156.59	59.81	13.02	150.75
18	29.21	798.65	5.78	158.01	66.39	13.13	152.23
19	31.84	886.50	5.73	159.45	73.69	13.25	153.72
20	34.71	984.02	5.67	160.90	81.79	13.37	155.22
	772.89	8562.56	551.51	2821.35	711.74	234.518	2269.84

Table-A7: Evaluation of Cost Benefit Ratio	
Total cost of the project (including operative expenses for 20 years)	Rs. 551.512 Lakh
Total tangible economic benefits from the project (including social benefits for 20 years)	Rs. 3055.868 Lakhs s
Cost Benefit Ratio	1: 5.54

Appendix III – Photographs of the Proposed Diversion Area of the Ecotourism Site



Photograph-01: Wainganga-Thanwar river sangam (confluence)

It marks the boundary of Mandla&Seoni districts. The very slow stream of the rivers at the sangam makes the condition favourable for boating &angling. It is situated in Compartment 94A of Nainpur Forest Range.



Photograph-02: Gughra Falls

It is situated on the bank of Thanwar river. The location is appropriate for trekking, bird watching and wildlife sighting & photography. It is situated in Compartment 94A of Nainpur Forest Range.



Photograph-03: Natural Trail

Natural trail among the Teak plantation of MPSFDC. Activities like trekking, cycling, Jungle Safari can be arranged on such natural trails.`



Photograph-04: Imlitola, Attaria Forest Village Community

Gond community lives in Attaria Forest Village. The villagers will be trained to cater to the tourists, which will earn them livelihood.



Photograph-05: Imlitola, Attaria Forest Village

Forest Village situated in Compartment 94B of Dhanora Beat, Nainpur Forest Range. This village can be developed to support Rural Tourism.



Photograph-06: PoldaNallah

It marks the boundary of Nainpur&Chiraidongari Forest Ranges. Causeway cum stop-dam would make this nallah suitable for Jungle Safari & wildlife sighting.



Photograph-07: Elevated area for Machaan

Elevated areas for Machaan construction are identified. Binoculars at the machaan will make the site seeing activity a pleasant experience. Tourists will find the spot appropriate for nature photography, bird watching & wildlife sighting.



Photograph-08: Dhanora Forest Rest House

The existing forest rest houses will be renovated to create suites for the tourists.



Photograph-09: Dhanora Staff Quarters

The existing forest staff quarters will be renovated to create suites for the tourists.

Appendix IV – Geographical Coordinates of Renovation Work

Table A8: GPS Information of Renovation Work in Dhanora-Turoor Ecotourism Project

SI No	Particulars	GPS Coordinates				Area (m ²)
		Corner 1	Corner 2	Corner 3	Corner 4	
Range/Circle: Nainpur		Beat: Dhanora				Compartment No: 94A
01	Forest Rest House	N: 22°24'03.7" E: 80°05'54.8"	N: 22°24'03.9" E: 80°05'54.9"	N: 22°24'03.8" E: 80°05'55.2"	N: 22°24'03.5" E: 80°05'55.1"	80 m ²
02	Kitchen	N: 22°24'03.4" E: 80°05'55.3"	N: 22°24'03.3" E: 80°05'55.5"	N: 22°24'03.7" E: 80°05'55.7"	N: 22°24'03.8" E: 80°05'55.6"	100 m ²
03	Patrolling Building	N: 22°24'04.3" E: 80°05'54.4"	N: 22°24'04.5" E: 80°05'54.7"	N: 22°24'04.6" E: 80°05'54.6"	N: 22°24'04.5" E: 80°05'54.3"	75 m ²
04	Store Room 1	N: 22°24'03.3" E: 80°05'55.6"	N: 22°24'03.1" E: 80°05'55.9"	N: 22°24'03.2" E: 80°05'56.0"	N: 22°24'03.4" E: 80°05'55.8"	80 m ²
05	Store Room 2	N: 22°24'02.7" E: 80°05'56.5"	N: 22°24'02.7" E: 80°05'56.6"	N: 22°24'02.4" E: 80°05'56.4"	N: 22°24'02.4" E: 80°05'56.5"	80 m ²
06	Naaka	N: 22°24'03.9" E: 80°05'53.5"	N: 22°24'04.1" E: 80°05'53.7"	N: 22°24'04.1" E: 80°05'53.6"	N: 22°24'04.0" E: 80°05'53.4"	50 m ²
07	Staff Quarter 1-2	N: 22°23'58.9" E: 80°05'48.5"	N: 22°23'58.9" E: 80°05'48.1"	N: 22°23'58.4" E: 80°05'48.1"	N: 22°23'58.4" E: 80°05'48.5"	100 m ²
08	Staff Quarter 3	N: 22°23'59.2" E: 80°05'48.7"	N: 22°23'59.3" E: 80°05'48.2"	N: 22°23'59.6" E: 80°05'48.1"	N: 22°23'59.6" E: 80°05'48.8"	75 m ²
07	Staff Quarter 4-5	N: 22°23'59.9" E: 80°05'48.7"	N: 22°23'59.9" E: 80°05'48.2"	N: 22°24'00.4" E: 80°05'48.2"	N: 22°24'00.4" E: 80°05'48.6"	100 m ²
Range: Chiraidongari		Beat: Turur				Compartment No: 66B
08	Forest Rest House	N: 22°20'22.4" E: 80°17'16.3"	N: 22°20'22.5" E: 80°17'16.0"	N: 22°20'23.1" E: 80°17'15.8"	N: 22°20'23.2" E: 80°17'16.1"	250 m ²
09	Kitchen	N: 22°20'23.5" E: 80°17'15.5"	N: 22°20'23.9" E: 80°17'15.5"	N: 22°20'23.9" E: 80°17'15.2"	N: 22°20'23.5" E: 80°17'15.3"	80 m ²
10	Staff Quarter	N: 22°20'24.2" E: 80°17'18.3"	N: 22°20'24.7" E: 80°17'18.3"	N: 22°20'24.7" E: 80°17'18.8"	N: 22°20'24.2" E: 80°17'18.8"	150 m ²

**** Existing Road from Dhanora Forest Rest House to Wainganga-Thandar river sangam (5kms in length) will be repaired**

**** Existing Road from Dhanora to Turoor (23kms in length) suitable for Jungle Safari will be repaired**

Appendix V – Geographical Coordinates of Construction Work

Table A9: GPS Information of Construction Work in Dhanora-Turur Ecotourism Project

Table A9: GPS Information of Construction Work in Dhanora-Turur Ecotourism Project						
SI No	Particulars	GPS Coordinates				Area (m ²)
		Corner 1	Corner 2	Corner 3	Corner 4	
Range: Nainpur		Beat: Dhanora			Compartment No: 94	
01	Children's Park	N: 22°23'59.4" E: 80°05'49.6"	N: 22°23'59.0" E: 80°05'49.7"	N: 22°23'58.9" E: 80°05'49.4"	N: 22°23'59.3" E: 80°05'49.2"	150 m ²
02	Basketball Court	N: 22°23'59.7" E: 80°05'49.2"	N: 22°23'59.6" E: 80°05'49.6"	N: 22°23'00.4" E: 80°05'49.8"	N: 22°23'00.6" E: 80°05'49.4"	436 m ²
03	Gate	N: 22°24'01.9" E: 80°05'55.2"	N: 22°24'02.1" E: 80°05'54.9"	N: 22°24'02.0" E: 80°05'54.9"	N: 22°24'01.8" E: 80°05'55.1"	10 m ²
04	Watch-tower	N: 22°22'37.5" E: 80°04'31.5"	N: 22°22'37.6" E: 80°04'31.5"	N: 22°22'37.5" E: 80°04'31.3"	N: 22°22'37.7" E: 80°04'31.3"	25 m ²
05	Tree House	N: 22°22'35.3" E: 80°04'13.1"	N: 22°22'35.4" E: 80°04'13.3"	N: 22°22'35.2" E: 80°04'13.3"	N: 22°22'35.2" E: 80°04'13.2"	36 m ²
06	AC Tent Platform	N: 22°22'36.4" E: 80°04'13.0"	N: 22°22'36.5" E: 80°04'12.8"	N: 22°22'36.1" E: 80°04'12.5"	N: 22°22'36.2" E: 80°04'12.7"	100 m ²
07	Boating Platform	N: 22°23'34.4" E: 80°04'12.5"	N: 22°23'34.5" E: 80°04'12.5"	N: 22°23'34.2" E: 80°04'12.6"	N: 22°23'34.1" E: 80°04'12.4"	25 m ²
08	Cafeteria	N: 22°22'36.6" E: 80°04'13.5"	N: 22°22'36.7" E: 80°04'13.6"	N: 22°22'36.8" E: 80°04'13.5"	N: 22°22'36.6" E: 80°04'13.3"	60 m ²
09	Bathroom & Toilet & Sceptic Tank	N: 22°22'35.4" E: 80°04'14.0"	N: 22°22'35.4" E: 80°04'13.8"	N: 22°22'35.2" E: 80°04'13.9"	N: 22°22'35.4" E: 80°04'14.0"	25 m ²
10	Pipe Culvert	N: 22°22'42.8" E: 80°04'50.7"	N: 22°22'43.0" E: 80°04'50.8"	N: 22°22'43.2" E: 80°04'50.8"	N: 22°22'42.6" E: 80°04'50.7"	50 m ²
Range: Chiraidongari		Beat: Turur			Compartment No: 66	
11	AC Tent Platform	N: 22°20'22.1" E: 80°17'15.3"	N: 22°20'22.2" E: 80°17'15.2"	N: 22°20'22.1" E: 80°17'15.8"	N: 22°20'22.1" E: 80°17'15.3"	100 m ²
12	Bathroom, Toilet & Sceptic Tank	N: 22°20'22.9" E: 80°17'15.2"	N: 22°20'23.0" E: 80°17'15.3"	N: 22°20'22.8" E: 80°17'15.3"	N: 22°20'22.8" E: 80°17'15.2"	25 m ²

Rapta & Causeways:						
SI No	Particulars	GPS Coordinates				Area (m²)
		Corner 1	Corner 2	Corner 3	Corner 4	
Range: Nainpur		Circle: Nainpur		Beat: Gonji		Compartment No: 92
13	Semarnaala Rapta	N: 22°23'01.6" E: 80°06'46.6"	N: 22°23'01.6" E: 80°06'47.1"	N: 22°23'01.5" E: 80°06'47.16"	N: 22°23'01.6" E: 80°06'46.6"	75 m ²
Range: Nainpur		Circle: Nainpur		Beat: Gonji		Compartment No: P9
14	Sitaramnaala Causeway	N: 22°22'39.6" E: 80°07'49.8"	N: 22°22'39.1" E: 80°07'50.5"	N: 22°22'39.1" E: 80°07'50.6"	N: 22°22'39.6" E: 80°07'49.9"	150 m ²
Range: Nainpur		Circle: Nainpur		Beat: Gonji		Compartment No: P9
15	Bhimmanaala Causeway cum Stopdam	N: 22°22'30.2" E: 80°07'56.6"	N: 22°22'29.0" E: 80°07'57.0"	N: 22°22'29.0" E: 80°07'57.2"	N: 22°22'30.3" E: 80°07'56.6"	225 m ²
Range: Nainpur,Chiraidongari		Circle: Beejaygaon,Cheejgaon		Beat: Keregaon,Pondi		Compartment No: 83,82
16	Poldanaala Causeway cum Stopdam	N: 22°20'26.9" E: 80°10'25.9"	N: 22°20'26.3" E: 80°10'26.9"	N: 22°20'26.4" E: 80°10'26.9"	N: 22°20'26.9" E: 80°10'26.1"	150 m ²
Range: Chiraidongari		Circle: Cheejgaon		Beat: Pondi		Compartment No: 82
17	Rapta	N: 22°20'17.3" E: 80°10'27.5"	N: 22°20'17.3" E: 80°10'27.6"	N: 22°20'17.5" E: 80°10'27.5"	N: 22°20'17.4" E: 80°10'27.4"	50 m ²
Range: Chiraidongari		Circle: Pathwahi		Beat: Uttar Pathwahi		Compartment No: 76
18	TP99 Causeway cum Stopdam	N: 22°20'29.5" E: 80°14'06.1"	N: 22°20'29.9" E: 80°14'06.8"	N: 22°20'30.0" E: 80°14'06.7"	N: 22°20'29.6" E: 80°14'06.0"	125 m ²
Range: Chiraidongari		Circle: Cheejgaon		Beat: Duddm		Compartment No: 74
19	TP82 Causeway cum Stopdam	N: 22°20'44.1" E: 80°14'29.0"	N: 22°20'44.2" E: 80°14'29.8"	N: 22°20'44.3" E: 80°14'29.8"	N: 22°20'44.2" E: 80°14'29.0"	125 m ²
20	Rapta	N: 22°20'43.4" E: 80°14'54.7"	N: 22°20'43.5" E: 80°14'55.3"	N: 22°20'43.6" E: 80°14'55.2"	N: 22°20'43.5" E: 80°14'54.7"	75 m ²
21	Rapta	N: 22°20'38.9" E: 80°15'20.4"	N: 22°20'38.7" E: 80°15'19.9"	N: 22°20'38.7" E: 80°15'20.0"	N: 22°20'38.8" E: 80°15'20.4"	75 m ²

Watch-towers:						
SI No	Particulars	GPS Coordinates				Area (m²)
		Corner 1	Corner 2	Corner 3	Corner 4	
Range: Nainpur		Circle: Beejaygaon		Beat: Beejaygaon		Compartment No: P8
22	Watch-tower	N: 22°21'47.6" E: 80°08'36.4"	N: 22°21'47.6" E: 80°08'36.3"	N: 22°21'47.5" E: 80°08'36.2"	N: 22°21'47.4" E: 80°08'36.2"	25 m ²
Range: Nainpur		Circle: Beejaygaon		Beat: Keregaon		Compartment No: 85
23	Watch-tower	N: 22°21'26.5" E: 80°09'27.4"	N: 22°21'26.3" E: 80°09'27.4"	N: 22°21'26.2" E: 80°09'27.5"	N: 22°21'26.4" E: 80°09'27.6"	25 m ²
Range: Nainpur		Circle: Beejaygaon		Beat: Keregaon		Compartment No: 83
24	Watch-tower	N: 22°21'04.8" E: 80°10'31.2"	N: 22°21'04.7" E: 80°10'31.3"	N: 22°21'04.6" E: 80°10'31.3"	N: 22°21'04.6" E: 80°10'31.1"	25 m ²
25	Watch-tower	N: 22°20'44.6" E: 80°10'36.2"	N: 22°20'44.5" E: 80°10'36.3"	N: 22°20'44.5" E: 80°10'36.4"	N: 22°20'44.7" E: 80°10'36.4"	25 m ²
Range: Chiraidongari		Circle: Cheejgaon		Beat: Pondi		Compartment No: 81
26	Watch-tower	N: 22°19'33.7" E: 80°11'58.0"	N: 22°19'33.6" E: 80°11'58.0"	N: 22°19'33.6" E: 80°11'57.8"	N: 22°19'33.7" E: 80°11'57.8"	25 m ²
Total area required for construction work:						2217 m² (or) 0.2217 ha