

प्रारूप-26

परियोजना का नाम :- रेलवे विकास निगम लि० को 33 के०वी० विद्युत संयोजन निर्गत करने हेतु उपसंस्थान गुल्लर से शिवपुरी टनल (ल०- 8.4 कि०मी० एवं चौ०- 2 मी०) तक विद्युत लाईन निर्माण हेतु वन भूमि हस्तांतरण का गैरवानिकी कार्यों हेतु उत्तराखण्ड पॉवर कारपोरेशन लि० नई टिहरी को प्रत्यावर्तन के सम्बन्ध में।

(परियोजना के राष्ट्रीय पार्क/वन्य जीव अभ्यारण्य के अंतर्गत प्रस्तावित होने अथवा राष्ट्रीय पार्क/वन्य जीव अभ्यारण्य की सीमा के 10.00 कि०मी० के परिधि के अंतर्गत होने की दशा में लागू)

प्रमाणित किया जाता है कि प्रस्तावित ट्रांसमिशन लाईन निर्माण से वन्य जीवों पर कोई प्रभाव नहीं पड़ेगा। प्रश्रुत परियोजना स्थल पर कोई विनिर्दिष्ट पादप (specified plants) नहीं पाए जाते हैं। अतः इस कार्य हेतु अनापत्ति प्रमाण पत्र जारी करने बाबत संस्तुति निम्न बिन्दुओं को मध्य नजर रखते हुए की जाती है -

1. प्रस्तावित क्षेत्र राजाजी नेशनल पार्क का हिस्सा नहीं है। प्रस्तावित स्थल से न्यूनतम हवाई दूरी लगभग 524 मी० है।
2. प्रस्तावित स्थल में पड़ने वाले क्षेत्र में हाथी, लेपर्ड, घूरड एवं अन्य वन्य जीवों का आवागमन रहता है अतः वन्य जीवों की मॉनिटरिंग एवं मानव वन्य जी संघर्ष को नियंत्रण करने हेतु मिटीगेशन प्लान के संरक्षण हेतु वित्तीय प्रकल्पन की प्रति संलग्न कर प्रेषित की जा रही है।
3. अब तक प्राप्त रिपोर्ट के अनुसार वनस्पतियों को ज्यादा क्षति नहीं होगी।

ह०/-

वन संरक्षण
राजिंदर सिंह
शिवपुरी रेंज
राजिंदर सिंह
शिवपुरी रेंज
शिवपुरी रेंज

ह०/-

उप-प्रभारी वन्यजीव विकास
(देव प्रभाग)
देव प्रभाग
नरेन्द्रनगर वन प्रभाग

ह०/-

प्रभारी वन्यजीव विकास
नरेन्द्रनगर वन प्रभाग
नरेन्द्रनगर वन प्रभाग
मुनिकीरे

डा० पराग मधुकर धकाते
मुख्य वन्यजीव प्रतिपालक
उत्तराखण्ड

106

कार्यालय प्रमुख वन संरक्षक (वन्यजीव), उत्तराखण्ड

85-राजपुर रोड, देहरादून (उत्तराखण्ड), फोन नं०-0135-2742884 फैक्स-2745691 ई-मेल- cwlvua@yahoo.co.in

पत्रांक 2637/12-1 देहरादून

दिनांक 06 फरवरी 2022

सेवा में,

✓ वन संरक्षक,
भागीरथी वृत्त,
मुनिकीरेती।

विषय :- रेलवे विकास निगम लि० को 3000 के०वी०ए० का विद्युत संयोजन निर्गत करने हेतु 33/11 के०वी० उप संस्थान गूल्लर से शिवपुरी टनज (लंबाई 8.40 कि०मी० लगभग एवं चौड़ाई 2.00 मी०) तक 33 के०वी० लाइन निर्माण हेतु वन भूमि हस्तान्तरण प्रस्ताव तैयार करने के संबंध में।

संदर्भ :- आपका पत्रांक-2031/12-1 दिनांक 01/4/2022

महोदय,

आपके कार्यक्षेत्रान्तर्गत विषयक परियोजना जो राजाजी राष्ट्रीय पार्क की सीमा के 10 कि०मी० परिधि के अंतर्गत है, के निर्माण हेतु वन भूमि हस्तान्तरण के क्रम में संदर्भित पत्र के माध्यम से मानव वन्यजीव संघर्ष को नियंत्रित करने हेतु आपके द्वारा तैयार किया गया मु० 34.46 लाख रुपये का वाइल्डलाइफ मिटीगेशन प्लान (Wildlife Mitigation Plan) मय संस्तुति के साथ अनुमोदनार्थ इस कार्यालय को प्रस्तुत किया गया है। आपकी संस्तुति के आधार पर विषयक परियोजना हेतु मु० 34.46 लाख रुपये का वाइल्डलाइफ मिटीगेशन प्लान का अनुमोदन करते हुए प्रपत्र-26 में हस्ताक्षर कर मूल में लौटाया जाता है।

संलग्न:-यथोपरि।

भवदीय,

(डा० पराग मधुकर धकाते)
मुख्य वन्य जीव प्रतिपालक,
उत्तराखण्ड।

पत्रांक-2637/ दिनांकित।

प्रतिलिपि प्रभागीय वनाधिकारी, नरेन्द्रनगर वन प्रभाग, मुनिकीरेती को आवश्यक कार्यवाही हेतु प्रेषित।

(डा० पराग मधुकर धकाते)
मुख्य वन्य जीव प्रतिपालक,
उत्तराखण्ड।

6/4/22

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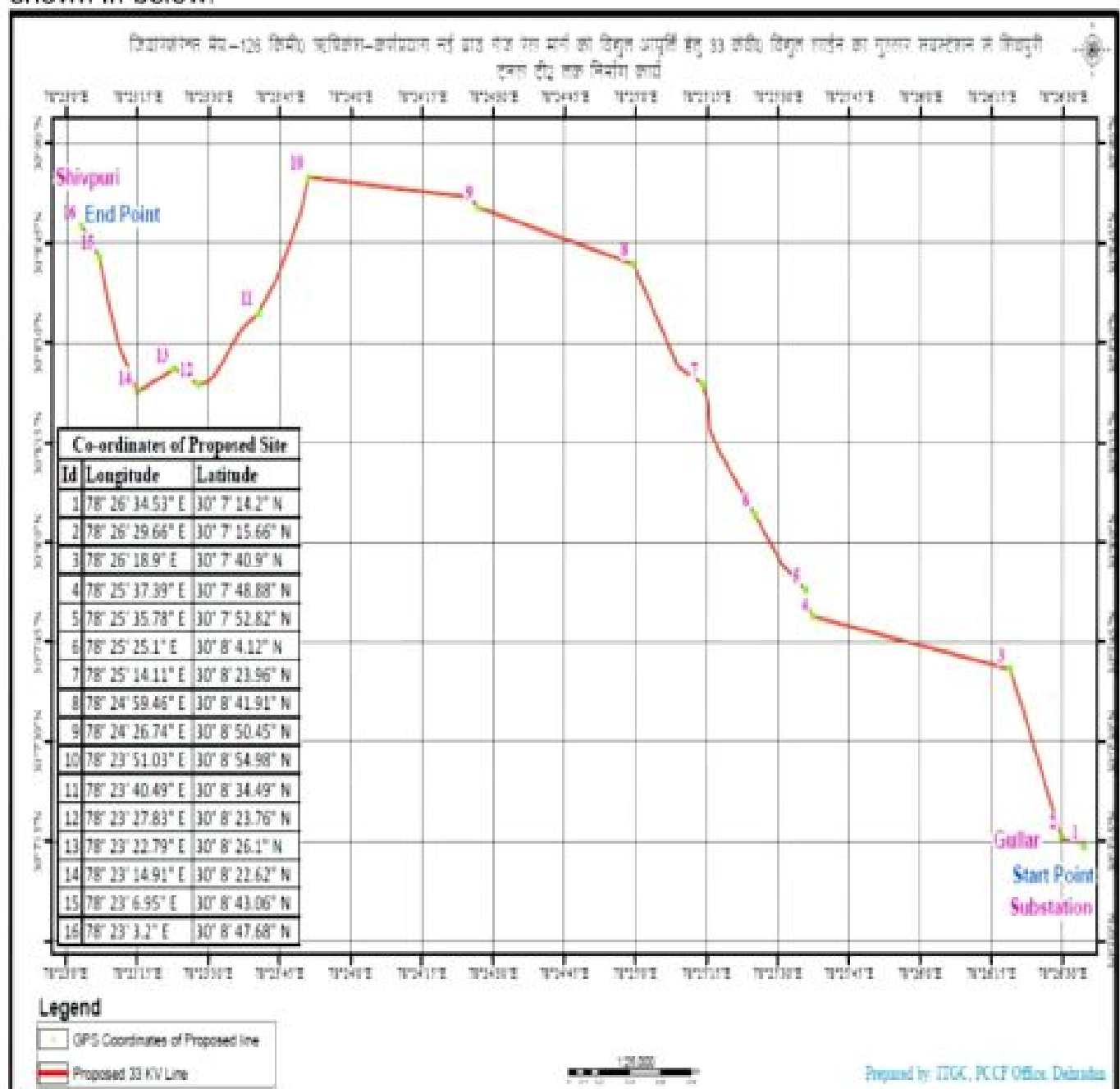
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Chapter-1

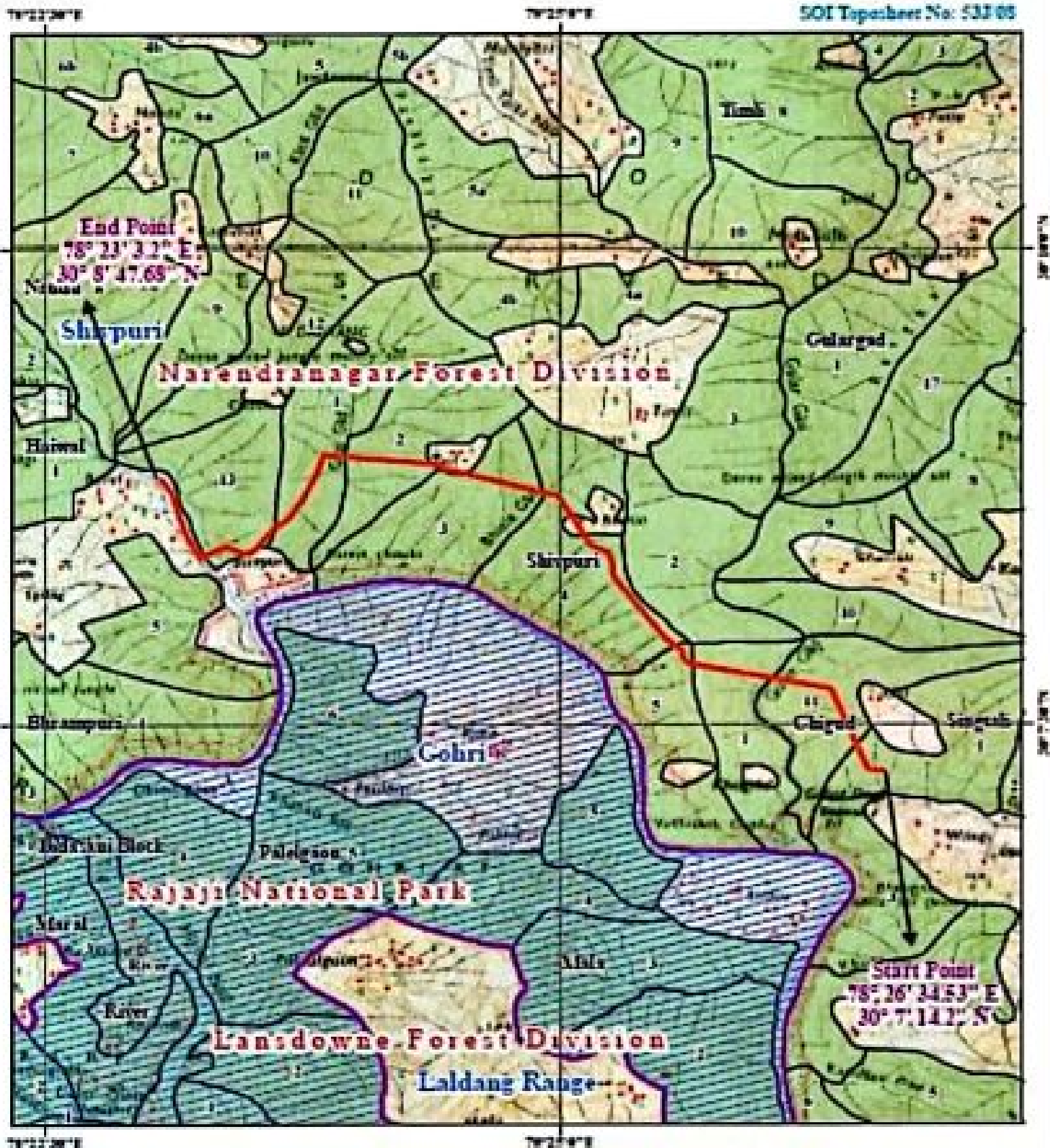
INTRODUCTION

Location of the Proposal Passing through Rajaji National Park

The proposed 33 KV Transmission Line from Sub-Station at Gullar to Tunnel (T2) related to Development of 126 Km Long New BG Rail Link from Rishikesh to Karnaprayag in the state of Uttarakhand is dedicated line for supply of power to Indian Railways. The area proposed for diversion lies outside the Rajaji Tiger Reserve at a distance of 524 meter. The proposed road length is 8.4 Km with a standard width of 2 meter. The layout plan and location of project on toposheet is as shown in below:



डिजिटल सेक-126 किमी० लंबाईका-कर्मचारीग बर्ड बाउंड गेज रेल मार्ग का विद्युत आधुनिकीकरण
33 किलो० विद्युत लाईन का मुख्यन लवस्टेशन से शिवपुरी टर्मल टी० तक निर्माण कार्य



Legend

	Reserve Forest Area
	Reserve Forest Boundary
	Forest Division Boundary
	Protected Area
	Proposed line

Scale 1:50,000

Prepared by: ITGC, PCT Office, Dehradun

Chapter 2

GENERAL DESCRIPTION OF THE PROJECT AREA

Introduction

The intent notification of Rajaji National Park (henceforth also referred to as the Park) was issued on 12 August 1983. The Park extends over the Shivalik Range from the Dehradun-Saharanpur road in the north-west to the Rawasan River in the southeast, with the Ganges dividing it into two parts. Some of the basic features of the Shivalik formations are to be seen in the Park and it is rightly known as a veritable storehouse of Shivalik biodiversity and eco-systems. River Ganga bifurcates the Park into two parts: the eastern part, consisting of the Chilla and Gohri ranges, stretches from the left bank of the Ganges to Rawasan River in the east and Shyampur Range of Hardwar Forest Division to the South. The northern boundary of the eastern portion of the Park is defined by Laxman jhula beat of Gohri Range of the Park

The western part of the Park consists of the Ramgarh, Kansrao, Motichur, Hardwar, Dholkhand and Chillawali Ranges.

The 10-20 million years old Shiwaliks are composed of sedimentary rocks such as sandstone, clay and conglomerates and are very rich in fossils. The hill ranges vary from 200m at the terminal slope to 1,000m at the peaks. The alluvial nature of the soil makes the Shiwalik very fertile as they are the first formidable barriers to the monsoon clouds that sweep through the plains and bring good showers in the region. The foothills of the Shiwaliks and the continuing plains are called 'bhabar', characterized by very low water table and boulder strewn seasonal streams called 'raus' and 'sots' with comparatively less debris. The river Ganga along with the various seasonal rau's and sot's (perennial streams) quench the reserve forest, providing for a rich habitat to support the extensive biodiversity of the reserve. It divides the reserve into two halves as it flows for about 25km through the reserve.

Climate and Temperature

The three main seasons in the Himalayan foothills are: winter, summer and monsoons. The best time for a safari or a bird watching trip is during winter (November to February) when the days are pleasant (12 - 25 degree Celsius), nights cold and humidity is low. Temperature rises rapidly to 38-40 degree Celsius in the hot season (May to June) but the wild life sighting is good around water holes and rainfall increases with the occasional thunderstorm after June. Humidity is high in the rainy season (June to September), with over 750 mm of precipitation in July to August, and there is little temperature variation. Annual rainfall ranges from 1200-1500 mm.

Terrain

The **Rajaji Tiger Reserve** is located in the foothills of the Shiwaliks ranges which extended over 1500 km in India and 600 km in Nepal. The Shiwaliks hills are one the most prominent and well vegetated area in Uttarakhand and Rajaji boasts of being the only rajaji tiger reserve in its lap. The 10-20 million years old Shiwaliks are composed of sedimentary rocks such as sandstone, clay and conglomerates and are very rich in fossils. The hill ranges vary from 200m at the terminal slope to 1,000m at the peaks.

Soil

The alluvial nature of the soil makes the Shiwalik very fertile as they are the first formidable barriers to the monsoon clouds that sweep through the plains and bring good showers in the region.

Flora

Rajaji Tiger Reserve, comprising of varied ecosystems like grasslands, river in forests and the slopes of the Shiwaliks make it a storehouse of floral and faunal diversity. The trees, shrubs, orchids, fungi, mammals, birds, amphibians, reptiles and insects make exploring the reserve an adventurous experience. Rajaji represents floral elements of both the Himalayan and the Upper Gangetic Plains. Owing to its location between both these **biogeographic regions**, it is home to one of the most diverse ranges of wildlife habitats in the country. The eight major forests types including the Western Gangetic Moist, Northern Dry Deciduous and Khair-Sissoo forests in the southern slopes, the Low Alluvial Savannah Woodlands in the southern margins of the reserve, and the Shiwalik Chir-Pine forests in the higher reaches of the hills makes this area rich of biodiversity.

The majestic sal along with its associates dominates most of the forests in the gentler northern slopes of **Rajaji Tiger Reserve**. Some trees grow up to 80ft with a girth of 5 ft. The sal trees shed their leaves between February to March and soon changes hues from brownish red to pale green to dark green. During March and April the forest is filled with the mild scent of the sal trees in full blossom. There are a lot of fruit bearing trees which are a treat to watch with several birds and animals feeding on them. The fruits of the harar and behera trees are eaten by birds and animals ranging from elephants to mice. Jamun, Chilla, Ber, Lassora, Aonla, Ficus, Bel, Sisham are few out of the 30 species of fruit-bearing trees found in reserve.

Rajaji National Park also harbours some of the rare and threatened plants which include *Catamixisbaccharoides* (Asteraceae), *Eremostachys superba* (Lamiaceae), *Euphorbia fusiformis* (Euphorbiaceae), *gloriosa superba* (Colchicaceae) etc.

Of these *E. superb* is one the most beautiful tuberous native species of the region and is known only from the area around Mohan. Other interesting species *C. baccharoides*, represented by a single species all the world is found on the steeply lower slopes of lower Shivalik. Tubers of *E.fusiformis* and *G. superb* are generally used for medicinal purposes. Since Rajaji is a rich repository of both floral and faunal elements, it is necessary to conserve these by inside conservation practices. Raja ji is a home to 36 species of orchids which is a reflection of the pristine habitat. One can find several species of fungi in the reserve. Their ability to re-cycle the food locked in dead and decaying matter offer conducive breeding ground for several insects such as moths and beetles which in turn have great relevance in maintain the balance of the ecosystem.

Fauna

In **RAJAJI NATIONAL PARK**, More than 50 species of mammals including the highly endangered **Asian Elephant and Tiger** found in the Park. Besides tiger, leopard, **Himalayan Black bear, sloth bear, Civet, Marten, Jackal, Hyena** etc, it is estimated that there are more than 350 Asian elephants in the park. Goral (Mountain Goat) - a characteristic mammals of the lower Himalayas abound in the precipitous slopes of the Shivalik hills. Three species of deer - **Sambhar, Spotted Deer (Cheetal) and Barking Deer (Kakar)** and animals like Wild Boar, Neel Gai. Langoor, Black Napped Hare, Jungle cat etc are also found. Tiger population so only confined to Chilla and Gohri ranges and the buffer zone of thereserve

Over **300 species of birds** are reported from Rajaji National Park, making it an important birding area in the Country. Of these, about **90 species are migrants**, which include **Pochards, Gulls, Mallards, Teals and Shellducks** that visit the water bodies of Bhimgora and Virbhadra Barrage and wetlands of river Ganga. The resident Birds include **Pea Fowl, Jungle Fowl, different Parakeets, Woodpeckers, Kingfishers, Thrushes, Warblers, Barbets** and Finches etc. Great Pied Hornbill occupies a place of pride among the different Hornbills found in the Park.

The **reptilian fauna** of the Park is represented by various species of lizards, snakes and tortoise. The area is also known for its rich population of **Pythons, Cobras and King Cobra**. The rivers of the Park are rich in aqua fauna like Golden Mahseer and other fishes.

Chapter 3

IMPACTS OF THE PROJECT ON THE HABITAT, FLORA AND FAUNA

Positive Impact

- In current situation, the proposed transmission line of 33 KV which provides the electricity supply to development of 126 Km long BG new rail link from Rishikesh- Karnprayag will also act in future, for distribution of electricity in near vicinity.
- The proposed Transmission Line also be in position to supply electricity to near by vicinity of work undertaken by Forest Department under River Front Development for economic development.
- The proposed rail link is very important in overall development of region by providing an alternative safe mode of transportation. The project will impetus the region with flux of pilgrims, boosting economic development and have strategic importance as it shall further provide speedy movement of strategic deployment at border.
- The proposed Transmission Line Length is 8.4 Km and width taken in consideration is 2 meter and there is no cutting of tree is proposed. He
- No violation of the Wildlife (Protection) Act, 1972 or Forest Conservation Act, 1980

Negative Impact

The proposed Transmission Line is short in length and no tree cutting is proposed and only electric poll installation and wire would be erected and thus there would be not much impacts due to installation, however, movement of manpower, small machinery and electrical material will be there during installation transmission line project will have barely minimum impacts to the ecosystem of outside of Rajaji National Park area which was established for the conservation of different species of Birds and animals, along with other wildlife as well as their habitat.

Dust. - The project shall not generate lot of dust. This will not cover the leaf surface and affect photosynthesis of plants with in the radius of 0.25 km.

Noise: - Movement and operation of machineries and of transport vehicles shall generate some noise. Noise induces some physiological and behavioral changes. No blasting should be done which will result

in considerably less noise pollution.

Lighting: - Not construction vehicle will be used and hence not much illumination and hence minimum disturbance to the night life of wild animal.

Forest Fire: - Due to increase in human activities, negligence etc. Forest fire may take place. Forest fire mostly is anthropogenic in origin. This, in turn, may deprive wildlife of their cover and food. A lot of care has been taken into consideration while choosing the route and height of pole to avoid fire catch due to electricity.

Smoke: - The construction and/or erection of pole will not involve heavy vehicle or machinery and hence less or negligible smoke generation and thus negligible chance of air or water pollution.

The concern project is in the periphery of Rajaji National Park. Therefore, Wildlife Mitigation Plan along with Conservation Plan is being prepared. All these perceived impacts/threats due to this project needs to be removed through different measures to improve the habitat for wildlife so that their status can be enhanced, and healthy environment is created. The measures for the same have been outlined in the Next chapter.

Chapter 4

IMPACT MITIGATION PLAN

Components:

Wildlife Conservation Plan

There are mostly related to the infrastructure improvement inside the park area, providing rescue and rehabilitation facilities and other conservation and awareness related measures which will be carried out by the Department of Rajaji National Park, Forest and Wildlife Preservation out of the funds deposited by the user agency to address all the issues related to conserving wildlife inside the Park.

The User Agency, while implementing the proposal and while carrying out the engineering works should take care of the mitigating the following impacts at its own cost.

Forest Protection

No damage to any green cover other the proposed project area should be done by the user agency Rigid protection will be given to the natural forms and plantation for their effectiveness as shelter belt.

Fire control

The accidental fires in the project area shall be extinguished immediately. Hence in project area no fire will be allowed to spread to any part including nearest vegetation.

Conservation Plan for Management of Wildlife

Considering the anticipated impacts posed by the project as indicated, It is necessary to take suitable amelioration measures to see that the assessed impacts on the wildlife and its habitat, due to project is minimized. It will be necessary to manage the perceived adverse impact in such a manner that this does least possible harm despite the project. The strategy of conservation measures will be properly juxtaposed within the cruising radii of wild animals. The Vegetation will be maintained in optimum level of interspersation as regards density cover and stand height.

The conservation plans aims at Maintenance of optimal habitats in proper stage of productivity and repair of damages already done or that may be done to the habitat activities.

The plan provides for the protection and conservation of all important species of wildlife and its habitat.

The components of the conservation plan are related to the infrastructure improvement inside park, providing rehabilitation facilities and other conservation and awareness related measures which will be carried out by the Department of Forests and Wildlife Preservation out of funds deposited by the user agency mainly to address all the issues related to conserving wildlife inside the park.

Goals

"To Conserve, the Flora and Fauna"

Objective

1. To prevent death of wild animals due to transmission line accidents
2. Protection and improvement of eco system through mitigation measures
3. Increase awareness on wild life Conservation

Plan Period

3 Years

Awareness Generation

No effort to protect wildlife and its habitat shall succeed without active involvement of public and the wildlife staff. Hence it is important to create awareness among them. For this purpose lectures, observation of different functions like wildlife week, competition like debate, essay, and quiz, film show, painting and distribution of literature can be taken.

Extension Activities

The Plan also provides for awareness and training camps for staff and villages community in protected areas with publications, information brochures, documentaries etc. in all the protected areas.

Conclusion

The Mitigation measures and conservation plan are proposed to prevent the adverse effects of the proposed project on both Flora and Fauna of the Park areas of the Rajaji National Park division and its surrounding and it is extremely important for the conservation of wildlife habitat. As well as minimize the human wild life conflicts.

Plan Cost

Total Cost of Plan has been worked out to be 29.54 Lakh

Indicators of Success

The Following will be taken as indicators of success of Plan

Local people awareness about wild animals

Employment opportunity to the local people

The Over all health of the ecosystem

Chapter 5

Budget Requirement/Financial Forecast of the Complete Project

The importance as well as Financial Outlay of the Impact Mitigation cum Wildlife Conservation Plan is as follows:-

- We are proposing our mitigation plan in such a manner which does not include only reestablishment of natural habitat of wild life (like water pond) but it will also help to strengthen rapid response team to handle man human conflict.
- We are proposing man power which also help to generate employment to local people.
- To make a healthy environment we have proposed dustbins, solar light as well as signage board in nearby village area.
- It also includes purchasing of camera trap for monitoring of wild life.
- Now a days Lantana seems a very big problem for visibility for wildlife as well as for human being, sometimes it becomes a main reason for human wildlife conflicts so we have proposed lantana eradication using CR Babu technique. We are focusing surrounding area of villages.
- Villages that may be get affected are
 - Gullar
 - Timali
 - Bhatya
 - Gal
 - Shivpuri
 - Badal

Forest Area- Singtali Co.No-1, Ghigur Co.No-11, Timli Co.No.-2, Shivpuri Co.No.4,3,2,& 1.

Wildlife

Details of Proposed work in Mitigation plan-

Si. No	Description of Work	Physical Quantity	Unit	Rate (In INR Lac)	Amount (In INR Lac)
1	Creation of water holes for wildlife and Restoration of water streams along the Transmission Line. (50000 ltr each)	6	Number	0.50	3.00
2	Maintenance of Water hole (next year)	6	number	0.10	0.60
3	Human-wildlife conflict Mitigation and awareness program	6	meetings	0.05	0.30
4	Establishment of Dustbin for Garbage	6	number	0.15	0.90
5	Solar Light (5 per village)	30	number	0.13	3.75
6	Signage Board (5 per village)	30	number	0.15	4.50
7	Rapid Response Team Strengthening (Manpower) (2 person 12 months for 2 year)	2 X 24	Month person	8584 -1.60	3.20 4.12
8	Hiring of Vehicle for 1 Year	1	Vehicle	4.20	4.20
9	Purchasing of Camera Trap	15	number	0.20	3.00
10	Medicine for Tranquilizing Gun	5	Number	0.20	1.00
11	Lantana Eradication (3 hac per village)	18	hac		
	1 st Year	18	hac	0.14	2.52
	2 nd Year	18	hac	0.04	0.78
	3 rd Year	18	hac	0.02	0.39
Sub-Total					28.14
12	Office Expense and Contingency (05% of Total Financial)				1.41
GRAND TOTAL					29.54

30.46



वन वनाधिकारी
शिवपुरी डिवीजन
नरेंद्रनगर वन प्रभाग
मनि की रेती

वन प्रभागीय वनाधिकारी
(देवप्रयाग)
नरेंद्रनगर वन प्रभाग

डा० पराग मधुकर धकाते
मुख्य वन्यजीव प्रतिपालक
उत्तराखण्ड

Divisional Forest Officer
Narendra Nagar Forest Division

Muni Ki Reti

CL

वन संरक्षक

भागीरथी वन, उत्तराखण्ड
मुनि की रेती (टि०ग०)

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15