



WILDLIFE MITIGATION PLAN FOR TRANSMISSION LINE PROJECTS

**132 KV D/C HUNTERGANJ -
CHAITRA TRANSMISSION LINE**


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PROJECT BACKGROUND

- JUSNL (Jharkhand Urja Sancharan Nigam Limited) is primarily entrusted for the construction and successful operation of High Voltage Transmission lines/Grid Sub-Station with a mission to form a Grid network to facilitate effective transfer of power within the State.
- The scheme is for construction of 132kV D/C Hunterganj- Chatra Transmission line. The proposed Transmission line shall connect the **proposed 132/33kV sub-station at Hunterganj (Village:- Bonra) in Chatra district and propose U/C Chatra (Village:-Darma) in Chatra district of Jharkhand state.**
- The Length of the said transmission line is 24.699 Km against which 19.708 Km passes through forest (PF & JJ land) and rest passes through other types of land.
- The power transmitted through this line will boost the Commercial, Domestic and Agricultural growth of total blocks of Hunterganj & Chatra district and nearby Villages.
- The wildlife mitigation plan has been prepared by divisional forest officer Chatra North with the support of DFO Chatra South and JUSNL, against with proposal No. FP/JH/TRANS/50112/2020 dated 03th Oct 2020.


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TRANSMISSION LINE PROJECTS VS OTHER INFRA PROJECTS

- It is not similar to any mining project that destroys forest completely for multiple purposes or creates displacement of people. These project prepares mitigation plan for wildlife to preserve flora and fauna of the area and also for the development of the peripheral village areas as part of the compliances under various laws including the CSR.
- It is not similar to any linear project like roadways and rail lines, that causes permanent breakage in the forest area.
- Transmission projects allow growth of shrubs and dwarf species plants in the corridor.
- Transmission lines creates temporary breakage, for a shorter time duration.
- In order to work in line with the Government mandate, a wildlife management plan with activities proposed (both traditional means and use of modern gadgets) is prepared.
- Impacts by nature are minor as the project affects are localized in nature and does not cause any irreversible change in the forest or community. Impacts of this nature are often amenable to mitigation.
- Not much negative effect on hydrological cycle.
- Project is to benefit for larger community at Chatra in particular and Jharkhand in general.
- It will create employment for locals during construction phase and post completion employment for maintenance of transmission lines.

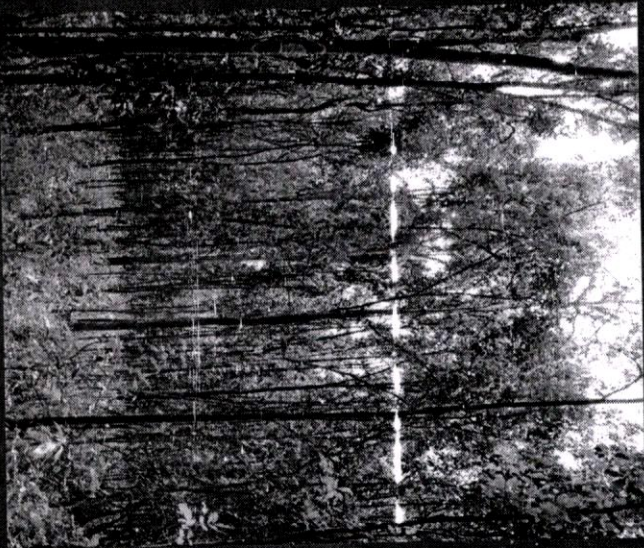
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PROJECT RELATED INFORMATION

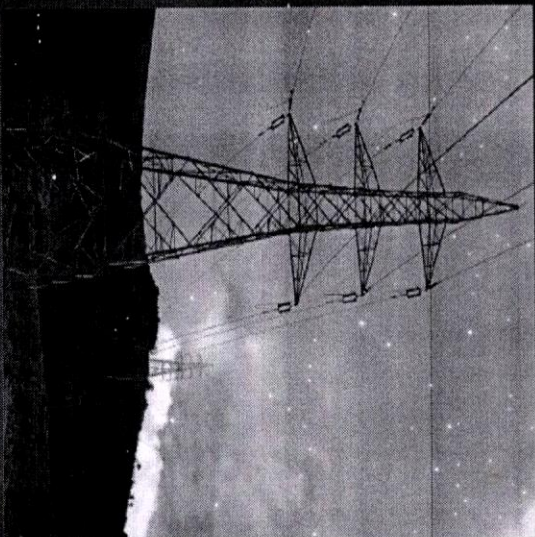


- Construction of approximately 24.699 km 132 KV transmission line, which stretches from Huntergani to Chatra (**Project Cost- 16.46Cr**)
- It passes through 23 villages in totality, 17 villages in Chatra North Forest Division and 06 villages in Chatra South Forest division
- The total area of forest to be diverted is 53.2129 Ha (Chatra North 23.3355 ha. and Chatra South 29.8774 ha.)
- Field surveys of the TL confirms that approximately 24.699 km of the line is to be laid out of which 19.708 kms passes through forest & JJ Land (11.066 Km through Chatra North and 8.642 Km through Chatra South) while 4.991 km passes through other lands.
- Compensatory Afforestation will be taken up in double the area of forest being cleared i.e. 108.047 Hectare (Chatra North - 48 ha, & Chatra South - 60.047 ha.)
- Proposed budget for Wildlife Management plan is Rs.337.913 lakh.(Rs. 148.184 lakh in Chatra North Forest Division & 189.729 lakh in chatra South Forest Division).

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LENGTH OF TRANSMISSION LINE IN KM



Length of Transmission Line in kms				Land diverted
Divisions	Total Length	Through Forest	Outside forest	In Ha
Chatra North	11.3589	8.6428	2.7161	23.3355
Chatra South	13.3408	11.0657	2.2751	29.8774
Total	24.6997	19.7085	4.9912	53.2129

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**ABSTRACT OF AREA
CALCULATION CHATRA
NORTH & CHATRA
SOUTH FOREST
DIVISION**



**132 KV D/C Transmission line from Hunterganj GSS To Chatra GSS (NTF-309
Package) Of Jharkhand State Electricity Board**

Abstract of calculation Chatra South Forest Division

Sl.no	Name of village	Thana no.	Name of District	Type of Forest (In Hect.)		Total Area
				Forest	II Area	
1	Bersaran	164	Chatra	0.5630	0.9222	1.4852
2	Kuba	165	Chatra	0.5181	2.3113	2.8294
3	sikid	160	Chatra	0.3247	2.2968	2.6215
4	sangharl	171	Chatra	9.0626	0.2951	9.3577
5	Darha	157	Chatra	5.0747	7.5493	12.6240
6	Mohanadth	176	Chatra	0.9594	0.0000	0.9594
Total in Hectare =				16.5025	13.3747	29.8772

**132 KV D/C Transmission line from Hunterganj GSS To Chatra GSS (NTF-309
Package) Of Jharkhand State Electricity Board**

Abstract of calculation Chatra North Forest Division

Sl.no	Name of village	Thana no.	Name of District	Type of Forest (In Hect.)		Total Area
				Forest	II Area	
1	Bourra	133	Chatra	0.7263	0.0000	0.7263
2	Kangurwa	175	Chatra	4.2096	0.0000	4.2096
3	Karna	173	Chatra	1.8909	0.1857	2.0766
4	Bhogatadth	172	Chatra	0.4340	0.1248	0.5588
5	Kathun	171	Chatra	0.0000	0.6784	0.6784
6	Basaria	170	Chatra	0.0000	1.2733	1.2733
7	Gobaradth	169	Chatra	0.0000	0.1954	0.1954
8	Kon	154	Chatra	0.0000	0.6121	0.6121
9	Tetaria	155	Chatra	0.0000	1.0883	1.0883
10	Saldaha	158	Chatra	0.0000	1.5672	1.5672
11	Beduali	159	Chatra	1.1465	0.2945	1.4410
12	Kanchan	285	Chatra	0.9196	0.0000	0.9196
13	Mongavandaha	157	Chatra	4.1706	0.0000	4.1706
14	Bakain	286	Chatra	0.0000	0.1633	0.1633
15	Karalbar	287	Chatra	0.0767	0.0363	0.1130
16	Korid	288	Chatra	0.0000	1.6853	1.6853
17	Bakhadth	273	Chatra	0.0000	1.8570	1.8570
Total in Hectare =				13.5742	9.7616	23.3358

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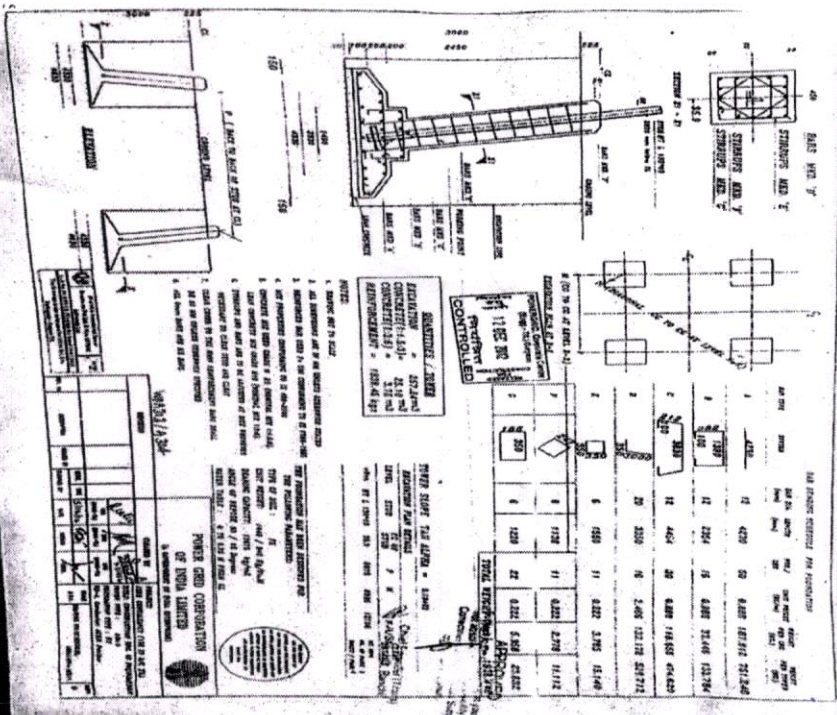
**TOTAL NUMBERS OF
TREES FELLING &
TRIMMING IN
CORRIDOR**



Total Trees (Chatra North & Chatra South Forest Division)					
Sl. No	Divison	Description	Unit	Qty	Total
1	Chatra North	Clear Felling 86%	Nos	430	503
		Trimming 14%	Nos	73	
		Clear Feilling 97%	ivos	1444	
2	Chatra South	Trimming 3%	Nos	40	1484
Grand Total					1987

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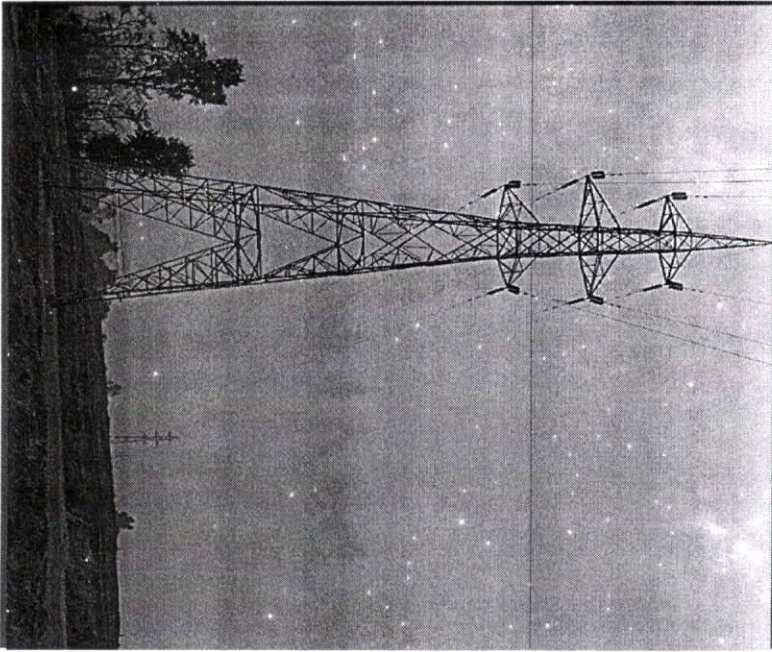
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- During route finalization and spotting of tower all the technical feasibility has been considered to avoid the forest land and tree felling at minimum level.
- Ground clearance has been maintained and kept 9 meter and above based on the terrain at all places in Forest land
- Distance between two consecutive towers is average 270 mts depending on the location of the tower and slope of the ground
- Each of the tower will generate maximum of 215.73 Cum of muck of which 95% will be used for back filling. Hence not much disturbance of the hydrological cycle of the area


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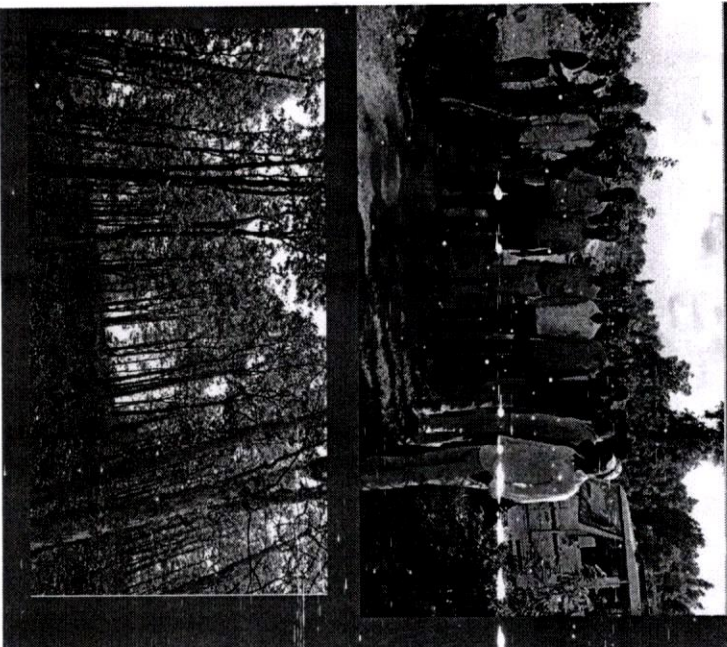
TRANSMISSION LINE PASSAGE



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PROCESS FOLLOWED FOR PREPARATION OF WLM PLAN

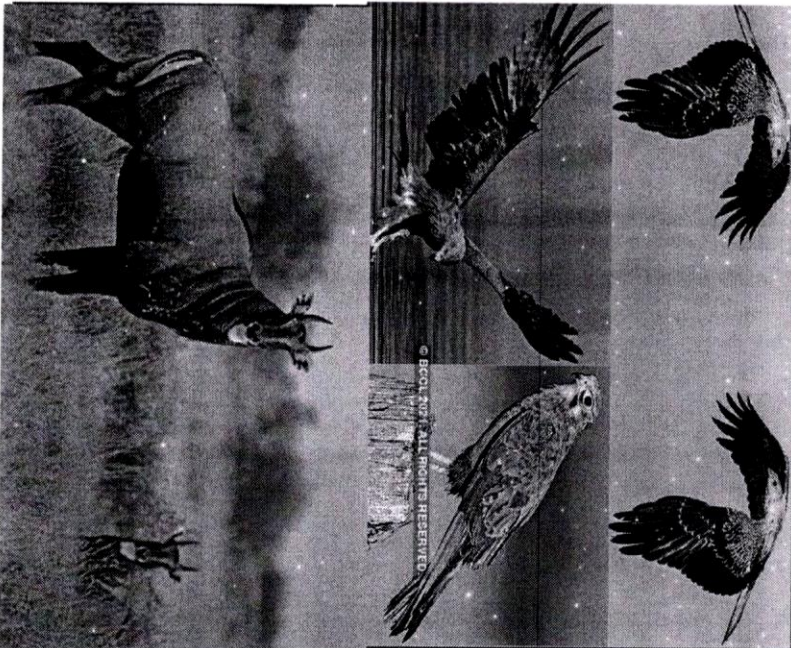


- Field visit along with APS/JUSNL team along with forest officials
- Village meetings across the project villages along with respective forest guards
- Getting perception of people affected with the raids by wild animals
- Discussion with the DFOs at their office with members from JUSNL and APS engineering with team members
- Sharing of draft mitigation plan
- Suggestion from DFOs and other seniors from department for proposed activities and budgetary allocation
- Finalization of plan and mitigation activities and budgetary allocations across proposed activities
- Final submission

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CHALLENGES IN PREPARING MITIGATION PLAN

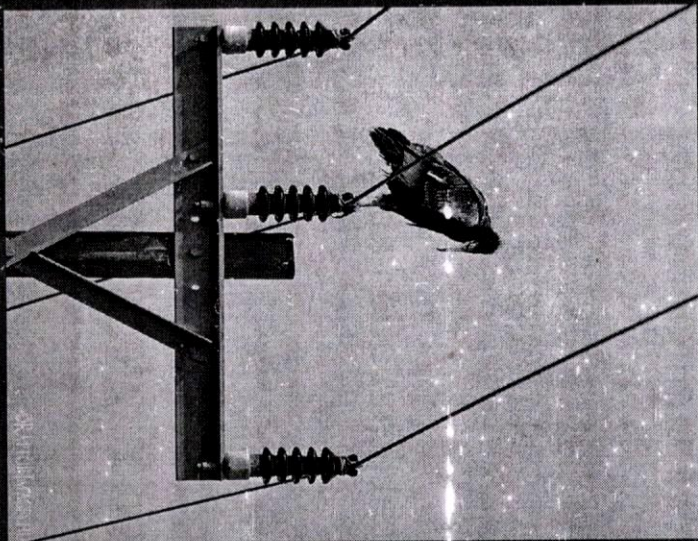


- Types of wildlife found, all year round including migratory species along with their numbers are not certain
- Assessment of Impact on a particular species in the proposed project area is difficult
- Less awareness among the local population about importance of the wildlife
- Infrastructural and manpower related challenges in forest department

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IMPACT OF TRANSMISSION LINE



POSITIVE IMPACTS

- Increased employment and economic activity. Increased tax revenues.
- uninterrupted power transmission of households and local industries
- Reduced emissions of air pollutants & Improved utilization of transmission corridors
- storm hardening, increased load serving capability, synergies with future transmission projects, increased fuel diversity and resource planning flexibility, increased wheeling revenues

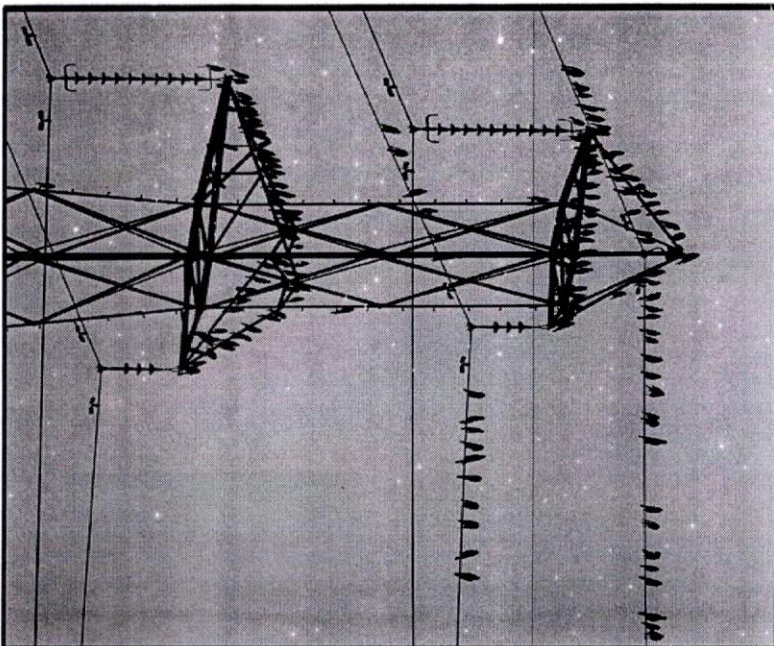
NEGATIVE IMPACTS

- Fragmentation and degradation of wildlife habitats across the habitat region
- Clearance for long periods provides exposure and facilitates weed growth
- Linear barrier during construction phase for small period creates unviable population
- Growth of plants gets restricted due to maintenance of the electrical clearance for transmission lines

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WHY THE IMPACT WILL BE LESS



- Ground clearance at all places have been to the tune of 9 mtr and above which is sufficient for the largest animal i.e elephant to pass safely
- Not all the sites are on steep slopes hence the hydrological disturbance will be less
- Towers will generate only 215.73 cum of muck out of which 95% will be used as backfill for the tower and rest will be spread over the stretch of the tower
- No risk of slope instability as footings of the towers have been based on geological study of the area and proper revetment will be done around the tower located on slopes
- None of the towers are near any water structures
- To avoid electrification Bird deflector along with artificial nest provision has been considered.

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INTERVENTIONS PROPOSED



Habitat
Management

Fire
Management

Awareness
Generation

Anti
Depredation

Monitoring
and
Evaluation

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Wildlife Conservation and Management plan (Mitigation Measure)-Activities proposed in Chatra North Forest Division
132 KV D/C Hunterganj - Chatra Transmission line proposal) For the period
F.Y. 2022-23 to 2032-33

Sl.No.	Item of proposed	Financial Quotity (in Lakhs)
Component -01 Habitat Management		
1	Food management (plantation of fruit bearing and fodder species for nesting and roosting of birds through Bamboo garbion plantation 400 garbion)	14.43
2	Water Management (Checkdams)	22.74
3	Habitat Management through silvicultural operation 30 ha	22.42
4	Watch towers	8.77
5	Artificial nests	1.08
6	Support for veterinary services	2.17
Sub Total Component -01		71.60
Component -02 Fire Management		
7	Fire management Squad	13.35
8	Fire fighting Equipments	3.25
Sub Total Component-02		16.60
Component -03 Awareness Generation & Capacity Building		
9	Awareness generation (Singer, hoardings, conservation, awareness, celebration of important	8.12
10	Capacity Building through trainings of staff.	2.71
11	Provision of energy saving device like community building through Smokeless chulha/solar lamps.	10.83
Sub Total Component-03		21.65
Component -04 Anti-Depredation Activities.		
12	ANMI DEFS (Active & Passive)	2.17
13	Provision of skilled manpower to support in various activities like anti depredation	12.24
Sub Total Component-04		14.41
Component -05 Facilities for monitoring and evaluation.		
14	Mahindra QRT	12.99
15	Maintanances @15000 per year	1.62
16	Fuel Expenses@60,000 per year	6.50
17	Night vision binoculars	2.17
18	GPS	0.65
Subtotal Component-05		23.93
Total		148.18

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**Wildlife Conservation and Management plan (Mitigation Measure)-Activities proposed in Chatra South Forest Division 132 KV
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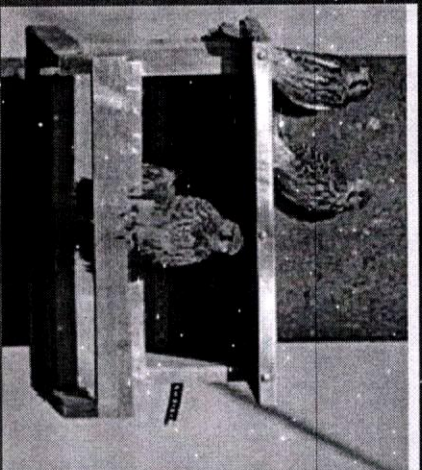
Sl.No.	Item of proposed	Financial Quotity (in Lakhs)
Component -01 Habitat Management		
1	Food management (plantation of fruit bearing and fodder species for nesting and roosting of birds through Bamboo garden plantation 400 garden)	18.48
2	Water management (Checkdams)	29.11
3	Habitat Management through silvicultural operation 30 ha	28.71
4	Watch towers	11.23
5	Artificial nests	1.39
6	Support for veterinary services	2.77
Sub Total Component -01		91.68
Component -02 Fire Management		
7	Fire management Squad	17.09
8	Fire fighting Equipments	4.16
Sub Total Component-02		21.25
Component -03 Awareness Generation & Capacity Building		
9	Awareness EC Jeration (Singer, board, etc.)	10.40
10	Capacity Building through trainings of staff	3.46
11	Provision of energy saving device like community building through Smokeless chulha/solar lamps.	13.86
Sub Total Component-03		27.72
Component -04 Anti-Depredation Activities.		
12	Anti DEBS (Active & Passive)	2.77
13	Provision of skilled manpower to support in various activities like anti depredation	15.68
Sub Total Component-04		18.45
Component -05 Facilities for monitoring and evaluation.		
14	Intahindra QRT	16.63
15	Maintanances @15000 per year	2.08
16	Fuel Expenses@60,000 per year	8.32
17	Night vision Binoculars	2.77
18	GPS	0.83
Subtotal Component-05		30.63
Total		169.73

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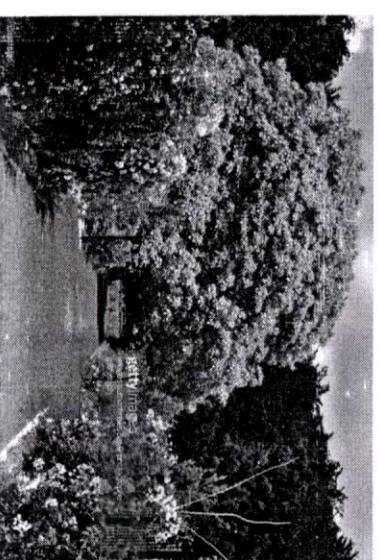
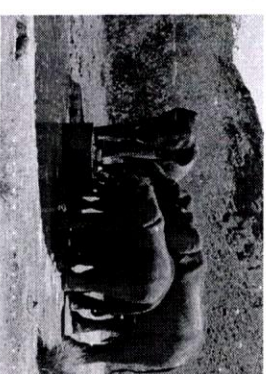
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HABITAT MANAGEMENT

Artificial nests to be placed



- Food Management (Plantation of fruit bearing and fodder species for nesting and roosting of birds through bamboo gabien plantation)
- Water Management (Check Dams)
- Habitat Management through Silviculture operations
- Support for veterinary services
- Watch towers



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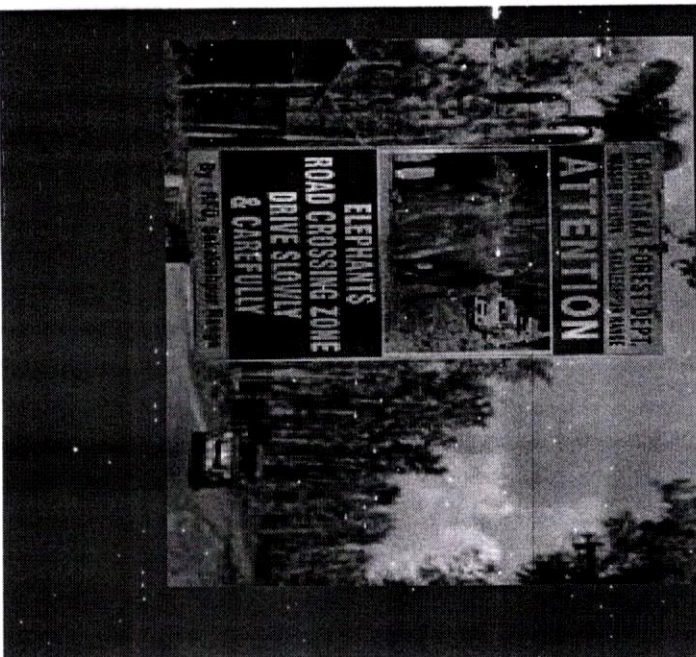
FIRE MANAGEMENT



- Transmission lines are having ultrafast acting protection relays (Operating time < 1 sec)
- For rare cases of accidental fire, fire management squad with 10 man days per kilometers of transmission line @ Rs. 311.33 per day with annual escalation of 10% over the base year 2022-23
- Fire fighting equipments

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AWARENESS GENERATION



- Display boards on road side along the villages through which transmission line will pass
- Capacity building through training programmers for field staff
- Conservation awareness
- Celebrations of important days
- Pamphlet distribution
- Empowering local communities through distribution of solar light system and improved cook stoves



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