

F. No. 6-82/2021 WL
Government of India
Ministry of Environment, Forest and Climate Change
(Wildlife Division)

1st Floor, Agni Wing,
Indira Paryavaran Bhawan,
JorBagh Road, Aliganj,
New Delhi 110003

Date: 21st September, 2021

To

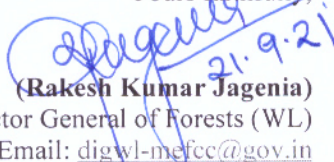
All Members
Standing Committee of NBWL

Sub: 65th Meeting of Standing Committee of National Board for Wild Life through Video conference-reg.

Sir/Madam,

It has been decided to convene the 65th Meeting of the Standing Committee of the National Board for Wild Life held on **24th September, 2021 at 10:00 AM** through Video Conference under the chairmanship of Hon'ble Minister of Environment, Forest and Climate Change. It is requested to kindly make it convenient to attend the meeting. The VC link and Agenda for the meeting will be circulated shortly.

Yours faithfully,


(Rakesh Kumar Jagenia)
Deputy Inspector General of Forests (WL)
Email: digwl-mefcc@gov.in

Distribution

1. Secretary, MoEF & CC
2. DGF&SS, MoEF&CC.
3. ADGF(WL), MOEF&CC.
4. ADGF(FC), MoEF&CC.
5. Member Secretary, NTCA
6. Director/IGF, PE Division, MoEF&CC.
7. Director, WII, Dehradun.
8. Director, GEER Foundation, Gandhinagar
9. Dr. R. Sukumar, Member, NBWL.
10. Dr. H.S. Singh, Member, NBWL
11. Secretary, Environment, Forest, Science and Technology Department, Govt. of Andhra Pradesh

Copy with request to be present during the meeting:

1. **The Additional Chief Secretary/Principal Secretary/Secretary Forest Department,** Arunachal Pradesh / Jammu and Kashmir / Kerala / Karnataka / Ladakh / Maharashtra/Odisha / Punjab / Tripura / Uttarakhand / Uttar Pradesh

2. **The Chief Wild Life Warden**, Arunachal Pradesh / Jammu and Kashmir / Kerala / Karnataka / Maharashtra / Ladakh/ Odisha / Punjab / Tripura / Uttarakhand / Uttar Pradesh

Copy also with a request to be present with respective State during the meeting.

1. CPWD, Indo Bangladesh Border Zone II Central Public Works Department 1st Floor, Nirman Bhawan, Matigara, Siliguri, West Bengal, slgibbz2.cpwd@gov.in.
2. M/s. Adani vizhinjam port private limited, Vipanchika Tower, Thycaud, Thiruvananthapuram, Kerala, avpl.aryanadu.gems@gmail.com.
3. Assistant Executive Engineer, Office of the Asst. Executive Engineer, RWS Sub Division, Kalyan Nagar, Hospet, Karnataka, aeerdsd.hspt@gmail.com.
4. Irrigation Deptt, O/o The Chief Engineer, Projects, opp. Collectorate Complex, Adilabad, Telangana, ceprojectsadilabad@gmail.com.
5. DCE CON I East Coast Railway, Annex Building West, Rail Vihar, Chandrasekharapur, Bhubaneswar, Odisha, dycelecorbbsr@gmail.com.
6. Infrastructure (Rehab) Division Rishikesh, Dehradun, Veer Bhadra Marg Rishikesh, Dehradun, Uttarakhand, songdamdehradun19@gmail.com.
7. Bharat Petroleum Corporation Limited, Kaiser ganj Abu ka Makbra Meerut, Uttar Pradesh, kumaravbharatpetroleum.in.
8. Uttarakhand Forest Development Corporation (UAFDC), 15/15 Kalidas Road Dhobalwala Dehradun, Uttarakhand, dlmkhanand.dun@gmail.com.
9. Executive Engineer PMGSY Division Ramnagar, Government Higher Secondary School Ramnagar, Jammu and Kashmir, xenpmgsyrgr@gmail.com.
10. Air Officer Commanding, Air Force Station Jammu, Jammu Satwari, Jammu Cantt, Jammu and Kashmir, guardiansone@nic.in
11. General Manager, NHAI, biswajit@nhai.org
12. JICA Project, Brahmani Left Basin, Sukinda, At-Jamuposi, Po-Ampoloba, Orissa, cebmb1b@gmail.com
13. Divisional Forest Officer-Cum-Wildlife Warden, Kalahandi South Division, Orissa, dfoklds6@gmail.com
14. 91 RCC (GREF), C/O 99 APO, Arunachal Pradesh, bro-91rcc@nic.in.
15. Commandant 9th Bn ITBP Lohitpur, 9th BN ITBP, Arunachal Pradesh, comdt9thbn@itbp.gov.in.
16. DIG ENGR, NW FTR ITBP LEH, Ladakh, Leh, E-mail ID-itcellnwfr@itbp.gov.in.
17. Executive Engineer, Department of Power, Government of Arunachal Pradesh, E-mail ID: baishyasantana@gmail.com

Copy to:

1. PS to Hon'ble MoEF&CC.
2. PS to Hon'ble MoS,EF&CC
3. PPS to DGF&SS, MoEF&CC.
4. PSO to Addl.DGF(WL)/PPS to IGF(WL).
5. NIC Cell/IT Division with request to make arrangements and coordinate with State Nodal Officers for the Video Conference on the above mentioned date and time.
6. SO(GA).
7. Reception

**TENTATIVE AGENDA OF 65TH MEETING OF THE STANDING COMMITTEE OF
NATIONAL BOARD FOR WILD LIFE**

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
INDIRA PARYAVARAN BHAWAN, JOR BAGH ROAD
ALIGANJ, NEW DELHI 110 003**

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TENTATIVE AGENDA FOR 65TH MEETING OF THE STANDING COMMITTEE OF NATIONAL BOARD FOR WILD LIFE

AGENDA No. 1

64.1. Confirmation of the minutes of the 64th Meeting of the Standing Committee of National Board for Wild Life held on 7th August, 2021

The 64th Meeting of the Standing Committee of National Board for Wild Life was held on 7th August, 2021. The minutes of the meeting were circulated vide letter F.No. 6-63/2021 dated 19th August, 2021 amongst all the Members. Copy of the minutes is placed at **ANNEXURE I**.

Dr. Sukumar, Member has requested, vide email dated 30.08.2021, that the following paragraph may be modified to more accurately reflect his statement during the meeting.

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Dr. Sukumar suggested that the cost, if any, imposed for mitigation measures should be 2% of the proportionate cost of projects falling within the protected area or the ESZ. He also suggested that there should be analysis of the cost imposed and mitigation measures taken based on the experience of States/UTs.

New text:

Dr. Sukumar observed that the cost imposed for mitigation measures should be 2% of the proportionate cost of projects falling within the protected area or the ESZ as per the policy adopted by the NBWL-SC at its 35th meeting held on 18th August 2015. Further, he also suggested that before any change in policy is adopted there should be analysis of the cost imposed and mitigation measures taken based on the experience of States/UTs.

Comments of the Ministry: The matter is placed before the Committee for consideration.

AGENDA No.2

(ACTION TAKEN REPORT)

SL. No.	Agenda Item	Action Taken	Category
1	Clarification on whether extraction of oil / natural gas is mining or not	<p>The following six proposals submitted by ONGC were recommended by the Standing Committee of National Board for Wildlife in its 52nd meeting held on 10th January 2019:</p> <ul style="list-style-type: none">a. Diversion of 1.42 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road in Tripurab. Diversion of 1.112 ha of forestland and 0.404 ha of non-forestland for construction of drill site, waste pit and approach road for the location TIDD project falling within Trishna Wildlife Sanctuary in Tripurac. Diversion of 1.367 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road in Tripurad. Diversion of 1.76 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road in Tripurae. Diversion of 1.96 ha of forestland for construction of drill site, waste pit and approach road for the location TIDF project falling within Trishna Wildlife Sanctuary in Tripura	

- f. Diversion of 1.496 ha of forestland for construction of drill site, waste pit and approach road for the location TIDE project falling within Trishna Wildlife Sanctuary in Tripura.

The factsheets of the proposals are placed at **ANNEXURE II**.

The proposals were recommended by the Standing Committee tentatively subject to the condition that the State Government shall obtain legal opinion from the Advocate General on whether extraction of natural gas / oil can be considered as mining in terms of Hon'ble Supreme Court order dated 4.8.2006 in IA-1000 in WPC-202/1995 (Godavarman vs. Union of India).

The Ministry of Petroleum and Natural Gas was also requested by the Ministry to seek the opinion of Ld. Solicitor General on the matter.

The Government of Tripura sought the opinion of the Advocate General of Tripura on the matter. The Advocate General has opined that extraction of natural gas/oil is not a mining activity under the provisions of Mines and Minerals (Development & Regulation) Act, 1957 (**ANNEXURE III**).

The opinion of Ld. Solicitor General on the matter was sought by ONGC. Ld. Solicitor General has opined that extraction of natural gas and oil (which includes exploration and development) is not a mining activity when compared to a traditional open cast mining carried out upon large

		<p>tract of land and that it cannot be considered as mining in terms of Hon'ble Supreme Court order dated 4.8.2006 in IA 1000 in WP (C) No. 202/1995 (ANNEXURE IV).</p> <p>The Standing Committee may like to take a view on the matter.</p>	
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AGENDA No.3

(Policy Matters, Court Orders)

S.No.	F.No.	Name of the Proposal
1.	1-20/2014 WL (PT)	<p>Cost of mitigation measures due to impact of developmental activities in National Parks, Sanctuaries, their Eco-Sensitive Zones, Tiger Reserves and Tiger Corridors</p> <p>In the 64th meeting, the Standing Committee recommended that 2 % of the proportionate cost of projects falling inside protected areas and ESZ may be imposed on user agencies for impact mitigation measures, wherever required in future. It was also decided that this amount should be spent on the mitigation measures within the same Protected Area.</p> <p>The Ministry is of the view that instead of imposing a uniform cost on all projects, it would be more appropriate if mitigation measures are suggested by the Chief Wild Life Wardens for each project.</p> <p>The Standing Committee may like to take a view.</p>
2.	6-82/2021 (pt.)	<p>National Foundation for Resource Mobilization for Wildlife Conservation</p> <p>There are several examples in the country where business houses/corporate bodies have supported wildlife conservation as part of Corporate Social Responsibility (CSR) component. Many of these efforts are replicable in other similar situations. However, resource mobilisation for conservation is often a challenging task.</p> <p>It is, therefore, proposed to establish a National Foundation for mobilizing resources for the purpose of wildlife conservation in the country. The National Foundation is envisaged as a Government owned Public Trust which will be registered under the Societies Registration Act, 1860. The accounts of the Foundation will be audited by the Comptroller and Auditor General of India. The Foundation will provide a range of activities for private or corporate funding and will have flexibility in terms of resource mobilization, operations and collaboration with other organizations for the purpose of wildlife conservation including zoo related activities.</p> <p>The Standing Committee may like to deliberate on the matter and provide guidance on the modalities and way forward for setting up the National Foundation.</p>

3	6-101/2020 WL	<p>Monitoring the implementation of the terms and conditions for approved projects (email dated 05.09.2021 from Shri H.S. Singh, Member NBWL)</p> <p>An email dated 05.09.2021 has been received from Shri H S Singh regarding the terms and conditions imposed on projects recommended by the Standing Committee. The main points raised in the email are as follows:</p> <ol style="list-style-type: none"> i. It was discussed in previous meetings of the Standing Committee that terms and conditions for approved project will be monitored. Subsequently, it was resolved to monitor projects to ensure the implementation of the terms and conditions in the field. It was also decided by the Standing Committee that a certificate regarding implementation of each term and condition for each sanctioned project will be obtained from the Chief Wildlife Wardens of the States. However, members of the Standing Committee are not aware of the action taken in this regard. ii. The Standing Committee has taken decisions to rationalise the boundaries of some Protected Areas. It was also decided to notify a sanctuary against the denotification of another sanctuary. For example, a decision was taken to notify a sanctuary covering Ganga River from Mirzapur to Allahabad, Uttar Pradesh against denotification of a Sanctuary in Varanasi. Another decision was about rationalising the boundaries of Hastinapur Wildlife Sanctuary. The Members of the Standing Committee have not been informed about the progress of implementation of the decisions related to these two proposals by the State Government. <p>Shri H.S. Singh has requested to present facts related to these and other similar matters related to the decisions of the Standing Committee in the next meeting of the Standing Committee of NBWL.</p> <p>Comments of the Ministry</p> <p>The Standing Committee may like to take a view.</p>
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AGENDA NO 4

Amendment in the minutes of meeting of Standing Committee

1.	6-168/2020 WL	<p>Amendment in the minutes of 60th meeting of the Standing Committee held on 5.10.2021</p> <p>The Standing Committee, in its 60th meeting held on 5th January, 2021, recommended the proposal for use of 47.7054 ha forest land for improvement, upgradation and construction of Ganeshpur-Dehradun road (NH72A) in the state of Uttar Pradesh (Km 0.0 to Km 16.160) to 4 lane configuration. The project falls in the Eco-Sensitive Zone of Rajaji National Park. One of the conditions imposed was that the user agency shall provide 2% of the proportionate cost of the project falling in the eco-sensitive zone for mitigation of negative impact and ecological development of the wildlife habitat area.</p> <p>The cost of the project as mentioned in Part I and Part II submitted by the user agency (NHAI, PIU, Dehradun) is Rs 1826 crore.</p> <p>NHAI has requested the Ministry that the condition recommended by SCNBWL regarding the demand of 2% proportionate construction cost of the project falling in the Eco Sensitive Zone be modified. It has been submitted by NHAI that a length of 160 m of the project falls in tiger corridor in Uttar Pradesh and that the cost to be imposed should be calculated accordingly. NHAI has also requested that the excess amount, if any, paid by it may be adjusted in future projects of NHAI.</p> <p>The Standing Committee may like to take a view.</p>
2.	6-112/2019 WL	<p>Amendments in the minutes of 54th meeting of the Standing Committee held on 18.07.2019</p> <p>The proposal for diversion of 21.746 ha of forest land from Abohar Wildlife Sanctuary for Rehabilitation & Upgradation to 2 lane road with paved shoulders of Abohar-Sito-Gunno-Dabwali Road from Km. 5.50 to Km. 22.50 of NH-354 E including construction of one High Level Major Steel Bridge on EPC Mode was recommended by the Standing Committee in the 54th meeting held on 18.07.2019.</p> <p>One of the conditions recommended by the Standing Committee, based on the recommendation of the Chief Wildlife Warden, Punjab was as follows:</p> <p>If any Toll Plaza is established on this road by the user agency in future even if outside of Abohar Wildlife Sanctuary, 25% of</p>

		<p>toll fee collected shall be shared by user agency with Wildlife Department for undertaking wildlife conservation measures.</p> <p>Secretary, Ministry of Road Transport & Highways, by his letter dated 4th August, 2021, has informed that the National Highway user fee is levied as per the NH Fee Rules, 2008 and that there is no provision for sharing of revenue with other organizations. He has, therefore, requested the Ministry to consider waiving the condition of sharing 25% of toll fee revenue with the Wildlife Department.</p> <p>The Standing Committee may like to take a view on the matter.</p>
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AGENDA No. 5

(Fresh Proposals falling inside / Outside the Protected Area)

ARUNACHAL PRADESH

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1	6-20/2021 WL	Improvement/up-gradation of Pakke-Seijosa-Itakhola road (62 KM) under NEC scheme at East Kameng District of Arunachal Pradesh FP/AR/ROAD/30479/2017
2	6-78/2021 WL	Diversion of 26.85 ha of forest land from Namdapha Tiger Reserve for construction of 33 KV Miao-Diyun Distribution Line. FP/AR/VELEC/35182/2018
3	6-79/2021 WL	Diversion of 4.5 ha of forest land from Namdapha Tiger Reserve for construction of 33 KV Miao-Kharsang Distribution Line, Arunachal Pradesh. FP/AR/VELEC/35184/2018
4	6-87/2021 WL	Proposal for use of 58.49 ha forest land from Dibang Wildlife Sanctuary for construction of Dembuen-Bruni Road by CPWD under Dibang Valley District of Arunachal Pradesh. FP/AR/ROAD/44350/2020
5	6-99/2021 WL	<ol style="list-style-type: none">1. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Kapuda under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52090/2020.2. Proposal for diversion of 0.6 ha of forest land from Dibang Wildlife Sanctuary for construction of New STG Camp Tathi under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/51791/2020.3. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Tapola under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52117/2020.4. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of

		<p>proposed BOP at Kangri under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52166/2020.</p> <p>5. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Balchida under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52168/2020.</p> <p>6. Proposal for diversion of 1.6 ha of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Phuphu under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52111/2020.</p> <p>7. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Lama under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52118/2020.</p> <p>8. Proposal for diversion of 1.6 ha of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Andrathang under Dibang Valley District, Arunachal Pradesh - FP/AR/DEF/52169/2020.</p> <p>9. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Amaha under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52159/2020.</p>
6	6-100/2021 WL	<p>Proposal for wildlife clearance of Nechipu Tunnel with approach road, Arunachal Pradesh.</p> <p>FP/AR/DEF/49287/2020</p>

(1)

1	Name of the Proposal	Improvement/up-gradation of Pakke-Seijosa-Itakhola road (62 KM) under NEC scheme at East Kameng District of Arunachal Pradesh FP/AR/ROAD/30479/2017
2	Name of the protected Area involved	Pakke Tiger Reserve
3	File No.	6-20/2021 WL
4	Name of the State	Arunachal Pradesh
5	Whether proposal is sub-judice	No
6	Area of the protected area	861.95 Sq.km
7(a)	Area proposed for diversion/Denotification	30.99 ha in buffer zone of Pakke Tiger Reserve
7(b)	Area so far diverted from the protected area(s)	NA
8	Status of ESZ, if any	Not yet notified. Additional information awaited from the State Government
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	Road may lead to some disturbance to wildlife during construction period but this road will also help in effective patrolling of Pakke Tiger Reserve and also in establishing anti-poaching Camps so as to facilitate the management of Tiger Reserve.
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	15/12/2018 (offline) and 12.08.2021 (Online)
13	Name of the applicant agency	EE Pakke-Kessang Division PWD Arunachal Pradesh
14	Total number of tree to be felled	-
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	Proposal was recommended by State Board for Wild Life in its meeting held on 10/01/2020.
17	Brief justification on the proposal as given by the applicant agency	Improvement/ Upgradation of Pakke-Seijosa-Itakhola Road (62.00 Km) under NEC, interstate Road originates from Chaibari(Sonitpur) in Assam and connects Assam to Pakke-Kessang (Arunachal Pradesh) via Seijosa covering a total

	<p>distance of 85.00 KM; out of which 23.00 KM falls in Assam and the rest 62.00 Km in Arunachal Pradesh to connect in between Seijosa ADC HQ with National Highway-13 at Pakke-Kessang EAC HQ in East Kameng District of Arunachal Pradesh. The project had been undertaken under NEC Scheme around 40 (forty) years back and this existing gravel road has a single lane carriage way of 3.75 Mtrs width which was completed in year 2002-03. Then the few years later, the entire stretch of this Road have been completely washed out in natural calamity and the road was completely abandoned for many years that causes many difficulties to people living at both ends of the road and nearby area, Therefore, this Road Project initiative has been to upgrade interstate Road with road width of 5.5 Mtrs to provide better transportation and communication facilities to many villages falling under this stretch, viz. Darlong, Seijosa (Upper& Lower), Bali, A2, Goloso, Jolly, Lenka, Margaso, Suchung, Palove and Pakke-Kessang in particular and Arunachal Pradesh as a whole beside the road will act as alternate Road communication to connect Tezpur Army HQ and the Bumla post of Indo-China Border.</p>
18	<p>Rare and endangered species found in the area</p> <p>Pakke tiger reserve is home to three large cats the Bengal tiger, Indian leopard and clouded leopard share space with two canids – the wild dog and Asiatic jackal. Among the herbivore species, elephant, barking deer, gaur, and sambar are most commonly encountered. The commonest monkeys are the Rhesus macaque, Assamese macaque and the capped langur</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal subject to implementation of Mitigation Plan and Animal Passage Plan suggested therein along with the proposal.</p>
20	<p>Details of Mitigation Measures as per proposal:</p> <p>The User Agency has submitted a Wildlife Mitigation Plan which may be seen at ANNEXURE V. The proposed mitigation measures include:</p> <ol style="list-style-type: none"> Marking of places for muck disposal, maintenance of hill in a way that animals can cross and climb the hill slope easily Construction of speed breakers, installation of sign boards under guidance of DFO, Wildlife, Construction of check gate at entry and exit points of area falling under buffer zone, provision for retaining wall and breast wall at critical point and as per site condition of the road. Refilling of excavated pits if any, awareness campaign amongst construction workers, Carrying out work between 8 am and 5 pm, no permanent labour camps inside forest areas.

	<p>f. Marking and protection of specific and important trees identified by the Forest Department.</p> <p>g. No firewood cutting or fuel collection inside buffer zone, no new approach road for carrying materials and manual excavation as per site condition,</p> <p>h. No extraction of materials like sand, gravel, etc. from the buffer zone, no cutting or damage to vegetation/tree during the maintenance,</p> <p>i. Adoption of eco-friendly engineering practices in construction works and due care to avoid injury to wildlife, due care regarding air pollution related aspects and waste management during the entire construction process.</p> <p>j. Executing agency to bear financial cost if any imposed by SBWL or NBWL,</p> <p>k. User Agency to bear cost of any proposal for rescue and rehabilitation of wild animals likely to be affected,</p> <p>l. Adherence to any other measures as envisaged by SBWL/NBWL and as per provision of Wild Life (Protection) Act, 1972 during execution by PWD</p> <p>m. The User Agency has not provided separate structures for animal passage plan. However, the scope of the work for road construction as mentioned in the mitigation plan submitted by the User Agency includes the following without location and complete dimensions of these structures:</p>		
	1	RCC Bridge of various Span	15 nos.
	2	RCC Slab Culverts	
	a)	2Mtr span (Widening)	49 nos.
	b)	2Mtr Span (Replace by new one)	5 nos.
	c)	2Mtr Span (New proposed)	104 nos.
	d)	3Mtr Span (Widening)	9 nos.
	e)	3Mtr Span (replace by new one)	7 nos.
	f)	3Mtr Span (New Proposed)	1 no.
	g)	4.00Mtr Span (Widening)	16 nos.
	h)	4.00 Mtr Span (New proposed)	1 no.
	i)	4.00 Mtr Span (New proposed)	2 no.
	j)	6.00Mtr Span (New proposed)	2 no.
21	Recommendations of National Tiger Conservation Authority: <p>National Tiger Conservation Authority (NTCA) vide its letter no. F. No. 7-3/2020-NTCA dated 11.08.2020 has informed that NTCA, Tiger Cell, Wildlife Institute of India, Dehradun was directed to assess the said proposal vis-a-vis tiger distribution, its dispersal connectivity and habitat. Taking into consideration the assessment report received, the recommendations of NTCA under Section 38O (1) (g) of the Wildlife (Protection) Act, 1972 are as under:</p> <p>a. Although Papum RF lies in the buffer zone of Pakke Tiger Reserve but this area has high conservation value. Therefore, it is recommended that the construction of a new alignment of the proposed road through Papum RF</p>		

	<p>should be avoided. However, the section of the road in between Itakhola and Seijosa (outside the boundaries of Pakke and Nameri Tiger Reserve can be repaired as proposed, maintaining the existing carriage width 3.75 metre).</p> <p>b. However, if it is decided to go for construction of road in Papum RF, as per proposed alignment, appropriate mitigation measures shall be taken as to be suggested by WII, Dehradun so as to reduce the negative impacts of this infrastructure development on forest ecosystem.</p>
22	<p>Comments of the Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

(2)

1	Name of the Proposal	Diversion of 26.85 ha of forest land from Namdapha Tiger Reserve for construction of 33 KV Miao-Diyun Distribution Line. FP/AR/VELEC/35182/2018
2	Name of the protected Area involved	Namdapha Tiger Reserve
3	File No.	6-78/2021 WL
4	Name of the State	Arunachal Pradesh
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	1807.82 Sq.km
7(a)	Area proposed for diversion/ Denotification	26.85 ha through buffer zone of Namdhapa Tiger Reserve
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	Draft notified on 8 th December 2015 and expired. Revised proposal is awaited from the State Government.
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	There is no chance of violation of Sec 29 of Wildlife (Protection) Act, 1972.
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	12/06/2020
13	Name of the applicant agency	Department of Power Govt of Arunachal Pradesh
14	Total number of tree to be felled	93 trees
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	Proposal was recommended by State Board for Wild Life in its meeting held on 17 th May 2021.
17	Brief justification on the proposal as given by the applicant agency	

The Ministry of Power (MOP) vide letter no. F.No.3/23/2011-Trans, dated 10th October, 2014 has conveyed approval for “Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim” with a total sanctioned cost of Rs. 4754.42 crore. The project cost for Arunachal Pradesh is Rs. 3199.45 crore.

For execution of the Comprehensive Scheme in Arunachal Pradesh, Ministry of Power (MoP), Govt. of India has appointed Power Grid Corporation of India Limited (POWERGRID) as Implementing Agency (IA) on behalf of the Department of Power, AP. In this regard, a Memorandum of Understanding (MoU) has been signed between Power Grid Corporation of India Ltd. (POWERGRID) and Department of Power, AP, wherein POWERGRID will execute the projects and hand over the assets to DoP upon progressive commissioning for taking care of operation and maintenance of the assets.

The proposed 33 kV Miao-Diyun Transmission line is a sub-project conceived under the banner of “Comprehensive Scheme for Strengthening of Transmission & Distribution System in Arunachal Pradesh” & the project area is located in Changlang district of the State.

The proposed 33 kV transmission line will connect two (2) Sub-stations namely 33 kV Diyun (yet to be constructed) & 132 kV Miao S/s (U/construction) The Diyun area, bordering Assam is a commercially important area and therefore load demand may increase in near future. The proposed 33 kV transmission sub-project will cater the power demand in Diyun and nearby areas and ensure uninterrupted power supply to various tea processing units & small agro based industries, some of which are already available and some are rapidly coming up.

After careful route survey, the route alignment of the proposed 33 KV line is finalized along the existing PWD road connecting Miao area (small township) to Diyun village. Among the three (3) nos of route alternatives studied by User Agency, the proposed route is found to be the best feasible route from construction, operation and maintenance point of view. Owing to its alignment along the road, it is longer than the other 2 alternatives but involves minimum tree cutting and some section passes through habituated & remaining mostly through open areas. Hence, impact to the forest and environment is also found to be bare minimum. The project activity involves erection of 33 KV HT poles and stringing of electric conductors on the poles for which no large scale tree felling is required. The Line shall be utilized for transferring of electric power from 132 kV Miao S/s to new 33/11 KV Diyun S/s. A corridor of 15 meter shall be effected for the construction of the said line, as well as maintaining statutory electrical clearance for safe operation as per standard norms of the CEA & MoEF.

During finalization of route alignment for laying of aforesaid 33 kV line, all efforts have been made to avoid any wildlife areas or buffer zones of tiger reserve. However, since the most feasible route is proposed along the existing PWD road therefore, some portion of the line has to unavoidably pass through the Buffer zone of Namdapha Tiger reserve (18 KM stretch & 26.85 ha) owing to the location of both the Miao & Diyun sub-station on either side of the Noa-dihing

	<p>river as shown in the map. The wildlife area involved (26.85 hectare) is the minimum requirement for the project. Since, the proposed 33 KV line is an integral part of the Comprehensive Scheme project, which aims at improvement of distribution network in the state of Arunachal Pradesh for better and uninterrupted power availability, therefore, it is mooted to apply for wildlife clearance as per the requirement of Wild Life Protection Act, 1972. Therefore, owing to the factors as mentioned above, it is found justifiable to locate the project in buffer zone of Namdapha tiger reserve but also ensuring minimum damage to the forest and environment.</p>
18	<p>Rare and endangered species found in the area Namdapha Tiger Reserve is home to Leopard, Snow leopard, Tiger and Clouded leopard etc.</p>
19	<p>Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal mentioning that it is an ambitious project of the Government of India aimed at augmenting the power transmission & distribution in the state without any negative impact on the Protected area.</p>
20	<p>Details regarding mitigation measures as per the proposal</p> <p>The Chief Wild Life Warden while forwarding the proposal has mentioned that the project area is devoid of vegetation and wildlife, hence nothing worth mentioning w.r.t. conditions, if any, to be ensured in the interest of wildlife for allowing use of the area. However, the Chief Wild Life Warden has forwarded a wildlife mitigation plan along with the proposal. The suggested mitigation measures include:</p> <ol style="list-style-type: none"> Install bird diverters in the power lines to save birds from getting electrocuted. Creation of Physical barriers like trenches to restrict wild elephants. Creation of local fruit bearing tree plantation, fodder and bamboo plantation in the periphery of the village to augment wildlife and also act as a diversion for crop raiding wild animals. An Alternative source of livelihood generation in the form of poultry, piggery and also been keeping should be introduced in the area. Equipping the Forest department and Communities for effective Management for smooth monitoring and management of the fringe villages, Namdapha Tiger Reserve with a vehicle, High beam torches, crackers and several field gadgets. Erection of Watch towers at several points in the buffer village for monitoring of wild elephant movement during the crop harvesting season. Awareness and Training for the local community to imbibe a sense of responsibility for conserving our natural resources and also hands on training on bee-keeping, poultry and piggery keeping by inviting experts from respective fields. Installation of night vision signage and hoardings. Canopy connectivity for animal crossings so that the small arboreal and mammals can use it as a means of passage for their crossings. Waste Management Plan for taking care of non-biodegradable waste by the executing agency during the implementation of the said project.

	The mitigation plan provided along with the proposal is placed as ANNEXURE VI.
21	<p>Recommendations of National Tiger Conservation Authority</p> <p>The proposal is recommended under section 38(O) of Wildlife (Protection) Act, 1972 for approval subject to the adherence to the following mitigation measures.</p> <p>Suggested mitigation measures</p> <ol style="list-style-type: none"> a. Insulated cables should be used along the entire stretch of the proposed transmission line so as to avoid electrocution to avifauna and other arboreal species as well as avoid poaching using electricity. This is in accordance with the decision taken by the Standing Committee of National Board for Wildlife in its 54th meeting held on July 18, 2019. b. Height above the ground at the lowest point of the lowest conductor or grounding wires (i.e., at maximum sag point) of powerlines should be: <ol style="list-style-type: none"> i. A minimum of 10m above ground on level terrain (slope 20 degrees) so that no elephant can reach it even with raised trunk. ii. A minimum of 15m above ground on steeper terrain (slope > 20 degrees) so that no elephant can reach it even with raised trunk. c. The entire length of the proposed powerline in between Miao and Diyun should be marked with appropriate bird diverters spaced at 10m intervals. The bird diverters shall be regularly checked and maintained by the power company. d. The alignment of the powerline should be made such that minimum numbers of trees are felled. Any felling/pollarding/pruning of trees for allowing electrical clearance/maintenance will be done with the permission of the local DFO, Namdapha Tiger Reserve. e. No construction/maintenance work shall be permitted within forest and wildlife areas in between 6 PM to 7 AM. Labor camps should be at least 1 km away from the boundaries of the Tiger Reserve. f. No construction material (including soil, stones etc.) should be collected from the forest.
22	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

(3)

1	Name of the Proposal	Diversion of 4.5 ha of forest land from Namdapha Tiger Reserve for construction of 33 KV Miao-Kharsang Distribution Line, Arunachal Pradesh. FP/AR/VELEC/35184/2018
2	Name of the protected Area involved	Namdapha Tiger Reserve
3	File No.	6-79/2021 WL
4	Name of the State	Arunachal Pradesh
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	1807.82 Sq.km
7(a)	Area proposed for diversion/ Denotification	4.5 ha in buffer zone of Namdapha Tiger Reserve
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	Draft notified on 8 th December 2015 and expired. Revised proposal is awaited from the State Government
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	There is no chance of violation of Sec.29 of Wildlife (Protection) Act, 1972
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	12/06/2020
13	Name of the applicant agency	Department of Power Govt of Arunachal Pradesh
14	Total number of tree to be felled	-
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life In the minutes of the meeting of State Board for Wild Life held on 17 th May 2021, the recommendations for the project under the heading (V) Proposal for wildlife clearance of 33 KV Transmission Line from Miao to Kharsang have been mentioned as follows:	

	<p><i>The proposal for wildlife clearance for establishment of 33 KV transmission line from Miao to Diyun has been received from the Department of power, Government of Arunachal Pradesh which will pass through the buffer zone of Namdapha Tiger Reserve. The proposed transmission line passes through buffer zone of Namdapha Tiger Reserve between Tibetan refugee camp and Kachang village having degraded forest and cultivation area. The portion of proposed transmission line at the buffer zone is at a distance of more than 10 (ten) Km from the boundary of the Namdapha TR. It is an ambitious project of the Government of India aimed at augmenting the power transmission & distribution in the state without any negative impact on the Protected Area. Field Director of Namdapha TR has submitted wildlife mitigation plan and has been approved by the Chief Wildlife Warden. The Board has agreed for clearance and onward submission to the NBWL for wildlife clearance.</i></p>
17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>Area involved in buffer zone of Namdapha Tiger Reserve: 4.5 Hectare</p> <p>The Ministry of Power (MOP) vide letter no. F.No.3/23/2011-Trans, dated 10th October, 2014 has conveyed approval for “Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim” with a total sanctioned cost of Rs. 4754.42 crore. The project cost for Arunachal Pradesh is Rs. 3199.45 crore.</p> <p>For execution of the Comprehensive Scheme in Arunachal Pradesh, Ministry of Power (MoP), Govt. of India has appointed Power Grid Corporation of India Limited (POWERGRID) as Implementing Agency (IA) on behalf of the Department of Power, AP. In this regard, a Memorandum of Understanding (MoU) has been signed between Power Grid Corporation of India Ltd. (POWERGRID) and Department of Power, AP, wherein POWERGRID will execute the projects and hand over the assets to DoP upon progressive commissioning for taking care of operation and maintenance of the assets.</p> <p>The proposed 33 kV Miao-Kharsang Transmission line is a sub-project conceived under the banner of “Comprehensive Scheme for Strengthening of Transmission & Distribution System in Arunachal Pradesh” & the project area is located in Changlang district of the State.</p> <p>The proposed 33 kV transmission line will connect two (2) Sub-stations namely 132 kV Miao S/s (U/construction) & 33 kV Kharsang S/s (U/construction). The Kharsang area, bordering Assam is a commercially important area and therefore load demand may increase in near future. The proposed 33 kV transmission sub-project will cater the power demand in Kharsang and nearby areas and ensure uninterrupted power supply to Kharsang Oil Field, various tea processing units & small agro based industries, some of which are already available and some are rapidly coming up.</p> <p>After careful route survey, the route alignment of the proposed 33 KV line is finalized along the existing PWD road connecting Miao area (Small Township) to Kharsang village. Among the three (3) nos of route alternatives studied by</p>

	<p>User Agency, the proposed route is found to be the best feasible route from construction, operation and maintenance point of view. Owing to its alignment along the road, it involves minimum tree cutting and some section passes through habituated & remaining mostly through open areas. Hence, impact to the forest and environment is also found to be bare minimum. The project activity involves erection of 33 KV HT poles and stringing of electric conductors on the poles for which no large scale tree felling is required. The Line shall be utilized for transferring of electric power from 132 kV Miao S/S to new 33/11 KV Kharsang S/s. A corridor of 15 meter shall be effected for the construction of the said line, as well as maintaining statutory electrical clearance for safe operation as per standard norms of the CEA & MoEF.</p> <p>During finalization of route alignment for laying of aforesaid 33 kV line, all efforts have been made to avoid any wildlife areas or buffer zones of tiger reserve. However, since the most feasible route is proposed along the existing PWD road therefore, some portion of the line has to unavoidably pass through the Buffer zone of Namdapha Tiger Reserve (3 KM stretch & 4.5 ha). The wildlife area involved (4.5 hectare) is the minimum requirement for the project. Since, the proposed 33 KV line is an integral part of the Comprehensive Scheme project, which aims at improvement of distribution network in the state of Arunachal Pradesh for better and uninterrupted power availability, therefore, it is mooted to apply for Wildlife Clearance as per the requirement of Wild Life Protection Act, 1972.</p> <p>Therefore, owing to the factors as mentioned above, it is found justifiable to locate the project in buffer zone of Namdapha tiger reserve but also ensuring minimum damage to the forest and environment.</p>
18	<p>Rare and endangered species found in the area</p> <p>Namdapha Tiger Reserve is home to Leopard, snow leopard, tiger and clouded leopard etc.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal mentioning that it is an ambitious project of the Government of India aimed at augmenting the power transmission & distribution in the state without any negative impact on the Protected area.</p>
20	<p>Details regarding mitigation measures as per the proposal</p> <p>The Chief Wild Life Warden while forwarding the proposal has mentioned that the project area is devoid of vegetation and wildlife, hence nothing worth mentioning w.r.t. conditions, if any, to be ensured in the interest of wildlife for allowing use of the area. However, a wildlife mitigation plan has been received for the project. The suggested mitigation measures include:</p> <ol style="list-style-type: none"> Install bird diverters in the power lines to save birds from getting electrocuted. Creation of Physical barriers like trenches to restrict wild elephants.

	<ul style="list-style-type: none"> c. Creation of local fruit bearing tree plantation, fodder and bamboo plantation in the periphery of the village to augment wildlife and also act as a diversion for crop raiding wild animals. d. An Alternative source of livelihood generation in the form of poultry, piggery and also bee keeping should be introduced in the area. e. Equipping the Forest department and Communities for effective Management for smooth monitoring and management of the fringe villages, Namdapha Tiger Reserve with a vehicle, High beam torches, crackers and several field gadgets. f. Erection of Watch towers at several points in the buffer village for monitoring of wild elephant movement during the crop harvesting season. g. Awareness and Training for the local community to imbibe a sense of responsibility for conserving our natural resources and also hands on training on bee-keeping, poultry and piggery keeping by inviting experts from respective fields. h. Installation of night vision signage and hoardings. i. Canopy connectivity for animal crossings so that the small arboreal and mammals can use it as a means of passage for their crossings. j. Waste Management Plan for taking care of non-biodegradable waste by the executing agency during the implementation of the said project. <p>The mitigation plan provided along with the proposal is placed as ANNEXURE VII.</p>
21	<p>Recommendations of National Tiger Conservation Authority</p> <p>The proposal is recommended under Section 38(O) of the Wildlife (Protection) Act, 1972 for approval subject to the adherence to the following mitigation measures:</p> <p>Suggested mitigation measures</p> <ul style="list-style-type: none"> a. Insulated cables may be used along the entire stretch of the proposed transmission line so as to avoid electrocution to avifauna and other arboreal species as well as avoid poaching using electricity. This is in accordance with the decision taken by the Standing Committee of National Board for Wildlife in its 54th meeting held on July 18, 2019. b. Height above the ground at the lowest point of the lowest conductor or grounding wires (i.e., at maximum sag point) of power lines should be: <ul style="list-style-type: none"> i. A minimum of 10m above ground on level terrain (slope < 20 degrees) so that no elephant can reach it even with raised trunk. ii. A minimum of 15m above ground on steeper terrain (slope > 20 degrees) so that no elephant can reach it even with raised trunk.

	<ul style="list-style-type: none"> c. The entire length of the proposed powerline in between Miao and Kharsang should be marked with appropriate bird diverters spaced at 10m intervals. The bird diverters shall be regularly checked and maintained by the power company. d. The alignment of the power line should be made such that minimum numbers of trees are felled. Any felling/pollarding/pruning of trees for allowing electrical clearance/maintenance will be done with the permission of the local DFO, Namdapha Tiger Reserve. e. No construction/maintenance work shall be permitted within forest and wildlife areas in between 6 PM to 7 AM. Labor camps should be at least 1 km away from the boundaries of the Tiger Reserve. f. No construction material (including soil, stones etc.) should be collected from the forest.
22	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

(4)

1	Name of the Proposal	Proposal for use of 58.49 ha forest land from Dibang Wildlife Sanctuary for construction of Dembuen-Bruni Road by CPWD under Dibang Valley District of Arunachal Pradesh. FP/AR/ROAD/44350/2020		
2	Name of the protected Area involved	Dibang Wildlife Sanctuary		
3	File No.	6-87/2021 WL		
4	Name of the State	Arunachal Pradesh		
5	Whether proposal is sub-judice	Not sub-judice		
6	Area of the protected area	4149 Sq.km		
7(a)	Area proposed for diversion/ Denotification	58.49 ha		
		S.no	Component	Project Area under Protected Area(ha.)
		1	Road	54.09
		2	Muck Disposal Area	4.4
7(b)	Area so far diverted from the protected area(s)	Nil		
8	Status of ESZ, if any	Final notified on 24/12/2020 and the extent of the ESZ is from zero to 1 km from the boundary of the Sanctuary.		
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	No Violation of sec. 29 of WPA 1972. However, strict vigilance shall be execution of work.		
10	Whether project linear/non-linear	Linear		
11	Whether EC obtained	EC application yet to be submitted		
12	Date of submission by user agency	11/03/2020		
13	Name of the applicant agency	CPWD, Indo Bangladesh Border Zone II		
14	Total number of tree to be felled	NA		
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes		
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 17 th May 2021. The State Board noted that a wildlife mitigation plan has been			

	submitted by the use agency which has been prepared in consultation with the DFO of Anini Social Forestry Division.	
17	Brief justification on the proposal as given by the applicant agency The road is strategically very important for the safety of the nation and will be used by the ITBP and Military Personnel to reach the border and for carriage goods and ammunition's etc. to protect Indian Territory. Therefore, diversion of forest land will be essential for construction of this strategic border road.	
18	Rare and endangered species found in the area Dibang Wildlife Sanctuary is home to blue throated forest lizard, common sunskink, Asian long tailed grass lizard and Monitor lizard, Chinese pangolin, Assamese macaque, wild dog, leopard cat, Marbled cat, Tiger, Mishmi Takin etc.	
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal subject to implementation of mitigation measures like creation of Check Post near critical junction like bridges and high faunal density area, speed breakers at periodic intervals, signage (warning signs), wildlife awareness, hoarding etc.	
20	Details regarding Mitigation Measures as per proposal <p>The length of the road proposed in the sanctuary is 30.1 km and the width is 18 m. The DFO has prepared Wildlife Mitigation and Conservation Plan for Dambeun-Bruni Road in Dibang Wildlife Sanctuary (ANNEXURE VIII). The proposed mitigation and conservation plan to minimize damage due to the project include mitigated span of bridge, use of culverts, speed control, fixing time for vehicle movement, creating tall avenue plantations along road, banning honking of vehicles, creating animal rescue and treatment infrastructure, creating awareness amongst the stakeholders, installation of fluorescent signages, interpretation center in Dambeun area to be carried out by the User Agency. However, the details regarding exact numbers, locations and dimensions of the animal passage structures have not been provided.</p> <p>Apart from the mitigation measures to be carried out by the User Agency, DFO has suggested that the cost of following mitigation measures to be implemented shall be borne by the User Agency by transfer to the Forest Department as follows:</p>	
	Sl. No.	Amount (Rs. in lakh)
	1	75.00
	2	25.00

	3	Patrolling, Ambulance and Monitoring and Rescue Vehicles, 3 numbers	42.00
	4	Staff wages (10000X12 MonthX2LabourerX 10 Year) for rescue and rehabilitation and other works for conservation of wildlife	24.00
	5	Creation of Awareness amongst the stakeholders	5.00
	6	Creation of Interpretation center for training of stakeholders	100.00
	7	Population monitoring exercise, migration and landscape studies of wild animals and scientific research	5.00
	8	Creation of Avenue Plantation along Highway (200 Plants per Kms 20 Kms * Rs. 1000)	60.00
		Sub Total	336.00
		Contingency (3% of total financial outlay)	10.08
		Total	346.08
21	Comments of Ministry The Standing Committee may like to take a view on the proposal.		

(5)

1	Name of the Proposal	<ol style="list-style-type: none">1. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Kapuda under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52090/2020.2. Proposal for diversion of 0.6 ha of forest land from Dibang Wildlife Sanctuary for construction of New STG Camp Tathi under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/51791/2020.3. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Tapola under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52117/2020.4. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Kangri under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52166/2020.5. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Balchida under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52168/2020.6. Proposal for diversion of 1.6 ha of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Phuphu under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52111/2020.7. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Lama under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52118/2020.8. Proposal for diversion of 1.6 ha of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Andrathang under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52169/2020.9. Proposal for diversion of 1.6 ha (4 acres) of forest land from Dibang Wildlife Sanctuary for construction of proposed BOP at Amaha under Dibang Valley District, Arunachal Pradesh- FP/AR/DEF/52159/2020.
2	Name of the protected Area involved	Dibang Wildlife Sanctuary

3	File No.	6-99/2021 WL		
4	Name of the State	Arunachal Pradesh		
5	Whether proposal is sub-judice	Not sub-judice		
6	Area of the protected area	4149 Sq.km		
7(a)	Area proposed for diversion/ Denotification	S.No.	Name of BOP	Area required (in Ha)
		1	Kapuda BOP	1.6
		2	STG Camp Tathi	0.6
		3	Tapola BOP	1.6
		4	Kangri BOP	1.6
		5	Balchida BOP	1.6
		6	Phuphu BOP	1.6
		7	Lama BOP	1.6
		8	Andrathang BOP	1.6
9	Amaha	1.6		
7(b)	Area so far diverted from the protected area(s)	Nil		
8	Status of ESZ, if any	Final notified on 24/12/2020 and the extent of the ESZ is from zero to 1 km from the boundary of the Sanctuary.		
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	Though the BOP is within Wildlife Sanctuary Violation of Sec. 29 of Wildlife (Protection) Act, 1972 is negligible.		
10	Whether project linear/non-linear	Non-Linear		
11	Whether EC obtained	No		
12	Date of submission by user agency	06/08/2021		
13	Name of the applicant agency	Commandant 9 th BN ITBP Lohitpur		
14	Total number of tree to be felled	NA		
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes		
16	Recommendation of State Board for Wild Life			
	Proposal was recommended by State Board for Wild Life in its meeting held on 17 th May 2021 considering its location from strategic point of view on the LAC between India and China with a condition to strictly implement the wildlife mitigation plan approved by the CWLW.			

17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>FP/AR/DEF/52090/2020</p> <ol style="list-style-type: none"> 1. The BOP Kapuda is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh. 2. The area occupied would be 4 acres of land. This BOP is approximate 11 km (aerial distance) from Kaya La North (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence. 3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land. <p>FP/AR/DEF/51791/2020.</p> <ol style="list-style-type: none"> 1. The BOP Tathi is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh. 2. The area occupied would be 1.5 acres of land. This BOP is approximate 11 km (aerial distance) from Yongyap La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence. 3. The requirement of forest land for diversion to this project works out to 1.5 acres of land. All the buildings at the proposed land will be of Assam
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pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52117/2020.

1. The BOP Tapola is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 1701-I/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 08 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.
2. The area occupied would be 4 acres of land. This BOP is approximate 7.5 km (aerial distance) from Zikyem La East(LAC). These border areas distant from our current border outposts due to which no much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.
3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52166/2020.

1. The BOP Kangri is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of /TBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.
2. The area occupied would be 4 acres of land. This BOP is approximate 5 km (aerial distance) from Andzamkho La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.
3. The requirement of forest land for diversion to this project works out to 04 acres of land. All the buildings at the proposed land will be of Assam

pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52168/2020.

1. The BOP Balchida is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenances entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPS and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.
2. The area occupied would be 4 acres of land. This BOP is approximate 6 km (aerial distance) from Agua La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPS will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.
3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52111/2020.

1. The BOP Phuphu is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-8M-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.
2. The area occupied would be 1.5 acres of land. This BOP is approximate 5.5 km (aerial distance) from Kaya La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.

3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52118/2020.

1. The BOP Lama is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-8M-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.
2. The area occupied would be 4 acres of land. This BOP is approximate 16 km (aerial distance) from Andzamkho La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.
3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.

FP/AR/DEF/52169/2020.

1. The BOP Andrathang is important from strategic point of view. This BOP is Important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPS and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur.
2. The area occupied would be 4 acres of land. This BOP is approximate 5.5 km (aerial distance from Andra La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which will strengthen the defence.

	<p>3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structures. Hence, no earth work excavation and muck disposal will be required in the land.</p> <p>FP/AR/DEF/52159/2020.</p> <p>1. The BOP AMAHA is important from strategic point of view. This BOP is important along LAC on the Indo-China border. This BOP is essential required in view of the present relation with China and security situation prevailing in the region. The responsibility for the construction and maintenance is entrusted to ITBP Engineering wing. The BOP was proposed to establish by MHA, BM Division vide secret letter no 17014/21/2019-BM-IV dated 17/01/2020 which conveyed the CCS approval for development of infrastructure for 47 new BOPs and 12 staging camps of ITBP along Indo-China Border. However, out of above 8 new BOPs and 1 staging camp are in AOR of 9th BN ITBP, Lohitpur, Arunachal Pradesh.</p> <p>2. The area occupied would be 4 acres of land. This BOP is approximate 4 km (aerial distance) from Yongyap La (LAC). These border areas are distant from our current border outposts due to which not much patrols can be conducted. Establishing these new BOPs will reduce the border distance and will make easy and frequent patrols which. will strengthen the defence.</p> <p>3. The requirement of forest land for diversion to this project works out to 4 acres of land. All the buildings at the proposed land will be of Assam pattern and elevated structure. Hence, no earth work excavation and muck disposal will be required in the land.</p>
18	<p>Rare and endangered species found in the area Dibang Wildlife Sanctuary is home to blue throated forest lizard, common sunskink, Asian long tailed grass lizard and Monitor lizard, Chinese pangolin, Assamese macaque, wild dog, leopard cat, Marbled cat, Tiger, Mishmi Takin etc.</p>
19	<p>Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal considering its location from strategic point of view on the LAC between China – India subject to implementation of Mitigation Plan to be submitted.</p>
20	<p>Comments of Ministry The Standing Committee may like to take a view on the proposal.</p>

(6)

1	Name of the Proposal	Proposal for wildlife clearance of Nechipu Tunnel with approach road, Arunachal Pradesh. FP/AR/DEF/49287/2020		
2	Name of the protected Area involved	Sessa Orchid Wildlife Sanctuary		
3	File No.	6-100/2021 WL		
4	Name of the State	Arunachal Pradesh		
5	Whether proposal is sub-judice	Not sub-judice		
6	Area of the protected area	100 Sq.km		
7(a)	Area proposed for diversion/ Denotification	2.68ha		
7(b)	Area so far diverted from the protected area(s)	15.62 ha		
		S.No	Name of the proposal	Area
		1	Diverted 2.12 ha of forest land for army building and convoy ground in Sessa.	2.12 ha
		2	Improvement and widening of Balipara-Charduar-Tawang(BCT) road 50 km to 88 km	13.50 ha
		Total		15.62
8	Status of ESZ, if any	Revised proposal is awaited from the State Government.		
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	No violation of Sec.29 of Wildlife (Protection) Act, 1972, as it is passing through mountain.		
10	Whether project linear/non-linear	Linear		
11	Whether EC obtained	No		
12	Date of submission by user agency	26/08/2021		
13	Name of the applicant agency	91 RCC (GREF)		
14	Total number of tree to be felled	NA		

15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 17 th May 2021 subject to strict implementation of Wildlife mitigation plan approved by the Chief Wild Life Warden.	
17	Brief justification on the proposal as given by the applicant agency The road stretch between Km 81.847 to km 87.040 of B.C.T (Balipara-Charidwar-Tawang) is entirely located in forest area. There is no other alternative to by-pass dense fog zone other than this proposed tunnel and nearly 10 km from km 87.040 towards Tenga and nearly 40 km from km 81.847 towards Bhalukpong is entirely forest land. So, economical and suitable location with bare minimum land selected for tunnel, approach roads and muck disposal.	
18	Rare and endangered species found in the area Sessa Orchid Wildlife Sanctuary has Rhesus macaque, Assamese macaque, Capped langur, Barking deer, Sambar, Serow, Wild boar, Asiatic elephant, Asiatic black bear Wild dog, Tiger, Common leopard, Clouded leopard, Jungle cat and Leopard cat etc.	
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal mentioning that this Nechipu Tunnel with approach road to bypass fog prone stretch of BCT road and will facilitate defence requirement subject to condition that speed breakers and signage to for installed on approach road on both end.	
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.	

JAMMU AND KASHMIR

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-81/2021 WL	Proposal for use of 9.51 ha. (23.5 Acres) of Forest land from Bahu Conservation Reserve for deployment of operational assets to strengthen defence coverage to Jammu Region by Indian Air Force. FP/JK/DEF/4910/2020
2.	6-88/2021 WL	Construction of Road from Sumwal to Sarail Choa (JK14-402). FP/JK/ROAD/46670/2020
3.	6-102/2021 WL	Diversion of 1.995 ha from Surinsar Mansar Wildlife Sanctuary for construction of road from Dhar Road Larey To Sumal. FP/JK/ROAD/141991/2021
4.	6-103/2021 WL	Diversion of 2.442 ha from Surinsar Mansar Wildlife Sanctuary for construction and upgradation of Road L-060 Kothar to Ponthal. FP/JK/ROAD/120321/2021
5.	6-105/2021 WL	Diversion of 0.1 ha of forest land from Dara Conservation Reserve for construction of water supply Scheme at Check Dara, Ganderbal by Jal Shakti Department. FP/JK/WATER/49492/2020
6.	6-106/2021 WL	Diversion of 0.6 ha of forest land from Jawahar Tunnel Chakore Conservation Reserve for Snow Harvesting System at D-10 Top FP/JK/WATER/49078/2020
7.	6-104/2021 WL	Proposal for diversion of 0.225 ha of forest land from Sudhmahadev Conservation Reserve for construction of Barkunda to Kharwa FP/JK/ROAD/5063/2020
8.	6-115/2021 WL	Diversion of 0.78 ha of forest land from Sudhmahadev Conservation Reserve for construction of Mantlai to Gamsadu road. FP/JK/ROAD/5064/2020

(1)

1	Name of the proposal	Proposal for use of 9.51 ha. (23.5 Acres) of Forest land from Bahu Conservation Reserve for deployment of operational assets to strengthen Defence coverage to Jammu Region by Indian Air Force. FP/JK/DEF/4910/2020				
2	Name of the protected Area involved	Bahu Conservation Reserve				
3	File No.	6-81/2021 WL				
4	Name of the State	UT of Jammu & Kashmir				
5	Whether proposal is sub-judice	Not sub-judice				
6	Area of the protected area	19.75 sq.km				
7(a)	Area proposed for diversion/ Denotification	9.51 ha.				
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year	Area Diverted/ Permitted for use(ha.)
		1.	Development of Judicial Infrastructure for High Court	J&K High Court	2020	40.6565
8	Status of ESZ, if any	NA				
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA				
10	Whether project linear/non-linear	Non-Linear				
11	Whether EC obtained	No				
12	Date of submission by user agency	03/03/2020				
13	Name of the applicant agency	Air Officer Commanding, Air Force Station Jammu				
14	Total number of tree to be felled	NA				
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes				

16	<p>Recommendation of State Board for Wild Life</p> <p>Proposal was recommended by the Standing Committee of the State Board for Wild Life in its meeting held on 18th October 2019 with the following conditions:</p> <ol style="list-style-type: none"> 1. The proprietary and legal status of the land shall remain unchanged. 2. The user agency shall pay NPV (Net Present Value) in accordance with the orders of the Hon'ble Supreme Court. 3. The user agency shall pay 5% of the estimated cost of the project for conservation and preservation of wildlife and its habitat. 4. The user agency shall be responsible for obtaining requisite clearances under any other law in vogue. 5. No harm to any wildlife species shall be done if found accidentally in the said area. 6. User agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of the Wildlife Protection Act, directions of the Ministry of Environment, Forest & Climate Change and orders of the J&K Government in this regard. 7. The activities shall be liable to periodic check by the department and stoppage of activities shall come into force, if it is found that any such provisions are not abided by the user agency. 8. Whole area of the range should be fenced by way of chain link. 9. Dumping of solid and liquid waste shall be scientifically dealt with by the user agency in and around the operational area in order to ensure no damage to wildlife habitat is caused.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>In view of the national defence requirement and to provide defence coverage to Jammu area, this land is of utmost importance and unavoidable as it is obstruction free and also away from the IB. Development of assets at this location will give an advantage. Use of this location will enhance the overall defence set up. This will provide better operational potential and security setup for the region. Proximity to Army Base at Sunjwan will result in better co-ordination and co-operation between two services, which will provide enhanced security to the Jammu. No other land is available with Air Force and State Revenue Department for deployment of Operational assets to strengthen Defence coverage to Jammu region, Air Defence protection of Jammu City and its important installations and counter measures against the adversaries.</p>
18	<p>Rare and endangered species found in the area</p> <p>Bahu Conservation Reserve is home to Jackal, Porcupine, Wild Boar, Rhesus Monkey etc Species of snakes and other reptiles have also been found in the area.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal with the conditions laid down by the Standing Committee of the State Board for Wild Life.</p>
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

(2)

1	Name of the Proposal	Construction of Road from Sumwal to Sarail Choa (JK14-402). FP/JK/ROAD/46670/2020			
2	Name of the protected Area involved	Surinsar Mansar Wildlife Sanctuary			
3	File No.	6-88/2021 WL			
4	Name of the State	UT of Jammu & Kashmir			
5	Whether proposal is sub-judice	Not sub-judice			
6	Area of the protected area	97.82 Sq kms			
7(a)	Area proposed for diversion/ Denotification	2.345 ha (Out of 2.345 ha proposed area, 1.865 ha falls under non-forest/private land and only 0.48 ha of forest land is involved in the said project.			
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year
		1.	Laying of 132 KV D/C Hiranagar-Battal Manwal Transmission Line	Power Development Department	2017
					Area Diverted/ Permitted for use(ha.)
					7.35
8	Status of ESZ, if any	Draft notification published on 12.01.2021			
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	The proposal is with regard to the construction of 3.255 km road to give connectivity to village Sarail Choa. The total area involved in the construction of proposal road is 2.345 ha of which 1.865 ha is private agriculture land and 0.48 ha is forest land. The proposed road passes through Surinsar-Mansar Wildlife Sanctuary. Since 80% of area involved in the proposed road is private agriculture land, the proposal shall not have much effect on the wildlife habitat. The connectivity for the villagers of Sarail			

		Choa shall be useful for winning their confidence in favour of the Wildlife Conservation.
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	23/06/2020
13	Name of the applicant agency	Executive Engineer PMGSY Division Ramnagar
14	Total number of tree to be felled	17
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by the Standing Committee of the State Board for Wild Life in its meeting held on 8th January 2019 with the following conditions: <ol style="list-style-type: none"> 1. The user agency shall pay 5% of the estimated cost of the project to the J&K Wildlife Protection Department for conservation and preservation of wildlife and its habitat. 2. The user agency shall also pay NPV (Net Present Value) to the Wildlife Protection Department in accordance with the orders of the Hon'ble Supreme Court. 3. The user agency, while implementing the road construction project, will abide by the orders issued by the Hon'ble Supreme Court of India and follow provisions of the Wild Life (Protection) Act, 1972. 4. The user agency will follow the eco-friendly engineering practices during the project execution. 5. The user agency shall be responsible for obtaining requisite clearances under any other law in vogue. 6. The Department of Wildlife Protection shall be at liberty to impose any other condition on the user agency that it or its ground staff may find necessary and unavoidable. 	
17	Brief justification on the proposal as given by the applicant agency 1. The project for construction of road from Sumwal to Sarail Choa (package No.: JK14-402) is sanctioned in Phase-X under PMGSY. Some stretches of road pass through forest/wildlife area. The road namely Sumwal to Sarail Choa takes off from the existing PMGSY road Dhar road Larey to Sumwal in	

	<p>village Sumwal. The village Sarail Choa is benefitted by construction of this road on its completion and will provide connectivity to a population of about 295 souls inhabiting this village.</p> <p>2. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.</p> <p>3. Hence, the diversion of the forest/wildlife land is the only choice to construction of road.</p>									
18	<p>Rare and endangered species found in the area</p> <p>Surinsar-Mansar Wildlife Sanctuary is home to Common Leopard, Barking deer, Goral, Wild Boar, Jackal, Hare, Jungle cat, Porcupine and Mongoose etc.</p>									
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal with the conditions laid down by the Standing Committee of the State Board for Wild Life.</p>									
20	<p>Details regarding Mitigation Measures as per proposal</p> <p>The length of the road is 3.225 km with a width of 6m. The animal passage plan submitted is placed as ANNEXURE IX. The User agency has proposed construction of 4 RCC culverts of following dimensions:</p> <table><tr><th>S.No.</th><th>Numbers</th><th>Dimensions</th></tr><tr><td>1</td><td>1</td><td>6 m (length) X {(6 +4.8)/2} m (width) X 3.8 m (height)</td></tr><tr><td>2</td><td>3</td><td>6 m (length) X 3 m (width) X 4.2 m (height)</td></tr></table> <p>Apart from above, the user agency has also proposed to erect sign boards at 4 places and 80 numbers of road studs 20 each in four locations.</p>	S.No.	Numbers	Dimensions	1	1	6 m (length) X {(6 +4.8)/2} m (width) X 3.8 m (height)	2	3	6 m (length) X 3 m (width) X 4.2 m (height)
S.No.	Numbers	Dimensions								
1	1	6 m (length) X {(6 +4.8)/2} m (width) X 3.8 m (height)								
2	3	6 m (length) X 3 m (width) X 4.2 m (height)								
21	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>									

(3)

1	Name of the Proposal	Diversion of 1.995 ha from Surinsar Mansar Wildlife Sanctuary for construction of road from Dhar Road Larey to Sumal. FP/JK/ROAD/141991/2021			
2	Name of the protected Area involved	Surinsar Mansar Wildlife Sanctuary			
3	File No.	6-102/2021 WL			
4	Name of the State	UT of Jammu & Kashmir			
5	Whether proposal is sub-judice	Not sub-judice			
6	Area of the protected area	97.82 Sq Kms			
7(a)	Area proposed for diversion/ Denotification	1.995 ha			
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year
					Area Diverted/ Permitted for use(ha.)
		1.	Laying of 132 KV D/C Hiranagar-Battal Manwal Transmission Line	Power Development Department	2017
					7.35
8	Status of ESZ, if any	Re-draft notification on 12.01.2021			
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA			
10	Whether project linear/non-linear	Linear			
11	Whether EC obtained	No			
12	Date of submission by user agency	02/05/2021			
13	Name of the applicant agency	Executive Engineer, PMGSY Division, Ramnagar			
14	Total number of tree to be felled	NA			
15	Maps depicting the Sanctuary and the	Yes			

	diversion proposal included or not	
16	<p>Recommendation of State Board for Wild Life</p> <p>Proposal was recommended by State Board for Wild Life in its meeting held on 10th July 2021 with the following conditions:</p> <ol style="list-style-type: none"> 1. The proprietary and the legal status of the land shall remain unchanged. 2. The user agency shall pay NPV (Net Present Value) which works out to Rs. 17,24,625.00 (Rupees Seventeen Lakh Twenty-Four Thousand Six Hundred Twenty-Five only) in accordance with the orders of the Hon'ble Supreme Court. 3. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue. 4. No harm to any wildlife species shall be done, if found accidentally in the project area. 5. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of Wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. 6. Waste material including muck generated during execution of project shall be disposed of outside the protected area. 7. The user agency shall construct speed breakers at critical wildlife passage areas to be specified by the concerned Wildlife Warden. 8. The user agency shall construct under passes as per animal passage plan for free movement of wild animals. 9. The area proposed should not be used by the user agency for any purpose other than proposed. 10. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. 11. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. 12. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wildlife Warden J&K for further submission to MoEF&CC, Government of India. 13. The Wildlife Department shall take plantation in the affected area by planting five times the number of trees involved in the felling. 	
17	<p>Brief justification on the proposal as given by the applicant agency</p> <ol style="list-style-type: none"> 1. The project for construction of road from Dhar road Larey to Sumal (Length:-3.325 km package No:-JK14-335) is sanctioned in Phase-VIII under PMGSY. Some stretches of road pass through Forest/Wild Life area. The road namely Dhar road Larey to Sumal takes off from the existing main Dhar road in village Larey. The village Sumal is benefitted by construction 	

	<p>of this road on its completion and will provide connectivity to the inhabitants of village Sumal.</p> <p>2. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.</p> <p>3. Hence, the diversion of the forest/wildlife land is the only choice to construction of road.</p>									
18	<p>Rare and endangered species found in the area</p> <p>Surinsar Mansar Wildlife Sanctuary is home to Common Leopard, Barking deer, Goral, Wild Boar, Jackal, Hare, Jungle cat, Porcupine and Mongoose etc.</p>									
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal with the conditions imposed by the State Board for Wild Life.</p>									
20	<p>Details of Mitigation Measures as per proposal:</p> <p>The length of the propose road is 3.325 km and the width is 6 m. The User Agency has submitted an Animal Passage Plan which may be seen at ANNEXURE X. The User agency has proposed construction of 2 RCC culverts of following dimensions</p> <table><tr><th>S.No.</th><th>Numbers</th><th>Dimensions</th></tr><tr><td>1</td><td>1</td><td>6 m (length) X 2 m (width) X 6 m (height)</td></tr><tr><td>2</td><td>1</td><td>6 m (length) X 3 m (width) X 4 m (height)</td></tr></table> <p>Apart from above, the user agency has also proposed to erect sign boards at 6 places and 120 numbers of road studs 20 each in six locations.</p>	S.No.	Numbers	Dimensions	1	1	6 m (length) X 2 m (width) X 6 m (height)	2	1	6 m (length) X 3 m (width) X 4 m (height)
S.No.	Numbers	Dimensions								
1	1	6 m (length) X 2 m (width) X 6 m (height)								
2	1	6 m (length) X 3 m (width) X 4 m (height)								
21	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>									

(4)

1	Name of the Proposal	Diversion of 2.442 ha from Surinsar Mansar Wildlife Sanctuary for construction and upgradation of Road L-060 Kothar to Ponthal. FP/JK/ROAD/120321/2021				
2	Name of the protected Area involved	Surinsar Mansar Wildlife Sanctuary				
3	File No.	6-103/2021 WL				
4	Name of the State	UT of Jammu & Kashmir				
5	Whether proposal is sub-judice	Not sub-judice				
6	Area of the protected area	97.82 Sq Kms				
7(a)	Area proposed for diversion/ Denotification	2.442 ha				
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year	Area Diverted/ Permitted for use(ha.)
		1.	Laying of 132 KV D/C Hiranagar-Battal Manwal Transmission Line	Power Development Department	2017	7.35
8	Status of ESZ, if any	Re-draft notification on 12.01.2021				
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA				
10	Whether project linear/non-linear	Linear				
11	Whether EC obtained	No				
12	Date of submission by user agency	31/01/2021				
13	Name of the applicant agency	Executive Engineer, PMGSY Division, Jammu				
14	Total number of tree to be felled	194				
15	Maps depicting the Sanctuary and the	Yes				

	diversion proposal included or not	
16	<p>Recommendation of State Board for Wild Life</p> <p>Proposal was recommended by State Board for Wild Life in its meeting held on 10th July 2021 with the following conditions:</p> <ol style="list-style-type: none"> 1. The proprietary and the legal status of the land shall remain unchanged. 2. The user agency shall pay NPV (Net Present Value) which works out to Rs. 48,68,370.00 (Rupees Forty-Eight Lakh Sixty-eight thousand three hundred seventy only) in accordance with the orders of the Hon'ble Supreme Court. 3. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue. 4. No harm to any wildlife species shall be done, if found accidentally in the said area. 5. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. 6. Waste material including muck generated during execution of project shall be disposed of outside the protected area. 7. The user agency shall construct speed breakers at critical wildlife passage areas to be specified by the concerned Wildlife Warden. 8. The user agency shall construct under passes as per animal passage plan for free movement of wild animals. 9. The area proposed should not be used by the user agency for any purpose other than proposed. 10. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. 11. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. 12. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wild Life Warden J&K for further submission to MoEF&CC, Government of India. 13. The Wildlife Department shall take plantation in the affected area by planting five times the number of trees involved in the felling. 	
17	<p>Brief justification on the proposal as given by the applicant agency</p> <ol style="list-style-type: none"> 1. The Project for Upgradation of road from L-060- Kothar to Ponthal having length 8.00 Kms, Package No:- JKO5-210, Block-Dansal District Jammu has been sanctioned by MoRD Govt. of India under PMGSYJI. This road takes off from Railway Station Manwal and ends at village Ponthal. It directly connects 4642 souls in village Kathar and 291 souls in village 	

	<p>Ponthal with a total population of 4933 souls as per Census 2001 and the road on its completion shall provide connectivity to the Population as enumerated above.</p> <p>2. Forest area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.</p> <p>3. Hence, the diversion of the forest land is the only choice to construct the road.</p>												
18	<p>Rare and endangered species found in the area</p> <p>Surinsar Mansar Wildlife Sanctuary is home to Common Leopard, Barking deer, Goral, Wild Boar, Jackal, Hare, Jungle cat, Porcupine and Mongoose etc.</p>												
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal with the conditions stipulated by the State Board for Wild Life.</p>												
20	<p>Details of Mitigation Measures as per proposal:</p> <p>The length of the proposed road is 4.070 km and 6m width. The User Agency has submitted an Animal Passage Plan which may be seen at ANNEXURE XI. The User agency has proposed construction of 3 RCC culverts of following dimensions</p> <table><tr><th>S.No.</th><th>Location of Culvert</th><th>Span</th></tr><tr><td>1</td><td>RD 4/475</td><td>15 M</td></tr><tr><td>2</td><td>RD 5/475</td><td>3 M</td></tr><tr><td>3</td><td>RD 6/350</td><td>3 M</td></tr></table> <p>Apart from above, the User agency has also proposed to erect sign boards at 02 places and 40 numbers of road studs 20 each at two places.</p>	S.No.	Location of Culvert	Span	1	RD 4/475	15 M	2	RD 5/475	3 M	3	RD 6/350	3 M
S.No.	Location of Culvert	Span											
1	RD 4/475	15 M											
2	RD 5/475	3 M											
3	RD 6/350	3 M											
21	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>												

(5)

1	Name of the Proposal	Diversion of 0.1 ha of forest land from Dara Conservation Reserve for construction of water supply Scheme at Check Dara, Ganderbal by Jal Shakti Department. FP/JK/WATER/49492/2020
2	Name of the protected Area involved	Dara Conservation Reserve
3	File No.	6-105/2021 WL
4	Name of the State	UT of Jammu & Kashmir
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	34 sq. kms
7(a)	Area proposed for diversion/ Denotification	0.1 ha
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	NA
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	01/01/2021
13	Name of the applicant agency	Jal Shakti Department PHE Kashmir
14	Total number of tree to be felled	43
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 10th July 2021 with following conditions: i. The proprietary and the legal status of the land shall remain unchanged. ii. The user agency shall pay NPV (Net Present Value) in accordance with the orders of the Hon'ble Supreme Court. iii. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue.	

	<ul style="list-style-type: none"> iv. No harm to any wildlife species shall be done, if found accidentally in the said area. v. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of Wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. vi. Waste material including muck generated during execution of project shall be disposed of outside the protected area. vii. The user agency shall construct retaining and breast walls to avoid landslide in the area. viii. The area proposed should not be used by the user agency for any purpose other than proposed. ix. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. x. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. xi. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wildlife Warden J&K for further submission to MoEF&CC, Government of India. xii. The Wildlife Department shall take plantation in the affected area by planting five times the number of trees involved in the felling.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>The Village Dara is situated at a distance of about 23 km from Srinagar and drinking water being the essential & basic amenities of life for human consumption and can be described next to air. Since the inhabitants of Village Dara and its adjacent areas lone Mohallah, Ganie Mohallah & other extended Habitations are facing acute shortages of portable drinking water particularly in absence of the Rapid Sand filtration Plant and allied works to provide adequate safe drinking water supplies. The areas are presently being fed through old WSS, which is not providing adequate drinking water as the Pipe network has lived its life, thus causing public nuisance and discomfort for the present habitations, residents and deprives them from safe & adequate drinking water supplies, which will be addressed through this aforesaid Project i.e. WSS Check Dara (Aug. DARA). The WSS was originally approved at a cost of Rs 367.84 lacs and on expenditure Rs.167.55 lacs has been booked ending March.2019. The WSS was approved for a Balance Cost of Rs 200.29 Lacs under Languishing on 24 March, 2019 by the HLC for funding through JKIDFC Ltd.</p> <p>The Construction of the said Water Supply Scheme-Check Dara (Aug. Dara) got necessitated to be constructed in the Forest land as the newly developed habitations are located on the higher contours, thus it was technically found necessary to execute the said WSS project on the higher contours / level to address the issue head loss and to maintain smooth & efficient drinking water flow to the newly constructed houses. Besides, there was no other feasible land available of such level in the vicinity. Thus, the Filtration Plant & other allied structures had to be located on the proposed land of 0.10ha of forest</p>

	land at Village Dara which will resolve the issue of providing of safe drinking water to the habitations of the Dara, Ganie Mohallah, Lone Mohallah & other newly developed habitations.
18	Rare and endangered species found in the area Dara Conservation Reserve is home to Himalayan Black Bear, Leopard, Hangul, Himalayan Langur etc.
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal subject to the conditions imposed by the State Board for Wild Life.
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.

(6)

1	Name of the Proposal	Diversion of 0.6 ha of forest land from Jawahar Tunnel Chakore Conservation Reserve for Snow Harvesting System at D-10 Top FP/JK/WATER/49078/2020
2	Name of the protected Area involved	Jawahar Tunnel Chakore Conservation Reserve
3	File No.	6-106/2021 WL
4	Name of the State	UT of Jammu & Kashmir
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	19.572 sq. kms
7(a)	Area proposed for diversion/ Denotification	0.6ha
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	NA
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA
10	Whether project linear/non-linear	Non-Linear
11	Whether EC obtained	No
12	Date of submission by user agency	11/09/2020
13	Name of the applicant agency	Ministry of Defence DRDO
14	Total number of tree to be felled	Nil
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 10 th July 2021 subject to following conditions: i. The proprietary and the legal status of the land shall remain unchanged. ii. The user agency shall pay NPV (Net Present Value) as per the orders of the Hon'ble Supreme Court and guidelines of MoEF&CC in this regard. iii. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue. iv. No harm to any wildlife species shall be done, if found accidentally in the said area.	

	<ul style="list-style-type: none"> v. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. vi. Waste material including muck generated during execution of project shall be disposed of outside the protected area. vii. The user agency shall construct retaining and breast walls to avoid landslide in the area. viii. The area proposed should not be used by the user agency for any purpose other than proposed. ix. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. x. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. xi. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wildlife Warden J&K for further submission to MoEF&CC, Government of India.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>Snow and Avalanche Study Establishment (SASE) has been working on mitigation of snow avalanches in Himalayan regions. To mitigate the avalanche hazards many techniques are being used by this establishment like avalanche forecasting, structural control of avalanches, artificial triggering for artificial release of avalanches and avalanche awareness safety and rescue training programs etc. To perform these tasks SASE has a wide spread network of field research stations in the states of Himachal Pradesh, Uttarakhand and in the union territories of Jammu-Kashmir & Ladakh.</p> <p>One such field research setup is stationed at D-10 Top (just above Jawahar Tunnel) near Banihal in the UT of J&K. A team of experts have to stay here on top of the mountain (Formation zone of Avalanche site) to carry out their experimental work. A data recording room and support team accommodation have been constructed where these people stay. During summer season the water for drinking and routine use falls short of its required quantity. To fulfil this requirement of water a system has to be planned, prepared, set up and made functional. Hence to fulfil the water requirement at the SASE observatory, a snow harvesting system has been proposed to be set up there. This will also act as a technology demonstration which can be used at other sites by various users.</p> <p>This snow harvesting system uses an artificial trap berm made of locally available soil material for targeted deposition of drifted snow at the site. The project site falls in the forest land (Jawahar Tunnel Chakore Conservation Reserve) on a mountain ridge. This is the most suitable location for harvesting project because very heavy snow drift phenomena occurs here and by suitably modifying the snow-drift patterns using earthen trap berms this drifted snow can be stored in a reservoir. During summer the stored snow due to snow drift will melt. This snow-melt water will be transported to the observatory using</p>

	HDPE pipes during summer/rainy seasons just by gravity flow as the harvesting site is relatively at higher altitudes than the observatory. For storage of snow-melt water there is enough flat area available at the site for construction of a snow reservoir and it is located near SASE observatory also. Considering all these facts the project site located in the forest land (conservation reserve} as mentioned above is the most suitable one for implementation of the snow harvesting system.
18	Rare and endangered species found in the area Jawahar Tunnel Chakore Conservation Reserve is home to Chakore, Leopard etc.
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal subject to the conditions imposed by the State Board for Wild Life.
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.

(7)

1	Name of the Proposal	Proposal for diversion of 0.225 ha of forest land from Sudhmahadev Conservation Reserve for construction of Barkunda to Kharwa Road FP/JK/ROAD/5063/2020
2	Name of the protected Area involved	Sudhmahadev Conservation Reserve
3	File No.	6-104/2021 WL
4	Name of the State	UT of Jammu & Kashmir
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	142.25 sq kms
7(a)	Area proposed for diversion/ Denotification	0.225 ha
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	NA
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	24/05/2020
13	Name of the applicant agency	EE PMGSY UDH
14	Total number of tree to be felled	Nil
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 10 th July 2021 subject to the following conditions: i. The proprietary and the legal status of the land shall remain unchanged. ii. The user agency shall pay NPV (Net Present Value) which works out to Rs.1,90,125/- (Rupees One Lac, Ninety Thousand, One Hundred & Twenty-Five only) in accordance with the orders of the Hon'ble Supreme Court. iii. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue.	

	<ul style="list-style-type: none"> iv. No harm to any wildlife species shall be done, if found accidentally in the project area. v. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of Wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. vi. Waste material including muck generated during execution of project shall be disposed of outside the protected area. vii. The user agency shall construct speed breakers at critical wildlife passage areas to be specified by the concerned Wildlife Warden. viii. The user agency shall construct under passes as per animal passage plan for free movement of wild animals. ix. The area proposed should not be used by the user agency for any purpose other than proposed. x. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. xi. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. xii. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wildlife Warden J&K for further submission to MoEF&CC, Government of India. xiii. The Wildlife Department shall take plantation in the affected area by planting five times the number of trees involved in the felling.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <ol style="list-style-type: none"> 1. The project for Construction of Road from Barkunda to Kharwa Package No: JK14-507 is sanctioned in Phase under PMGSY. The proposal of the project is to construct the road that shall benefit 5 habitations having 262 souls (as per approved core network of PMGSY) after its completion. However, in this proposal some stretches of Road pass through wildlife area involving 0.225 Ha of wildlife land that needs to be diverted for the smooth execution of the scheme. 2. Wildlife area can't be avoided as the proposed alignment is the only viable and technically feasible route for providing vital connectivity to these habitations. 3. Hence, it is to certify that diversion of the wildlife land is urgently required and its use is unavoidable for the construction of the above said road.
18	<p>Rare and endangered species found in the area Sudhmahadev Conservation Reserve is home to Himalayan Black Bear , Leopard, Ghoral etc.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal subject to the conditions imposed by the State Board for Wild Life.</p>
20	<p>Details regarding Mitigation Measures as per proposal</p>

	<p>The length of the road is 375 m with a width of 6m. The animal passage plan submitted is placed as ANNEXURE XII. The User agency has proposed construction of 2 RCC culverts of following dimensions:</p> <table><tr><th>S.No.</th><th>Numbers</th><th>Dimensions</th></tr><tr><td>1</td><td>2</td><td>6 m (length) X 3 m (width) X 4.2 m (height)</td></tr></table> <p>Apart from above, the user agency has also proposed to erect sign boards at 2 places and 40 numbers of road studs 20 each in two locations.</p>	S.No.	Numbers	Dimensions	1	2	6 m (length) X 3 m (width) X 4.2 m (height)
S.No.	Numbers	Dimensions					
1	2	6 m (length) X 3 m (width) X 4.2 m (height)					
20	<p>Comments of Ministry The Standing Committee may like to take a view on the proposal.</p>						

(8)

1	Name of the Proposal	Diversion of 0.78 ha of forest land from Sudhmahadev Conservation Reserve for construction of Mantlai to Gamsadu road. FP/JK/ROAD/5064/2020
2	Name of the protected Area involved	Sudhmahadev Conservation Reserve
3	File No.	6-115/2021 WL
4	Name of the State	UT of Jammu & Kashmir
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	142.25 sq kms
7(a)	Area proposed for diversion/ Denotification	0.78 ha
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	NA
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	24/05/2020
13	Name of the applicant agency	PMGSY Division Udhampur-I
14	Total number of tree to be felled	Nil
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 10 th July 2021 subject to the following conditions: i. The proprietary and the legal status of the land shall remain unchanged.	

	<ul style="list-style-type: none"> ii. The user agency shall pay NPV (Net Present Value) which works out to Rs.6,59,100/- (Rupees Six Lacs, Fifty-Nine Thousand, One Hundred only) in accordance with the orders of the Hon'ble Supreme Court. iii. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue. iv. No harm to any wildlife species shall be done, if found accidentally in the project area. v. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of Wildlife Protection Act, directions of the Ministry of Environment, Forest and Climate Change and orders of the Government of Jammu & Kashmir in this regard. vi. Waste material including muck generated during execution of project shall be disposed of outside the protected area. vii. The user agency shall construct speed breakers at critical wildlife passage areas to be specified by the concerned Wildlife Warden. viii. The user agency shall construct under passes as per animal passage plan for free movement of wild animals. ix. The area proposed should not be used by the user agency for any purpose other than proposed. x. The land so allowed to be used shall be returned to the department free of any encumbrances when it is no longer required by the User Agency. xi. The User Agency shall have to abide by all the conditions laid down in the sanction order issued by the Competent Authority. xii. The annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the Chief Wildlife Warden J&K for further submission to MoEF&CC, Government of India. xiii. The Wildlife Department shall take plantation in the affected area by planting five times the number of trees involved in the felling.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <ol style="list-style-type: none"> 1. The project for Construction of Road from Mantalai to Gamsadu Package No: JK14-501 is sanctioned in Phase under PMGSY. The proposal of the project is to construct the road that shall benefit 5 habitations having 390 souls (as per approved core network of PMGSY) after its completion. However, in this proposal some stretches of Road pass through wildlife area involving 0.78 Ha of wildlife land that needs to be diverted for the smooth execution of the scheme. 2. Wildlife area can't be avoided as the proposed alignment is the only viable and technically feasible route for providing vital connectivity to these habitations. 3. Hence, it to certify that diversion of the wildlife land is urgently required and its use is unavoidable for the construction of the above said road.
18	<p>Rare and endangered species found in the area</p> <p>Sudhmahadev Conservation Reserve is home to Himalayan Black Bear , Leopard, Ghoral etc.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal subject to the conditions imposed by the State Board for Wild Life.</p>

20	<p>Details regarding Mitigation Measures as per proposal</p> <p>The length of the road is 1.3 km with a width of 6m. The animal passage plan submitted is placed as ANNEXURE XIII. The User agency has proposed construction of 3 RCC culverts of following dimensions:</p> <table><tr><th>S.No.</th><th>Numbers</th><th>Dimensions</th></tr><tr><td>1</td><td>3</td><td>6 m (length) X 3 m (width) X 4.2 m (height)</td></tr></table> <p>Apart from above, the user agency has also proposed to erect sign boards at 3 places and 120 numbers of road studs 20 each in six locations.</p>	S.No.	Numbers	Dimensions	1	3	6 m (length) X 3 m (width) X 4.2 m (height)
S.No.	Numbers	Dimensions					
1	3	6 m (length) X 3 m (width) X 4.2 m (height)					
21	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>						

KARNATAKA

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-89/2021 WL	Diversion of 0.597 ha of forest land in Bukkasagar, Kanivethimmalapura Villages in Bellary Division for laying of pipeline and providing CWSS to Bukkasagara Devasamudra and other 5 Villages in Hospet Taluk, Ballari District. FP/KA/WATER/19533/2016

(1)

1	Name of the Proposal	Diversion of 0.597 ha of forest land in Bukkasagar, Kanivethimmalapura Villages in Bellary Division for laying of pipeline and Providing CWSS to Bukkasagara Devasamudra and other 5 Villages in Hospet Taluk Ballari District FP/KA/WATER/19533/2016
2	Name of the protected area involved	Daroji Bear Sanctuary
3	File No	6-89/2021 WL
4	Name of the State	Karnataka
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	82.72 sq.km
7(a)	Area proposed for diversion / De-notification	0.597 ha
7(b)	Area so far diverted from the protected area(s)	NA
8	Status of ESZ if any	Final notified on 25 th September 2019 and the extent of ESZ is from 1 km to 4.7 km from the boundary of the sanctuary.
9	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	The work shall be taken up only under the close supervision of the jurisdictional officers & staff, to avoid any damage to the flora & fauna.
10	Whether linear / non-linear	Linear
11	Whether EC obtained	No
12	Name of the applicant agency	Assistant Executive Engineer, RWS Sub Division, Kalyan Nagar, Hospet
13	Date of submission	23/12/2019
14	Total number of tree to be felled	NA
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	

	State Board for Wild Life recommended the proposal in its meeting held on 19 th January 2021.
17	<p>Brief justification on the proposal as given by the applicant agency</p> <p>Two alternative alignments for laying pipeline in the forest land in addition to proposed alignment in the map. Length of 2 alternative alignments is 1.76 km (route 2) and 1.78 km (route 3). But economically suitable alignment for laying pipeline is having a length of 1.99 Km (route 1). Two alignments which are having distances less than the route 1 alignment. These two alignments are having obstructions like trees, ponds and hillocks etc., and it is very difficult for laying pipeline.</p> <p>Because of above reasons we proposed route 1 alignment for laying pipeline in the forest land which is economically suitable and for regular maintenance.</p>
18	<p>Rare and endangered species found in the area</p> <p>Daroji Wildlife Sanctuary is home to leopard, porcupine, pangolin, jackal, black-napped hare, ruddy mongoose and Indian sloth bear etc.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the proposal with the following conditions:</p> <ol style="list-style-type: none"> 1. The User agency should provide two outlets within the sanctuary limit all along the pipe line and supply water to the wild animals, which would benefit the wild animals during lean season/ summer season. 2. All the staff and workers involved in the project implementation should be informed, created awareness about wildlife, so that they would not harm/kill/hunt/poach or abet in any such crimes in any way, failing which, legal course of action under the provisions of Wildlife (Protection) Act, 1972, will be taken. 3. Care should be taken not to disturb the wildlife species and their habitat during construction activities. 4. No work shall be done before sunrise and after sunset in the project area. 5. The user agency and project personnel will comply with the provisions of the Wildlife (Protection) Act, 1972. 6. The muck generated during the project implementation shall be taken out of the protected area without endangering the flora and fauna. 7. The work shall be taken up only under the close supervision of the jurisdictional officers & staff, to avoid any damage to the flora & fauna. 8. No tents or any other stay arrangement shall be permitted inside the protected area.
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

KERALA

A. Proposal falling outside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-71/2021 WL	Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited. FP/KL/MIN/4771/2020

(1)

1	Name of the Proposal	Granite Building Stone Quarry of M/s. Adani Vizhinjam Port Private Limited. FP/KL/MIN/4771/2020.
2	Name of the protected Area involved	Neyyar and Peppara Wildlife Sanctuary
3	File No.	6-71/2021 WL
4	Name of the State	Kerala
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	Neyyar Sanctuary – 128 Sq km and Peppara Sanctuary - 53 sq.km
7(a)	Area proposed for diversion/Denotification	1.927 ha in ESZ.
7(b)	Area so far diverted from the protected area(s)	Nil
8	Status of ESZ, if any	Draft notified on 28/08/2016 and now expired
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	NA
10	Whether project linear/non-linear	Non Linear
11	Whether EC obtained	EC application yet to be submitted
12	Date of submission by user agency	01.01.2020
13	Name of the applicant agency	M/S. Adani Vizhinjam Port Private Limited
14	Total number of tree to be felled	NA
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	Proposal was recommended by State Board for Wild Life in its meeting held on 18/01/2021.
17	Brief justification on the proposal as given by the applicant agency	The proposed quarry area is situated at an aerial distance of 5.12 Km from Peppara Wildlife sanctuary and 6.76 Kms from Neyyar Wildlife sanctuary and it is a part of quarry which had ceased to function long back. The distance from the proposed mining lease area to the proposed Eco sensitive zone boundary of Peppara Wildlife Sanctuary is 5.12 Kms. None of flora or Fauna listed in the area causes much concern with respect to the conservation status. The functioning of the unit would not cause much impact to the Forest eco-system. The area also does not include National park, Elephant Corridor, Tiger reserve or Biosphere Reserve area.

18	Rare and endangered species found in the area Peppara Wildlife sanctuary supports a wide variety of flora and fauna which include important rare, endemic and threatened species of plants such as <i>Bentinckia condapanna</i> , <i>Eugenia floccose</i> , <i>Ardisia missionis</i> , <i>Janakia arayalpatra</i> , <i>Paphiopedilum druryi</i> , <i>Eulophia macrostachya</i> and important animals such as Elephant, Gaur, Sambar Deer, Lion Tailed Macaque, Nilgiri Langur, Slender Loris, Sloth Bear, Leopard Cat.
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal with the following condition: <ol style="list-style-type: none"> 1. No activities will be carried out by the project proponent before sun rise and after sun set an amount of Rs. 10.00 lakh shall be contributed towards mitigation of human-wildlife conflict by the project proponent.
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.

LADAKH

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-111/2021 WL	<ol style="list-style-type: none"> 1. Diversion of 14.3844 ha from Changthang Wildlife Sanctuary for construction of Marshimikla-Kiu La road- FP/LA/DEF/5669/2021. 2. Diversion of 17.88 ha from Changthang Wildlife Sanctuary for construction of Mahay-Debring road- FP/LA/DEF/5898/2021.
2.	6-112/2021 WL	<ol style="list-style-type: none"> 1. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Tara BOP- FP/LA/DEF/5937/2021. 2. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Thakung BOP - FP/LA/DEF/5936/2021. 3. Diversion of 5.37 ha from Changthang Wildlife Sanctuary Chusul BOP- FP/LA/DEF/5935/2021. 4. Diversion of 2.26 ha from Changthang Wildlife Sanctuary for Nykmikle BOP FP/LA/DEF/5696/2021. 5. Diversion of 2.25 ha from Changthang Wildlife Sanctuary for Tagyarmale BOP -FP/LA/DEF/5695/2021. 6. Diversion of 1.63 ha from Changthang Wildlife Sanctuary for Loma BOP-FP/LA/DEF/5694/2021. 7. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Heena BOP-FP/LA/DEF/5693/2021. 8. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Rango BOP- FP/LA/DEF/5692/2021. 9. Diversion of 2.69 ha from Changthang Wildlife Sanctuary for Dungti BOP- FP/LA/DEF/5691/2021. 10. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for Karzok BOP- FP/LA/DEF/5680/2021. 11. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Zursar BOP- FP/LA/DEF/5679/2021. 12. Diversion of 1.63 ha from Changthang Wildlife Sanctuary for Hanley BOP- FP/LA/DEF/5678/2021. 13. Diversion of 3.25 ha from Changthang Wildlife Sanctuary for Chumar BOP- FP/LA/DEF/5677/2021. 14. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for Chismule BOP- FP/LA/DEF/5676/2021. 15. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for PP16 BOP- FP/LA/DEF/5655/2021. 16. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Bao Nallah BOP- FP/LA/DEF/5648/2021. 17. Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Lukung BOP- FP/LA/DEF/5646/2021. 18. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for KS Hill BOP- FP/LA/DEF/5644/2021. 19. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Hot Spring BOP- FP/LA/DEF/5643/2021.

		<p>20. Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Dhan Singh BOP- FP/LA/DEF/5642/2021.</p> <p>21. Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Chartse BOP- FP/LA/DEF/5641/2021.</p> <p>22. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for T-Salu BOP- FP/LA/DEF/5639/2021.</p> <p>23. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Silung La BOP- FP/LA/DEF/5638/2021.</p> <p>24. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Phobrang BOP- FP/LA/DEF/5636/2021.</p>
	6-113/2021 WL	<p>1. Diversion of 2.1 ha from Karakoram Wildlife Sanctuary for Chang Chenmo- BOP-FP/LA/DEF/5660/2021.</p> <p>2. Diversion of 1.62 ha from Karakoram Wildlife Sanctuary for Sultan Chusko BOP land- FP/LA/DEF/5658/2021.</p> <p>3. Diversion of 2.2 ha from Karakoram Wildlife Sanctuary for Murgo BOP- FP/LA/DEF/5657/2021.</p> <p>4. Diversion of 2.46 ha from Karakoram Wildlife Sanctuary for Burtse BOP FP/LA/DEF/5656/2021.</p> <p>5. Diversion of 2.00 ha from Karakoram Wildlife Sanctuary for Gapsan BOP -FP/LA/DEF/5632/2021.</p> <p>6. Diversion of 1.63 ha from Karakoram Wildlife Sanctuary for DBO BOP-FP/LA/DEF/5631/2021.</p> <p>7. Diversion of 1.64 ha from Karakoram Wildlife Sanctuary for Track BOP-FP/LA/DEF/5630/2021.</p>

(1)

1	Name of the Proposal	1. Diversion of 14.3844 ha from Changthang Wildlife Sanctuary for construction of Marshimikla-Kiu La road- FP/LA/DEF/5669/2021. 2. Diversion of 17.88 ha from Changthang Wildlife Sanctuary for construction of Mahay-Debring road FP/LA/DEF/5898/2021.
2	Name of the protected area involved	Changthang Wildlife Sanctuary
3	File No	6-111/2021 WL
4	Name of the State	UT of Ladakh
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	12780.50 Sq Km.
7(a)	Area proposed for diversion / De-notification	14.3844 ha-Marshimikla-Kiu La road 17.88 ha-Mahay-Debring road
7(b)	Area so far diverted from the protected area(s)	NA
8	Status of ESZ if any	Proposal not received from UT of Ladakh
9	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	The area through which the proposed road is passing is devoid of any trees. Moreover, blasting of rocks shall not be permitted.
10	Whether linear / non-linear	Linear
11	Whether EC obtained	No
12	Name of the applicant agency	51 RCC BRO(GREF)-753 TF
13	Date of submission	FP/LA/DEF/5669/2021 - 2/2/2021 FP/LA/DEF/5898/2021 - 20/05/2021
14	Total number of tree to be felled	Nil
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	State Board for Wild Life recommended the proposals in its meeting held on 24 th July 2021.

17	Brief justification on the proposal as given by the applicant agency FP/LA/DEF/5669/2021 BRO has been entrusted by Ministry of Defence (MOD) for construction of high altitude Indo-China border roads located in Leh & Ladakh(UT). These roads are strategically important for the security of nation. These roads are to be used by Military personnel for logistics and carriage of ammunition etc. to protect Indian Territory up to International border. Details of roads are mentioned below:							
	<table border="1"> <thead> <tr> <th>S.No.</th><th>Details of Project Road</th><th>Length(in Km)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Marshimikla-Kiv la</td><td>7.658</td></tr> </tbody> </table>	S.No.	Details of Project Road	Length(in Km)	1	Marshimikla-Kiv la	7.658	
S.No.	Details of Project Road	Length(in Km)						
1	Marshimikla-Kiv la	7.658						
	FP/LA/DEF/5898/2021 Border Roads Organization (BRO) under (P) Himank at Leh has been entrusted for construction of snow bounded Indo-China border roads located in Leh & Ladakh (UT) by Ministry of Home Affairs (MHA). These roads are strategically important for the security of the nation and are being used by ITBP & Military personnel's for logistics and carriage of ammunition etc to protect Indian Territory up to international border. Subject proposal of Mahay-Debring road is one of these. Therefore, diversion of forest/wildlife land will be essential for early construction of high altitude project roads.							
	<table border="1"> <thead> <tr> <th>S.No</th><th>Name of Road</th><th>Length in Kms</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Mahay-Debring Road</td><td>73.00</td></tr> </tbody> </table>	S.No	Name of Road	Length in Kms	1.	Mahay-Debring Road	73.00	
S.No	Name of Road	Length in Kms						
1.	Mahay-Debring Road	73.00						
18	Rare and endangered species found in the area Changthang Wildlife Sanctuary is home to Tibetan wolf, Wild yak, Bharal, Wild dog, Snow leopard, Brown bear and the Marmot etc.							
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal with the following conditions: <ol style="list-style-type: none"> 1. The legal status of the land shall remain unchanged. The User Agency will have right only for construction, maintenance and use of the road. 2. The land shall be used for the purpose stated in the Wildlife Clearance order. Any diversion of land to any other purpose except the stated 							

	<p>purpose shall not be admissible without fresh approval from the Standing Committee of NBWL.</p> <ol style="list-style-type: none"> 3. The User Agency shall pay Net Present Value (NPV) and other monies in accordance with the orders of the Hon'ble Supreme Court and the MoEF&CC guidelines. 4. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue, including Forest (Conservation) Act, 1980 if applicable before the initiation of work. 5. No damage to any wildlife including habitat shall be done in the neighbouring area. 6. User agency will report all road kills or accident of any wild animals and deposit the carcasses to the office of concerned wildlife warden to be dealt according to the prevailing laws. 7. User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of the Wild Life (Protection) Act, 1972, directions of the Ministry of Environment Forest & Climate Change, conditions imposed in the Wildlife Clearance sanction and orders of the UT Administration in force and as may be issued from time to time. 8. The activities shall be liable to periodic check by the officers of the Wild Life Protection Department. The officer(s) may order stoppage of work if it is found that any provisions of preceding clause have not been complied with. 9. Dumping of solid and liquid waste shall be scientifically dealt with by the User Agency to ensure that there is no damage to wildlife and their habitat. 10. Detailed muck disposal plan shall be prepared by the User Agency and approved by the Chief Wild Life Warden/Wildlife Warden before commencement of work on ground. If any deviation from the approved disposal plan is noticed, the permission granted for construction of road is liable to be revoked. 11. The User Agency shall pay 5% of the cost of the project, for road length more than 5 km, to Wildlife Protection Department for conservation and preservation of wildlife and its habitat in the Sanctuary. 12. The Wildlife Conservation Plan shall also be placed before the State Board for Wild Life for approval to use the budget for its implementation. 13. The user agency shall not restrict movement of Wildlife/Forest officials including the person/s authorized in discharging official duties, including survey and census.
20	<p>Comments of Ministry</p> <p>Marshimikla-Kiv la road shall have a length of 7.658 km with a width of 18 m. Mahay-Debring Road will have a length of 73 km with a width of 2.45 m.</p>

Animal passage plan as per the guidance document 'Eco-friendly Measures to Mitigate Impacts of Linear Infrastructure on Wildlife' has not been provided for these proposals.

The Standing Committee may like to take a view on the proposal.

(2)

1	Name of the Proposal	<ol style="list-style-type: none">1. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Tara BOP FP/LA/DEF/5937/20212. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Thakung BOP FP/LA/DEF/5936/20213. Diversion of 5.37 ha from Changthang Wildlife Sanctuary Chusul BOP FP/LA/DEF/5935/20214. Diversion of 2.26 ha from Changthang Wildlife Sanctuary for Nykmikle BOP FP/LA/DEF/5696/20215. Diversion of 2.25 ha from Changthang Wildlife Sanctuary for Tagyarmale BOP FP/LA/DEF/5695/20216. Diversion of 1.63 ha from Changthang Wildlife Sanctuary for Loma BOP FP/LA/DEF/5694/20217. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Heena BOP FP/LA/DEF/5693/20218. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Rango BOP FP/LA/DEF/5692/20219. Diversion of 2.69 ha from Changthang Wildlife Sanctuary for Dungti BOP FP/LA/DEF/5691/202110. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for Karzok BOP FP/LA/DEF/5680/202111. Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Zursar BOP FP/LA/DEF/5679/202112. Diversion of 1.63 ha from Changthang Wildlife Sanctuary for Hanley BOP FP/LA/DEF/5678/202113. Diversion of 3.25 ha from Changthang Wildlife Sanctuary for Chumar BOP FP/LA/DEF/5677/202114. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for Chismule BOP FP/LA/DEF/5676/202115. Diversion of 1.62 ha from Changthang Wildlife Sanctuary for PP16 BOP FP/LA/DEF/5655/202116. Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Bao Nallah BOP FP/LA/DEF/5648/2021
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		17.Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Lukung BOP FP/LA/DEF/5646/2021 18.Diversion of 4.1 ha from Changthang Wildlife Sanctuary for KS Hill BOP FP/LA/DEF/5644/2021 19.Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Hot Spring BOP FP/LA/DEF/5643/2021 20.Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Dhan Singh BOP FP/LA/DEF/5642/2021 21.Diversion of 2.00 ha from Changthang Wildlife Sanctuary for Chartse BOP FP/LA/DEF/5641/2021 22.Diversion of 4.1 ha from Changthang Wildlife Sanctuary for T-Salu BOP FP/LA/DEF/5639/2021 23.Diversion of 1.64 ha from Changthang Wildlife Sanctuary for Silung La BOP FP/LA/DEF/5638/2021 24.Diversion of 4.1 ha from Changthang Wildlife Sanctuary for Phobrang BOP FP/LA/DEF/5636/2021.			
2	Name of the protected area involved	Changthang Wildlife Sanctuary			
3	File No	6-112/2021 WL			
4	Name of the State	UT of Ladakh			
5	Whether proposal is sub-judice	Not sub-judice			
6	Area of the protected area	12780.50 Sq Km.			
7(a)	Area proposed for diversion / De-notification		S.No.	Name of BOP	Area required (in Ha)
			1	Tara BOP	4.1 ha
			2	Thakung BOP	4.1 ha
			3	Chusul BOP	5.37 ha
			4	Nykmikle BOP	2.26 ha
			5	Tagyarmale BOP	2.25 ha
			6	Loma BOP	1.63 ha
			7	Heena BOP	1.64 ha
			8	Rango BOP	1.64 ha
			9	Dungti BOP	2.69 ha
			10	Karzok BOP	1.62 ha
			11	Zursar BOP	1.64 ha
			12	Hanley BOP	1.63 ha
			13	Chumar BOP	3.25 ha
			14	Chismule BOP	1.62 ha

			15	PP16 BOP	1.62 ha
			16	Bao Nallah BOP	4.1 ha
			17	Lukung BOP	2.00 ha
			18	KS Hill BOP	4.1 Ha
			19	Hot Spring BOP	4.1 Ha
			20	Dhan Singh BOP	2.00 ha
			21	Chartse BOP	2.00 ha
			22	T-Salu BOP	4.1 ha
			23	Silug La BOP	1.64 ha
			24	Phobrang BOP	4.1 ha
7(b)	Area so far diverted from the protected area(s)	NA			
8	Status of ESZ if any	Proposal not received from UT of Ladakh			
9	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	The proposals under question are vital for National Security. The said BOP is meant exclusively for defence personnel and shall not be accessible by the public. Thus, anthropogenic activity would be minimum. The area involves no felling of trees, or change of flow of water. No removal of wildlife or killing shall take place if the said proposal is approved. In the light of the above BOPs will not have significant impact on the bio-diversity of the area.			
10	Whether linear / non-linear	Non-Linear			
11	Whether EC obtained	No			
12	Name of the applicant agency	NW FTR ITBP Leh			
13	Date of submission	25/06/2021			
14	Total number of tree to be felled	Nil			
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes			
16	Recommendation of State Board for Wild Life State Board for Wild Life recommended the proposals in its meeting held on 24 th July 2021.				
17	Brief justification on the proposal as given by the applicant agency Indian Tibet Border Police is stationed in Ladakh area since year 1964 and is continuously discharging its border guarding duty on the Indo-China Borders. There are 36 border out posts of ITBP in Ladakh area along Indo-China borders and land for none of them have been transferred in the name of ITBP. Therefore, demarcation/survey of land of most of these border out posts has been completed by revenue department in 2019-20 and Deputy Commissioner, Leh, Ladakh (U.T.) has informed that clearance of from Wild Life Deptt is necessary for these lands.				

18	<p>Rare and endangered species found in the area</p> <p>Changthang Wildlife Sanctuary is home to Tibetan wolf, Wild yak, Bharal, Brown bear and the Marmot etc.</p>
19	<p>Opinion of the Chief Wild Life Warden</p> <p>The Chief Wild Life Warden has recommended the above proposals with the following mitigation measures:</p> <ol style="list-style-type: none"> 1. The user agency shall not violate any regulatory provisions under Section-9,17A, 27,29,30,31,32 of Wildlife (Protection) Act, 1972. 2. The user agency shall not harm or destroy wildlife habitat including fauna and flora of the sanctuary. 3. The user agency shall ensure that they will not create any dumping site within the Protected Area. 4. The user agency shall not establish any temporary or permanent labour camp in the protected area. 5. The user agency or his contractor shall not create any fire places inside the Protected Area. 6. Approval under Forest (Conservation) Act, 1980, if required, shall be obtained separately for use of forest land. 7. The User Agency shall deposit NPV for the use of land of Protected area as per the existing rates.
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

(3)

1	Name of the Proposal	1 Diversion of 2.1 ha from Karakoram Wildlife Sanctuary for Chang Chenmo- BOP FP/LA/DEF/5660/2021. 2 Diversion of 1.62 ha from Karakoram Wildlife Sanctuary for Sultan Chusko BOP FP/LA/DEF/5658/2021. 3 Diversion of 2.2 ha from Karakoram Wildlife Sanctuary for Murgo BOP FP/LA/DEF/5657/2021. 4 Diversion of 2.46 ha from Karakoram Wildlife Sanctuary for Burtse BOP FP/LA/DEF/5656/2021. 5 Diversion of 2.00 ha from Karakoram Wildlife Sanctuary for Gapsan BOP FP/LA/DEF/5632/2021. 6 Diversion of 1.63 ha from Karakoram Wildlife Sanctuary for DBO BOP FP/LA/DEF/5631/2021. 7 Diversion of 1.64 ha from Karakoram Wildlife Sanctuary for Track BOP FP/LA/DEF/5630/2021.																										
2	Name of the protected area involved	Karakoram Wildlife Sanctuary																										
3	File No	6-113/2021 WL																										
4	Name of the State	UT of Ladakh																										
5	Whether proposal is sub-judice	Not sub-judice																										
6	Area of the protected area	16126.84 Sq Km.																										
7(a)	Area proposed for diversion / De-notification	<table><tr><th>S.No.</th><th>Name of BOP</th><th>Area required (in Ha)</th></tr><tr><td>1</td><td>Chang Chenmo-BOP</td><td>2.1</td></tr><tr><td>2</td><td>Sultan Chusko BOP</td><td>1.62</td></tr><tr><td>3</td><td>Murgo BOP</td><td>2.2</td></tr><tr><td>4</td><td>Burtse BOP</td><td>2.46</td></tr><tr><td>5</td><td>Gapsan BOP</td><td>2.00</td></tr><tr><td>6</td><td>DBO BOP</td><td>1.63</td></tr><tr><td>7</td><td>Track BOP</td><td>1.64</td></tr></table>			S.No.	Name of BOP	Area required (in Ha)	1	Chang Chenmo-BOP	2.1	2	Sultan Chusko BOP	1.62	3	Murgo BOP	2.2	4	Burtse BOP	2.46	5	Gapsan BOP	2.00	6	DBO BOP	1.63	7	Track BOP	1.64
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7(b)	Area so far diverted from the protected area(s)	NA																										
8	Status of ESZ if any	Proposal not received from UT of Ladakh																										
9	Specific comments w.r.t section 29 to the	The proposals under question are vital for National Security. The said BOP is meant exclusively for defence personnel and shall not be accessible by the public.																										

	Wild (Protection) Act, 1972	Thus, anthropogenic activity would be minimum. The area involves no felling of trees, or change of flow of water. No removal of wildlife or killing shall take place if the said proposal is approved. In the light of the above BOPs will not have significant impact on the bio-diversity of the area.
10	Whether linear / non-linear	Non-Linear
11	Whether EC obtained	No
12	Name of the applicant agency	NW FTR ITBP LEH
13	Date of submission	29/04/2021
14	Total number of tree to be felled	Nil
15	Maps depicting the Sanctuary and the diversion proposal included or not	YES
16	Recommendation of State Board for Wild Life State Board for Wild Life recommended the proposals in its meeting held on 24 th July 2021.	
17	Brief justification on the proposal as given by the applicant agency Indian Tibet Border Police is stationed in Ladakh area since year 1964 and is continuously discharging its border guarding duty on the Indo-China Borders. There are 36 border out posts of ITBP in Ladakh area along Indo-China borders and land for none of them have been transferred in the name of ITBP. Therefore, demarcation/survey of land of most of these border out posts has been completed by revenue department in 2019-20 and Deputy Commissioner, Leh, Ladakh (U.T.) has informed that clearance of from Wild Life Deptt is necessary for these lands.	
18	Rare and endangered species found in the area Karakorum Wildlife Sanctuary is home to Tibetan Antelope, Shapo, Wild Yak, Bharal, Leopards, Himalayan Mouse and Lynx etc.	
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the above proposals with the following conditions: 1. The user agency shall not violate any regulatory provisions under Section-9,17A, 27,29,30,31,32 of Wildlife (Protection) Act, 1972.	

	<ol style="list-style-type: none"> 2. The user agency shall not harm or destroy wildlife habitat including fauna and flora of the sanctuary. 3. The user agency shall ensure that they will not create any dumping site within the Protected Area. 4. The user agency shall not establish any temporary or permanent labour camp in the protected area. 5. The user agency or his contractor shall not create any fire places inside the Protected Area. 6. Approval under Forest (Conservation) Act, 1980, if required, shall be obtained separately for use of forest land. 7. The User Agency shall deposit NPV for the use of land of Protected area as per the existing rates.
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

MAHARASHTRA

A. Proposal falling outside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-91/2021 WL	Channaka-Korata (Rudha) barrage on Penganga river -Interstate Irrigation Project, Adilabad District of Telangana FP/MH/IRRIG/1601/2017

(1)

1	Name of the Proposal	Channaka-Korata (Rudha) barrage on Penganga river - Interstate Irrigation Project, Adilabad District of Telangana FP/MH/IRRIG/1601/2017																		
2	Name of the protected area involved	Tipeshwar Wildlife Sanctuary																		
3	File No.	6-91/2021 WL																		
4	Name of the State	Maharashtra																		
5	Whether proposal is sub-judice	Not sub-judice																		
6	Area of the protected area	147.58 sq.km																		
7(a)	Area proposed for diversion / De-notification	<p>213.48 ha in the ESZ about 3.5 km away from boundary of Tipeshwar Wildlife Sanctuary</p> <table border="1"> <thead> <tr> <th colspan="3">Details of area under ESZ in Maharashtra</th></tr> <tr> <th>Sr. No</th><th>Details of Area</th><th>Area Under ESZ (in ha.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Submergence (Area Under River portion)</td><td>180</td></tr> <tr> <td>2</td><td>Bank Connection & Protection Work</td><td>6.48</td></tr> <tr> <td>3</td><td>Underground pressure mains and raising mains</td><td>27</td></tr> <tr> <td colspan="2">Total</td><td>213.48</td></tr> </tbody> </table>	Details of area under ESZ in Maharashtra			Sr. No	Details of Area	Area Under ESZ (in ha.)	1	Submergence (Area Under River portion)	180	2	Bank Connection & Protection Work	6.48	3	Underground pressure mains and raising mains	27	Total		213.48
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1	Submergence (Area Under River portion)	180																		
2	Bank Connection & Protection Work	6.48																		
3	Underground pressure mains and raising mains	27																		
Total		213.48																		
7(b)	Area so far diverted from the protected area(s)	Nil																		
8	Status of ESZ if any	Final notification on 19.09.2018 and the extent of ESZ is from 150 m to 11 km from the boundary of the sanctuary.																		
9	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	There will not be direct adverse effect on Wildlife Habitat. Public support can be obtained as this barrage project will benefit 16500 acres (13500 acres for Telangana & 3000 acres for Maharashtra) and 14 villages having population of 17340.																		
10	Whether linear / non-linear	Linear																		
11	Whether EC obtained	EC under process																		
12	Name of the applicant agency	Irrigation Deptt, Telangana																		
13	Date of submission	07/09/2017																		
14	Total number of tree to be felled	NA																		

15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life State Board for Wild Life recommended the proposal in its meeting held on 31 st January 2018 subject to condition to form a committee to suggest mitigation measures after spot inspection of the area and the conditions as laid down by the Chief Wildlife Warden.	
17	Brief justification of the proposal as given by the applicant agency Channaka – Korata Barrage is falling within 3.50 Km radius from the Tippihwar Wildlife Sanctuary core area. In the construction of Channaka – Korata Barrage no forest land is required for submergence and the water is stored within the flanks of the Penganga river and it was also verified that due to impounding water in nallas, which are joining from Maharashtra side there is no forest land involved in submergence. It is further submitted that the average Maximum RL of Tippihwar Wildlife Sanctuary is around +382.00 m and similarly average Minimum RL of Tippihwar Wildlife Sanctuary is +262.00 m. And the FRL of the Channaka – Korata Barrage is +213.00 m. As the Tippihwar Wildlife Sanctuary core area is in higher elevation, hence there will be no water logging effect due to construction of Channaka – Korata Barrage. Further there is no diversion of sanctuary land and no forest land is involved in the construction of Channaka – Korata Barrage.	
18	Rare and endangered species found in the area Tippihwar Wildlife Sanctuary is home to Tiger, Leopard, Civet, Wolf, Hyena, Cheetal, Black Buck Jackal and Porcupine etc.	
19	Opinion of the Chief Wildlife Warden The Chief Wild Life Warden has recommended the proposal with the following conditions. <ol style="list-style-type: none"> 1. Use of heavy noise making machines should be minimal around sanctuary area. 2. The labour working on construction of canal should not camp in sanctuary or nearby area and should not use any resource of sanctuary area. 3. Canal water be given to the Forest Department free of cost for the use of departmental purpose, if needed. 4. To prevent mortality of ungulates, Gaurs and other animals, if they fall in barrage, escape routes should be given at periodic interval. Whatever, the side walls are going to be lined, at every 200m, 5m gap having 1:30 slope should be constructed in steps, having each step not more than 10 cm. high and each step not less than 75 cm. wide on both sides. 	

	5. As decided in the 8th meeting of State Board of Wild Life held on 20th February 2014, the project proponent shall deposit 2% cost of the proposed project which passes through the deemed ESZ should be deposited with the Pench Tiger Conservation Foundation for the Habitat Improvement of the Tipeswar Wildlife Sanctuary and adjoining forests.
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.

ODISHA

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-92/2021 WL	Proposal for use of 0.788 ha of forest land from Kapilash Wildlife Sanctuary for construction of Budhapank-Salegaon 3rd & 4th Railway line Project, (0-85km) FP/OR/RAIL/34204/2018
2.	6-97/2021 WL	Proposal for rationalization of Karlapat Wildlife Sanctuary Boundary/Area of Kalahandi South Division, Odisha. FP/OR/Others/5944/2021
3.	6-98/2021 WL	Rengali Irrigation Project FP/OR/IRRIG/27418/2017

(1)

1	Name of the Proposal	Proposal for use of 0.788 ha of forest land from Kapilash Wildlife Sanctuary for construction of Budhapank-Salegaon 3 rd & 4 th Railway line Project, (0-85km) FP/OR/RAIL/34204/2018.				
2	Name of the protected Area involved	Kapilash Wildlife Sanctuary				
3	File No.	6-92/2021 WL				
4	Name of the State	Odisha				
5	Whether proposal is sub-judice	Not sub-judice				
6	Area of the protected area	125.59 sq.km				
7(a)	Area proposed for diversion/Denotification	0.788 ha				
7(b)	Area so far diverted from the protected area(s)					
		S.no	Name of project	User Agency	Year	Area Diverted/ Permitted for use(ha.)
		1	Rengali Irrigation Project-27418/2017	Chief Engineer, JICA Project, Sukinda	2020	31.954
8	Status of ESZ, if any	Final notified on 17/06/2015 and the extent of ESZ is from 500 m to 13.15 km from the boundary of the Sanctuary.				
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	For the purpose of this project some forest growth (mostly pole size crop) will be required to be removed. This may not cause a major effect on the habitat. As per provisions of Section 29 of Wild Life (Protection) Act, 1972, forest growth so removed may be used for meeting the personal bona fide needs of the people living in and around the sanctuary near the affected area.				
10	Whether project linear/non-linear	Linear				
11	Whether EC obtained	No				
12	Date of submission by user agency	02/11/2020				

13	Name of the applicant agency	DCE CON I East Coast Railway
14	Total number of tree to be felled	NA
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by the Standing Committee of the State Board for Wild Life in its meeting held on 23/04/2021 with the condition that overpass work should start simultaneously with the railway line construction work and should be completed expeditiously.	
17	Brief justification on the proposal as given by the applicant agency The construction of 3 rd & 4 th line Railway project from Budhapank to Salegaon has been sanctioned in the year 2015-16. Budhapank is a junction station in Cuttack-Angul- Sambalpur route at a distance of 98.13 Km from Cuttack from where a branch line to Talcher has taken up and Talcher to Bimlagarh newline has been under construction. Salegaon Station is 13.25 Km from Cuttack station. The existing railway network from Salegaon to Budhapank consists of two numbers of track (UP and DN line), catering to the originating coal traffic from Mahanadi Coal Field to Paradeep and Vishakhapatnam ports and a number of coal –based industries/ power plants in Cuttack-Angul- Sambalpur area. Also imported coal from Paradeep is transported to steel plants at Rourkela, Angul etc. through this route. More than 50 pairs of goods trains (loaded as well as empty) run every day in each direction. Other than freight trains, this railway route also carries more than 15 pairs of passenger trains because this is the only railway route connecting western Odisha, north-western India with the coastal districts and state capital. With this mixed traffic regime, existing rail network consisting of two lines has been sanctioned. Thus, to cope up the ever increasing both goods and passenger traffic due to enhanced coal production by MCL and rapid industrialization requiring more passenger trains, the Instant 3 rd and 4 th line railway project was sanctioned at a cost of Rs.1172.92 Cr. And projected ROR will be 21.31%. The existing 1 st & 2 nd line between Budhapank to Salegaon has been constructed during the year 1923 and 1995 respectively. However, the Sanctuary and the Ecologically Sensitive Zone of Kapilash Wildlife Sanctuary has been declared by Ministry of Environment, Forest and Climate Change, Govt. of India on 15 June 2015. The alternative alignment survey for the present proposal is not possible because its being a 3 rd & 4 th line project and this has to follow the 1 st & 2 nd line route to have synchronization with the existing infrastructure, electrical network and signalling system. The power plants /other industrial infrastructure are connected to the existing network by different siding which are to be served by augmenting the existing capacity by constructing the 3 rd & 4 th line for which it has to run parallel to the existing network and has to be integrated with the existing network system. As railway line is to be laid with stipulated technical parameters, these bare minimum forest land involvements are unavoidable.	

	Therefore, locating the project within Kapilash Wildlife Sanctuary is not avoidable, keeping in view the demand of ever-increasing traffic required for fast paced industrial development of the area as well as the nation.
18	Rare and endangered species found in the area Kapilash Wildlife Sanctuary is an excellent habitat for Asian Elephants and some of the most endangered species like, Hyena, Spotted Deer, Sambar, Wolf, Bears, Common Langurs, Jackal, Fox, etc;
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal with the condition that to provide connectivity, one overpass shall be constructed in the sanctuary area over the Railway Line according to provisions of the "Eco-friendly Measures to Mitigate Impacts of Linear Infrastructure on Wildlife".
20	Details of mitigation measures as per proposal The length of the railway lines inside the sanctuary is 203.649 m. Construction of one animal overpass of length 100 m by the user agency by following the guidelines named "Eco-friendly Measures to mitigate impact of linear infrastructure on Wildlife" has been proposed. On the overpass, earth cushion of 2 m will be provided to sustain vegetation. To keep a watch on elephant movement, one high observation tower with adequate manpower and mobility will be constructed.
21	Comments of Ministry The Standing Committee may like to take a view on the proposal.

(2)

1	Name of the Proposal	Proposal for rationalization of Karlapat Wildlife Sanctuary Boundary/Area of Kalahandi South Division, Odisha. FP/OR/Others/5944/2021
2	Name of the protected Area involved	Karlapat Wildlife Sanctuary
3	File No.	6-97/2021 WL
4	Name of the State	Odisha
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	147.66 sq.km
7(a)	Area proposed for diversion/de-notification	Proposal is for rationalisation of Boundary
7(b)	Area so far diverted from the protected area(s)	NA
8	Status of ESZ, if any	Draft notified on 9th August, 2019
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	<p>The proposal envisages addition of five forest patches adding 13.688 sq.km to sanctuary area considering chunk of good forest in these contiguous patches resulting potential habitat for wildlife and inclusion of the area will serve for better degree of protection and management of sanctuary. Further, there is no addition of new villages and no pending Forest Right claims of villagers.</p> <p>In addition to above, the proposal also includes reduction of 4.32 Sq km sanctuary area by inward shifting of Southern boundary of the sanctuary at two locations considering less movement of wild animals, low vegetation density, biotic pressure by the villagers and location of Bauxite Reserves. From Wildlife management point of view, the shifting of sanctuary boundary will not affect wildlife or its habitat. In addition to making boundary as per working plan, addition of adjoining good forest patches, free from human habitations, will improve the conditions for wildlife and its habitat.</p> <p>With the proposed rationalization, the revised area of Karlapat Sanctuary will be</p>

		193.998 Km which is 9.368 Sq km more than the notified area.
10	Whether project linear/non-linear	Non-Linear
11	Whether EC obtained	No
12	Date of submission by user agency	03/07/2021
13	Name of the applicant agency	Divisional Forest Officer cum wildlife warden Kalahandi South
14	Total number of tree to be felled	NA
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by Standing Committee of the State Board for Wild Life in its meeting held on 23 rd April 2021.	
17	Brief justification on the proposal as given by the applicant agency The area of Karlapat WL Sanctuary as notified in Orissa Gazette is 147.66 Sq Km and as per GPS mapping the area is 175.5 Sq Km. In the Working Plan (1997-98 to 2006-07) which was prepared for undivided Kalahandi Division, it was mentioned that 'in view of geographical proximity, habitat structure of Karlapat WL Sanctuary' the DFO shall take necessary steps to include area in Karlapat WL Sanctuary'. Further the outgoing Management Plan (2010-11 to 2018-19) and the current Management Plan (2019-20 to 2028-29) has been approved for 175.5 Sq Km and mentioned about the trajectory path of elephants and its habitat condition in the adjoining Forest areas and also mentioned about the biotic pressure in the buffer zone is beyond carrying capacity. This necessitated the geo-referencing of Karlapat WL Sanctuary Boundary in order to rationalize its boundary and area. Therefore, proposal for rationalization of boundary and area of Karlapat WL Sanctuary was submitted in order to overcome the anomaly in area of PA with respect to original notification and Management Plan area, after the observation raised by the Expert Committee of ESZ of MoEF&CC. While geo-referencing the area of PA boundary using available Village Cadastral sheets with respect to original Notification and after ground truthing, it was necessitated for exclusion and addition of areas to PA on wildlife management point. In the above background different Field team with field staffs of DFO, Kalahandi South Division have studied and analyzed the ground factual condition with ground truthing for exclusion and addition of areas with Karlapat Sanctuary.	

Proposed forest areas for inclusion:			
Sl. No	Forest Patch	Area In (Sq Km)	Status of Forest
1	Patch-1 Part of Nehela RF	1.67 Sq Km	Reserve Forest
2	Patch-2 Part of Nehela RF	5.54 Sq Km	Reserve Forest
3	Patch-3 Hatimunda RF	2.60 Sq Km	Reserve Forest
4	Patch-4 Sagada PRF	0.37 Sq. Km	Reserve Forest
5	Patch-5 Khalia RF	3.508 Sq Km	Reserve Forest
	Total	13.688 Sq Km	
Proposed forest areas for exclusion:			
Sl. No	Forest Patch	Area In (Sq Km)	Status
1	1 Patch-Part of Karlapat RF	4.32 Sq Km	Reserve Forest
2	2 Patch-Part of Jerka RF		
<p>Considering the facts of biotic pressure by the villagers, movement of wild animals and vegetation density the field team after ground truthing felt the need for exclusion of forest patches from the Sanctuary. From Wildlife management point of view, this shifting of PA boundary is necessary for better monitoring of wild animals' movement and for the confinement of PA boundary as per the prescription of Working Plan.</p>			
18	Rare and endangered species found in the area Karlapat Wildlife Sanctuary is home to Chital, Sambar Barking deer, Wild boar, Porcupine, Common langur, Indian elephants, Sloth Bear, Pangolin, Hyena, jackal, Indian civet, jungle cat, Leopard, Tiger, Common lizard and Indian chameleon etc.		
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden, Odisha has stated that the area of Karlapat WL Sanctuary as notified in the year 1992 was 147.66 sq. km. As per the Working Plan prescriptions (1997-98 to 2006-07) by Sri K.R. Singh, IFS, the PA area is found to be 175.50 Sq. Km in the field and the DFO, Kalahandi South Division was asked for necessary correction. The Management Plan has also been prepared for the PA area based on the GPS coordinates of the boundary (175.50 Sq Km). In order to overcome this anomaly, the Boundary of the WL Sanctuary is now Geo Referenced based on the Boundary of WL Sanctuary shown in Revenue Village cadastral sheets.		

After geo-referencing of Cadastral Map of villages around Sanctuary, the PA area comes to 184.63 Sq. Km. In addition, the boundary of the Sanctuary is proposed to be extended in 5 locations by inclusion of forest patches into the Sanctuary due to presence of Dense to Moderate Dense Forest, which are contiguous to existing area and potential habitat for wildlife. Further, there is no addition of new villages and there are no pending Forest Claims.

1. Patch No.1: The boundary of sanctuary is proposed to be extended North-East part of Sanctuary in Nehela RF with addition of 1.67 Sq. Km. area to sanctuary.
2. Patch No.2: The present boundary of sanctuary is proposed to be extended East part of Sanctuary in Nehela RF with addition of 5.54 Sq. Km. area to sanctuary.
3. Patch No.3: A new Forest Block Hatimunda RF is proposed to be included in Sanctuary with addition of 2.60 Sq. Km. area.
4. Patch No.4: The existing sanctuary boundary is proposed to be extended towards North in Sagada RF with addition of 0.37 Sq. Km. area to sanctuary.
5. Patch No.5: Inclusion of Khalia Forest Block (new) to sanctuary with addition of 3.508 Sq. Km. area.

With the above addition of five patches of forest area, the total sanctuary area will be 198.318 Sq. Km. as detailed below.

S.No.	Particulars	Area
(i)	Area as per Notification No.24498-8F(W)-41/92 dt. 15.10.1992	147.66 Sq. Km.
(ii)	Area after Georeferencng & cadastral Topo Integrations	184.63 Sq. Km.
(iii)	Additional forest area proposed for inclusion	13.688 Sq. Km.
Total area after Geo-referencing		198.318 Sq.

Along with addition of forest area, an inward shifting of Southern boundary of the sanctuary is proposed in 2 locations due to less movement of wild animals, less vegetation density, biotic pressure by the villagers and presence of Bauxite Reserves by which an area of 4.32 sq. km. of Sanctuary Area need exclusion. After the reduction of 4.32 sq. km, the revised final area of Sanctuary is 193.998 sq. km which is 9.368 sq. km area more than the actual Notified Area. The Chief Wild Life Warden recommended the above proposal for rationalization of boundary of Karlapat Wildlife Sanctuary from the existing 184.63 Sq. Km. to 193.998 Sq. Km. for improvement of habitat of wild animals and making the PA boundary as per the prescription of Working Plan.

20 Comments of Ministry

The Standing Committee may like to take a view on the proposal.

(3)

1	Name of the Proposal	Rengali Irrigation Project FP/OR/IRRIG/27418/2017
2	Name of the protected Area involved	Kapilash Wildlife Sanctuary
3	File No.	6-98/2021 WL
4	Name of the State	Odisha
5	Whether proposal is sub-judice	No
6	Area of the protected area	125.59 sq.km
7(a)	Area proposed for diversion/Denotification	7.562 ha
7(b)	Area so far diverted from the protected area(s)	
8	Status of ESZ, if any	Final notified on 17/06/2015 and the extent of ESZ is from 500 m to 13.15 km from the boundary of the Sanctuary.
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	For the purpose of the project some forest growth (mostly pole size crop) will be required to be removed. This may not cause a major effect on the habitats. As per provisions of section 29 of Wild Life (Protection) Act, 1972 forest growth so removed may be used for meeting the personal bona fide needs of the people living in and around the sanctuary near the affected area.
10	Whether project linear/non-linear	Linear
11	Whether EC obtained	No
12	Date of submission by user agency	12/02/2021
13	Name of the applicant agency	JICA Project, Brahmani Left Basin, Sukinda
14	Total number of tree to be felled	NA
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life	Proposal was recommended by the Standing Committee of the State Board for Wild Life in its meeting held on 23 rd April 2021.
17	Brief justification on the proposal as given by the applicant agency	

As per the approved Longitudinal Section (L.S.) and Design statement (D.S.), the alignment of Darpani Branch Canal passes through Godabalua Reserve Forest from RD 27.603 km to 29.041 Km and Ranibania Reserve Forest from RD 29.041 km to 30.20 km. The total length of canal passing in Reserve Forest area is 2.597 km. The stage-II forest clearance for length of canal located in amidst of the above Reserve Forest area has been accorded by MoEF&CC, Government of India and F.E. Department, Govt. of Odisha. The balance forest area located within canal reach 29.603 Km to 30.20 Km has been included in the fresh forest diversion proposal (423.1727 ha) of Rengali Irrigation Project applied on date 02.08.2017. In view of the above comparison study of the approved alignment and proposed new alignment of Darpani Branch Canal are as follows:

Approved Alignment of DBC

- i. Proposal for forest land diversion (25.94 ha) has been prepared with DGPS survey & fresh tree enumeration.
- ii. Land acquisition of private land of two numbers of villagers naming as Radharamanpur & Nrusinghpur located in the vicinity of forest area has already been submitted to DoWR for sanction of estimate for payment to land owners.
- iii. The Stage-II approval for patches of Reserve Forest (Ranibania) area located in between RD 29.041 Km and RD 30.200 Km has been accorded by the Ministry of Environment, Forest & Climate Change, Government of India & Govt. of Department of Forest & Environment. Fresh forest diversion proposal for the forest land (25.94 ha) has been submitted.
- iv. Cost involvement for construction of DBC as per the approved alignment is Rs. 3193.230 lakhs which is inclusive of 100m length of cut & cover for passage of wild animals in sanctuary portion.

Revised Proposed Alignment to avoid Sanctuary Area

- i. Fresh Forest diversion proposal of 41.23 Ha to be prepared for submission and approval.
- ii. Additional 15.26 Ha (41.23-25.97 Ha.) of forest land will be diverted and it will cost Rs.599.11 lakhs which includes NPV, CA scheme (10 years' operation and maintenance of plantation) & CA Land of Non-forest land to be transferred in lieu of diverted land and DGPS survey and etc.
- iii. Land Acquisition for private land to be prepared & submitted for 3 nos of villages such as Kasipada, Radhakrushnapur & Radharamanpur measuring an area of 20.01 Ac.
- iv. Cost involvement for construction of DBC including all its structures & LA compensation for three nos of villages is Rs. 4820.35 lakhs & Forest Diversion cost is Rs. 599.11 lakhs totalling to Rs. 5419.46 lakhs.

In view of the comparison, it is requested the original approved alignment of Darpani Branch Canal may be approved & National Wild life Board Authority will be requested for approval of proposal.

18	Rare and endangered species found in the area Kapilash Wildlife Sanctuary is an excellent habitat for Asian Elephants and some of the most endangered species like, Hyena, Spotted Deer, Sambar, Wolf, Bears, Common Langurs, Jackal, Fox, etc;
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal with the condition that “Cut and cover method of canal construction shall be used with minimum 2-meter soil cover on RCC slab covering the canal. For Eco-sensitive Zone and neighbouring areas, a Site Specific Wildlife Conservation Plan may be prepared specifying mitigation measures.”
20	Comments of Ministry The Standing Committee may like to take a view on the proposal.

UTTARAKHAND

A. Proposal falling outside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-93/2021 WL	Proposal for Song Dam Drinking Water Project, Uttarakhand. FP/UK/WATER/40701/2019

(1)

1	Name of the Proposal	Proposal for Song Dam Drinking Water Project, Uttarakhand. FP/UK/WATER/40701/2019				
2	Name of the protected Area involved	Mussoorie Sanctuary				
3	File No	6-93/2021 WL				
4	Name of the State	Uttarakhand				
5	Whether proposal is sub-judice	Not sub-judice				
6	Area of the protected area	1081.97 ha				
7(a)	Area proposed for diversion/ Denotification	Proposed site is 8.7 km away from the Sanctuary				
		S.no	Component	Project Area under Non-Protected Area(ha.)		
		1	Submergence	68.821		
		2	Control room	0.5		
		3	Stock Piles	14.2827		
		4	Muck Dumping	4.6965		
		5	Colony	2.5576		
		6	Motor road new approach	7.0275		
		7	Motor Road Upgrade	6.33		
		8	Quarry	4.6143		
		9	Batching Plant	3.9716		
		10	Pipe line	14.87		
		Total		127.6712		
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year	Area Diverted/ Permitted for use(ha.)
		1.	Masrana to Kimoi Motor Road	PWD	2016	0.42
8	Status of ESZ, if any	Not yet notified. Additional information awaited from the State Government.				
9.	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	The proposed project does not involve any felling of trees and the proposed project does not stop or enhance the flow of water into or outside the sanctuary. And hence, there no impact of Section 29 and Section 35(6) of the Wild Life (Protection) Act, 1972.				

10	Whether project linear/non-linear	Non-Linear
11	Whether EC obtained	EC under process
12	Date of submission by user agency	4/06/2020
13	Name of the applicant agency	Infrastructure (Rehab) Division Rishikesh, Dehradun
14	Total number of tree to be felled	8781
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life Proposal was recommended by State Board for Wild Life in its meeting held on 24 th November 2020.	
17	Brief justification on the proposal as given by the applicant agency As per the Geographical and Hydrological feasibility, this is location is the only suitable place for construction of Song Dam Drinking Project from where Dam can be constructed for supply of 150 MLD water. As a result, population of approximately 19 lakhs will be benefited and there will be reduction in the number of tube wells and consequently reduction in expenditure on electricity and their maintenance. It will improve ground water level which had declined due to urbanisation of Dehradun in previous years. Required drinking water supply to the population of Dehradun will be assured. Therefore, this project will make significant contribution towards success of AMRUT Scheme of Government of India together with contribution in pisciculture, various economic activities like tourism and conservation of animals. There will be permanent/temporary employment generation due to this implementation of this project. There will be opportunities for tourism in this part of Uttarakhand which will generate revenue for local people and Government and local roads will get improved which will provide traffic facilities to people and contribute in nation building.	
18	Rare and endangered species found in the area Mussoorie Wildlife Sanctuary is home to leopard, Himalayan black bear, wild boar, Langur, Indian hare, barking deer, wild pig, spotted deer, mongoose, etc.	
19	Opinion of the Chief Wild Life Warden The Chief Wild Life Warden has recommended the proposal subject to following conditions: <ol style="list-style-type: none"> 1. Legal status of the diverted forest land shall remain unchanged. 2. The felling shall be done under the strict supervision of the State Forest Department. 3. No damage to the flora and fauna of the surrounding area shall be caused. 4. The forest land shall not be used for any purpose other than that specified in the proposal. 	

	<p>5. The concerned territorial Divisional Forest Officer shall monitor the implementation of the project regularly and report for the violations, if any.</p> <p>6. It shall be ensured that no labourer camp will be set up inside the forest area.</p> <p>7. The user agency shall comply all the provisions of the Wildlife (Protection) Act, 1972 & Wildlife (Protection) amended Act in 2006 and all other Acts, Rules, Regulations, Guidelines, Hon'ble Court Order(s) and Hon'ble NGT Order(s) pertaining to this project.</p>
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

UTTAR PRADESH

A. Proposal falling inside the protected area

S.No.	F.No.	Name of the Proposal
1.	6-86/2021 WL	Proposal for use of 0.3333 ha. from Hastinapur Wild Life Sanctuary for retail outlet site at Village Sudnipur, Khasra No.262 along Chandpur-Bijnor Road (SH-51) Km Stone 184 To 186 (Left Shoulder), Tehsil Chandpur, District Bijnor (U.P.) of M/S Bharat Petroleum Corporation Limited, Meerut. FP/UP/Others/5325/2020

(1)

1	Name of the Proposal	Proposal for use of 0.3333 ha. from Hastinapur Wild Life Sanctuary for retail outlet site at Village Sudnipur, Khasra No.262 along Chandpur-Bijnor Road (SH-51) Km. Stone 184 To 186 (Left Shoulder), Tehsil Chandpur, District Bijnor (U.P.) of M/S Bharat Petroleum Corporation Limited Meerut. FP/UP/Others/5325/2020				
2	Name of the protected area involved	Hastinapur Wildlife Sanctuary				
3	File No	6-86/2021 WL				
4	Name of the State	Uttar Pradesh				
5	Whether proposal is sub-judice	Not sub-judice				
6	Area of the protected area	2073 Sq. Km.				
7(a)	Area proposed for diversion / De-notification	0.3333 ha				
		Component wise breakup				
		S.no	Component			Project Area under Protected Area(ha.)
		1	Approach Road of Forest			0.1583
		2	Khasra No.262 for Establishment of Retail Outlet			0.175
7(b)	Area so far diverted from the protected area(s)	S.no	Name of project	User Agency	Year	Area Diverted/ Permitted for use(ha.)
		1.	B.P.C.L Retail outlet	B.P.C.L Meerut	2018	0.0935
		2.	NHAI	NHAI Moradabad	2016	6.925
8	Status of ESZ if any	Final notified on 18.09.2018 and the extent of ESZ is one km from the boundary of the Sanctuary.				
9	Specific comments w.r.t section 29 to the Wild Life (Protection) Act, 1972	Uttar Pradesh Government vide its notification No. 3782/14-3-57/84, dated 30-07-1986, u/s Section 18 of Wild Life (Protection) Act 1972, declared 2073 km ² area as Hastinapur Wild Life Sanctuary in U.P. It is spread over in 5 Districts viz. Meerut, Hapur, Bijnor, J.P. Nagar (Amroha), Muzuffarnagar for the purpose of protecting the wild life and its environment. This Sanctuary is the habitat of many species of mammals, amphibians and birds. Mitigation measures and better management will be required for protection of wild life and its habitat.				

10	Whether linear / non-linear	Non-Linear
11	Whether EC obtained	No
12	Name of the applicant agency	M/s Bharat Petroleum Corporation Limited, Territory - Meerut
13	Date of submission	18/09/2020
14	Total number of tree to be felled	5
15	Maps depicting the Sanctuary and the diversion proposal included or not	Yes
16	Recommendation of State Board for Wild Life State Board for Wild Life recommended the proposal in its meeting held on 29.11.2020.	
17	Brief justification on the proposal as given by the applicant agency Proposed protected forest land to be diverted for entry/exit of BPCL Retail Outlet on Delhi-Moradabad road NH-24 (New NH-09), in KM.No.94 (Ch.No.93.548, LHS), at Khasra No.-57, 58, 59, 60, 67 & 68, Village-Kharagpur Ahatmali, Tehsil-Hasanpur, District-Amroha (Uttar Pradesh). Proposed forest land is in the boundary of Hastinapur wildlife Sanctuary situated in Amroha district, having protected forest land area along road crossing is 0.173655 ha and non-forest land area is 0.2583 ha within boundary of wildlife sanctuary. The proposed route is optimal with minimum area within wildlife sanctuary involved in the project along with best construction of maintenance facility for the project.	
18	Rare and endangered species found in the area Hastinapur Wildlife Sanctuary is home to sloth bear, jackal, wild pig and the lesser cats- fishing cat, leopard cat, jungle cat and civet etc.	
19	Opinion of the Chief Wildlife Warden The Chief Wild Life Warden has recommended the proposal with the following conditions: <ol style="list-style-type: none"> 1. Protection & Mitigation measures for wild life should be ensured as per guidelines of Government of India (MoEFWL). 2. Land shall not be used for any purpose other than that specified in the proposal. 3. Rules and regulation of the concerned departments for establishing the project shall be complied with. 	

	<ol style="list-style-type: none"> 4. The instructions/orders passed by the State Govt/Central Govt. and the directions passed by Hon'ble High Court/ Hon'ble Supreme Court/ National Green Tribunal from time to time regarding such project shall be complied with. 5. User agency will ensure that the project personnel engaged in the project shall observe the provisions of the Wild Life (Protection) Act, 1972 & Rules made there under. 6. Construction/waste materials shall not be thrown inside the sanctuary area or movement corridor of the wildlife. 7. User agency will take all precautions including technical measures to contain the noise and air pollutions and protection from fire due to construction activities and thereafter. 8. The project proponent shall obtain consent to establish and to operate from U.P. Pollution Control Board and effectively implement all the conditions stipulated therein. 9. The project proponent shall provide necessary finance for planting the native species in the area adjacent to project area/sanctuary as per suggestion/direction of Protected Area Manager. 10. Amount of Net Present Value (N.P.V.) shall be paid by the User Agency as per directions contended in G.O. No writ 526/14-2-2008 dated- 22-8-2008 of U.P. Govt. 11. No labour camp shall be established within the sanctuary/forest area or other sensitive areas. 12. No Construction work will be allowed after sunset and before sunrise within Sanctuary area. 13. In place of 05 trees required to be removed, 10 trees to be planted at appropriate site by the DFO. The cost of plantation and maintenance of 10 trees for 10 years will be deposited by user agency with DFO concern as per estimates/demand raised by the DFO.
20	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

AGENDA NO. 6

Any other item with the permission of the Chair



F.No.6-63/2021 WL
Government of India
Ministry of Environment, Forest and Climate Change
(Wildlife Division)

2nd Floor, Jal Wing
Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj
New Delhi 110003

Date: 19.08.2021

To

All Members
Standing Committee of NBWL

Sub: Minutes of 64th Meeting of the Standing Committee of National Board for Wild Life- reg.

Sir / Madam,

Kindly find enclosed copy of the Minutes of 64th Meeting of the Standing Committee of National Board for Wild Life held on 7th August 2021 under the chairmanship of Hon'ble Minister of Environment, Forest and Climate Change, Government of India.

Yours faithfully,


(Surender Gugloth)
Scientist 'D'

Email: surender.gugloth@gov.in

Encl: As above

Distribution

1. Secretary, MoEF&CC
2. DGF&SS, MoEF&CC
3. ADGF(WL), MoEF&CC
4. ADGF(FC), MoEF&CC
5. Member Secretary, NTCA
6. Director/IGF, PE Division, MoEF&CC
7. Director, WII, Dehradun
8. Director, GEER Foundation, Gandhinagar, Gujarat
9. Prof. R. Sukumar, Member, NBWL
10. Dr. H.S. Singh, Member, NBWL
11. Pr. Secretary, Forest Department, Government of Andhra Pradesh

Copy to:

- (1) PS to Hon'ble MoEF&CC
- (2) PS to Hon'ble MoSEF&CC
- (3) PPS to DGF&SS, MoEF&CC
- (4) PSO to Addl.DGF(WL), Sr.PPS to IGF(WL)
- (5) Additional Chief Secretary/Principal Secretary/Secretary, Forest Department, Government of Assam, Uttarakhand, Telangana, Rajasthan, Uttar Pradesh, Tripura and Sikkim.
- (6) PCCF and HoFF, Government of Assam, Uttarakhand, Telangana, Ladakh, Rajasthan, Uttar Pradesh, Tripura and Sikkim.
- (7) CWLW, Government of Assam, Uttarakhand, Telangana, Ladakh, Rajasthan, Uttar Pradesh, Tripura and Sikkim.

Copy also to:

Sr. Technical Director, NIC with a request to upload the minutes of the meeting on PARIVESH Portal.

MINUTES OF THE 64th MEETING OF THE STANDING COMMITTEE OF NATIONAL BOARD FOR WILD LIFE HELD ON 07th AUGUST, 2021

The 64th Meeting of the Standing Committee of the National Board for Wild Life was held through Video Conference on 07th August, 2021 under the chairmanship of the Hon'ble Minister for Environment, Forest & Climate Change. The list of participants is placed at **ANNEXURE-I**.

This was the first meeting of Hon'ble Minister Environment, Forest & Climate Change as Chairman of the Standing Committee of the National Board of Wildlife. The Secretary EF&CC welcomed Hon'ble MEF and Hon'ble MoS EF&CC. The Member Secretary of the committee requested all Members of the committee and representatives of the States (PCCFs and CWLWs) to have a round of introduction to the Chair.

The Chairman welcomed the participants to the meeting and asked IGF (WL) to initiate the discussions on the Agenda Items.

AGENDA ITEM No.1

63.1.1 Confirmation of the minutes of the 63rd Meeting of the Standing Committee of National Board for Wild Life held on 11th August, 2021.

The Committee was informed that the minutes of the 63rd meeting of the Standing Committee of National Board for Wild Life held on 11th June, 2021 were circulated to all the Members and no comments were received.

Decision Taken: After discussion, the Standing Committee decided to confirm the minutes of the 64rd meeting.

AGENDA ITEM No.2

(Action Taken Report)

64.2.1 Proposal for use of 98.59 ha of reserve forestland from Saleki proposed reserve forest which is a part of Dehing Patkai Elephant Reserve for Tikok OCP coal mining project by North-Eastern Coal Field, Coal India Limited, Assam State (Original Agenda – 54.4.3).

The Committee noted that in the 64rd meeting, Coal India Limited was directed to carry out a joint survey of the area with Assam Forest Department and provide a detailed report regarding the events which led to illegal mining in the project area and the remedial measures to be taken. The Committee also noted that the matter is sub-judice. It was therefore decided to defer the matter.

Decision Taken: After discussion, the Standing Committee decided to defer the matter.

64.2.2 Proposal for collection of Minor Minerals from Song 1, 2, 3 and Jakhan 1, 2 of Dehradun Forest division, Uttarakhand.

The proposal was first considered in the 61st meeting of the Standing Committee held on 18th February, 2021. It was decided by the Committee that the proposal would be considered only on receipt of a certificate of compliance of Sustainable Sand Mining Management Guidelines, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, 2020 from the State Government. It was also decided to seek the comments of the National Mission on Clean Ganga (NMCG) on the proposal. Since the required documents were not received, the Standing Committee deferred the proposal in the 62nd and 64rd meetings.

The Committee was apprised that the State Government has submitted a letter to the Ministry informing that the Sustainable Sand Mining Management Guidelines 2016 and Enforcement and Monitoring Guidelines for Sand Mining 2020 are being followed in the State of Uttarakhand. However, the comments of NMCG are yet to be received.

Shri Nishant Verma, Uttarakhand Forest Development Corporation stated that the proposal is for renewal of permission already granted from 2011-12 till 2018-19. He informed that the ToR for the proposal has been issued by the Ministry of Environment, Forest and Climate Change.

The Chief Wild Life Warden, Uttarakhand stated that all mandatory requirements have been taken care of by the State Government.

Secretary, EF&CC suggested that the Project Proponent may apply for Environment Clearance for the project. He said that the project proposal will be considered by the Committee on receipt of the comments of NMCG.

Decision taken: After discussion, the Standing committee decided to defer the proposal till the submission of application for environmental clearance by the Project Proponent and receipt of comments from NMCG.

AGENDA ITEM No. 3

(Policy Matters, Court Orders/Rationalization of Boundaries of Protected Areas)

64.3.1 Projects falling outside the notified Eco-sensitive Zones before recommendations of Standing Committee of the National Board for Wild Life

The Committee was informed that many project proposals are submitted to the Ministry for consideration of the Standing Committee of the National Board for Wild Life due to their location within the default ESZ. In several cases, the projects fall outside the ESZ once it is notified finally. The Ministry has received requests for exempting such projects from the conditions imposed

by the Standing Committee based on the location of the projects inside the default ESZ.

Dr. R. Sukumar, Member stated that the projects were recommended by the Standing Committee with conditions imposed by the Chief Wild Life Wardens/State Board for Wild Life/State Governments taking into consideration the overall landscape. He suggested that the Chief Wild Life Warden and the State Board for Wild Life may examine these issues and decide whether exemption may be granted to project proponents from compliance of conditions for projects falling outside the finally notified ESZ. He said that for projects falling inside ESZ, the project proponents should comply with all the conditions imposed.

Shri H.S. Singh and Shri U.D. Singh, Director, GEER Foundation, Members stated that if the location of the project is outside the finally notified ESZ, compliance of conditions should not be insisted upon.

Secretary, EF&CC suggested that legal opinion on the matter may be obtained before taking a decision.

Decision Taken: After discussions, the Standing Committee decided that the Ministry would take legal opinion on the matter before further deliberation.

64.3.2 Cost of mitigation measures due to impact of developmental activities in National Parks, Sanctuaries, their Eco-sensitive Zones, Tiger Reserves and Tiger Corridors

The Committee was informed that while forwarding the proposals for consideration of the Committee, States/UTs impose the condition that a certain percentage of the cost of the project will be paid by the project proponent for mitigation of impacts due to developmental activities. The States/UTs impose costs at different rates for mitigation measures. The Ministry has received requests that the cost imposed should be based on the proportion of the project lying within the Protected Area or the ESZ rather than the total cost of the project. The Ministry has also received requests that instead of imposing costs on project proponents, they may be asked to implement mitigation measures.

Dr. Sukumar suggested that the cost, if any, imposed for mitigation measures should be 2% of the proportionate cost of projects falling within the protected area or the ESZ. He also suggested that there should be analysis of the cost imposed and mitigation measures taken based on the experience of States/UTs.

Secretary, EF & CC suggested that the conditions should prescribe mitigation measures to be carried out by the project proponent instead of restricting the cost to a certain percentage of the project cost.

Shri H.S. Singh, Member stated that the cost imposed on the project proponent should be based on the proportion of the project falling inside the protected areas and the ESZ. He further said that if the project proponents

are allowed to carry out mitigation measures inside Protected Areas, it will cause interference in the management of protected areas.

Shri U.D. Singh, Member stated that guidelines should be framed for fixing impact cost of the projects. He said that project proponents do not have expertise in implementing mitigation measures. He suggested that the amount recovered from the project proponents should be deposited in State CAMPA accounts and Annual Plans of Operation may be prepared and sanctioned for withdrawal of funds and execution of Mitigation Plans. He said that it would be advisable to impose a proportionate cost on projects for implementing the mitigation measures.

PCCF and CWLW, Telangana suggested that impact cost of the projects should be site specific and based on the impact of the project on the wildlife of the protected area and ESZ.

Decision taken: After discussion, the standing committee recommended that 2 % of the proportionate cost of projects falling inside protected areas and ESZ may be imposed on user agencies for impact mitigation measures, wherever required in future. This amount should be spent on the mitigation measures within the same Protected Area.

64.3.3 Fixation of date for holding meeting of the Standing Committee of the National Board for Wild Life.

As per the Ministry's notification F.No. 6-46/2013 WL (pt-2) dated 22nd July, 2014, Standing Committee shall ordinarily meet once in three months.

It was proposed that in order to minimise the number of pending cases and avoid delays in projects, meetings of the Standing Committee be conducted every month.

Shri H.S Singh, Member and Dr Sukumar, Member observed that the meetings of the Standing Committee may be held once in two months.

Secretary, EF&CC observed that if meetings of the Standing Committee are held once in two months, new project proposals would have to wait for a long time before they are considered by the Standing Committee. He therefore suggested that meetings of the Standing Committee may be held once in a month unless there are no complete proposals for consideration of the Committee.

Decision taken: After discussion, the Standing Committee decided that meetings of the Committee would be held once in a month unless no complete proposals are received for consideration of the Committee from States/UTs.

AGENDA ITEM No. 4

(Amendment in the minutes of meeting of Standing Committee)

64.4.1 Amendment in the minutes of 60th meeting of the Standing Committee of the National Board for Wild Life FP/HR/Others/2653/2018

The proposal for wildlife clearance for improvement, upgradation and construction of Ganeshpur- Dehradun road (NH72A) in the state of Uttar Pradesh (Km 0.0 to Km 16.160) to 4 lane was considered and recommended by the Standing Committee in its 60th meeting held on 5th January, 2021. The proposal was forwarded by the State Government with certain conditions imposed by the Chief Wild Life Warden including the one mentioned below:

'In addition to this, mitigation measures for development of Delhi-Dehradun Highway (NH-72A) in the Shivalik hills have been provided by WII, Dehradun. Moreover, the mitigation plan for wildlife and their habitat improvement amounting Rs. 1150 lakhs has been proposed by Shivalik Forest Division and the same shall be deposited by the user agency (NHAI).'

The Chief Wild Life Warden had further mentioned that *'amount required for implementation of this condition shall be part of condition no. 3, i.e., User agency shall provide 2% of the project's proportionate cost of the area falling in eco-sensitive zone for mitigation of negative impact and ecological development of wildlife habitat area as per guideline of Government of India.'*

The proposal was recommended by the Standing Committee in the 60th meeting held on 5th January, 2021. One of the conditions imposed while recommending the proposals was condition 4(I) which reads as follows:

'In addition to this, mitigation measures for development of Delhi-Dehradun Highway (NH-72A) in the Shivalik hills have been provided by WII, Dehradun.'

The National Highways Authority of India vide letter no. 31061/NHAI/RO-UKD/2014/15652 dated 30th July, 2021 has sought clarification on this condition.

Decision Taken: After discussions, the Standing Committee decided to amend the condition 4 (I) to read as follows:

'In addition to this, mitigation measures for development of Delhi-Dehradun Highway (NH-72A) in the Shivalik hills have been provided by WII, Dehradun. Moreover, the mitigation plan for wildlife and their habitat improvement amounting to Rs. 1150 lakh has been proposed by Shivalik Forest Division and the same shall be deposited by the user agency (NHAI). The amount required for implementation of this condition shall be part of condition no. 3.'

AGENDA ITEM No. 5

(Fresh Proposals Falling Inside / Outside the Protected Area)

- 64.5.1**
- 1. Diversion of 1.258 ha area from Changthang Wildlife Sanctuary for Demchok ITBP Post Road-FP/LA/DEF/5469/2020**
 - 2. Diversion of 46.67 ha. area from Changthang Wildlife Sanctuary for Pt. 4510 (Beltityu) to Anela Road-FP/LA/DEF/5024/2020**
 - 3. Diversion of 15.112 ha. area from Changthang Wildlife Sanctuary for Hena ITBP Post Road-FP/LA/DEF/5023/2020**
 - 4. Diversion of 2.488 ha. area from Changthang Wildlife Sanctuary for Dungti ITBP Post Road-FP/LA/DEF/5022/2020**
 - 5. Diversion of 1.976 ha. area from Changthang Wildlife Sanctuary for Tagyamale ITBP Post Road-FP/LA/DEF/5021/2020**
 - 6. Diversion of 1.194 ha. area from Changthang Wildlife Sanctuary for Koyul ITBP Post Road- FP/LA/DEF/5020/2020**
 - 7. Diversion of 18.322 ha. area from Changthang Wildlife Sanctuary for Nyakmikle ITBP Post Road-FP/LA/DEF/5019/2020**
 - 8. Diversion of 8.486 ha. area from Changthang Wildlife Sanctuary for Umlungzing ITBP Post Road-FP/LA/DEF/5018/2020**
 - 9. Diversion of 20.156 ha. area from Changthang Wildlife Sanctuary for Silungla base to ITBP Post Road-FP/LA/DEF/5016/2020**
 - 10. Diversion of 2.958 ha. area from Changthang Wildlife Sanctuary for Patrol Base 111 to ITBP Post Road-FP/LA/DEF/5015/2020**

The Committee was informed that these proposals have been forwarded by ITBP for construction of high altitude Indo-China border roads located in Ladakh (UT). These roads are strategically important for the security of country and will be used by ITBP and military personnel for logistics and carriage of ammunition etc. to protect Indian territory up to international border. The location of these roads is within the Changthang Sanctuary.

The proposals have been recommended by the Chief Wild Life Warden, Ladakh and the State Board for Wild Life.

The Chief Wild Life Warden, Ladakh informed the Committee that the area required for the projects is very small compared to the area of the Changthang Sanctuary. He said that the animals found in this terrain are long ranging and no road kills have been recorded on the existing roads.

The expert members stated that in view of the strategic importance of these roads, the proposals may be recommended.

Decision Taken: After discussion, the Standing Committee decided to recommend the proposals subject to the following:

A. Conditions imposed by the State Board for Wild Life:

1. The legal status of the land shall remain unchanged. The User Agency will have right only for construction, maintenance and use of the road.
2. The land shall be used for the purpose stated in the Wildlife Clearance order. Any diversion of land for any other purpose except the stated purpose shall not be admissible without fresh approval from the Standing Committee of NBWL.
3. The User Agency shall pay Net Present Value (NPV) and other monies in accordance with the orders of the Hon'ble Supreme Court and the MoEF&CC guidelines.
4. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue, including Forest (Conservation) Act, 1980 if applicable before the initiation of work.
5. No damage to any wildlife including habitat shall be done in the neighbouring area.
6. The User agency will report all road kills or accident of any wild animals and deposit the carcasses to the office of concerned wildlife warden to be dealt according to the prevailing laws.
7. The User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of the Wild Life (Protection) Act, 1972, directions of the Ministry of Environment Forest & Climate Change. conditions imposed in the Wildlife Clearance sanction and orders of the UT Administration in force and as may be issued from time to time.
8. The activities shall be liable to periodic check by the officers of the Wild Life Protection Department. The officer(s) may order stoppage of work if it is found that any provisions of preceding clause have not been complied with.
9. Dumping of solid and liquid waste shall be scientifically dealt with by the User Agency to ensure that there is no damage to wildlife and their habitat.
10. Detailed muck disposal plan shall be prepared by the User Agency and approved by the Chief Wild Life Warden/Wild Life Warden before commencement of work on ground. If any deviation from the approved disposal plan is noticed, the permission granted for construction of road is liable to be revoked.
11. The SCNBWL modified the condition imposed by the State Board of Wildlife which states that the user agency shall pay 5% of the cost of the project, for road length more than 5 Km, to Wildlife Protection Department of conservation and preservation of wildlife and its habitat in the sanctuary. **Instead, the user agency shall pay 2% of the cost of the project in proportion of the area of the project falling within the Protected Area, to Wildlife Protection Department of conservation and preservation of wildlife and its habitat in the sanctuary.**

12. The Wildlife conservation plan shall also be placed before the State Board for wildlife for approval to use the budget for its implementation.
13. The user agency shall not restrict movement of Wildlife/Forest officials including the person/s authorized in discharging official duties, including survey and census.

B. An annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

64.5.2 Diversion of 35.46 ha of land from Karakorum Wildlife Sanctuary for Saser Brangsa Gapshan for construction of road. FP/LA/DEF/5451/2020

The Committee was informed that the proposal has been submitted by the Border Roads Organisation (BRO) for construction of Indo-China border roads located in Ladakh. These roads are strategically important for the security of the country and are being used by ITBP and army personnel for logistics and carriage of ammunition etc to protect Indian territory up to the international border. Diversion of land is necessary for construction of these high altitude project roads.

The proposal has been recommended by the Chief Wild Life Warden and the State Board for Wild Life.

Dr. Sukumar mentioned that in several cases, the area over which the project is recommended is exceeded by utilising more area for muck disposal. He said that monitoring of the conditions imposed is essential so that damage to such ecologically fragile areas is minimised.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to following:

A. Conditions imposed by the State Board for Wild Life:

1. The legal status of the land shall remain unchanged. The User Agency will have right only for construction, maintenance and use of the road.
2. The land shall be used for the purpose stated in the Wildlife Clearance order. Any diversion of land to any other purpose except the stated purpose shall not be admissible without fresh approval from the Standing Committee of NBWL.
3. The User Agency shall pay Net Present Value (NPV) and other monies in accordance with the orders of the Honible Supreme Court and the MoEF&CC guidelines.
4. The User Agency shall be responsible for obtaining requisite clearances under any other law in vogue, including Forest (Conservation) Act, 1980 if applicable before the initiation of work.

5. No damage to any wildlife including habitat shall be done in the neighbouring area.
6. The User agency will report all road kills or accident of any wild animals and deposit the carcasses to the office of concerned wildlife warden to be dealt with according to the prevailing laws.
7. The User Agency shall abide by all the directions of the Hon'ble Supreme Court, provisions of the Wild Life (Protection) Act, 1972, directions of the Ministry of Environment Forest & Climate Change. conditions imposed in the Wildlife Clearance sanction and orders of the UT Administration in force and as may be issued from time to time.
8. The activities shall be liable to periodic check by the officers of the Wild Life Protection Department. The officer(s) may order stoppage of work if it is found that any provisions of preceding clause have not been complied with.
9. Dumping of solid and liquid waste shall be scientifically dealt with by the User Agency to ensure that there is no damage to wildlife and their habitat.
10. Detailed muck disposal plan shall be prepared by the User Agency and approved by the Chief Wild Life Warden/Wild Life Warden before commencement of work on ground. If any deviation from the approved disposal plan is noticed, the permission granted for construction of road is liable to be revoked.
11. The SCNBWL modified the condition imposed by the State Board of Wildlife which states that the user agency shall pay 5% of the cost of the project, for road length more than 5 Km, to Wildlife Protection Department of conservation and preservation of wildlife and its habitat in the sanctuary. **Instead, the user agency shall pay 2% of the cost of the project in proportion of the area of the project falling within the Protected Area, to Wildlife Protection Department of conservation and preservation of wildlife and its habitat in the sanctuary.**
12. The Wildlife conservation plan shall also be placed before the State Board for wildlife for approval to use the budget for its implementation.
13. The user agency shall not restrict movement of Wildlife/Forest officials including the person/s authorized in discharging official duties, including survey and census.
- B.** An annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

64.5.3 Construction of passenger ropeway at Mandir Shree Garh Ganesh Jaipur

The Committee was informed that proposal relates to construction of a passenger ropeway at Mandir Shree Ganesh in the city of Jaipur. The temple is located on the hills near Nahargarh Fort and Jaigarh Fort. Pilgrims reach

the foot of the hill by road and then climb 400 steep steps to reach the temple. The temple is located in forest area and the path leading to it is also in forest area.

The proposal has been recommended by the Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The Chief Wild Life Warden, Rajasthan suggested that in line with the discussion held in the meeting regarding cost to be imposed for mitigation measures, condition no. 1 of the conditions imposed by the Chief Wildlife Warden may be modified to charge 2 % of the proportionate project cost within the protected area. He further said that the condition regarding the deposition of 10% of the entry fee into account specified by the Chief Wild Life Warden need not be imposed as the Forest Department is charging entry fee inside the sanctuary and there is a court order in this regard.

Shri H. S. Singh, Member and Dr. Sukumar, Member expressed their agreement in this regard.

Shri U.D. Singh, Director GEER, Member stated that the condition regarding imposition of cost may be modified to the extent that amount deposited by the User Agency for mitigation of the impacts due to this project will be used only for management and protection of Nahargarh Sanctuary.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to following:

A. Conditions imposed by the Chief Wild Life Warden/ State Board of Wildlife:

- Two percent of the proportional project cost falling within the Protected Area should be deposited in RPACS by the user agency for management and protection of wildlife in Nahargarh Sanctuary.
- No work shall be done before sunrise and after sunset in the project area.
- No material of any kind should be extracted from the Protected Area.
- There will be no felling of trees and burning of fuel wood inside the Protected Area.
- The waste material generated should be disposed outside the Protected Area.
- There will be no labour camp within 1 km from the boundary of Protected Area.
- No blasting will be carried out within 1 km from the boundary of Protected Area during the work.
- There shall be no high mast/ beam/ search lights &, high sounds within 1 km from the Protected Area boundary.
- Signages regarding information about the wild animals in the area, control of the traffic volumes, speed etc should be erected in the project area.
- The user agency and project personnel will comply with the provisions of the Wild Life (Protection) Act, 1972.

- Maintenance activity of any nature should be carried out only after seeking formal approval from competent authority of tiger reserve/ PA.
 - Six feet high wall is to be constructed on the periphery of applied project area.
 - The user agency and project personnel will comply with the provisions of Standard SOP/ Guidelines issued by WII, Dehradun for linear projects.
 - Any permission / clearance required under FCA-1980 or other acts may be taken as per rules.
 - FCA clearance needs to be taken for forest land involved in the project.
 - Valet parking will be ensured for the visitors or special vehicle for carrying visitors to and from the ropeway will be employed.
 - The project area and the temple will be fenced off from the Sanctuary by a 6 ft wall.
 - No construction material will be carried except by service ropeway.
 - No commercial activities will be undertaken in temple or project area.
 - Except for specific religious purposes, only ropeway should be used for visiting the temple.
 - Appropriate provisions may be made so that no garbage is thrown from the ropeway in to the sanctuary area.
 - User agency shall allow forest personnel on duty to inspect the area during construction as well as during operational phase for monitoring compliance of the conditions.
- B.** An annual compliance certificate on the stipulated conditions shall be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

64.5.4 Diversion of 1.6 ha of forest Land from Pangolakha Wildlife Sanctuary for construction of Border Out Post at Below Arjun, East Sikkim by ITBP.

The Committee was informed that the proposal relates to diversion of 1.6 ha of forest Land from Pangolakha Wildlife Sanctuary for construction of Border Out Post at Below Arjun, East Sikkim by ITBP. Construction of the proposed Out Post is necessary in order to provide logistics support which is an operational requirement for border guarding duty.

The proposal has been recommended by the Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The Chief Wild Life Warden stated that the Pangolakha Sanctuary is located at the tri-junction of India, Bhutan and China and the area is of strategic importance.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to following:

A. Condition imposed by the Chief Wild Life Warden / State Board of Wildlife:

1. There will be no violations of various acts and laws applicable to a Wildlife Sanctuary.
 2. The user agency has to ensure that all the activities should be restricted to the area that has been approved for clearance under the Forest (Conservation) Act, 1980.
 3. The material used for construction of road should not be extracted inside the sanctuary area.
 4. Labour camps (temporary or permanent) should not be constructed in the Wildlife Sanctuary area.
 5. Any activities which are not permissible in Wildlife Sanctuary should not be undertaken without prior approval of the Forests and Environment Department.
 6. The Army and other paramilitary organizations must work closely with the Forest Department and leave no scope for conflict in the future. The Army must not hinder the working of the Forest Department personnel inside the Pangolakha Wildlife Sanctuary.
 7. There should be no defacing of rocks and other natural formations.
 8. The local names of the places should not be distorted.
 9. The reason for which the diversion was effected must be the only activity undertaken in the field and there should be no diversion from the main objective.
 10. The army officials will carry out geo-hydrological studies to understand the rock structures and the springs available there. The user agency should take every precautionary measures to not to disturb the geological structures. As these are the major sources of water for the downstream 111 and rivers. The environmental impact assessment should be carried out in addition to the geo-hydrological and other necessary studies in these areas before taking up the construction work.
 11. The damage done to the bio-diversity both above and below the road should be taken into account and managed judiciously.
 12. The user agency to obtain clearance under the Forest (Conservation) Act, 1980.
- B.** The annual compliance certificate on the stipulated conditions should be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India

64.5.5 Cluster of Ramagundam Mines [GDK No.1&3, 2&2A and 5 Incline, GDK Coal Mine (2&2A and 5 Incline), GDK No.11 Incline, GDK No.7-LEP, Ramagundam Coal Mine (Vakilpalli Mine, Adriyala longwall Project, GDK 10&10A Inclines, RGOC-I Exp. & RGOC-II Ext.) MOCP, RGOC III Exp. Ph-II.]

The Committee was informed that the proposal relates to coal mining in the default ESZ of Sivaram Sanctuary.

Chief Wild Life Warden, Telangana stated that the proposal has been submitted by Singareni Collieries (SCCL) which are in operation since 1958. The proposed project site, extending over 3296.47 ha, is located outside the notified Sivaram Wildlife Sanctuary and falls in the default Eco-sensitive Zone of the Sanctuary at a distance of 7.72 Km. from the Sanctuary boundary. The proposal is for amalgamation of existing mines for which environment clearance is required. Since the project falls within the default ESZ, the SCCL have applied for wildlife clearance. There is no increase in the area of existing mines. The mitigation plan has been submitted and all the queries raised have been answered.

Dr. Sukumar, Member stated that overall landscape should not get affected due to mining activities and therefore suggested that landscape level mitigation management plan should be considered.

H.S.Singh, Member stated that the area of mining is large and the grasslands may get damaged due to dumping.

Shri U.D. Singh, Director, GEER Foundation observed that since black bucks and other animals are sensitive to blasting, suitable conditions need to be imposed in this regard.

Decision Taken: After discussions, the Standing Committee requested the Chief Wild Life Warden, Telangana to submit a report regarding the concerns raised by the Expert Members and decided to defer the proposal till the next meeting.

64.5.6 Construction of BOP A R Pur

The Committee was informed that the proposal relates to construction of Border Outpost in Trishna Sanctuary. An area of 1.3 ha. Is required for the construction.

The proposal has been recommended by the Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The Chief Wild Life Warden, Tripura informed that the sanctuary is known for Indian Gaur. He said that the proposed Border Outpost, which is on the India Bangladesh border, will be helpful in controlling international wildlife crime.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to following:

A. Conditions imposed by the State Board for Wild Life:

1. The impact of the project on wildlife could be compensated by higher protection of wildlife due to movement of security personal. To enhance this, BSF should cooperate and extend help to Tripura Forest Department officials in conservation of wildlife, whenever asked for.
2. No damage to animals & birds should be done by the contractor, labour or BSF staff during the constructions and thereafter. For this purpose, noise levels should be kept low and labourer should stay and cook outside the sanctuary/Forest area. Generators etc should be placed under noise proof enclosures, natural flow of water in the sanctuary should be stopped or diverted or enhanced.
3. All relevant rules of regulations should also be followed wherever applicable.
4. Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) should be under taken around project unit along with ROC embedding at bottom and 3 (three) strands of barbed wire on top for restricting entry of wild animals especially Bison in BOP.
5. Rs.30.00 lakhs (Rupees thirty lakhs) should be provided by the user agency for following works:
 - a. Construction of artificial water holes and salt licks for wild animals needs to be taken up for development of wildlife habitat.
 - b. Maintenance of housing infrastructure of Patrolling staff.
 - c. Grazing spaces for wild animals' i.e plantation of Napier grass &, fruit bearing species needs to be created for development of wildlife habitat.
 - d. Fund for procurement of patrolling vehicle (one tonner) for protection of forest and wildlife.

- B.** The annual compliance certificate on the stipulated conditions should be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

64.5.7 Proposal for retail outlet of HPCL and entry and exit over an area of 0.391267 ha. in Khasra no- 455m, 456 m in Village - Rassolpur, Tehsil - Jansat, District Muzaffarnagar in Uttar Pradesh

The Committee was informed that the proposal relates to construction of a new retail outlet by Hindustan Petroleum Corporation Limited in Hastinapur Sanctuary. The area required is about 0.39 ha.

The proposal has been recommended by the Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The Chief Wild Life Warden informed that this area falls within the boundaries of Hastinapur Sanctuary located in five districts. He said that the rationalisation process of the Sanctuary is yet to begin.

Shri U.D. Singh, Director, GEER Foundation, Member suggested that the condition regarding purchase of GPS and binoculars may be removed while recommending the proposal.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to the following:

A. Condition imposed by the Chief Wild Life Warden:

1. Protection & Mitigation measures for wild life should be ensured as per guidelines of Government of India (MoEFWL).
2. User agency M/s Hindustan Petroleum Corporation Lt., 2nd floor, 495/1 Tower University Road, Mangal Pandey Nagar, Meerut U.P, should provide the funds (2% of the project cost) for reduction in negative impact of the Project and conservation & Eco development activities as per guidelines of Ministry of Environment & Forest, Government of India.
3. Land shall not be used for any purpose other than that specified in the proposal.
4. Rules and regulation of the concerned departments for establishing the project shall be complied with.
5. The instructions/orders passed by the State Govt/Central Govt. and the directions passed by Hon'ble High Court/ Hon'ble Supreme Court/ National Green Tribunal from time to time regarding such project shall be complied with.
6. User agency will ensure that the project personnel engaged in the project shall observe the provisions of the Wild Life (Protection) Act, 1972 & Rules made there under.
7. Construction/waste materials shall not be thrown inside the sanctuary, area or movement corridor of the wildlife.
8. User agency will take all precautions including technical measures to contain the noise and air pollution and protection from fire due to construction activities and thereafter.
9. The project proponent shall obtain consent to establish and to operate from U.P. Pollution Control Board and effectively implement all the conditions stipulated therein.
10. The project proponent shall undertake plantation work by planting the native species in the area adjacent to project area/sanctuary for which necessary finance will be provided by the user agency as per suggestion/direction of DFO concern.
11. Amount of Net Present Value (N.P.V.) shall be paid by the User Agency as per directions contended in G.O. No writ 526/14-2-2008 dated- 22-8-2008.
12. No labour camp shall be established within the sanctuary/forest area or other sensitive areas.
13. Since the project involves 0.211267 ha of protected forest along with felling of 10 trees. Therefore, forest clearance is also attracted. The user agency should also take forest clearance.

14. No Construction work will be allowed after sunset and before sunrise within Sanctuary area.
 15. In place of 10 trees required to be removed 20 trees to be planted at appropriate site by the DFO. The cost of plantation and maintenance of 20 trees will be deposited by user agency with DFO concerned as per estimates/demand raised by the DFO will be translocated at some other suitable place as advised by protected area manager of sanctuary.
- B.** The annual compliance certificate on the stipulated conditions should be submitted by the project proponent to the State Chief Wild Life Warden and an annual compliance certificate shall be submitted by the State Chief Wild Life Warden to Government of India.

64.5.8 Proposal for setting up the Retail outlet in National Chambal Sanctuary Project Agra on between KMS Stone No. 29 and 31 on Chakarnagar to Hanumantpura Road (MDR 142) in Personal Agricultural Land KHASRA NO 725/3, 729/3 at Village-Sahson, Tehsil-Chakarnagar, Distt. -Etawah, Uttar Pradesh.

The Committee was informed that the proposal is for setting up a retail outlet by Hindustan Petroleum Corporation Limited in National Chambal Sanctuary.

The proposal has been recommended by the Chief Wild Life Warden, the State Board for Wild Life and the State Government.

The Chief Wild Life Warden, Uttar Pradesh informed that the proposed project is located within the boundaries of National Chambal Wildlife Sanctuary on a piece of private land along Chakarnagar to Hanumantapura road and PWD land. He said that no forest land is required for the setting up the proposed retail outlet.

Decision Taken: After discussions, the Standing Committee decided to recommend the proposal subject to the following:

A. Condition imposed by the Chief Wild Life Warden:

1. Protection & Mitigation measures for wildlife should be ensured as per guidelines of Government of India (MoEFCC).
2. User agency M/s Hindustan Petroleum Corporation Ltd, Kanpur, should provide funds (2% of the project cost) for reduction in negative impact of the Project and conservation & Eco-development activities as per guidelines of Ministry of Environment & Forest, Government of India.
3. Land shall not be used for any purpose other than that specified in the proposal.

4. Rules and regulation of the concerned department for establishing the project shall complied with.
5. The instruction /orders passed by the State Govt/Central Govt. and the directions passed by Hon'ble Supreme Court/ National Green Tribunal from time to time regarding such projects shall be complied with.
6. User agency will ensure that the project personnel engaged in the project shall observe the provision of the Wild Life (Protection) Act, 1972 & rules made there under.
7. Construction/waste materials shall not be thrown inside the sanctuary area or movement corridor of the wildlife.
8. User agency will take all precautions including technical measures to contain the noise and air pollution and protection from fire due to construction activities and therefore.
9. The project proponent shall obtain the required consent to establish and to operate the project from U.P Pollution Control Board and effectively implement all the conditions stipulated therein.
10. The protect proponent shall undertake plantation work by planting the native species in the area adjacent to project area/ sanctuary for which necessary finance will be provided by the user agency as per suggestion /direction of DFO concern.
11. Amount of NPV shall be paid by the user agency as per directions contended in G.O No writ 526/14-2-2008 dated 22-8-2008.
12. No labour camp shall be established within the sanctuary/forest area or other sensitive area.
13. The project proponent will be bound follow the condition imposed by PWD (owner of the land) for exit & entrance to the pump.
14. No construction work will be allowed before sunset and after sunrise within Sanctuary area.

The meeting ended with thanks to the Chair.

ANNEXURE I

LIST OF PARTICIPANTS

1	Shri Bhupender Yadav, Hon'ble Minister for EF&CC	Chairman
2	Shri Ashwini Kumar Choubey Hon'ble Minister of State for EF&CC	Special Invitee
3	Shri R P Gupta, Secretary, MoEF&CC	Member
4	Shri Subhash Chandra, DGF&SS, MoEF&CC	Member
5	Shri Soumitra Dasgupta, ADGF(WL), MoEF&CC	Member Secretary
6	Prof R Sukumar, Member, NBWL	Member
7	Dr H S Singh, Member, NBWL	Member
8	Shri U. D. Singh Director GEER Foundation, Member, NBWL	Member
9	Dr Dhananjai Mohan, Member, NBWL	Member
10	Shri S.P. Yadav, ADGF (PT) and M.S. NTCA	Invitee
11	Shri Rohit Tiwari, IGF(WL)	Invitee
12	Shri Chief Wildlife warden, Ladakh	Invitee
13	Ms. Neha Verma, Additional Secretary, Uttarakhand	Invitee
14	Shri J.S. Suhag, Chief Wild Life Warden, Uttarakhand	Invitee
15	Ms. R. Sobha, PCCF & CWLW, Telangana	Invitee
16	Shri M.L Meena, Chief Wild Life Warden, Rajasthan	Invitee
17	Shri Sharma, PCCF & CWLW, Uttar Pradesh	Invitee
18	Shri Rameshwar Das, PCCF & CWLW, Tripura	Invitee
19	Shri D.C. Nepal, Chief Wildlife Warden, Sikkim	Invitee
20	Shri Surender Gugloth, Scientist, MoEF&CC	Invitee
21	Dr. Sunil Sharma, AIG (WL), MoEF&CC	Invitee

1	Name of the Proposal	Diversion of 1.42 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road
2	Date of submission of proposal by the project proponent to the State Govt.	27.08.2015
3	Name of the protected Area involved	Trishna Wildlife Sanctuary
4	File No.	6-175/2018 WL
5	Name of the State	Tripura
6	Whether proposal is sub-judice	Not sub-judice
7(a)	Area of the protected area	194.708 sq.km
7(b)	Area proposed for diversion / De-notification	1.42 ha of forestland
8	Area so far diverted from the protected area(s)	NIL
9	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
10	Name of the applicant agency	ONGC, GoI
11	Total number of tree to be felled	Few trees
12	Maps depicting the Sanctuary and the diversion proposal included or not	YES
13	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
14	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.42 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 18 wells and 11 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
15	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
16	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC embedding at bottom and 3 (three) strands of barbed wire on top around the drill site for restriction of entry of wild animals specially bison. (2) Alternative grazing land for bison i.e., plantation of Congo signa grass, fruit bearing species & Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat. Fund for the purpose should be provided by user agency. (3) Eco-friendly drilling operation with minimum noise level is required to be undertaken at drilling site and movement of vehicles to the drilling locations needs to be restricted to avoid any adverse	

	behavioral effect in wild animals specially bison. (4) Construction of artificial water holes and salt licks for wild animals needs to be taken up for development of wildlife habitat. Fund for the purpose should be provided by user agency.
17	Comments of Ministry The Standing Committee may like to take a view on the proposal.

1	Name of the Proposal	Diversion of 1.112 ha of forestland and 0.404 ha of non-forestland for construction of drill site, waste pit and approach road for the location TIDD project falling within Trishna Wildlife Sanctuary
2	Name of the protected Area involved	Trishna Wildlife Sanctuary
3	File No.	6-176/2018 WL
4	Name of the State	Tripura
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	194.708 sq.km
7(a)	Area proposed for diversion / De-notification	1.112 ha of forestland 0.404 ha of non-forestland
7(b)	Area so far diverted from the protected area(s)	NIL
8	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
9	Name of the applicant agency	ONGC, GoI
10	Total number of tree to be felled	NIL
11	Maps depicting the Sanctuary and the diversion proposal included or not	YES
12	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
13	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.112 ha of forestland and 0.404 ha of non-forestland from the Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 18 wells and 11 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
14	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
15	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Rs. 60 lakhs should be paid to the Wildlife Warden for following works & development of Sanctuary. (2) Construction of artificial water holes and salt licks for wild animals needs to be development of wildlife habitat. (3) Alternative grazing land for wild animals i.e., plantation of Napier grass & fruit bearing species needs to be created for development of wildlife habitat. (4) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC embedding at bottom and 3 (three) strands of barbed wire on top around Sanctuary and the	

	<p>project site for restriction of entry of wild animals specially bison.</p> <p>(5) Alternative grazing land for bison i.e., plantation of Congo signa grass, fruit bearing species, Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat.</p> <p>(6) Eco-tourism amenities and awareness activities in different locations.</p> <p>(7) Eco-friendly project operation with minimum noise level is required to be undertaken at work site and movement of vehicles needs to be restricted to avoid any adverse behavioral effect in wild animals specially bison.</p>
16	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

1	Name of the Proposal	Diversion of 1.367 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road
2	Name of the protected Area involved	Trishna Wildlife Sanctuary
3	File No.	6-177/2018 WL
4	Name of the State	Tripura
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	194.708 sq.km
7(a)	Area proposed for diversion / De-notification	1.367 ha
7(b)	Area so far diverted from the protected area(s)	NIL
8	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
9	Name of the applicant agency	ONGC, GoI
10	Total number of tree to be felled	NIL
11	Maps depicting the Sanctuary and the diversion proposal included or not	YES
12	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
13	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.367 ha of forestland from the Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 18 wells and 11 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
14	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
15	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Rs. 70 lakhs should be paid to the Wildlife Warden for following works & development of Sanctuary. (2) Construction of artificial water holes and salt licks for wild animals needs to be development of wildlife habitat. (3) Alternative grazing area for wild animals i.e., plantation of Napier grass & fruit bearing species needs to be created for development of wildlife habitat. (4) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC pillars embedding at bottom and 3 (three) strands of barbed wire on top around Sanctuary and the project site for restriction of entry of wild animals specially bison.	

	<p>(5) Alternative grazing area for Bison i.e., plantation of Congo signa grass, fruit bearing species, Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat.</p> <p>(6) Eco-tourism amenities and awareness activities in different locations.</p> <p>(7) Procurement of one battery operated mini bus for the tourist fully equipped with tranquilizing gun and other equipments.</p> <p>(8) Eco-friendly project operation with minimum noise level is required to be undertaken at work site and movement of vehicles needs to be restricted to avoid any adverse behavioral effect in wild animals specially bison.</p>
16	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

1	Name of the Proposal	Diversion of 1.76 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road
2	Name of the protected Area involved	Trishna Wildlife Sanctuary
3	File No.	6-178/2018 WL
4	Name of the State	Tripura
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	194.708 sq.km
7(a)	Area proposed for diversion / De-notification	1.76 ha of forestland
7(b)	Area so far diverted from the protected area(s)	NIL
8	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
9	Name of the applicant agency	ONGC, GoI
10	Total number of tree to be felled	Few trees
11	Maps depicting the Sanctuary and the diversion proposal included or not	YES
12	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
13	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.76 ha of forestland from Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 18 wells and 11 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
14	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
15	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Rs.70 lakhs should be paid to the Wildlife Warden for following works & development of Sanctuary. (2) Construction of artificial water holes and salt licks for wild animals needs to be development of wildlife habitat. (3) Development of alternative grazing area for wild animals i.e., plantation of Napier grass & fruit bearing species needs to be created for development of wildlife habitat. (4) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC embedding at bottom and 3 (three) strands of barbed wire on top around Sanctuary and the project site for restriction of entry of wild animals specially bison.	

	<p>(5) Development of alternative grazing area for Bison i.e. plantation of Congo signa grass, fruit bearing species & Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat.</p> <p>(6) Tourist amenities and awareness activities in different locations.</p> <p>(7) Procurement of one battery operated mini bus for the tourist fully equipped with tranquilizing gun and other equipments.</p> <p>(8) Eco-friendly project operation with minimum noise level is required to be undertaken at work site and movement of vehicles needs to be restricted to avoid any adverse behavioral effect in wild animals specially bison.</p>
16	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

1	Name of the Proposal	Diversion of 1.96 ha of forestland for construction of drill site, waste pit and approach road for the location TIDF project falling within Trishna Wildlife Sanctuary
2	Name of the protected Area involved	Trishna Wildlife Sanctuary
3	File No.	6-179/2018 WL
4	Name of the State	Tripura
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	194.708 sq.km
7(a)	Area proposed for diversion / De-notification	1.96 ha of forestland
7(b)	Area so far diverted from the protected area(s)	NIL
8	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
9	Name of the applicant agency	ONGC, GoI
10	Total number of tree to be felled	NIL
11	Maps depicting the Sanctuary and the diversion proposal included or not	YES
12	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
13	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.96 ha of forestland from the Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 12 wells and 3 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
14	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
15	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Rs. 80 lakhs should be paid to the Wildlife Warden for following works & development of Sanctuary. (2) Construction of artificial water holes and salt licks for wild animals needs to be development of wildlife habitat. (3) Development of alternative grazing area for wild animals i.e., plantation of Napier grass & fruit bearing species needs to be created for development of wildlife habitat. (4) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC pillars embedding at bottom and 3 (three) strands of barbed wire on top around Sanctuary and the project site for restriction of entry of wild animals specially Bison.	

	<p>(5) Development of alternative grazing area for Bison i.e., plantation of Congo signa grass, fruit bearing species, Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat.</p> <p>(6) Tourist amenities and awareness activities in different locations.</p> <p>(7) Procurement of one battery operated mini bus for the tourist fully equipped with tranquilizing gun and other equipments.</p> <p>(8) Eco-friendly project operation with minimum noise level is required to be undertaken at work site and movement of vehicles needs to be restricted to avoid any adverse behavioral effect in wild animals specially bison.</p>
16	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal</p>

1	Name of the Proposal	Diversion of 1.496 ha of forestland for construction of drill site, waste pit and approach road for the location TIDE project falling within Trishna Wildlife Sanctuary
2	Name of the protected Area involved	Trishna Wildlife Sanctuary
3	File No.	6-180/2018 WL
4	Name of the State	Tripura
5	Whether proposal is sub-judice	Not sub-judice
6	Area of the protected area	194.708 sq.km
7(a)	Area proposed for diversion / De-notification	1.496 ha
7(b)	Area so far diverted from the protected area(s)	NIL
8	Status of ESZ, if any	Draft notified on 10.09.2018 ESZ extends from 0.0 to 500 m Project falls within the PA
9	Name of the applicant agency	ONGC, GoI
10	Total number of tree to be felled	NIL
11	Maps depicting the Sanctuary and the diversion proposal included or not	YES
12	Recommendation of State Board for Wildlife State Board for Wildlife recommended the proposal in its meeting held on 17.11.2018	
13	Brief justification on the proposal as given by the applicant agency Proposal is for the diversion of 1.496 ha of forestland from the Trishna Wildlife Sanctuary for construction of drill site, waste pit and approach road. The user agency has already drilled 18 wells and 11 wells found to be gas bearing. This project will be useful for the supply of natural gas to agencies like TSECL, NEEPCO, OTPC, etc. and benefit the State in the form of Royalty. The project will generate direct / indirect employment opportunities for the people of the State. This project will also initiate various socio-economic development activities as a part of CSR Activity-I which will improve the socio-economic status of people in the area.	
14	Rare and endangered species found in the area Trishna Wildlife Sanctuary supports healthy bison, deer, hollock gibbon, golden langur, capped langur, pheasant, etc. It is also the habitat of several migratory birds.	
15	Opinion of the Chief Wildlife Warden The Chief Wildlife Warden has recommended the proposal with the following conditions: (1) Rs. 60 lakhs should be paid to the Wildlife Warden for following works & development of Sanctuary. (2) Construction of artificial water holes and salt licks for wild animals needs to be development of wildlife habitat. (3) Development of alternative grazing area for wild animals i.e., plantation of Napier grass & fruit bearing species needs to be created for development of wildlife habitat. (4) Construction of double chain link wire mesh fencing with RCC pillars (height 7 feet) along with RCC pillars embedding at bottom and 3 (three) strands of barbed wire on top around Sanctuary and the project site for restriction of entry of wild animals specially Bison.	

	<p>(5) Development of alternative grazing area for Bison i.e., plantation of Congo signa grass, fruit bearing species, Kallai bamboo (<i>Oxytenethera nigrociliata</i>) needs to be created for development of wildlife habitat.</p> <p>(6) Tourist amenities and awareness activities in different locations.</p> <p>(7) Procurement of one battery operated mini bus for the tourist fully equipped with tranquilizing gun and other equipments.</p> <p>(8) Eco-friendly project operation with minimum noise level is required to be undertaken at work site and movement of vehicles needs to be restricted to avoid any adverse behavioral effect in wild animals specially bison.</p>
16	<p>Comments of Ministry</p> <p>The Standing Committee may like to take a view on the proposal.</p>

485119/2021/PE

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Advocate General, Tripura



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Ref. No.

Date :06-05-2019.....

LEGAL OPINION**QUERY**

Whether **extraction of Natural Gas / Oil** cannot be considered as **mining** in terms of Hon'ble Supreme Court order dated 04-08-2006 in W.P(C) 202 of 1995 (Godavarman versus Union of India)

OPINION

1. According to the Mines Act, 1952, "minerals" have been defined in Section- 2 (1)(j) to mean all substances which can be obtained from the earth by mining , digging, drilling, dredging, hydraulicing, quarrying or by any other operation and includes mineral oils (which in turn include **natural gas and petroleum**). The Mines Act, 1952 may not be applicable in our case or the reasons stated hereinafter.

2. The said **Mines Act, 1952** was enacted to amend and consolidate the law relating to the **regulation of labour and safety in mines**. The Mines and Minerals (Development and Regulation) Act, 1957 was enacted subsequently to provide for the development and regulation of mines and minerals under the control of the Union and consequently this Act is relevant for the purpose of ascertaining as to whether extraction of natural gas / oil cannot be considered as mining. It appears from the aforesaid later Act that minerals have been defined in Section -3(aa) to include all minerals **except "mineral oil"** and "mineral oil" in Section-3(b) has been defined to include natural gas and petroleum . Mining operation has been defined in Section - 3(d) to mean any operation undertaken for the purpose of winning any

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Advocate General, Tripura



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mineral. It, therefore, follows that on the question of mining, it would be apparent from the definition alone that mining includes all minerals except mineral oil and mineral oil includes natural gas and petroleum and therefore, **mining does not include the extraction of natural gas / oil.**

3. It is interesting to note that, the Mines Act, 1952 which was enacted to amend and consolidate the law relating to the regulation of labour and safety in mines included the natural gas and petroleum i.e. natural oil within the definition of minerals but in the later Act No. 67 of 1957 which provided for the regulation of mines and development of minerals, the mineral oil which include natural gas and petroleum were excluded from the definition of minerals. In the present case, the later Act is relevant and applicable and, therefore, extraction of natural gas / oil does not amount to mining activities. Had both the Acts been in the same field, then also inclusion of natural gas and oil in the definition of minerals in the former Act would be hit by implied repeal.

4. It would appear from the order dated 04-08-2006 passed by the Hon'ble Supreme Court of India in W.P(C) 2002 of 1995 that issue of temporary working permit was restricted. It has been held by the Hon'ble Supreme Court that " By order dated 16th September, 2005, it was, inter alia, directed that no temporary working Permissions or Temporary Permit or any other permission, by whatever name called, shall be granted for mining activities in the National Parks, Sanctuaries and Forest areas. It was further directed that no mining activity would continue under any Temporary Working Permit or Permission (T.W.P.), which may have been granted. This order was later relaxed on the applications filed by some of the applicants. Suggestions have been filed by the learned Amicus Curiae and the Ministry of Environment and Forests, besides the Foundation of Indian Minerals Industries (FIMI) regarding the

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conditions, which would govern grant of T.W.P. On consideration thereof, the conditions precedent for the grant of T.W.Ps. as well as the procedure for their grant were provided in the order. It was clarified that T.W.Ps. shall be granted only where the conditions are satisfied". The Hon'ble Supreme Court directed the pre-condition and procedure for grant of clearance in the said order.

5. So far as the proposed projects of Tripura are concerned, the extraction of natural gas /oil being not included as a mining activity under the provision of the Act of 1957 and Hon'ble Supreme Court of India in the said case having not decided otherwise, **in my humble opinion no restriction has been imposed by the Hon'ble Supreme Court of India in proceeding with the projects which aims at economic development of the backward state of Tripura.**

(A.K. Bhowmik)
Advocate General, Tripura
06-05-2019

TUSHAR MEHTA



महा-सॉलिसिटर
भारत
SOLICITOR GENERAL OF INDIA

Supreme Court of India
New Delhi, the 14th May, 2021
Ph.011-23384486

LEGAL OPINION

Querist: Oil and Natural Gas Corporation ("ONGC")

1. My opinion has been sought by ONGC ("**Querist**"), an Indian government owned crude oil and natural gas corporation, under the aegis of Ministry of Petroleum and Natural Gas ("**MoPNG**").

2. The Querist has placed before me a brief for opinion on the following Query:

a) Whether extraction of Natural Gas / Oil cannot be considered as Mining in terms of Hon'ble Supreme Court order dated 4.8.2006 in IA-1000 in WPC-202/1995 (T.N. Godavarman vs. Union of India).

3. I have perused the brief for opinion placed before me and also the documents annexed thereto, including the opinions of the Id. Advocate General, Tripura and Id. Additional Solicitor General. I've also had a detailed conference in the matter with Dr. Harsh Pathak of M/s Dr. Harsh Pathak & Associates along with officers of the Querist.

4. Before opining on the query placed before me, it would be apposite to set out the brief facts and background as stated in the brief for opinion that have given rise to the queries set out above:

4.1. It is noted that, oil & gas exploration, development & production activities, started in India in 1889, at Digboi in Assam. The same grossly differs materially from mining of minerals, undertaken

under provision of Mines and Minerals (Development and Regulation) Act, 1957 ("**MMDR Act**").

4.2. Herein, offshore and onshore oil & gas exploration, development & production activities are carried out in various phases as detailed herein:-

4.2.1. It is started first with grant of short-term Petroleum Exploration License ("**PEL**") by Central Government for undertaking seismic survey to establish presence of hydrocarbon and plan for exploratory drilling of wells, after analysis of seismic data with commitment of minimum work program in the block.

4.2.2. Thereafter, the process of tracing presence of hydrocarbon during exploratory drilling takes place, wherein more appraisal/ test wells are drilled to evaluate the reservoir capacity, and if there are commercial prospects, the operator applies for grant of Petroleum Mining Lease ("**PML**") from the Central Government, which is granted for longer duration for 20 years and so on.

4.2.3. Herein, an operator can start commercial production from a block only when PML is granted and no production is permissible from the block allotted with PEL.

4.2.4. In course of production, installation and laying of associated oil/gas pipelines, along with drilling of developmental wells are planned in the block, when PML is granted by the Central Government to the operator.

4.2.5. In the present case, approximately 2-hectare ("**ha**") land is required for drilling of a well for search of hydrocarbon and the land is restored to its normalcy after decommissioning of rig and associated facilities, in case of non-commercial discovery during exploratory phase of operation with PEL.

- 4.2.6. Herein, wells are drilled deep beneath the earth surface at depth 2,000+ meters using rigs and it extends to kilo meters laterally under the subsurface. For drilling a well, a hole of 1 meter to 12 cm (40" to 5") in diameter, tapering down in stages, is made into the earth with a drilling rig that rotates a drill string with a bit attached. After the hole is drilled, sections of steel pipe (casing), are placed in the hole. Herein, cement is placed between the outside of the casing to provide structural integrity to isolate potentially dangerous high-pressure zones. Finally, to control the flow of hydrocarbon, out of the well, Christmas tree is installed with downhole safety valve (others being Surface-Controlled Subsurface Safety Valve, Downhole Safety Valve, Subsurface Safety Valve) while the tree acts as an attachment and conduit means of the control system to the downhole safety valve. The well thus acts as a conduit to connect the hydrocarbon deposits in the reservoir through a maximum of 4" to 7" diameter steel pipe (inside well) and connected through underground pipe lines to processing facilities. The Rig is then decommissioned and temporary surface activities are ceased at drilling locations.
- 4.3. Before proceeding further, it's crucial to appreciate the prevailing regulations governing mining of minerals and exploration, development and production of Mineral Oils (Natural Gas and Petroleum).
- 4.3.1. Herein, upstream onshore and offshore oil and gas exploration, development & production activities are governed under purview of Oil Fields (Regulation & Development) Act, 1948 ("**ORD Act**") and Petroleum & Natural Gas Rules, 1959 ("**PNG Rules**") made under provision the said act.
- 4.3.2. Further, mining of other minerals are governed under provision of MMDR Act, which includes all minerals except Mineral Oils [definition 3(aa) of the Act] and Mineral Oils is defined there in

as Natural Gas and Petroleum [definition 3(b) of the Act]. Thus, onshore & offshore oil & gas exploration, development & production activities are not falling under purview of the MMDR Act, 1957, as the prevailing act for the oil & gas sector was introduced much earlier in 1948 [i.e the ORD Act].

4.3.3. In this regard, the Mines Act introduced in 1952 after the ORD Act, was to ensure labour welfare and safety aspects in Mines.

4.4. Before, proceeding further its pertinent to analyze the prevailing regulation/approvals of Ministry of Environment, Forests and Climate Change ("**MoEF&CC**") and Legal Opinions of Id. Advocate General of Tripura and Id. Additional Solicitor General of India:

4.4.1. Under provision of Environment Impact Assessment ("**EIA**") Notification, 2006, published on 14th September, 2006, made under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986; Offshore and Onshore Oil and Gas Exploration, Development & Production activities under 1(b) category of the schedule is considered as 'Industrial Project' and Mining of Minerals are categorized under 1(a) of the schedule of the notification. Thus, the validity period of Environment Clearance ("**EC**") for Oil & Gas sector is 7 years, whereas for Mining of Mineral projects, the EC validity is for 30 years or it is coterminous with the Mining Lease period.

4.4.2. In view of above, Standing Committee of National Board for Wildlife ("**SC-NBWL**") permitted oil & gas exploration, development & production activities within 1 km from the boundary of Dihing-Patkai Wildlife Sanctuary ("**WLS**") in Assam and approved project of Hindustan Oil Exploration Co. Ltd. ("**HOEC**") in Dirok PML block, in its 43rd meeting held on 27th June, 2017. The same project was rejected earlier, being considered as mining activity, in the 42nd meeting of SC-NBWL held on 15th May, 2017, in compliance to Supreme Court's

order against *Goa Foundation Case* - Writ Petition (Civil) No. 435 of 2012 for open cast mining of Iron ore in the State of Goa. Thereafter, the SC-NBWL subsequently reviewed the decision in the 43rd meeting after legal consultation and concluded that, oil & gas exploration, development & production activities is a separate activity from mining as per EIA Notification, 2006.

4.4.3. Further, while approving the proposed 6 drilling wells Projects of ONGC, utilizing 9.115 ha forest lands inside Trishna WLS, Tripura, the SC-NBWL in its 52nd meeting held on 10th January, 2019, approved the projects provisionally subject to obtaining legal opinions from the Advocate General of Tripura and Solicitor General of India- Minute of 52nd SC-NBWL.

4.4.4. In present case, the legal opinion from Id. Advocate General of Tripura has already been obtained *vide* letter dated 6th May, 2019, who opined that, extraction of natural gas/oil cannot be considered as mining in terms of Hon'ble Supreme Court's order dated 4.8.2006 in IA No. 1000, in W.P. (C) No. 202/1995 (*T.N. Godavarman vs. Union of India*).

4.4.5. Similarly, a legal opinion was also obtained by Indian Oil Corporation Limited ("**IOCL**")/HOEC from the Id. Additional Solicitor General of India *vide* letter dated 22nd June, 2017 for their project, wherein he also opined that, extraction of natural gas/oil cannot be considered as mining in terms of Hon'ble Supreme Court's order dated 4.8.2006 in IA No. 1000, in W.P. (C) No. 202/1995 (*T.N. Godavarman vs. Union of India*).

5. In light of the above, I would now proceed to examine the matter.

6. With regard to the aforementioned query 'a', extraction of natural gas/oil cannot be considered as mining in terms of Hon'ble Supreme Court order dated 4.8.2006 in IA No. 1000, in WP (C) No. 202/1995 (*T.N. Godavarman vs. Union of India*). This can be understood, through an in-

depth analysis of the MMDR Act of 1957 and ORD Act of 1948. The key differences between the terms i.e. *Minerals* and *Mineral Oils* have been tabulated herein, for the sake of brevity and utmost clarity.

Sr. No.	Mining of Minerals	Mining of Mineral Oils
1.	<p>Minerals: According to Section 3(aa) of the Mines and Minerals Act, "minerals" includes all minerals except mineral oils.</p> <p>Examples: Iron Ore, Manganese, Minor Minerals [Section 3 (c)], etc.</p>	<p>Mineral Oils: According to Section 3(b) of the Mines and Minerals Act and Section 3(c) of the Oilfields Act, "mineral oils" include natural gas and petroleum.</p> <p>Examples: Crude Oil and Natural Gas (Union List in Schedule VII of the Constitution of India).</p>
2.	<p>Mining Lease: According to Section 3(c) of the Mines and Minerals Act, "Mining Lease" means a lease granted for the purpose of undertaking mining operations, and includes a sub-lease granted for such purpose;</p>	<p>Mining Lease: According to Section 3(d) of the Oilfields Act, "mining lease" means a lease granted for the purpose of searching for, winning, working, getting, making merchantable, carrying away or disposing of mineral oils or for purposes connected therewith, and includes an exploring or a prospecting license;</p>
3.	<p>Mining Operations: Means any operations undertaken for the purpose of winning any mineral.</p>	<p>Mining Operations: "mining operations" has not been defined under the Oilfields Act, 1948, since an operation of such nature required to procure the minerals other than mineral oils, is absent in the case of mineral oils.</p>

4.	Technique: Mining of minerals requires a colossal procedure majorly, which includes an Open Cast technique.	Technique: Mining of mineral oils is confined to a technique, which is a minimal process of sub-surface mining i.e. mostly 1000-2000 meters below sub-surface.
5.	Transportation: Moving of materials requires heavy road vehicles and railways.	Transportation: Preferred mode of transport is a subsurface pipeline.

7.

7.1. Herein, mining of minerals are governed both by State as well as Central Government, whereas right for grant of Oil blocks are vested to Central Government alone under provision of the 7th Schedule of Union List.

7.2. In this regard, the Supreme Court's Order dated 08.08.2014 in conjunction with Central Empowered Committee's Report dated 25.02.2014 against IA No. 3627 of 2013 in W.P. (C) No 202/1995, well elaborates the operational and regulatory differences between mining of minerals undertaken under provision of MMDR Act and oil & gas exploration, development and production activities under provision of ORD Act. Thereby, court cases/orders concerning mining of minerals under provision of MMDR Act, doesn't attract provisions of oil & gas exploration, development and production activities carried out under provision of ORD Act and PNG Rules.


7.3. With reference to aforesaid I've been briefed that, production can be started immediately after allotment of mining lease for extraction of minerals, whereas no production is permissible for oil & gas sector, till long term PML is granted for the purpose, after prior allotment of PEL, wherein no production is permissible. Also, mining of minerals is essentially open cast/surface activity, whereas oil & gas, is always deep sub-surface activity and during drilling of wells, temporary surface activity continues for about 1 month. Further, in case of mining of minerals, entire lease area is

used, whereas only 2% to 3% of the leased area is used in connection with oil & gas exploration, development and production activities. Furthermore, the leased area allotted for mining of minerals needs to be fenced, which is not required in connection with leased area granted for oil & gas exploration, development and production activities.

- 7.4. In continuation thereof, while undertaking mining the surface area has to be free from all encroachments for the block allotted for mining of minerals, whereas surface structure can co-exist for oil & gas blocks, as the well drilling is carried out deep beneath the earth surface, at depth of 2 to 3 km or more. Herein, it's also pertinent to note that surface activity lasts for the entire mining lease term for minerals, whereas surface activity is very temporary in nature for oil & gas drilling activities/others. Furthermore, mined minerals are loaded on to and carried by trucks/trains, whereas oil & gas are transported to production/other facilities, through sub-surface pipelines.
- 7.5. With regard to impact on environment, mining of minerals affects the surrounding environments in the form of erosion, formation of sinkholes, loss of biodiversity etc. Also, large amounts of water produced from mine drainage, mine cooling, aqueous extraction and other mining processes, potentially contaminates ground and surface water, as well as the soil, due to the various chemicals used in the mining process. Besides creating environmental damage, the contamination resulting from leakage of chemicals also affects the health of the local population. Herein, dissolution and transport of metals and heavy metals by runoff and ground water is another example of environmental problems with mining of minerals. Conversely, as per studies, oil & gas exploration, development and production activities doesn't adversely impact the environment, as the surface activities are of temporary nature, causing minimal impact on environment.

7.6. To summarise, in my considered opinion , the query is opined in affirmative, as extraction of natural gas and oil (which includes exploration and development) is not a mining activity, when compared to a traditional open cast mining carried out upon large tracts of land, wherein there are severe environmental repercussions along with being scientifically and fundamentally different in their modus operandi of extractions. Hence, it is observed that the extraction of Natural Gas / Oil cannot be considered as Mining in terms of Hon'ble Supreme Court order dated 4.8.2006 in IA-1000 in WPC-202/1995 (T.N. Godavarman vs. Union of India). Query is answered accordingly,I have nothing further to add.

I opine accordingly.



(TUSHAR MEHTA)

“WILDLIFE MITIGATION PLAN”

FOR

**IMPROVEMENT/UP-GRADATION OF PAKKE – SEIJOSA – ITAKHOLA
ROAD IN ARUNACHAL PRADESH (62.00KM) UNDER NEC**



PROPOSAL NO. FP/AR/ROAD/30479/2017

**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**



**OFFICE OF THE EXECUTIVE ENGINEER
PAKKE KESSANG DIVISION: PWD
AP: CAMP: NAHARLAGUN**

BASE MAP OF PAKKE KESSANG DISTRICT ARUNACHAL PRADESH

Legend

●	District H.Q.
●	Settlement
—	State Boundary
—	District Boundary
—	Circle Boundary
—	Road
—	Drainage (Perennial)
—	River



0 5 10 20 Kilometers

1:200,000

Accuracy of the settlement location and administrative boundaries depicted on the map are subject to ground verification. The boundaries, names and representation in part or whole shall be photographic or any other means is prohibited and may be voidable.

Disclaimers



GOVERNMENT OF ARUNACHAL PRADESH
PANGSANG
PANGSANG

**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**



OFFICE OF THE EXECUTIVE ENGINEER
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**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

OFFICE OF THE EXECUTIVE ENGINEER
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L. GENERIC STRUCTURE, STUDY & FEASIBILITY REPORT

Name of Project:- Improvement/Up-gradation of Pakke- Seijosa- Itakhola road (62.00km) under NEC Scheme East Kameng Dist. of Arunachal Pradesh.

1. CONTEXT/BACKGROUND

State :- Arunachal Pradesh.
District :- East Kameng now Pakke Kessang
Block :- 1. Pakke Kessang
2. Seijosa.
Sector :- DoNEER (NEC)
Executing Agency:- PWD (Arunachal Pradesh)
Estimated Cost :- 166.16 Lakhs.

Arunachal Pradesh, also called "the land of rising sun", or orchid state of India, down-lit of mountain, lies in northeast India. The state is the largest of the North-Eastern States, spread over an area of 83,743 Sq.Km (32,333SqMi). The state shares an international border, 160km (99mi) long with Bhutan in west while a 1,030km (640mi) long border separates the state from China in the north. A 440km (270mi) long border exists between Arunachal Pradesh and Burma in the east.

It borders the states of Assam in the south and Nagaland in the outer Himalayas and Patkoi Ranges. It is endowed with wide topographical variations, vegetation and wild life. The state is vivisected by rivers and streams, which originate in higher Himalayas and Arakan Ranges and flow down to form the tributaries of Brahmaputra. Arunachal Pradesh is primarily a hilly tract nestled in the foothills of Himalayas. Previously, Arunachal Pradesh had been a part of the North Eastern Frontier Agency (NEFA). Today, Arunachal Pradesh is a state of the Indian Union.

Pakke Kessang District is newly District created in year 2018 vide No.Law/Legn-19/2018. It is the 24th District of Arunachal Pradesh. It share a state border with Assam and district border with East Kameng, West Kameng, Papum Pare and Kurung Kumey, which was bifurcated with East Kameng district on 1st December 2018 with district headquarter at LEMMI, along with five administrative units, namely:

1. Pakke Kessang
2. Seijosa
3. Pijirang
4. Passa Valley
5. Dissing Passo.

According to the 2011 census Pakke Kessang under East Kameng district has a population of 15,358. Pakke Kessang has a sex ratio of 1,036 females for every 1000 males.

Pakke Kessang is inhabited by various tribes of similar origin but with distinct cultures and beliefs, practicing the Donyi-Polo religion. The most populous of these, the Nyishi, are scattered throughout the entire district. Other tribes, especially the Puroik and the Galo are very less in number. With the coming of modernism, festival such as the NYOKUM of the Nyishi, the GUMKUM-GOMPA and MOPIN of GALO are celebrated in full flair.

The Pakke Kessang District newly created District so Deputy Commissioner will be the administrative head of the district with its headquarters at Lemmi. The Deputy Commissioner is assisted by various administrative officers and Police Forces in maintaining law and order in the district. The lowest administrative unit is a Circle which is looked after by a Circle Officer. The district is divided into 2 Sub-Divisions; Pakke Kessang and Seijosa, which are further divided into five Administrative circles, namely, Pijirang, Pakke-Kessang, Seijosa, Dissing Passo and Passa Valley. And there are one Community Development (CD) Blocks. As per 2011 census the following are the Block wise population of Pakke Kessang District under East Kameng District:-

District:- Pakke Kessang, Headquarter: Lemmi				
Name of Block	Name of Circles	Persons	Males	Females
Pakke-Kessang CDBlock	Seijosa	3958	1970	1988

	Dissing Passo	1561	812	749
	Pakke Kessang	3609	1705	1904
	Pizirang	6230	3056	3174
	Passa Valley			

Seijosa is a circle in East Kameng district. It has now an Additional Deputy Commissioner office. Mainly Nyishi, Puroik and Galo people inhabit here. The Pakke wildlife Sanctuary is located here. The Seijosa town is situated along the river Pakke. Every Thursday people from Assam mainly from places like Itakola come to sell vegetables, clothes etc. The people from Assam and Seijosa share a cordial relationship. Due to lack of proper road communication and direct link road to Itanagar, often people have to suffer a lot due to frequent Assam Bandh calls and poor communication and network facilities. The way to Seijosa to Lemmi, District HQ via road is very painful and troublesome due to non-maintenance of roads. Large numbers of potholes on the road often big as a pond often get filled with Rain Water during summer and create huge difficulty to its people. Goloso, Bali-Basti, A/2 etc. are some of the villages. It is a great place for a picnic every year lot of tourists comes to Seijosa to picnic. Seijosa was heavily flooded in 2004 destroying her beauty but is developing well with the help of Govt of Arunachal Pradesh. The Assam Government has built an irrigation dam locally known as ND Dam on the innerline checkgate of Seijosa. Around the foothills of Seijosa there are frequent sights of wild elephants and other wild animals from Pakke Tiger Reserve. Seijosa has a State Bank of India Branch established in 1986 which is serving to around 7000 population of Pakke Kessang Constituency and also peoples from surrounding villages of Assam from Itakhola to Seijosa.

Dissing Passo is a Circle HQ located at distance of 35.00km from Seijosa ADC Administrative HQ. Naksha Prabhat is a historical place where the **Darangiya King** was settle during 12-13AD. This place is an archeology site. Lots oldest monuments items are still lying there. The well constructed during 12AD by Darangiya King is still in good condition and different things are lying untouched. By seeing the important of the place the Govt. of India have set up an Office of **ARCHEOLOGICAL SURVEY OF INDIA (ASI)**.

The people of Pakke Kessang District areas are deprived from road connectivity since many decades. Absences of communication; the people of these areas are deprived of basic amnesty. Construction of road will directly serve the these geographically parted areas on its Administrative Circle to enabling people to attend to their daily chores for

their livelihood like cultivation of their WRC field, collection and transportation of their forest products which till now is basically carried out on the basis of head load system through existing porter track. The people of this area have until recently been using Assam road from Pakke Kessang to Seijosa via Seppa-Bhalukpong road which is 255km and from Seijosa/Dissing Passo to Lemmi, district HQ the people have go via Biswanath Charali, Gophur and Itanagar by covering 268km. After construction of Pakke Seijosa Itakhola road this will be only 62.00km which will be life-line of the entire district and will coined as INTER-STATE-CONNECTIVITY (ISC). This road will not benefited the Pakke Kessang District only but will be Transportation corridor for five district for Arunachal Pradesh, namely:-

1. East Kameng,
2. Lower Subansiri,
3. Upper Subansiri,
4. Kamle
5. Papum Pare

In fact, the habitations falling under these areas, are least developed in road communication sector. So construction of this road is of paramount importance for the upliftment of these people. Above all and most importantly, physical and emotional integration of the tribal people of these areas with the main stream continues to be slow without road communication facility which in turn is again a bottle-neck for the development towards the modern India.

The construction of this road will solve many problems of the indigenous people of this area like facilitate the farmers of the concerned area for easy transportation of their agriculture, horticulture, pisciculture and other forest products. Hence, saving time, labour, and also provide safe and easy communication passage for all. Hence, this road is identified for urgent construction mainly for development purpose towards modern civilization of Rural India. The construction of this road will be dreams come true for the people of Namorah in particular and the Dissing Passo Circle HQ in general. The whole area is inhabited by scheduled trib population for which upliftment of the population, Government of India lays strong emphasis. Therefore, this scheme have been proposed under Inter State Connectivity Scheme, **Government of India, Ministry of Road Transport & Highways (Zone-V)** as per letter No.NH-I2031/29/2017/AS/ISC/P-8, Dtd 5th Oct'2018

The following villages will directly benefit after completion of this project:-

1. Naksha Prabhat.
2. Namorah
3. Upper Dikalmukh
4. Lower Dikalmukh
5. Lasum pathe
6. Taposo
7. Dipik
8. Balliso
9. Digalmukh
10. Tayarso
11. Mobuso-I
12. Mobuso-II
13. Taro Boso
14. Taraso
15. Tapioso
16. Suchung
17. Taoso
18. Zeraso

II. PROBLEM TO THE ADDRESSED

Pakke Kessang district has acute problem in road connectivity due to its peculiar hilly terrain. Geographically they are forced to be isolated and scattered in hilly and rugged terrain. The geographical isolation has further aggravated due to difficult mountainous topographical terrain and presence of the turbulence of Pakke river, Goloso river and Lanka river. During summer these river are loaded with heavy flood. The Government of Arunachal Pradesh has taken step to provide connectivity to all administrative headquarter so that people can avail the better administrative works in time as well as quality education, health and their socio-economic development.

III. PROJECT OBJECTIVE

The objective of this project is to provide road Inter State Connectivity in between Assam and Arunachal Pradesh i.e Namorah to Assam by construction of road. The economic potential in the form of agriculture, horticulture, animal husbandry & tourism will be exploited by construction of the road. As such it is deemed to give a face lift of the area. Beside this the construction of road under Assam and Arunachal Pradesh will be big step to increase the road connectivity of the strategically located newly created district of Pakke Kessang.

IV. TARGET BENEFICIARIES

A rural population of 15358 residing nearby proposed road will be directly benefitted by construction of the road. More over entire Pakke Kessang District will be benefitted as this project is having vital importance to economic and social development of the people of the district.

V. PROJECT STRATEGY.

This project will be implementing by the PWD Arunachal Pradesh by engaging suitable contractors through call of tender. Mechanical method of construction will be adopted whenever feasible. There will be closed linkage between the funding agency and the PWD in supervision and implementation of this project.

For monitoring, supervision etc. tools like Bar Chart, CPM & PERT shall be used to achieve the targets. To get a quality road, the project will be implemented through agreement by giving wide circulation through local & national media. Also administration by Superintending Engineer, Sagalee PWD Circle and strict monitoring from Chief Engineer PWD Western Zone, PWD, Itanagar and third party monitoring of the project will be delivered.

VI. LEGAL FRAME WORK

The government of Arunachal Pradesh entrusted the project to the Department of Public Works for survey, planning, designing and contract. All legal frame work frame work will be specified in the contract/legal document at fixed time and fixed cost. The project will be implemented by APPWD as centrally sponsored project. Relevant specification lay down by the IRC and Ministry of Road Transport & Highways (MoRT&H) will be the basis for entering into agreement with contractor wherever applicable. The standard bidding document (SBD) approved by Central Ministry will also form the basis for agreement. Any legal dispute will be settled within the terms & condition of the contract as decided by the Chief Engineer PWD Western Zone, Itanagar or Arbitrator legally appointed for the purposed. Local disputes will be settled by the local administration through district court of law or Panchayat or village council as

admissible. The state Government shall provide land required for the project free of cost without encumbrances after taking necessary clearance, if any.

VII. ENVIRONMENT IMPACT ASSESMENT

Since the proposed road shall be constructed on the community, hence there will be no adverse impact on the environment. There will be no issues relating to land acquisition, diversion of land, rehabilitation & resettlement.

VIII. ONGOING INITIATIVES

At present there is no other initiative taken by the state government to construct roads in this area. As such duplication of this project will not arise.

IX. TECHNOLOGICAL ISSUES

The proposed road shall be constructed as per latest available CPWD Manual, IRC specification and codes & norms followed by the Ministry of Road Transport & Highways, Government of India and New Delhi. The state PWD is well equipped both in terms of logistic tools, technology, manpower etc. to implement such project.

X. PRELIMINARY ENGINEERING DESIGN

Engineering study, (rainfall and wind velocity) river condition and geological & geotechnical condition data has been collected from statistics and field surveys and investigated. Those data are used as background information in preliminary engineering design.

XI. MANAGEMENT & ARRANGEMENT

The project has been assign to the Public Works Department, one of the premier work departments in the state. Overall responsibility for planning, designing, drawing, monitoring, specification, technical sanctioning, acceptance of tender documents etc. rest with the Chief Engineer, PWD Western Zone, Itanagar and Superintending

Engineer, Sagalee Circle, PWD shall be responsible for supervision of project survey & investigation, project planning, monitoring of progress and strict implementation of specification and quality control. Executive Engineer, Pakke Kessang Division, PWD will be fully responsible for the execution of the project with the approved drawing specification and quality in targeted time frame.

XII. MEANS OF FINANCE AND PROJECT BUDGET

The project proposed to be financed by Govt. of India under Inter State Connectivity Scheme (ISCS). No private and other parties are expected to participate in fund share.

XIII. TIME FRAME

The work shall be started soon as the project is sanctioned and fund released and expected to be completed over a period of three years. Time lapse is not considered with the hope that fund will be made available as per phasing of project as given below:

Year	Phasing of fund (in lakh) ISCS share
2018-19	600.00
2019-20	1100.00
2020-21	1000.00
Total	2700.00

XIV. RISK ANALYSIS

No proper risk could be made. However, the possible risk against project implementation could be natural calamities like earthquake, landslides etc. On the hand no risk, legal, contractual, environmental and managerial or regulatory are expected. Being the site of the project works are on existing villages hence no environmental risk analysis is required. It is a social benefit cost project hence revenue risk analysis is required. The quantifiable benefit analysis is not possible at this stage. However, the project risk and responsibilities shall be shouldered by the executing agency. Every support from local people is highly anticipated in this project of social and economic benefit.

XV. SUCCESS CRITERIA

Economy in the cost, timely implementation & completion and socio-economic benefit to the people of the area covered by this project may be taken as its success criteria. The success of this project depends on funding as per phasing highlighted. Diligent and close monitoring, supervision and direction of the departmental officer shall be required for timely completion of the project. Contribution of village council, Panchayat Raj institution and district administration is required for smooth execution of the project.

XVI. FINANCEIAL AND ECONOMIC ANALYSIS

Financial analysis in this project is not feasible being a social benefit project. As it is a social benefit project, it may not be possible to get quantifiable benefits in terms of revenue. Project has been prioritized to maximize gains in locality. Social gains anticipated from the project in both economic and non-economic are multifarious and diverse. The economic internal rate of return (EIRR) and Sensitivity analysis could not be done at present in this DPR. However, the maximum required internal rate of return (EIRR) shall be assessed by means of growing non-economic activities in the region.

XVII. SUSTAINABILITY

After completion of the project department of Public Works, Government of Arunachal Pradesh will take care for maintenance and upkeep. AP, PWD has its gangs of labourers and machineries. The maintenance of road will be done as per norms in the department and shall be borne by the state Government from the usual funding under 3054 (R&B). There will be no difficulty in maintaining this road network. Hence the sustainability of this project is quite secured.

XVIII. DESIGN AND SCOPE

The total scope of the project is as under:-

1. Site Clearance	-	62.00 Km
2. Jungle Clearance	-	62.00 km
3. Dismantling		
4. Formation cutting	-	62.00 Km.
5. Sub base Course,	-	62.00 Km
6. WBM	-	62.00 km
7. Bituminous work	-	62.00 km
8. Road Furniture & Traffic safety measures	-	62.00 km
9. RCC Bridge of various Span	-	15.00No.
10. RCC Slab Culverts.		
a) 2Mtr span (Widening)	-	49Nos
b) 2Mtr Span (Replace by new one)	-	5.00Nos
c) 2Mtr Span (New proposed)	-	104 Nos
d) 3Mtr Span (Widening)	-	9Nos
e) 3Mtr Span (replace by new one)-		7Nos
f) 3Mtr Span (New Proposed)	-	1No
g) 4.00Mtr Span (Widening)	-	16Nos
h) 4.00 Mtr Span (New proposed)-		1No
i) 4.00 Mtr Span (New proposed)-		2No
j) 6.00Mtr Span (New proposed) -		2.00Nos.
k) Retaining wall & Breast wall		
(Of various height)	-	2775 Mtr.
l) Surface drain		
Pucca Drain	-	4549.00Mtr
Online Drain	-	56,281.00Mtr

XIX. DESIGN STANDARD AND SPECIFICATION

The assessment of data collected from the survey and investigation carried out and the result derived from the analysis of the data have framed on the basis for engineering design parameters of the design criteria and standard adopted for the project. The design criteria method applied for important components of the project are:

Geometric Design:- IRC Standards (Hill manual, IRC:48-1998)

Specification: MoRT&H and IRC Specification with up-to-date correction slips. Hill road have mostly to negotiate through difficult topography, in hospitable terrain and extreme type of climate condition. As such hill roads according to IRC: SP: 48-1998 & IRC SP-20—2002 have been followed considering importance of safety and free flow of traffic ensuing safe and comfortable travel.

XX. MATERIALS

Engineering material like Fork land and Excavator shall be directly procured from manufacturer or their authorized agent and shall be carried by mechanical transport to site of work.

XXI. COST. Rs. 166.16 lakhs.
(Rupees Sixteen Crores Sixty Six Lakhs and Sixteen Thousand) Only.

XXII. RATE. Based on APSR 2018.

XXIII. CONCLUSION AND RECOMMENDATIONS

The project is technically and economically feasible and environmentally sound. Hence, it is justified to implement the project for national and people's benefits. Preparation and execution of resettlement action & land acquisition is also not required.

XXIV. DETAILS OF THE PROPOSED ROAD CONSTRUCTION SUB-PROJECT:

The proposed Pakke-Seijosa-Itakhola Road provides connectivity between the Interstate Intermediate Seijosa-Pakke Kessang project roads takes off from NH-15 (old NH-52) at Chaibari, Assam of 18.00Km which will connect Seijosa to Pakke Kessang in East Kameng District/Pakke Kessang District one of the most under developed are in the state. The total length of the road is 62.00 Km under Arunachal Pradesh.

The preparation of DPRs for this road has been sanctioned by Ministry Of DoNER vide No. NEC/(T&C)/APPROVAL/2015-16/03, Dtd.02.06.2015 for the preparation

of DPRs for Improvement/Up-gradation and development of road network for general development of the region.

The project road is vital link road and line of communication for local habitant of the forward sectors as well as for the defence **Alternate Road Communication** which is one of the important road to connect and reach from **Tezpur Military Zone** to **China Border** via **Pakke Kessang** to **Seppa** at short spans of time.

The existing road of 32 Km.(0.00 to 14.50 Km and 44.50 to 62.00km) and new alignment having a length of 30 Km (14.50 Km to 44.50 Km) of the area is fall under the jurisdiction of DFO, Khellong Forest Division, Bhalukpong and DFO, PTR, Seijosa No other alternate areas were available hence the alignment proposed is based on the actual of the forest area. This road being Interstate Intermediate the Gateway for **East Kameng, Papum Pare, Lower Subansiri, Kamle, and Upper Subansiri District** is very important for development of the area. The road is an improvement of an existing road constructed during the late seventies.

The proposed under consideration for improvement/Up-gradation of **Pakke Kessang Itakhola Road (62.00Km)** under NEC Scheme under Khellong Forest Division, has been prepared as per revised Forest (Conservation) Rule 2003 under Forest (Conservation) Act 1980 for obtaining forest clearance from Govt. of India which almost cleared but need further wildlife clearance.

XXV. Muck Disposal Plan

Approximately 37647cum of muck is to be disposed off per km, with this rate for 62.00km (32.00km widening & 30.00km FC), 2214519cum of muck is to be disposed off. Out of this 40% will be utilized for side filling, embankment and raising the level of the road in fill sections. Hence the quantity of unusable muck which is to be disposed off is 60% of 2214519cum=1328711cum. This surplus quantity will be disposed off in dumping yards/muck disposal sites having area of 37647cum land being done for these dumping areas. Dumping sites shall be stabilized with provision of retaining structures and plantation enclosed in this proposal. Location of Muck Disposal Sites totalling for 37647cum is marked on Topo Sheet.

And the location of Muck Disposal Area is as "Annex" and enclosed.

XXVI. Requirement of Wildlife Clearance

In order to minimize the impact on forest and wildlife, the old alignment is abandon to shorten the road length. The present proposed route is the shortest and most feasible route from all aspects which has been selected among all the alternatives route explored during detail survey. However, a portion of the route passes through Buffer Zone of **Pakke Tiger Reserve** which is part of **Papum RF**, since both the route from starting point to


end point are located on either side of the buffer zone. The avoidance of the buffer zone is entirely is not possible due to the physical and complex terrain of the area.

Since, development the projects in Tiger Reserve area attract provisions of Wildlife Conservation Act, 1976 and require prior wildlife clearance, therefore, it is mooted to apply for wildlife clearance for the proposed project as per provision of the Act.

The technical details of the proposed route and status of forest and wildlife clearances are stated as below:

Name of Project for which WL clearance is required	Improvement/Up-gradation of Pakke- Seijosa- Itakhola road (62.00km) under NEC Scheme East Kameng Dist. Of Arunachal Pradesh.
Total length of road	Existing road = 32.00km New Alignment = 30.00km (falls under Buffer Zone) Total length of road = 62.00km
Details of wildlife area involved	Buffer Zone of Pakke Tiger Reserve (part of Papum RF) 24.45Ha.
Total length of road to be constructed in Wildlife Area	30.00km
Total Wild life Area involved	24.45Ha
Present Status of WL proposal	Submitted
Present Status of Forest proposal	Process started on 11.04.2017 & online submitted on 07.12.2017.
Likely impact of the project on protected area (PA)	The overall impact of the project on protected area (PA) i.e Buffer Zone of Pakke Tiger Reserve (PTR) is assessed as minimum which can be addressed through proper mitigation measure as recommended.


Assistant Engineer
Seijosa Sub-Division,
PWD, AP


Executive Engineer
Pakke Kessang Division
PWD, AP
Executive Engineer
Pakke Kessang Division
APPWD - Pakke Kessang


Divisional Forest Officer
Pakke Tiger Reserve
Seijosa, AP
Divisional Forest Officer
Pakke Tiger Reserve
Seijosa (A.P.)



**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

OFFICE OF THE EXECUTIVE ENGINEER
PAKKE KESSANG DIVISION: PWD
AP: CAMP: NAHARLAGUN

Email id: eepkdpwd@gmail.com

2. DETAILS OF PROTECTED AREA

2.0 PAKKE TIGER RESERVE AND BUFFER ZONE

Pakke Tiger Reserve is located in the East Kameng District of Arunachal Pradesh. It is surrounded by the Tenga Reserve Forest to the North, Doimara Reserve Forest on the West, Nameri National Park and Tiger Reserve (Assam) on the South and some agriculture land as well as Papum Reserve Forest on the East. The landscape has high species diversity and two important parts of the North-East Indian Tiger landscape are the Brahmaputra flood plains and the North-East Indian hills. Pakke and Nameri Tiger Reserves are situated North of the river Brahmaputra in the transition zone between the Assam plains and the hilly forests of Arunachal Pradesh. Together, they form one of the largest blocks of semi-evergreen and evergreen forests in the North East. They are extremely important in maintaining contiguity within the North East Indian forests and are centrally located within the Western Assam and Arunachal forests. On the West, they are connected with Sonai-Rupai Wildlife Sanctuary through Sessa Orchid Wildlife Sanctuary and Eagle Nest Wildlife Sanctuary, on the South with Kaziranga Tiger Reserve and Karbi-Anglong hills and towards the North, they are contiguous with Tale Vally and Lower Subansiri Forests, which are contiguous with East-Siang and further into Namdapa Tiger Reserve in Changlang District in Eastern Arunachal Pradesh. The Details of Pakke Tiger Reserve are as follow:

Date of notification as Pakke Tiger Reserve : 23rd April'2002.

Date of notification of Buffer Zone : 06th August'2012.

Area of the tiger Reserve

Core/critical Tiger Habitat : 861.95 Sq.Km

Buffer/Peripheral area : 515.00 Sq.Km

Total : 1276.95 Sq.Km

Location

Latitudes : 27°01'05"N to 27°11'05"N

Longitudes : 92°39'05"E to 92°44'20"E

A map showing the area of Pakke Tiger Reserve is enclosed. Map showing the proposed road of

Improvement/Up-gradation of Pakke- Seljosa- Itakhola road (62.00km) under NEC Scheme East Kameng Dist. of Arunachal Pradesh passing through the buffer zone Pakke Tiger Reserve is also enclosed as Annexure-II.

2.1 Geography

The reserves elevations range from 100 to 2,000 m (330 to 6,560 ft) above MSL. The terrain is rugged with mountainous ranges in the north and narrow plains and sloping hill valleys in the south. The sanctuary slopes southwards towards the river valley of the Brahmaputra River. The area of Brahmaputra and Chittagong Hills, which includes Pakke and Namdapha Tiger Reserve, is the north-western limit of the Indochinese tiger's range, bordering the eastern limit of the Bengal tiger's range.

2.2 Climate

Pakke Tiger Reserve has a subtropical climate with cold weather from November to March. The temperature varies from 12 to 36 °C (54 to 97 °F). Annual rainfall is 2,500 millimetres (98 in). It receives rainfall predominantly from the south-west monsoon in May to September and north-east monsoon from November to April. October and November are relatively dry. Winds are generally of moderate velocity. Thunderstorms occasionally occur in March–April. The average annual rainfall is 2500 mm. May and June are the hottest months. Humidity levels reach 80% during the summer.

2.3 Flora

The habitat types are lowland semi-evergreen, evergreen forest and Eastern Himalayan broadleaf forests. A total of 343 woody species of flowering plants (angiosperms) have been recorded from the lowland areas of the park, with a high representation of species from the families Euphorbiaceae and Lauraceae, but at least 1500 species of vascular plants are expected from Pakhui WLS, of which 500 species would be woody. While about 600 species of orchids are reported from Arunachal Pradesh, Pakhui WLS and adjoining areas also harbour many orchid species. The forest has a typical layered structure and the major emergent species are Bhelu *Tetrameles nudiflora*, Borpat *Ailanthus grandis* and Jutuli *Altingia excelsa*.

The general vegetation type of the entire tract is classified as Assam Valley tropical semi-evergreen forest. The forests are multi-storeyed and rich in epiphytic flora and woody lianas. The vegetation is dense, with a high diversity and density of woody lianas and climbers. The forest types include tropical semi-evergreen forests along the lower plains and foothills dominated by Kari *Polyalthia simiarum*, Hatipehala *Pterospermum acerifolium*, Karibadam *Sterculia alata*, Paroli *Stereospermum chelonoides*, *Ailanthus grandis* and Khokun *Duabanga grandiflora*.

The tropical semi-evergreen forests are scattered along the lower plains and foothills, dominated by *Altingia excelsa*, Nahar *Mesua ferrea*, Banderdima *Dysoxylum binectariferum*, *Beilschmedia* sp. and other middle storey trees belonging to the Lauraceae and Myrtaceae. These forests have a large number of species of economic value. Subtropical broadleaved forests of the Fagaceae and Lauraceae dominate the hill tops and higher reaches. Moist areas near streams have a profuse growth of bamboo, cane and palms.

About eight species of bamboo occur in the area, in moist areas in gullies, in areas previously under settlements, or subjected to some form of disturbance on the hill slopes. At least 5 commercially important cane species grow in moist areas, along with Tokko *Livistona jenkinsiana*, a species used extensively by locals for thatching roofs. Along the larger

perennial streams, there are shingle beds with patches of tall grassland, which give way to lowland moist forests with Outenga *Dillenia indica* and Boromthuri *Talauma hodgsonii*. Along the larger rivers, isolated trees of Semal *Bombax ceiba* and two species of Koroi *Albizia* sp. are common.

These forests have a high percentage of tree species (64%) that are animal-dispersed, with 12% tree species being wind-dispersed.

2.4 Fauna

At least 40 mammal species occur in Pakhui Tiger Reserve (PTR). Three large cats - the Bengal tiger, Indian leopard and clouded leopard share space with two canids - the wild dog and Asiatic jackal. Among the herbivore species, elephant, barking deer, gaur, and sambar are most commonly encountered. The commonest monkeys are the Rhesus macaque, Assamese macaque and the capped langur. In addition, PTR is home to as many as sixteen species of viverrids, weasels and mongooses. Commonly seen in pairs is the yellow-throated marten.

Notable mammals in the Tiger Reserve are: tiger, leopard, clouded leopard, jungle cat, wild dog, jackal, Himalayan black bear, binturong, elephant, gaur, sambar, hog deer, barking deer, wild boar, yellow-throated marten, Malayan giant squirrel, flying squirrel, squirrel, capped langur, rhesus macaque, Assamese macaque, gaur. The presence of stamp tailed macaques has been reported by one researcher.

At least 296 bird species have been recorded from PTR including the globally endangered white-winged wood duck, the unique ibisbill, and the rare Oriental bay owl. PTR is a good place to see hornbills. Roost sites of wreathed hornbills and great hornbill can be observed on the river banks. Birds seen in Pakke Tiger Reserve include: Jerdon's baza, pied falconet, white-cheeked hill-partridge, grey peacock-pheasant, elwe's crane, ibisbill, Asian emerald cuckoo, red-headed trogon, green pigeon spp., forest eagle owl, wreathed hornbill, great hornbill, collared broadbill and long-tailed broadbill, blue-naped pitta, lesser shortwing, Himalayan shortwing, Daurian redstart, Leschenault's fork-tail, lesser necklaced laughing-thrush, silver-eared leiothrix, white-bellied yuhina, yellow-bellied flycatcher warbler, sultan tit, ruby-cheeked sunbird, maroon oriole, and crow-billed drongo.

Of the over 1500 butterfly species found in India, it is estimated that Pakke Tiger Reserve could be home to at least 500 species.

A total of 36 reptile species and 30 amphibian species have been reported in Pakke Tiger Reserve. The Assam roofed turtle, a highly endangered species, is commonly sighted. The king cobra is sometimes seen on the fringes of villages and is not uncommon within the park. The pied warty frog, resembling bird droppings, is also found here.

2.5 Tiger Status

A report on the status of tigers, co-predators and prey in India done in 2010 by the Wildlife Institute of India shows that there are 9 tigers shared by Pakke and Nameri.

2.6 Core Area

In the core area, wildlife protection and management are given priority. The forest Department provides livelihood alternatives and eco-development activities in the buffer in order to wean people away from depending on resources in the core.

2.7 Buffer Area

The buffer area has been classified into 2 (two) zones:

- i. Eco development zone which consists of human settlement areas, agriculture land, horticulture, fisheries and jhum land. The eco-development activities are implemented through participatory village level micro plans for reducing resource dependency of people living around the park. The local community ensures reciprocal commitment through respective eco-development committee. Rural development activities shall be integrated with wildlife conservation concerns.
- ii. The forested zone consists of the Reserve forests (part of Papum RF & Tenga RF) and other unclassified state forests away from the human settlement. The zone is protected with the participation of local people. Collection of timber and NTFP are regulated. Human – wildlife conflict is mitigated by ensuring timely payment of exgratia for loss of life, livestock and crop depredation.

2.8 Corridor

The Seijosa nala and Dibru nala corridors in the Eastern part of Pakke Tiger Reserve connecting with Papum RF have been partially disturbed due to human settlement and agriculture land development. There is serious human-animal conflict due to crop depredation and damage of dwelling house over the area. This corridor can be restored by voluntary relocation of the 2 villages (Lanka and Jolly) and providing them with alternate suitable land. The Tipi and Elephants flat corridors in the Western part of Pakke Tiger Reserve connecting Doimara RF, Eagle Nest Wildlife Sanctuary and Sessa Orchid Sanctuary has been almost lost due to human settlements and the construction of 24km Pinjuli-Kimi road by NEEPCO Ltd. which is beyond restorations. The proposed additional buffer at Doimara RF seeks to maintain the Dezelling corridor. In case of the corridors mentioned above, if the resident community is not agreeable to voluntary relocation, the agricultural practices and sale of agricultural land resulting in change of land use patterns will be monitored so that corridor values are not affected.

2.9 Major activities involved in the Road construction proposed:

The major construction activity envisages in the road construction project are as follows:

- Formation Cutting of single lane (7.50mtr width formation cutting involves excavation of soil)
- Extraction of raw materials (involves boulder, crushing of boulder as stone aggregate and stacking of sand for GSB, WBM, construction of Culverts, Bridges and black topping)

The above activities will be carried out by engaging first class contractor. And the extraction of raw materials shall be carried out from the notified quarry site and the crusher equipment will be set up as per guideline as per Forest and Wildlife act.

2.10 ROAD CONSTRUCTION:

Nature does not always provide the ideal ground conditions – whether for civil engineering or structural engineering projects. Quite often, the existing soil requires preliminary treatment to improve its bearing capacity. In other places, massive rock formations need to be levelled.

i. Compaction

Since the soil is frequently loose and insufficiently cohesive, earthworks are required before the base course, binder course and surface course can be laid. Compaction is the most important process in earthworks. The purpose of compaction is to reduce the volume of soil filled with air and water. This gives the soil the desired properties: it becomes more resistant to the stresses imposed by traffic and climate.



Trapezoidal studs on the drum produce impressions in the soil, increasing the total surface and enabling the soil to dry.

Nature doesn't always provide the ideal foundation for the construction of roads: natural rock. In the majority of cases, the ground is unstable, offering insufficient bearing capacity. Earthmoving operations are therefore usually the first step in the construction of a new road. When the course has been defined and set out, the ground underlying the new road needs to be prepared.

Compaction is the single most important process in soil construction. Its job is to reduce the volume of pores in the soil to be compacted, which are filled with water and air. Compaction will give soil the desired properties: its resistance to stresses induced by traffic and climate will be improved by increasing its stability while simultaneously reducing its tendency to swell due to water absorption. The latter will additionally make the soil resistant to frost.



ii. Cohesive and non-cohesive soils

The process is different for different types of soil. Experts distinguish between cohesive and non-cohesive soils. In cohesive soils like loam, clay or silt, the particles in the soil bond to one another. In non-cohesive soils like gravel or sand, the particles lie side by side without bonding. Soil types can be distinguished as follows in terms of compactability: water-retaining soils, fine grained cohesive soils, coarse grained non-cohesive soils, fine and coarse grained mixed soils, and rock.



Trapezoidal studs on the drum produce impressions in the soil, increasing the total surface and enabling the soil to dry.

iii. **Dynamic compaction is highly effective**

Dynamic compaction with vibrating or oscillating rollers has proved particularly effective in earthworks, as it compacts the soil through the combination of vibrations from the roller drum and the weight of the roller.



Compacting a gravel layer in oscillation mode: This gentle method of dynamic compaction needs just a few roller passes to achieve high degrees of density.

iv. **Compaction requires more than just weight**

The intensity of compaction is governed by three influencing factors: displacement of the roller drum, meaning the amplitude of the vibration or oscillation, rate of recurrence of the vibration or oscillation, meaning the frequency, and duration, meaning the roller's travel speed. When these parameters are set correctly, the specified density can be achieved in considerably less roller passes.

v. **The right technique for any type of soil**

Cohesive soils are best compacted using compactors with padfoot roller drums and high amplitudes, while non-cohesive soils are more effectively compacted with smooth roller drums and lower amplitudes. The ground is then ready to be paved - provided that it does not still contain too much moisture. In that case, it must additionally be stabilized.

The construction of a new road - whether from asphalt or concrete - requires the production of an excellently bonded pavement structure, beginning with a stable base layer and going all the way to a precisely levelled surface course.

vi. **Construction of base layers**

The base layer of a road lays the foundation for the upper pavement structure. It must offer excellent bearing capacity, be capable of withstanding a broad range of different climatic conditions, and remain functional over several decades.



vii. Placing a base layer with road paver.

The base course serves as a foundation for the paving. Depending on the stresses to be expected, the road comprises various layers of different thickness in order to withstand the most diverse weather conditions and remain serviceable for many decades.

The first person in the paving team, however, is the truck driver who fills the asphalt into the paver's hopper. Two mutually independent conveyors transport the material through the machine to the rear, where it is uniformly distributed between paver and screed by two individually controlled rotating screw conveyors. When paving a standard mix, the temperature should always remain above 110 °C in order to ensure sufficient time for compaction.



Large-scale construction projects can be completed swiftly and asphalt pavements laid seamlessly across the greatest widths with a laydown rate of up to 1,600 t/h and a pave width of up to 16 m.

viii. Supply of mix and job site logistics

The hot mix should be covered when delivered by charging trucks to ensure that the paving operation is carried out in the most suitable time frame. To guarantee continuous paving, the capacity of the asphalt mixing plant always needs to be higher than the paver's laydown capacity. If the paver stops moving due to lack of material, disruptive lateral joints occur as a result of the paved layer cooling down. When paving standard mix, the paving

temperature should be higher than 110°C to allow an as large time frame as possible for compaction.



A continual material flow and the correct set-up of the machine are two crucial factors in any paving operation.

ix. Paving with the road paver

All paving units need to be heated prior to commencing the paving operation to prevent the mix from sticking to sensitive parts of the machine. On modern pavers, the compacting systems in the screed can be actuated separately. Particularly the high compaction screeds achieve very good compaction. As a result, the rollers behind the paver require fewer passes to achieve the specified final degree of compaction.

x. Optimum final compaction

Compaction effected by the high-density screed enables the rollers which follow behind the paver to achieve the overall final density specified by the client in fewer roller passes. In most cases, the road paver is geared for either high density or fast advance speed, both of which have an effect on the number of roller passes required.



xi. Economically efficient processing of natural stone and recycling materials

Natural crushed stone and recycled materials in graded grain sizes are used as standard aggregate for concrete, as well as for base, binder and surface courses in road and building construction.

511315/2021/PE

Versatility and flexibility in application are the major trump cards that mobile crushers play in comparison to stationary crushing plants. What are mobile crushers used for? What are the differences between the various crushing techniques? What about the hardness of the rock to be processed?

Mobile crushers are used in quarries, in mining, on job sites, and in the recycling industry. The robust plants mounted on crawler tracks are capable of processing both rock and recycling material, producing mineral aggregate and recycled building materials respectively for the construction industry.



When processing natural stone or recycling material like demolition waste, concrete, asphalt, incineration ash or steel slag, an excavator or wheel loader feeds the material into the mobile crusher. Then the produced material is used for road construction or other, similar applications.

xii. Processing of natural stone.

When processing natural rock, larger rocks are broken up into defined grain sizes in a multi-stage crushing and screening process. If the rock is processed in mobile plants, excavators transfer the blasted rock to crushers which are usually located directly alongside the quarry wall.



MOBISCREEN M5 20 D: Three screening decks each with a screening area of 12.3 m² ensure maximum efficiency, also for smaller grain sizes.

The crushed stone is then either transferred directly to the next processing stage on conveyor belts or removed by trucks. Alternatively, the broken material can also be removed by heavy-duty trucks. Excavators or wheeled loaders load the rock onto trucks at the quarry wall for transport to the stationary processing plant. Processing of recycling material.

xiii. Different crushing techniques

Crushing techniques distinguish between pressure crushing and impact crushing. Jaw crushers or cone crushers use the so-called pressure crushing technique where material is reduced in size mainly by high pressure between slow-moving wear parts. Impact crushers use the so-called impact crushing technique, in which the rock is accelerated by a massive fast-moving rotor and reduced in size by impacting against breaker walls. Jaw crushers are widely used for crushing medium-hard to hard rock, and are mostly used as primary crushers. Impact crushers work as both primary and secondary crushers for processing soft to medium-hard rock, producing larger quantities of fines. Cone crushers are used predominantly as secondary crushers for hard rock.

xiv. RAP Processing

A comparison of renewal projects and newly built roads reveals that the number of renewed roads is significantly higher than the number of newly built roads. To address environmental protection, efforts are made to reintroduce the high volume of RAP material into the materials cycle and to reuse a very high ratio. Since the 1970s, an effort has been made to recycle an increasing volume of reclaimed asphalt while continuously optimizing the energy-intensive process of asphalt production.

xv. Granulation – the subtle difference

The highest theoretical additive volume of used asphalt mainly depends on its grading curve or, in other words, on its ingredients with regard to volume, size and composition. It therefore has to be one of the objectives to reconcile the grading curve of the crushed asphalt as much as possible with the grading curve of the final asphalt product.

Assistant Engineer
Sejasa Sub-Division
P.W.D., A.P.

Executive Engineer
Pakke Kessang Division
APPWD - Pakke Kessang



**GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

OFFICE OF THE EXECUTIVE ENGINEER
PAKKE KESSANG DIVISION: PWD
AP: CAMP: NAHARLAGUN

Email id: eepkdpwd@gmail.com

3. PROPOSED MITIGATION MEASURES


LIKELY IMPACT OF THE PROJECT ON BUFFER ZONE OF PAKKE TIGER RESERVE:

The impact on the forest and wildlife associated with road construction project with specific reference to the proposed to Pakke – Seijosa – Itakhola road on the buffer zone of Pakke Tiger Reserve (PTR) is summarized as below:-


- Road constructions especially the earth work are known to affect many different animal groups, predominantly the land animals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the right of way. The 62km road will have a formation breadth of the road 7.50mtr including berm and 5.50mtr black topping. The department have marks some place as MUCK DISPOSAL AREA (MDA) or DUMPING ZONE where the excavated earth will carry by Dumper and dumping at MDA, hence there will be less impact on land and stop large scale of felling trees. And hence the entire process can not affect the BIRDS KINGDOM.
- The hill side slope will be maintained in such a way that the animals can cross and climb the hills side slope easily
- The speed breaker will constructed as per requirement under the guidance of the concerned DFO or RFO to protect animals.
- The sign board for information to the human driver will be installed as per requirement.
- The construction of check gate will be constructed at entry and exist point at area falls under buffer zone.
- To protect the land sliding there is a provision of retaining wall and breast wall at critical point and as per site condition of the road.
- ACCIDENTAL FALLING OF ANIMALS IN EXCAVATED PITS :
Generally, the road construction does not involve any pit where wild animals can fall. However, if any then the excavated pit may re-filling to protect the animals from falling.



- Before start of the work in the Pakke Tiger Reserve (Buffer zone) awareness campaign will be taken up by PWD in collaboration with Forest Department to create maximum awareness amongst the construction workers regarding safeguard of the forest and wildlife.
- No work shall be carrying out or allowed at night between 5pm to 8am
- No permanent labour camps will be set up inside the forest area.
- The specific and important tree species as indentified by the Forest department will be marked separately and protected during the entire construction process.
- No firewood cutting or fuel collection shall be allowed inside the Buffer zone.

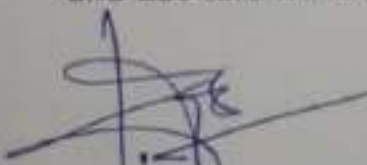

Assistant Engineer
Seijosa Sub- Division
P.W.D, A.P.


Executive Engineer
Pakke Kessang Division
APPWD - Pakke Kessang

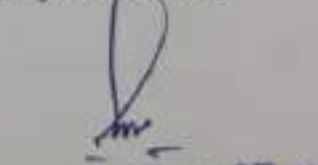

Divisional Forest Officer
Pakke Tiger Reserve
Seijosa (A.P.)



- To minimize the disturbance to wildlife, no new approach road will be constructed in the forest area. The existing village tracts/path will be utilized for carrying of materials and manual excavation will be done wherever required as per the site condition.
- No extract of any materials like sand, gravel etc from the buffer zone. All materials for construction, road maintenance etc shall be brought from outside of buffer zone.
- No vegetation/tree shall be cut or damaged during the maintenance.
- The Eco-friendly engineering practices in the construction works will be allowed and due care will be taken properly to avoid injury to wildlife.

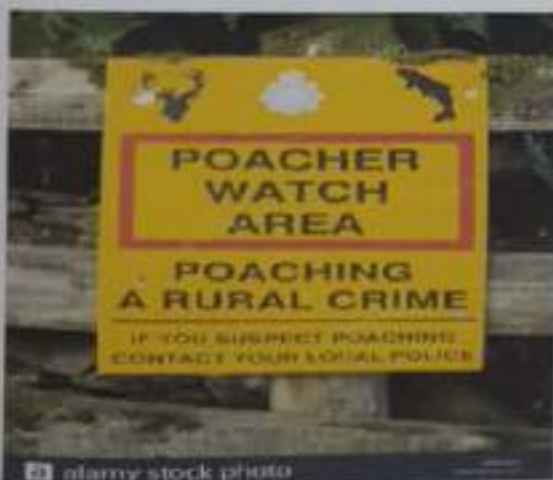

 Assistant Engineer
 Seljosa Sub-Division,
 P.W.D, A.P.


 Executive Engineer
 Pakke Kessang Division
 APPND - Pakke Kessang


 Divisional Forest Officer
 Pakke Tiger Reserve
 Seljosa (A.P.)



- The excavated pits, if any shall be properly re-filling by excavated soil to prevent accidental falling of mammals like bay elephants in the vicinity of the construction sites.
- All pollution related aspects and waste management will be duly taken care during the entire construction process.
- The financial cost if any imposed by SBWL or NBWL while according approval will be borne by the Executing Agency.
- The PWD being the Executing Agency shall bear the cost of any proposal for rescue and rehabilitation of wild animals likely to be affected.
- In addition to above, any other measures as envisaged by the SBWL/NBWL and as per provision of wildlife (Protection) Act, 1972 will be strictly adhered to during execution of the project by PWD.



Necessary sign board will be install as per requirements under the guidance of
 DEO, Wildlife.

Assistant Engineer
 Seijosa Sub-Division
 P.W.D, A.P.

Executive Engineer
 Pakke Kejatang Division
 A.P.M.T - Pakke Kejatang

Divisional Forest Officer
 Pakke Tiger Reserve
 Seijosa (A.P.)



GOVERNMENT OF ARUNACHAL PRADESH
PUBLIC WORKS DEPARTMENT

OFFICE OF THE EXECUTIVE ENGINEER
PAKKE KESSANG DIVISION: PWD
AP: CAMP: NAHARLAGUN

Email Id: eepkdpwd@gmail.com

4. CONCLUSION

Improvement/Up-gradation of Pakke-Seijosa-Itakhola Road (62.00 Km) under NEC, is a very important road project which conceived by the Ministry of DoNER, GoI under the ambitious "INTER STATE CONNECTIVITY". The project is a major step towards meeting the national objectives of proper road connectivity to all.

This Interstate Road originates from Chaibari (Sonitpur) in Assam and connects Assam to Pakke-Kessang (Arunachal Pradesh) via Seijosa covering a total distance of 85.00KM out of which 23.00KM falls in Assam and the rest 62.00Km in Arunachal Pradesh to connect in between Seijosa ADC HQ with Arunachal Trans - Highway at Pakke Kessang EAC HQ in East kameng district now Pakke Kessang District (newly created) of Arunachal Pradesh.

The project had been undertaken under various head in phase wise manner:-

1. Construction of approach road from Upper Seijosa to Jolly Lanka area constructed during the year 1971-72 vide Snaction No. NEFA No. 11(5)/68-NEFA, dt.07.01.1969 & DRS/22/70, Dtd.10.02.1971 (Reference copy enclosed as annexure-I).
2. Approach road from Dibru (Jolly/Lenka) to Pakke Hydel site in Kameng District. Said road was constructed during the year 1978-79 which is in the same alignment of Pakke-Seijosa-Itakhola road (Reference copy enclosed as annexure-II).
3. Later the Govt. has decided to extend the roads upto Pakke-Kessang and re-named the road as Pakke-Seijosa-Itakhola road under NEC in the year around 1984-85 with a carriage way width of 3.75mtr (Measurement book enclosed as Annexure-III).

Later the portion of same stretch and parts of this Road had completely been washed out in natural calamity and the same has completely been abundant for many years that cause so many difficulties to people living at both ends of the Road and nearby area.

Purpose-wise break-up of the total length of road are as follows:-

Length of existing Road (all weather road).

= From Chainage 0.00 km to 14.50Km = 14.50km

= From Chainage 44.50km to 62km = 17.50km

Total existing road = 32.00km

Length of new road proposed, = 14.50km to 44.50km = 30.00km

Total length of road (including existing road) = 62.00km

And hence, by seeing the necessity of **Pakke Tiger Reserve Forest** the new alignment of 30.00km have diverted to Papum Range Forest under Khellong Forest Division which comes under buffer zone.

Therefore, this Road Project initiate to upgrade interstate Road with carriageway width of 5.50 Mtrs to provide better transportation and communication facilities to many villages falling under this stretch, viz. Darlong, Seijosa(Upper& Lower), Bali, A2, Goloso, Jolly, Lenka, Margaso, Suchung, Palove and Pakke-Kessang in particular and Arunachal Pradesh as a whole beside defense alternate Road communication importance to connect and reach from Tezpur military zone to China Border via Pakke Kessang to seppa at short spans of time.

Considering the importance of conservation of biodiversity and the rich wildlife habitat, flora and fauna of Pakke Tiger Reserve, it is found that there will be some temporary and permanent impact from the aforesaid road construction project on buffer zone area. However, the Public Works Department has made a holistic approach towards protection of buffer zone through the principal of avoidance, minimization and mitigation in their project activity and committed for implementation of various mitigation measures for elephants and other wild animals etc. including general measures for overall protection of the forest and wildlife in the buffer zone of Pakke Tiger Reserve.

Therefore, it is summarized that the overall impact on biodiversity on PTR (buffer zone) due to the proposed road construction project is assessed as low which can be minimized through proper mitigation measures as per guideline.

GEO REFERENCE FOR MUCK DISPOSAL AREA WITH LOCATION

Sl. No.	Chainage		Area Sqmtr	Longitude (E)			Latitude (N)		
	From	To		Deg	Min	Sec	Deg	Min	Sec
2	19190	19290	2500.00	27	2	7.411	93	4	50.300
3	25100	25190	4500.00	27	3	8.51	93	6	0.209
4	29590	29690	7000.00	27	4	43.46	93	5	29.411
5	36790	36890	7000.00	27	5	57.502	93	6	45.32
Total=			21000.00	Sqmtr					

Total in Hactre = 2.10 Ha

AREA OF LAND INVOLVED

- 1 New road = 30.00Km
 Total width required for road = 7.45Mtr
 Area of forest land required for new road = $30000 \times 7.45 = 223500.00$ Sqmtr
 = 22.35 Ha

2 Muck Disposal fall under Buffer Zone:-

MD2	=	1x	50	x	50	=	2500.00	Sqmtr
MD3	=	1x	90	x	50	=	4500.00	Sqmtr
MD4	=	1x	100	x	70	=	7000.00	Sqmtr
MD5	=	1x	100	x	70	=	7000.00	Sqmtr
Total =							21000.00	Sqmtr
Total in Hactre =							2.10	Ha

Total forest land required under bufferzone = 22.35 Ha + 2.10 Ha
 = 24.45 Hactre

Assistant Engineer
 Seljasa Sub- Division
 P.W.D, A.P.

Executive Engineer
 Pakke Kessang Division
 APPWD : Pakke Kessang

Divisional Forest Officer
 Pakke Tiger Reserve
 Seljasa (A.P.)

511315/2021/PE

**GOVERNMENT OF ARUNACHAL PRADESH
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR
OF FORESTS (WL & BD) ITANAGAR**

Memo No. CWL/D/21(343)/2019 / 180-81

Dated 03rd September, 2019

To,

The Divisional Forest Officer
Pakke Tiger Reserve
Seijosa

Sub:- Wildlife clearance for Improvement/Upgradation of Pakke -Seijosa-Itakhola road (62 km)
under NEC Scheme of East Kameng A.P

Sir,

I am directed to forward herewith a copy of the proposal as received from Executive Engineer, Pakke Kessang Division Camp Naharlagun alongwith other enclosures regarding Wildlife clearance for Improvement/Upgradation of Pakke -Seijosa-Itakhola road (62 km) under NEC Scheme of East Kameng A.P and a letter from Nodal Officer (FCA) vide his letter No. FOR-5-60/Cons/2017/426-28 dated 04/03/2019.

You are requested to submit Wildlife impact mitigation plan as the proposal road appears to be in notified buffer zone of Pakke Tiger Reserve as well as eco-sensitive zone of Pakke WLS (TR)

You may also expedite action for getting the ESZ notified for Pakke TR.

Enclos- As above

Yours sincerely,



DCF (WL & BD)
O/o the PCCF (WL & BD)
Itanagar

Copy to:-

✓ The Executive Engineer, Pakke Kessang Division PWD, Camp Naharlagun. As per existing guidelines for Wildlife Clearance the proposal should be submitted online through PARIVESH portal and Wildlife impact mitigation plan is mandatory. The User Agency may prepare Wildlife mitigation plan in consultation with DEO Pakke Tiger Reserve and submit the earliest so that approval from SBWL can be obtained.

VII. Pakke Tiger Reserve Notification

GOVERNMENT OF ARUNACHAL PRADESH
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
(WL&RD)
& CHIEF WILDLIFE WARDEN - ITANAGAR

Notification

No. CWL/Dr/21(67)2019-21. In exercise of the power conferred by section 34 V(4) (i) of Wildlife (Protection) Act, 1972 as amended upto 2006 the Governor of Arunachal Pradesh is hereby pleased to notify the area described in the schedule below as buffer area adjacent to Pakke Tiger Reserve.

Schedule

Area - Papum R.F. - 346.25 sqkm and Tengra R.F. - 163.75 sqkm. Total - 510.0 sqkm

Boundary description - 109.75 km

Name of Forest	Direction	Description of boundary
Papum R.F. Forestland buffer - 346.25 sqkm Multifunctional use buffer zone - 12.00 sqkm	North	From the confluence of Pasa Nallah and Dekhar Nallah upwards upstream along right bank of Pasa Nallah upto latitude 29°12'40"(N) and longitude 93°08'30"(E).
	East	Thence a straight line southwards upto Sochung village and thence another straight line upto source of Dekhar Nallah at longitude 93°11'40"(E) and latitude 27°06'29"(N). Thence followed the Dekhar Nallah downstream upto its confluence with Lapa Nallah.
	South	Thence a straight line upto longitude 93°08'00"(E) and latitude 27°00'00"(N). Thence followed another straight line upto the source of Sejosa Nallah and thence downstream of Sejosa Nallah upto its confluence with Pakke River.
	West	Thence upstream of Pakke River upto the confluence of Seba Nallah and thence upstream of Seba Nallah upto the geo-coordinate longitude 93°05'00"(E) and latitude 27°05'40"(N). Thence a straight line northwards upto Pakke River. Thence northwards along the eastern boundary of Pakke Wildlife Sanctuary upto starting point.
	North	From the 'O' point or Bhakhpong - Bomdila road followed southern boundary of Tengra R.F. upto geo-coordinates longitude 93°40'00"(E) and latitude 27°11'29"(N). Thence a straight line upto the confluence of Bichon River and Kameng river.

Contd. F-2

East	Thence downstream along right bank of Kameng river upto its confluence with Papu river.
South	Thence downstream of Kameng river upto the confluence of Sessa Nallah and thence a straight line about 720' upto Bhulakpang-Bomdila road near Elephant flat.
West	Thence followed the Bhulakpang - Bomdila road (Boundary of Eaglenest WLS) upto the meeting point with the boundary of Sessa Orchid Sanctuary and then followed eastern boundary of Sessa Orchid Sanctuary upto starting point.

Ref: SOL Type dates: B3A/12, A/16, B/9, B/14, E/1, F/1 & F/1

Sd/-
(B.S. Sajwan)
PCCF & Principal Secretary (E&F)
Itanagar

Memo No.CWL/2021(67)/2018-11/

Dated 6th Aug'2012.

Copy to:

- 1) The Secretary to his Excellency Government of Arunachal Pradesh, Itanagar.
- 2) The P.P.S to Hon'ble Chief Minister, Arunachal Pradesh, Itanagar.
- 3) The P.S to Parliamentary Secretary (E&F), Arunachal Pradesh, Itanagar.
- 4) AD Secretary, Govt. Arunachal Pradesh, Itanagar.
- 5) The AG (Accounts) Arunachal Pradesh, Itanagar.
- 6) All Deputy Commissioner Arunachal Pradesh.
- 7) The Director Information and Public Relations, Govt. of Arunachal Pradesh.
- 8) All the CCF, Govt. of Arunachal Pradesh.
- 9) All the DFO, Govt. of Arunachal Pradesh.
- 10) The CP & FD (PI), Nandighat National Park for information with reference to his letter No.PT/15-12/1/3379 dtd 26.12.2011.
- 11) All branches of office of the PCCF (WLS&O).
- 12) Conservation cell of PCCF office.

(L.K. Paul)
Special Secretary (E&F)
Itanagar

F. No. 11-306/2014-FC
Government of India
Ministry of Environment, Forests and Climate Change
(Forest Conservation Division)

Indira Paryaveeran Bhawan
Aliganj, Jorbagh Road
New Delhi - 110 001
Dated: 8th August, 2014

To

The Principal Secretary (Forests)
All State / Union Territory Governments

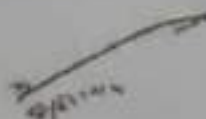
Sub: Guidelines for diversion of forest land for non-forest purpose under the Forest (Conservation) Act, 1980- Simplified procedure for grant of permission for felling of trees standing on forest land to be diverted for execution of linear projects: *reg.*

Sir,

I am directed to say that guidelines issued under the Forest (Conservation) Act, 1980 provides that forestry clearance will be given in two stages. In 1st stage, the proposal shall be agreed to in principle in which usually the conditions relating to transfer and mutation of equivalent non-forest land for compensatory afforestation and realization of funds for raising compensatory afforestation thereof and NPV etc. are stipulated and after receipt of compliance report from the State Government in respect of the stipulated conditions, formal approval under the afore-mentioned Act is issued. Central Government while according in-principle approval stipulates a condition that till receipt of the formal/ final approval of the Central Government, transfer of forest land to the User Agency shall not be affected by the State Government.

This Ministry has received representation to relax the above conditions in respect of projects involving linear diversion of forest land and allow the user agency to fell trees standing on the forest land even before grant of formal/final approval by the Central Government once the conditions relating to transfer and mutation of equivalent non-forest land for compensatory afforestation, wherever required and funds for NPV and raising compensatory afforestation etc. are complied with.

The matter has been examined in this Ministry and after careful consideration with a view to facilitate speedy execution of projects involving linear diversion of forest land such as laying of new roads, widening of existing highways, transmission lines, water supply lines, optic fiber cabling, railway lines etc., the Central Government hereby decides that for linear projects of National Highways Authority of India (NHAI), Border Roads Organization (BRO), Central Public Works Department (CPWD), Ministry of Road Transport and Highways (MoRTH), Ministry of Railways, and various other central agencies, in-principle approval under the Forest (Conservation) Act, 1980 may be deemed as the working permission for tree cutting and commencement of work, if the required funds for compensatory afforestation, NPV, wildlife conservation plan, plantation of dwarf species of medicinal plants, and all such other compensatory levies specified in the in-principle approval are realised from the user agency. In case of linear projects of other user agencies, in-principle approval under the Forest (Conservation) Act, 1980 may be deemed as the working permission for tree cutting and commencement of work, if the required compensatory levies as above, stipulated in the in-principle approval are realised from the



2

user agency and where necessary, for compensatory afforestation, transfer and mutation of non-forest/revenue forest land in favour of State Forest Department is affected.

The State Governments, in such cases will seek and obtain from the Central Government final/formal approval under the Forest (Conservation) Act, 1980 for diversion of such forest land at the earliest, and in any case not later than five years from the date of grant of the in-principle approval.

This issues with approval of the competent authority.

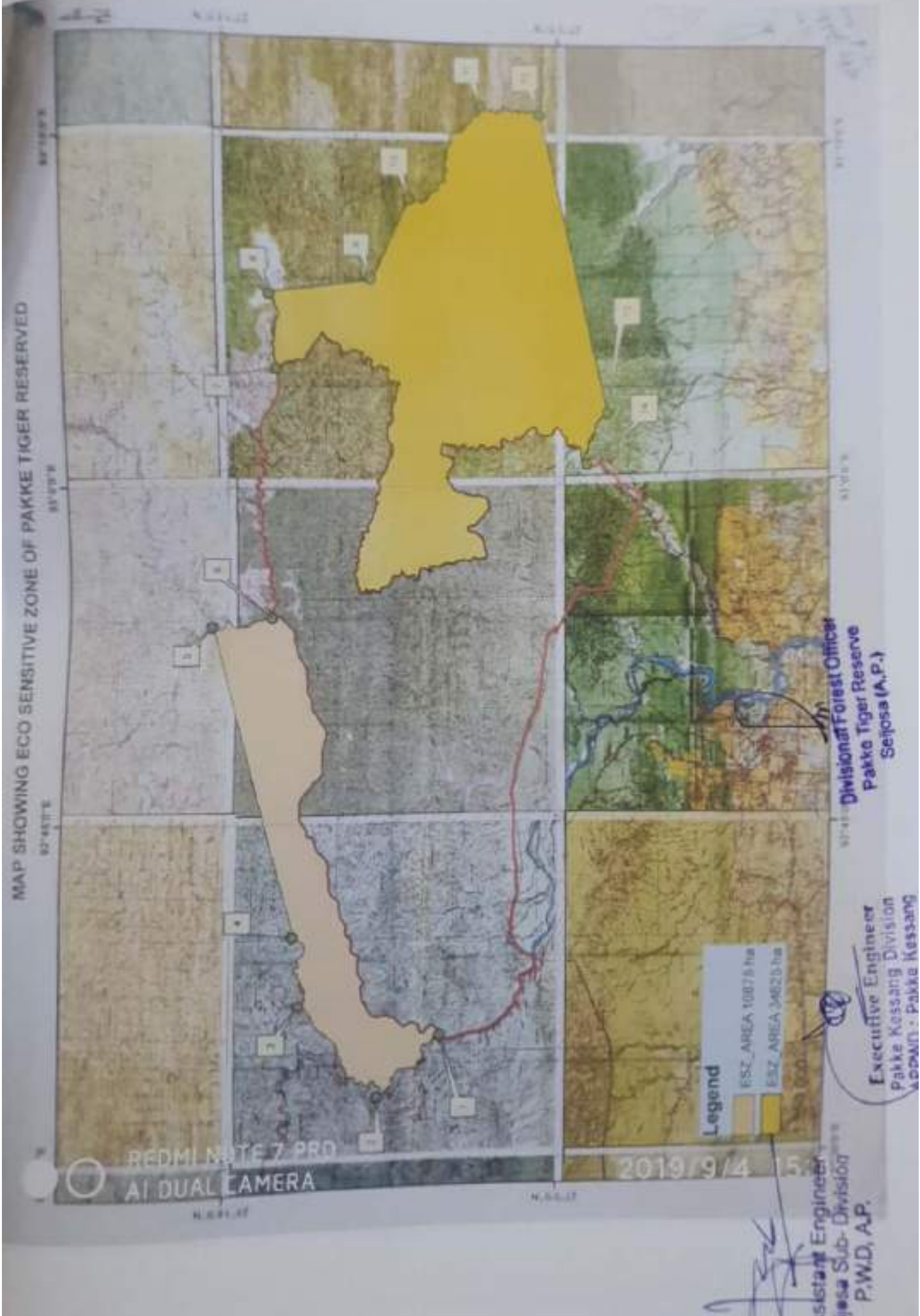
Yours faithfully,

(H.C. Chaudhary)
Director

Copy to:-

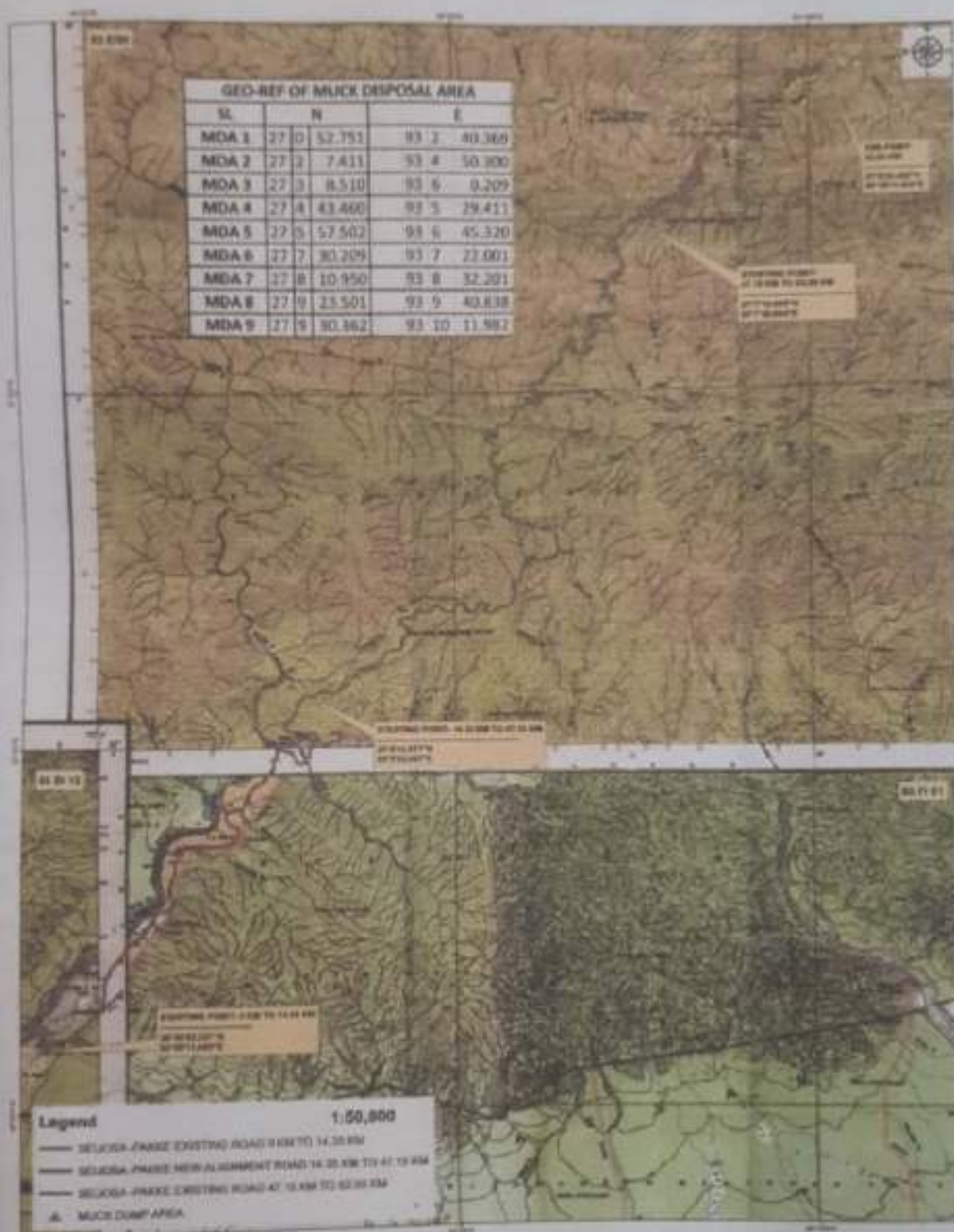
1. Prime Minister's Office (Kind attn.: Shri Santosh D. Vaidya, Director), North Block, New Delhi.
2. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
3. Secretary, Ministry of Petroleum and Natural Gas, Government of India, Shastri Bhawan, New Delhi.
4. Chairman, Railways Board, Rail Bhawan, New Delhi.
5. Secretary, Ministry of Road Transport and Highways, Government of India, Transport Bhawan, New Delhi.
6. The Secretary (Coordination), Cabinet Secretariat, Rashtrapati Bhawan, New Delhi.
7. Director General, Border Roads Organization, New Delhi.
8. Principal Chief Conservator of Forests, all State/UT Governments.
9. Nodal Officer, the Forest (Conservation) Act, 1980, all State/UT Governments.
10. All Regional Offices, Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India (GoI).
11. Joint Secretary in-charge, Impact Assessment Division, MoEFCC, GoI.
12. All Assistant Inspector General of Forests/ Directors in the Forest Conservation Division, MoEFCC, GoI.
13. Director, Regional Offices Headquarters Division, MoEFCC, GoI.
14. Sr. Director (Technical), NIC, MoEFCC, GoI with a request to place a copy of this letter on website of this Ministry.
15. Sr. PPS to the Secretary, Ministry of Environment, Forests and Climate Change, GoI.
16. Sr. PPS to the Director General of Forests & Special Secretary, MoEFCC, GoI.
17. Sr. PPS to the Addl. Director General of Forests (Forest Conservation), MoEFCC, GoI.
18. PS to the Inspector General of Forests (Forest Conservation), MoEFCC, GoI.
19. Guard File.

(H.C. Chaudhary)
Director





MAP SHOWING IMPROVEMENT/UPGRADATION OF PAKKE-SELJOSA-ITAKHOLA ROAD 62.00 KM UNDER NEC



Alignment Approved by Executive Engineer,
P.W.D. Pakke-Kessang Division, Arunachal Pradesh

Alignment Approved by Superintendent Engineer,
P.W.D. Pakke-Kessang Division, Arunachal Pradesh

Alignment Approved by Chief Engineer,
P.W.D. Pakke-Kessang Division, Arunachal Pradesh

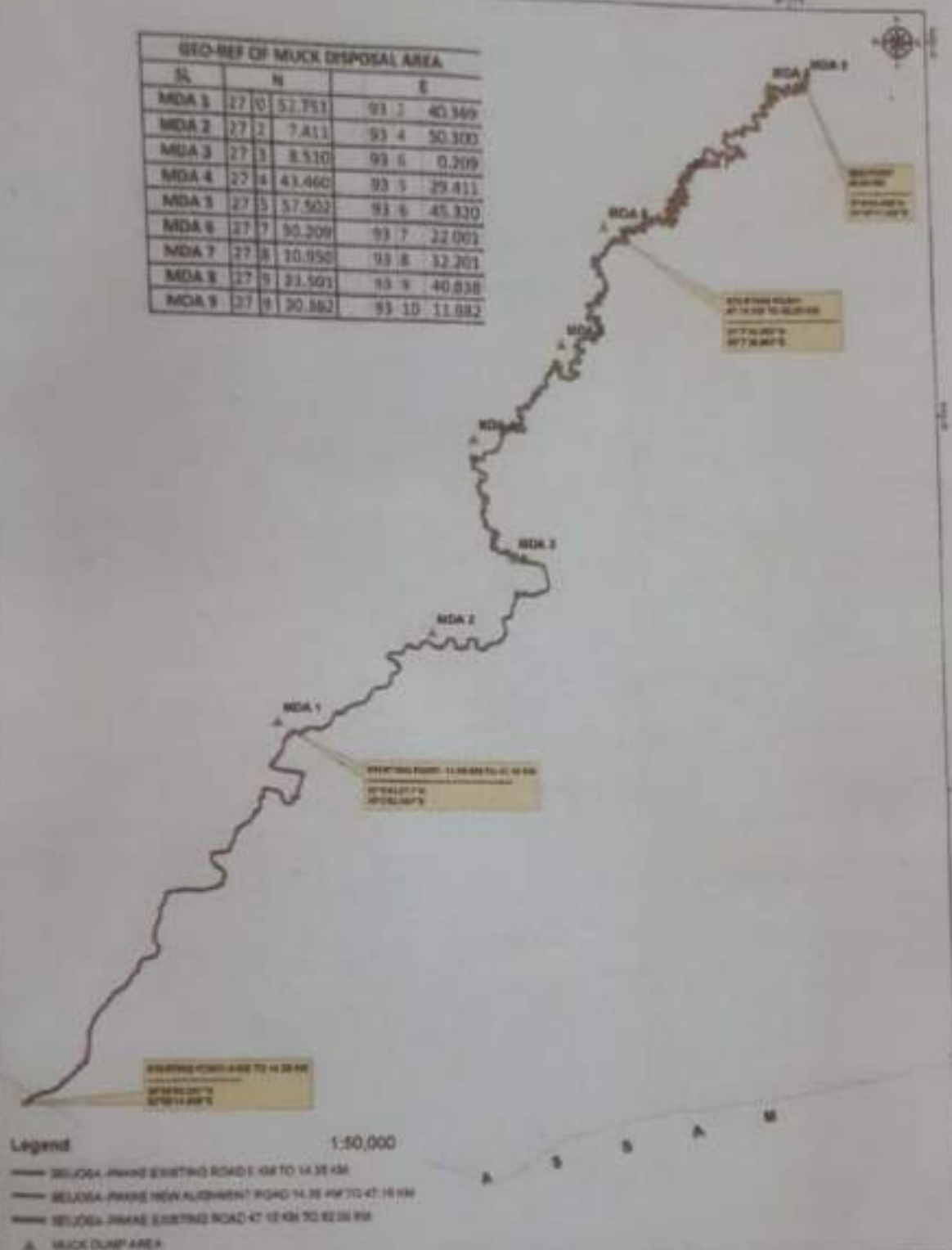
Assistant Engineer
Seljosa Sub-Division
P.W.D. A.P.

Executive Engineer
Pakke Kessang Division
APPWD - Pakke Kessang

Divisional Forest Officer
Pakke Tiger Reserve
Seljosa (A.P.)

GPS MAP SHOWING IMPROVEMENT/UPGRADATION OF PAKKE-SELJOSA-TAKHOLA ROAD 82.00 KM UNDER NEC

GEO-REF OF MUCK DISPOSAL AREA				
SL	N		E	
MDA 1	27 0	52.753	93 2	40.949
MDA 2	27 2	7.411	93 4	50.300
MDA 3	27 3	8.510	93 5	0.209
MDA 4	27 4	43.460	93 5	29.411
MDA 5	27 5	57.502	93 6	45.320
MDA 6	27 7	90.209	93 7	22.003
MDA 7	27 8	10.050	93 8	32.201
MDA 8	27 9	23.501	93 9	40.838
MDA 9	27 9	30.862	93 10	11.882



Assistant Engineer
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APPWD - Pakke Kessang

Divisional Forest Officer
Pakke Tiger Reserve
Seljosa (A.P.)

511315/2021/PE



PART - III

To be completed by Officer In-charge of the National Park/Sanctuary completed and submitted to the Chief Wildlife Warden or Officer authorized by him in this behalf within 30 days of receipt of Part-II)

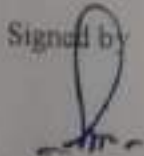
1	Date of receipt of Part-II	15/12/2018
2	Total area (ha.) of Sanctuary	861.95 Sq km or say 862 Sq km
3	Total area diverted so far	---
4	List of past project and ha diverted	---
5	Name of Project	---
6	Area diverted	---
7	Year of diversion	---
8	Positive impact due to diversion area	Does not arise
9	Name of Projects	---
10	Positive impacts	---
11	Scientific basis of Assessment	---
12	Negative impacts due to diversion areas	---
13	Name of Projects	Does not arise
14	Scientific basis of Assessment	---
15	List of Management Actions proposed to be taken in whole Block/Zone in which proposed area is located	The proposed area falls within the Papum Reserve Forest notified buffer zone of Pakke Tiger Reserve and area is under administrative control of Divisional Forest Officer, Khellong Forest Division. As per Pakke Tiger Reserve Conservation Plan 2013-2023, the Eco-development activities for fringe villages and Eco-tourism activities are also proposed
16	Type of forest in which proposed area falls	Hill Semi-evergreen Forest (Papum Reserve Forest)
17	Locations of proposed area wrt to critical/intensive wildlife management areas/wildlife habitats (Attach map to scale)	03-10 km away from Critical Tiger Habitat area of Pakke Tiger Reserve. However, this area is prime habitat of Elephant & Tiger and other wild animals and birds.
18	List of likely Negative and positive impacts of the proposed project giving scientific and technical justification for each impact.	<p>Possible Negative Impact - Causing disturbance to wild animals during construction, encroachment & human settlement along the road, hunting and illegal tree cutting is anticipated, fragmentation & degradation of wildlife habitat, road kill of snake & amphibian etc</p> <p>Positive Impact - The road can be used in tourism activities, anti-poaching patrolling route.</p> <p>Mitigation Measures - The project proponent has submitted comprehensive wildlife conservation plan and proposed to undertake adequate mitigation measures to reduce illegal activities.</p>
19	Whether project authorities have ever committed violation of Wildlife (Protection) Act 1972 or Forest Conservation Act 1980	Not known
20	Have you examined the Project Appraisal documents & alternatives as provided in Part-II	Yes


 Divisional Forest Officer
 Pakke Tiger Reserve
 Seijosa (A.P.)

511315/2021/PE

21	Have you examined Biodiversity Impact Assessment Report?	Wildlife Conservation Plan submitted
22	If yes, please give your recommendations given in the report	Wildlife Conservation Plan appears adequate mitigation measures
23	Dates and duration of your field visit to proposed sites	06 th & 07 th Feb 2019
24	Do you agree that the present proposal of diversion of WLS area is the best and only option viable	Economically viable and cost effective
25	Any other information that you would want to bring to the notice of the State Board, National Board that may be relevant to decision making	<p>The project proponent has proposed to construct 62 km road, of which 32 km is existing NEC road which requires widening & improvement and this part of road passes through 08 villages and administrative headquarter of ADC, Seijosa. Hence, this area falls within the "Multiple land use Buffer Zone" of Pakke Tiger Reserve</p> <p>The remaining 30 Km alternate NEC road proposed to be constructed passes through notified "Forested Buffer Zone" of Pakke Tiger Reserve. This area is rich in wildlife with primary forest falls under Papum Reserve Forest within the jurisdiction of Khellong Forest Division. Construction of road will fragment and degrade the wildlife habitat associated with encroachment and illegal logging and hunting. Disturbance to wildlife during construction and after construction will continue. Road kill to snake and amphibian is inevitable at night traffic</p> <p>The project proponent has submitted comprehensive wildlife conservation plan and proposed to undertake adequate mitigation measures to prevent/reduce road kill, illegal activities. the proposed mitigation measures at page 25 to 28 of wildlife conservation plan submitted appears to be adequate which has to be adhered without fail. For long term monitoring, management & protection of 30 Km road portion, entry point at Jully and exit point at Suchung, two check gate with IV unit staff barrack has to be constructed immediately at project cost under Khellong Forest Division</p>
26	Do you recommend the project (Please provide full justification to support your recommendations)	Recommended for consideration subject to fulfilment of mitigation measures in Sl. No. 25 above

Signed by



(TANA TAPI)

Divisional Forest Officer

Pakke WLS & Tiger Reserve

Seijosa (A.P.)

Divisional Forest Officer
Pakke Tiger Reserve
Seijosa (A.P.)

The Officer In-charge of Wildlife (A.P.)

Official Seal

Memo No PSD/19/2011/ 1318

Dtd. Seijosa the 11th Oct'2019

1. Submitted to the PCCF (WL & BD) & CWLW, Govt. of Arunachal Pradesh, Itanagar in quadra duplicate proposal along with Wildlife Conservation Plan (Mitigation Measures) for doing the needful and further necessary action please
2. The Executive Engineer, PWD Division, Govt. of A.P., Pakke Kessang Dist. for information please


(TANA TAPD)
Divisional Forest Officer
Pakke WLS & Tiger Reserve
Seijosa (A.P.)
Divisional Forest Officer
Pakke Tiger Reserve
Seijosa (A.P.)

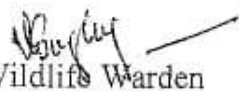
PART - IV

(To be completed by the Chief Wildlife Warden within 15 days of the receipt of PART-II & III)

1	Date of receipt of PART - II and III by the Chief Wildlife Warden or the other authorized by him in this regard.	:	28.10.2019
2	Do you agree with the information and recommendations provided by the officer-in-charge in Part-III	:	Yes
3	If not, please provide the reasons	:	NA
4	Have you visited the site yourself and held discussions with the applicant.	:	No
5	Do you agree that the present proposal for permitting use of NP/WLS area is the best option or only option and is viable?	:	The proposed Pakke-Seijosa-Itakhola road does not fall within any NP/WLS but it falls within Buffer Zone of Pakke Tiger Reserve and the best option.
6	Please provide specific comments with reference to section 29 of the wild life (Protection) Act, 1972.	:	Road may lead to some disturbance to wildlife during construction period but this road will also help in effective patrolling of Pakke Tiger Reserve and also in establishing anti poaching CAMPS so as to facilitate the management of Tiger Reserve.
7	Any other information that you would bring the notice of the State Board, National Board or its committee that may be relevant and assist in decision making.	:	The proposed road is being undertaken under NEC scheme and will provide connectivity to 8(eight) villages and ADC headquarter.
8	Do you recommend the project (Please provide full justification to support your recommendation)	:	Yes, since the road will not only provide connectivity to 8(eight) villages and ADC headquarter at Seijosa and will also help in facilitating patrolling and establishment of anti poaching camp.
9	Conditions, if any, to be ensured in the interest of wildlife for allowing use of the area.	:	Subject to implementation of Mitigation Plan enclosed and Animal Passage Plan suggested therein along with the proposal.

Date: 08.01.2020

Place: Itanagar


 The Chief Wildlife Warden
 Name: M.S. Negi, IFS
 State: Arunachal Pradesh

PART – V

(To be completed by the Department In-charge of Forestry and Wildlife in consultation with the State Board for Wildlife within 30 days of the receipt of PART-IV)

1	Date of receipt of PART – II, III and IV by the Department	:	16.01.2020
2	Do you agree with the information and recommendations of the Chief Wildlife Warden	:	Yes
3	If not, please provide the reasons	:	NA
4	Did you provide PART – II, III and IV to the members of the State Board for Wildlife?	:	Yes
5	Attach copy of the opinion of the State Board for Wildlife	:	Copy of minutes of meeting of SBWL attached
6	Give details of the recommendations of the State Government	:	Recommended

Signed by:



The Principal Secretary (E & F)
 Name: M.S. Negi , IFS
 State: Arunachal Pradesh
Principal Secretary
(Environment & Forests)
 Govt. of Arunachal Pradesh,
 Itanagar.

Mitigation measures for the proposed 33KV power line(Miao to Diyun) passing through Buffer Zonesfalling under Fringe areas of Namdapha Tiger Reserve.

Miao, Arunachal Pradesh.

Introduction:

Northeast India is a mega-biodiversity centre and Indo-Burma global biodiversity hotspot (Myer *et al.*, 2000; Mittermeier, 2004), which forms a significant portion of both the Himalaya and Indo-Burma biodiversity hotspots (Mittermeier, 2004). This region comprises of 8 states including Arunachal Pradesh which is the largest among them spanning with a geographical area of 83,743 km² and is located at the foothills of Eastern Himalayas. The state harbours large patches of evergreen rainforest which comprises of huge habitat diversity and is abode to many rare, threatened and endemic flora and fauna in the region. About 13 protected areas are spread across the state, which plays a significant role in *in-situ* conservation of biological diversity. Among these protected areas, Namdapha National Park (NNP) which enjoys the dual conservation value such as Namdapha Tiger Reserve (NTR), is one of the oldest protected area of the state and known for an exceptional biological diversity, harbouring a number of diverse habitats with distinct types of speciation, including many endemic and threatened species communities, which are often limited to a particular and distinct distribution of area. This extreme richness in species variation in the NNP is based on the unique patterns of biogeography due to several factors which includes its age, unique tectonic plate and palaeoclimatic history and also its location at the confluence of distinct realms (Afrotropic, Palearctic, and Indo-Malay (Olson and Dinerstein, 2002), wide altitudinal range (e.g. ranging from 200m to more than 4000 m above sea level) leading to vast habitat diversity (from tropical to alpine; Champion and Seth, 1968). Many mammalian species occurring in the NNP, are considered to be of global and national conservation priorities, including *Panthera Tigris*, *Pantherapardus*, *Neofelisnebulosa*, snow leopard, Western hoolock gibbons (*Hoolockhoolock*), Elephants (*Eliphusmaximus*), Hornbills etc. New species are also consistently being discovered, such as the Namdapha flying squirrel and leaf deer (Datta *et al.*, 2003).

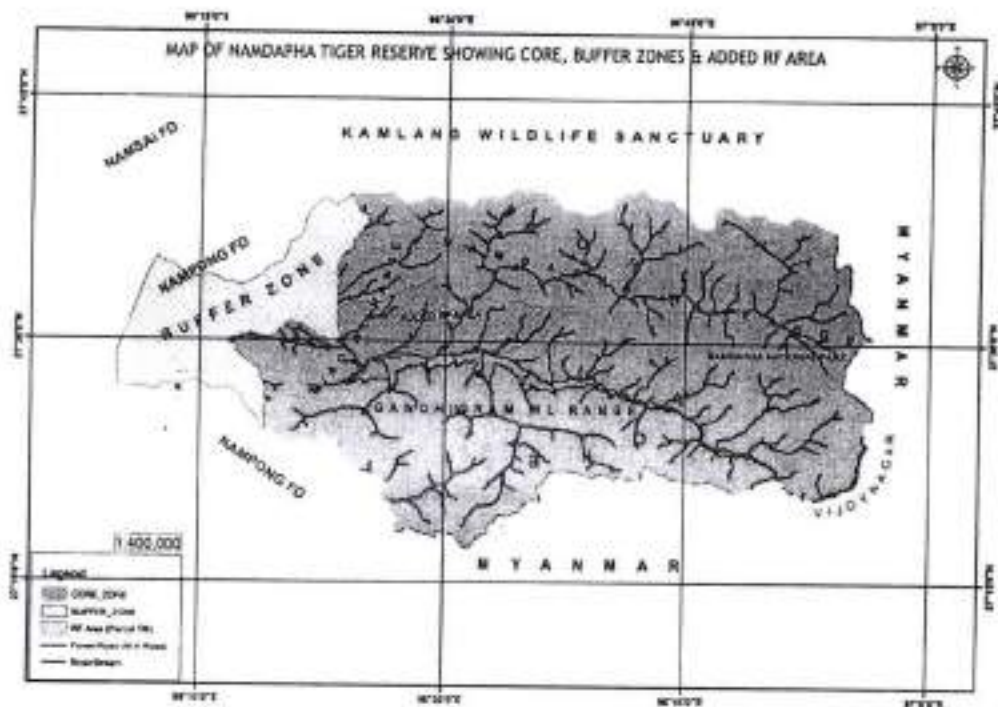
For enhancing the conservation strategy of Namdapha Tiger Reserve, buffer areas are being notified in Namdapha Tiger Reserve (NTR) with a total area of 245 km² with 68 km² in Miao RF, 141 km² in Diyun RF and 36 km² in the surrounding Unclassed State Forests of Nampong Forest Division and Namsai Forest Division.

The Buffer area:

Diyun RF and the surrounding USFs have diversified flora and fauna. They also act as shelter for spill-over wildlife population from the Namdapha Tiger Reserve. The buffer area has wide altitudinal range from 200 m to 1000 mamsl. Though the wildlife population has been depleted in the buffer areas, they are with high potential to harbour sustainable population of wildlife.

3(Three)villages falls under the Buffer zone of Namdapha Tiger Reserve along the proposed of 33 KV transmission in Miao- Diyun area falling under Diyun Reserve Forest under Nampong Forest Division.(FIG:1)

FIG 1 Showing map of NTR with buffer zone



Background of the Buffer Area

1) EDHAPIC CHARACTER

1.1) *Geology, Rock and Soil*

The geology of the buffer area is similar to that of the core. The following are the geological attributes of the area:

1. The geological formations covering the area include the Tertiary and Quaternary sequences.
2. The oldest of the Tertiary sequences comprises a group of grey to black splintery shale with thin sandstone inter-beds classified as the Disang Group (Eocene).
3. The overlying Barail Group (Oligocene) includes an assemblage of sandstone, clay, shale, and carbonaceous shale with coal.
4. The lowermost beds, called the Nagaon formation consist of hard and compact, fine grained, sandstone with minor shale and partings, is however, totally cut off in the area by the Disang thrust. The middle part of the group known as the Baragolai formation includes an alternation of sandstone, shale, carbonaceous shale and clay with minor coal layers and occasional thin seams of coal. This formation is well exposed along the northern base of the Kuwen Bum hills where the rock beds trend ENE-WSW with a southerly dip up to 60°.

5. The upper beds of Barail Group, called the Tikhakparbat formation include several thick coal seams at the base. The formation is arenaceous, comprising of medium to coarse grained, well-bedded sandstone, sandy clays, shale, and carbonaceous shale with thick coal seams. The formation in the Namchik Coalfield (outside the buffer) over the northern slope of Kuwen Bum is about 600 meter thick.
6. The Tipong Group of rocks formed during the Miocene are younger rocks overlying the Barail rocks. It has coarse ferruginous sandstone and sandy clay with occasional thin partings of shale and conglomerates. Fragments of silicified and semi carbonized fossil wood are embedded in these rocks. The lower part of Tipong rocks is a sandstone formation that is predominantly arenaceous, consisting of false bedded ferruginous sandstone with minor clay or shale parting and occasional conglomerates. The oil seepages in the area are associated with Tipong sandstone.
7. The youngest part of the Tertiary sequence comprises of pebble beds alternating with clays and soft sandstones classified as the Dihing Group. The Dihing beds are exposed at intervals along the Noa-dihing riverbed near Miao.
8. The Quaternary sequence consists of a group of older alluvium consisting of clays, loose coarse sand, gravel and boulder deposits covering Tertiary rocks along the base of the Kuwen Bum Hill and around Namchik. This group has been covered with the newer alluvium deposits of clay, sand silt and shingles.
9. The Jairampur area lies over the easterly extension of the ENE-WSW abuts directed, east, plunging Namdang syncline widening towards the east. The south limb of the syncline is at places affected by the Disang thrust. The north limb abuts against Margherita thrust passing along the base of Kuwen Bum Hill.

(1.2) Soil

The soil is acidic and is characterized by a surface layer of considerable depth and loamy texture with colour varying from yellowish to reddish. It consists of a thick layer of sandy loam soil rich in vegetative matter. This soil is mostly found in the forested hills which used to support the best dipterocarp forests. On the ridges and precipitous slopes, the soil depth becomes shallow while in the areas near the river banks which are liable to frequent inundations, the soil depth is larger. The soil tends to be sandy on the sloping grounds and clayey on the flat grounds.

(1.3) Hydrology and Water Sources

The Miao RF, Diyun RF and the USF areas comprised numerous rain-fed streams and rivers (known as *Hka* in *Singpho* and *Wa* in *Tangsa* language). Some streams are perennial while most are seasonal and remain dry in winter.

The major rivers are the Tirap, Namchik, DoglaiWa, Rima or Namphuk, NanonHka, NangtheWa, Noa-dihing and Buri-dihing. All these perennial rivers and streams drain into the Brahmaputra.

Collection of river bed materials like boulder, sand and shingles is being carried out in almost all the rivers and streams to meet the increasing demands of building material for road and bridge construction. This is one of the factors that contribute erosion of river banks and subsequent floods in the low lying areas.

2) Vegetation Types

The vegetation types of the buffer area are very similar to the low-elevation forests of the core area. As per Champion and Seth's (1968) forest types of India, the forests in the buffer of NTR fall under the following forest categories: -

(2.1) Assam valley tropical wet evergreen forests (Dipterocarp forests):

The major species in this forest are Hollong (*Dipterocarpus macrocarpus*) and Mekai (*Shorea assamica*). These forests are typically three-storied with *D. macrocarpus* and *S. assamica* as the dominant species. *D. macrocarpus* is present along the alluvial plains in the foot hills while at higher elevations the dominant tree is *S. assamica* which grows in soil with high gravel. The other species occurring in the upper storey are Gonsorai (*Cinnamomum cecidaphne*), Hollock (*Terminalia myriocarpa*), Sam (*Artocarpus chaplasi*), Jutuli (*Altingia excelsa*), Poma (*Toona ciliata*), Dhuna (*Canarium resiniferum* and *C. strictum*), Amari (*Aglaia spectabilis*). The middle storey consists of Khokan (*Duabanga grandiflora*), Morhal (*Vatica lanceaefolia*), Nahar (*Mesua ferrea*), Jamun (*Syzygium cumini*), Sopa (*Magnolia* sp.), Phulgamari (*Endospermum chinensis*), Hingori (*Castanopsis indica*), Banderdima (*Dysoxylum nectariferum*), Chalmugra (*Gynocardia odorata*), Pichola (*Kydia calycina*). The lower storey consists of species like: Thekera (*Garcinia* spp.), Tejranga (*Myristicinia linifolia*), Outenga (*Dillenia indica*). The canopy density in the upper storey varies inversely with that of the lower storey.

The undergrowth is composed of woody shrubs like Kukrathenga (*Leea indica*), Leteku (*Baccaurea sapida*), Surat (*Laportea acrenulata*), Phutki (*Melastoma malabathricum*), Nephapho (*Clerodendron* spp.), *Ixora* and shrubs like Kaupat (*Phrynium* spp.), Torani (*Alpinia allughas*), Bogitora (*Alpinia malaccensis*), Kol (*Musa* spp.). There are four species of bamboo: Kako (*Dendrocalamus hamiltonii*), Bojal (*Pseudostachyum polymorphum*), Bijuli (*Bambusa pallida*), Dollu (*Teinostachyum dullooa*) and three species of cane: Lejai bet (*Calamus floribundus*), Raidang (*Calamus flagellum*) and Houka bet (*Calamus latifolius*), and two species of palms: Tokko palm (*Livistonia jenkinsiana*) and Garugatamul (*Pinang gracilis*). There are at least six species of grasses: Kush (*Saccharum spontaneum*), Kher (*Imperata cylindrica*), Megheli (*Erianthus arundinaceus*), Ekra (*Erianthus ravenae*), Nol (*Phragmites karka*) which are found in the plains and Jharu (*Thysanolaena maxima*) which grow on slopes. Some common climbers found are: Gowalialata (*Vitis latifolia*), Ghilalata (*Entadaphaseoloides*), Kacholalata (*Acacia prunescens*), Kuchai (*Acacia pennata*), Amrolialata (*Tapiriahirsuta*), Mikenia (*Mikania micrantha*) and Hathilota (*Baiea parviflora*).

(2.2) Assam alluvial plains semi-evergreen forests:

The Assam alluvial plain semi-evergreen forests are typically two-storied and consist of many deciduous tree species mixed with evergreen species. The common species in the upper storey are: Hollock (*Terminalia myriocarpa*), Amari (*Aglaia spectabilis*), Sam (*Artocarpus chaplasi*), Bogipoma (*Chukrasia tabularis*), Jutuli (*Altingia excelsa*), Dhuna (*Canarium resiniferum*) and Borpat (*Allanthurus grandis*). The middle storey consists of Mekahi (*Phoebe cooperiana*), Pichola (*Kydia calycina*), Moj (*Albizia lucida*), Morhal (*Vatica lanceaefolia*), Sopa (*Magnolia* spp.), Khokan (*Duabanga grandiflora*) and Titasopa (*Michelia champaca*) while the undergrowth consists of species like *Alpinia allughas*, *Mikania micrantha* and *Musa* spp.

Following is the list of bamboos, canes and climbers in these forests:

1. Bamboo: Bijuli (*Bambusa pallida*), Kako (*Dendrocalamus hamiltonii*)
2. Cane: Raidang (*Calamus flagellum*), Hauka (*Calamus latifolius*), Lejai (*Calamus floribundus*)
3. Climbers: Ghilalata (*Entadaphaseoloides*), Kochoikaint (*Acacia pruinescens*), Amrolialota (*Tapiriahirsuta*), and Kuchai (*Acacia*)

(2.3) Eastern Hollock forests:

The Eastern Hollock forests have an evergreen understory and a deciduous upper storey. These forests are generally found on alluvial flats along the river and stream banks. Hollock (*Terminalia myriocarpa*) is the dominant species. However, at present, Hollock has considerably reduced in numbers due to logging. The floristic composition these forests are as follows: The upper storey consists of Khokan (*Duabanga grandiflora*), Hilika (*Terminalia chebula*), Bohera (*Terminalia bellerica*), Titachampa or Champ (*Micheliachampaca*), Sopa (*Magnolia* spp.), Hatipaila (*Pterospermum acerifolium*), Gamari (*Gmelina arborea*), Amari (*Aglaia spectabilis*), Sam (*Artocarpus chaplasha*), Urium (*Bischofia javanica*), Dhuna (*Canarium resiniferum*), Udal (*Sterculia villosa*), Borpat (*Ailanthus grandis*), Bogipoma (*Chukrasia tabularis*) and Jutuli (*Altingia excelsa*). The middle storey consists of Outenga (*Dillenia indica*), Banderdima (*Dysoxylum binectariferum*), Hingori (*Castanopsis indica*), Jamuk (*Syzygium cumini*), Pichola (*Kydia calycina*), Boromthuri (*Talauma hodgsonii*), Morolia (*Macaranga denticulata*), Chalmugra (*Gynocardia odorata*), Morhal (*Vatica lanceaefolia*), Moj (*Albizia lucida*), Satiana/Chatiana (*Alstonia scholaris*) and undergrowth like Ghetu (*Clerodendron infortunatum*), Kaupat (*Phrynium imbricatum*), Tora (*Alpinia allughas*), Surat (*Laportea cremulata*), Jeng (*Calamus erectus*) and *Eupatorium* spp.

3) Fauna.

The buffer areas of the Tiger Reserve almost had similar faunal diversity and habitat conditions as that of the core area. However, due to anthropogenic activities in the buffer areas, it has reduced wildlife population and degraded the habitat. There is a record of presence of rich diversity from the buffer areas in the earlier past where there are reports of tiger sighting and other important wildlife sighting from the buffer areas.

Major Conspicuous Changes in the Habitat since Inception:

The buffer area was declared in the year 2012 and since then there have been a considerable conspicuous changes in the habitat since its inception. Land use changes occurred due to logging, conversion of forested land to tea estates and clearing of forest land for agriculture purposes. Also there has been a considerable loss of natural forests due to coal mining in the last decade. The area now is in a degraded state with no natural forest in the village area. The community residing the area is totally dependent on farming for their livelihood generation with tea cultivation being the major cash crop. There are occasional reports of Human-Animal conflict from the area. Reports of wild elephant raids in the paddy fields during crop ripening is documented from the area and also reports of loss of poultry due to attack from small carnivores. The village members are also prolific hunters and often visit the forest for hunting.

ECOLOGICAL THREATS:

- 1) Large electrical transmission lines are a hindrance for bird movement and a major reason for many Bird kill (includes migratory bird). Bird kill occur due to collision with the power lines which are often not visible to the birds during their flight.
- 2) Accidental killings of domestic as well as wildlife due to power leakages from the electrical poles.
- 3) Also further felling of existing trees will lead to creation of canopy distance which is not suitable for arboreal animals like squirrels and some tree dwelling species.

MITIGATION PLAN TO MINIMISE THE ECOLOGICAL DAMAGE:

- 1) ***Install bird diverters in the power lines to save birds from getting electrocuted:***
Many bird species have poor frontal vision because of which they collide with power lines during their flight. So there is a need to install bird diverters in the powerlines to avoid the bird kills.
- 2) ***Creation of Physical barriers:***
There is a need to restrict wild elephants in their natural habitats and also prevent them from entering the village or near the large electrical poles to avoid accidental killings due to power leakages. For this physical barriers like elephant trench can be constructed in the pathway from where the elephants enter the village area.
- 3) ***Creation of Plantations:***
Create local fruit bearing tree plantation, fodder and bamboo plantation in the periphery of the village to augment wildlife and also act as a diversion for crop raiding wild animals.
- 4) ***Employment generation:***
80% of the population residing in these fringe villagers are dependent on agriculture for their livelihood. Since the agriculture area is scarce, they clear forests for establishing new areas under agriculture. As a result there is a huge loss of forest cover every year in the area. An Alternative source of livelihood generation in the form of poultry, piggery and also bee keeping should be introduced in the area. This will help in income generation and also help minimising their dependence on forests.
- 5) ***Equipping the Forest department and Communities for effective Management:***
For smooth monitoring and management of the fringe villages, Namdapha Tiger Reserve should be equipped with a vehicle, High beam torches, crackers and several field gadgets.

6) *Erection of Watch towers:*

Watch Towers are needed to be constructed at several points in the buffer village for monitoring of wild elephant movement during the crop harvesting season.

7) *Awareness and Training:*

There is a continuous need for generating awareness among the local community to imbibe a sense of responsibility for conserving our natural resources. To meet this objective timely awareness programmes on the importance of conservation should be held in the fringe area.

Also hands on training on bee-keeping, poultry and piggery keeping should be provided by inviting experts from respective fields.

8) *Installation of night vision signage and hoardings:*

Since a road passes nearby to the buffer village, Posters and billboards play an important role as early warning system in human psychology while in constant movement. Therefore, signage having night vision properties should be installed along the roadside in the areas where animals frequently visit. Signals indicating speed limit to avoid collision, animals crossing warning, reduce excessive honking etc. may be applied

9) *Canopy connectivity for animal crossings:*

Since the area is already devoid of large trees, felling of trees should be bare minimum. Attempt should be made to keep canopy connectivity so that the small arboreal and mammals can use it as a means of passage for their crossings.

10) *Waste Management Plan:*

The non-biodegradable waste generated during the implementation of the project shall be duly taken care of by the executing agency during the implementation of the said project.

CONCLUSION:

The mitigation plan is an effort to imbibe an efficient management planning to find a solution where in development and conservation walk in tandem. It is in no way a roadblock to developmental project but a solution where we endeavour to minimise the damage that may occur as a result of developmental projects.

FINANCIAL FORECAST

Financial (33kV Transmission line Miao to Diyun)

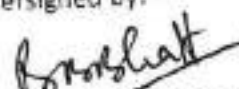
Sl no	Description of works	Qty	Rate	Amount	Remarks
1	Creation of plantation (Bamboo, Fodder, Fruit bearing trees plantation)	20 Hect.	17289/- per Hect.	345780	
2	Employment generation (Poultry, Piggery, bee keeping) for 3 nos village @ 5 beneficiary per village	5 nos beneficiary	30000/-	450000	for 3 nos villages
3	Erection and Watch tower at strategic point	3 nos	365000/- each	1095000	As per Plint area rate
4	Awareness and training	4 nos	100000/- each	400000	
5	Installation of night vision vinyl sheet signage 1'2x0'90 on size with MS angle post at vulnerable and strategic places	10 nos	25000/-	250000	Along the M.V. Road, starting from M'Pen.
6	Canopy connectivity for animal crossings by planatation of tall sapling.	800 Sapling	20000/- per Hect.	200000	As per norms
7	Construction of check gate with hut at 17.063 Sqm at vulnerable site of Deban	1 nos	495300/- each	495300	As per Plint area rate
8	Engagement of protection squad 5 nos at 10000/- for 4 months for 5 years.	5 nos	10000/-	1000000	During vulnerable periods
9	a) Rescue of wild animals & treatment from Forest area to Mini zoo Miao.	5 years	L/S	300000	As an when required
	b) Identification of rich wildlife habitat/corridors and marking of the areas to be converted to community reserve i.e, documentation.	5 Nos	25,000/-	125000	Survey/de marcation of Biodiversit y hotspot
10	Waste management plan	2 nos	100000/-	200000	
Grand Total				4861080	
Say Rs.				4861000	

(Rupees Forty Eight Lakh Sixty One Thousand) Only

Prepared by: -


Addl. Chief Estimator
O/o PCCF (WL & BD) & CW LW
Itanagar

Countersigned by: -


Dr. B. B. Bhatt (Res/Asst.)
O/o PCCF (WL & BD) & CWLW
Itanagar


DCF (WL & BD)
O/o PCCF (WL & BD) & CWLW
Itanagar
DCF (WL & BD)
O/o PCCF (WL & BD)
Itanagar

Mitigation measures for the proposed 33KV power line (Miao to Kharsang) passing through Tibetan Settlement Camp and Kachang Viillagefalling under Fringe areas of Namdapha Tiger Reserve.

Miao, Arunachal Pradesh.

Introduction:

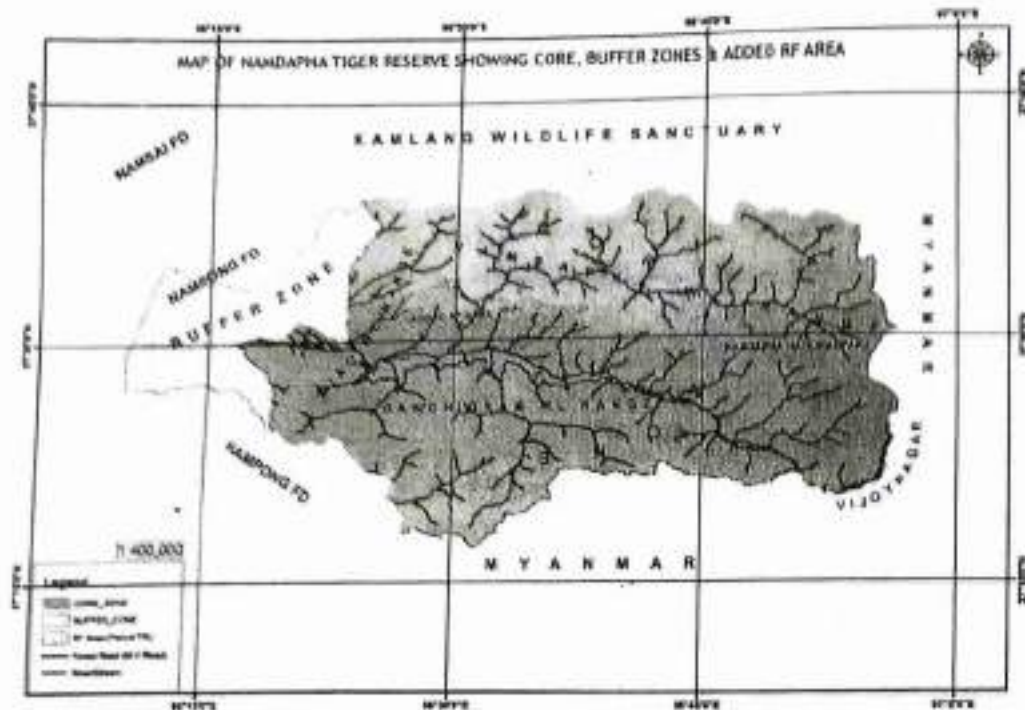
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For enhancing the conservation strategy of Namdapha Tiger Reserve, buffer areas are being notified in Namdapha Tiger Reserve (NTR) with a total area of 245 km² with 68 km² in Miao RF, 141 km² in Diyun RF and 36 km² in the surrounding Unclassed State Forests of Nampong Forest Division and Namsai Forest Division.

The Buffer area:

A total of 19 fringe villages have been identified as buffer zone in NTR for enhancing the conservation strategy *which includes the Kachang village falling under Miao R.F.*, where the proposed 33KV transmission line will pass.(FIG:1)

FIG 1 Showing map of NTR with buffer zone



Background of the Buffer Area

1) EDHAPIC CHARACTER

1.1) *Geology, Rock and Soil*

The geology of the buffer area is similar to that of the core. The following are the geological attributes of the area:

1. The geological formations covering the area include the Tertiary and Quaternary sequences.
2. The oldest of the Tertiary sequences comprises a group of grey to black splintery shale with thin sandstone inter-beds classified as the Disang Group (Eocene).
3. The overlying Barail Group (Oligocene) includes an assemblage of sandstone, clay, shale, and carbonaceous shale with coal.
4. The lowermost beds, called the Nagaon formation consist of hard and compact, fine grained, sandstone with minor shale and partings, is however, totally cut off in the area by the Disang thrust. The middle part of the group known as the Baragolai formation includes an alternation of sandstone, shale, carbonaceous shale and clay with minor coal layers and occasional thin seams of coal. This formation is well exposed along the northern base of the Kuwen Bum hills where the rock beds trend ENE-WSW with a southerly dip up to 60°.

5. The upper beds of Barail Group, called the Tikhakparbat formation include several thick coal seams at the base. The formation is arenaceous, comprising of medium to coarse grained, well-bedded sandstone, sandy clays, shale, and carbonaceous shale with thick coal seams. The formation in the Namchik Coalfield (outside the buffer) over the northern slope of Kuwen Bum is about 600 meter thick.
6. The Tipong Group of rocks formed during the Miocene are younger rocks overlying the Barail rocks. It has coarse ferruginous sandstone and sandy clay with occasional thin partings of shale and conglomerates. Fragments of silicified and semi carbonized fossil wood are embedded in these rocks. The lower part of Tipong rocks is a sandstone formation that is predominantly arenaceous, consisting of false bedded ferruginous sandstone with minor clay or shale parting and occasional conglomerates. The oil seepages in the area are associated with Tipong sandstone.
7. The youngest part of the Tertiary sequence comprises of pebble beds alternating with clays and soft sandstones classified as the Dihing Group. The Dihing beds are exposed at intervals along the Noa-dihing riverbed near Miao.
8. The Quaternary sequence consists of a group of older alluvium consisting of clays, loose coarse sand, gravel and boulder deposits covering Tertiary rocks along the base of the Kuwen Bum Hill and around Namchik. This group has been covered with the newer alluvium deposits of clay, sand silt and shingles.
9. The Jairampur area lies over the easterly extension of the ENE-WSW abuts directed, east, plunging Namdang syncline widening towards the east. The south limb of the syncline is at places affected by the Disang thrust. The north limb abuts against Margherita thrust passing along the base of Kuwen Bum Hill.

(1.2) Soil

The soil is acidic and is characterized by a surface layer of considerable depth and loamy texture with colour varying from yellowish to reddish. It consists of a thick layer of sandy loam soil rich in vegetative matter. This soil is mostly found in the forested hills which used to support the best dipterocarp forests. On the ridges and precipitous slopes, the soil depth becomes shallow while in the areas near the river banks which are liable to frequent inundations, the soil depth is larger. The soil tends to be sandy on the sloping grounds and clayey on the flat grounds.

(1.3) Hydrology and Water Sources

The Miso RF, Diyun RF and the USF areas comprised numerous rain-fed streams and rivers (known as *Hka* in *Singpho* and *Wa* in *Tangsa* language). Some streams are perennial while most are seasonal and remain dry in winter.

The major rivers are the Tirap, Namchik, Doglai Wa, Rima or Namphuk, Nanon Hka, Nangthe Wa, Noa-dihing and Buri-dihing. All these perennial rivers and streams drain into the Brahmaputra.

Collection of river bed materials like boulder, sand and shingles is being carried out in almost all the rivers and streams to meet the increasing demands of building material for road and

bridge construction. This is one of the factors that contribute erosion of river banks and subsequent floods in the low lying areas.

2) Vegetation Types

The vegetation types of the buffer area are very similar to the low-elevation forests of the core area. As per Champion and Seth's (1968) forest types of India, the forests in the buffer of NTR fall under the following forest categories: -

(2.1) Assam valley tropical wet evergreen forests (Dipterocarp forests):

The major species in this forest are Hollong (*Dipterocarpus macrocarpus*) and Mekai (*Shorea assamica*). These forests are typically three-storied with *D. macrocarpus* and *S. assamica* as the dominant species. *D. macrocarpus* is present along the alluvial plains in the foot hills while at higher elevations the dominant tree is *S. assamica* which grows in soil with high gravel. The other species occurring in the upper storey are Gonsorai (*Cinnamomum cecidophne*), Hollock (*Terminalia myriocarpa*), Sam (*Artocarpus chaplasi*), Jutuli (*Altingia excelsa*), Poma (*Toona ciliata*), Dhuna (*Canarium resiniferum* and *C. strictum*), Amari (*Aglala spectabilis*). The middle storey consists of Khokan (*Duabanga grandiflora*), Morhal (*Vaticaleaefolia*), Nahar (*Mesua ferrea*), Jamun (*Syzygium cumini*), Sopa (*Magnolia* sp.), Phulgamari (*Endospermum chinensis*), Hingori (*Castanopsis indica*), Banderdima (*Dysoxylum binectariferum*), Chalmugra (*Gynocardia odorata*), Pichola (*Kydiacalycina*). The lower storey consists of species like: Thekera (*Garcinia* spp.), Tejranga (*Myristicinia folia*), Outenga (*Dillenia indica*). The canopy density in the upper storey varies inversely with that of the lower storey.

The undergrowth is composed of woody shrubs like Kukrathenga (*Leea indica*), Leteku (*Baccaurea sapida*), Surat (*Laportea cremulata*), Phutki (*Melastoma malabathricum*), Nephapho (*Clerodendron* spp.), *Ixora* and shrubs like Kaupat (*Phrynium* spp.), Torani (*Alpinia allughas*), Bogitora (*Alpinia malaccensis*), Kol (*Musa* spp.). There are four species of bamboo: Kako (*Dendrocalamus hamiltonii*), Bojal (*Pseudostachyum polymorphum*), Bijuli (*Bambusa pallida*), Dollu (*Teinostachyum dullooa*) and three species of cane: Lejai bet (*Calamus floribundus*), Raidang (*Calamus flagellum*) and Houka bet (*Calamus latifolius*), and two species of palms: Tokko palm (*Livistonia jenkinsiana*) and Garugatamul (*Pinang gracilis*). There are at least six species of grasses: Kush (*Saccharum spontaneum*), Kher (*Imperata cylindrica*), Megheli (*Erianthus arundinaceus*), Ekra (*Erianthus ravenae*), Nol (*Phragmites karka*) which are found in the plains and Jharu (*Thysanolaena maxima*) which grow on slopes. Some common climbers found are: Gowalialata (*Vitis latifolia*), Ghilalata (*Entadaphaseoloides*), Kachoilata (*Acacia pruinescens*), Kuchai (*Acacia pennata*), Amrolialata (*Tapiriahirsuta*), Mikenia (*Mikania micrantha*) and Hathilota (*Baiea parviflora*).

(2.2) Assam alluvial plains semi-evergreen forests:

The Assam alluvial plain semi-evergreen forests are typically two-storied and consist of many deciduous tree species mixed with evergreen species. The common species in the upper storey are: Hollock (*Terminalia myriocarpa*), Amari (*Aglala spectabilis*), Sam

(*Artocarpus chaplasha*), Bogipoma (*Chukrasia tabularis*), Jutuli (*Altingia excelsa*), Dhuna (*Canarium resiniferum*) and Borpat (*Ailanthus grandis*). The middle storey consists of Nekahi (*Phoebe cooperiana*), Pichola (*Kydiacalycina*), Moj (*Albizia lucida*), Morhal (*Vatica lanceaefolia*), Sopa (*Magnolia* spp.), Khokan (*Duabanga grandiflora*) and Titasopa (*Michelia champaca*) while the undergrowth consists of species like *Alpinia allughas*, *Mikania micrantha* and *Musa* spp.

Following is the list of bamboos, canes and climbers in these forests:

1. Bamboo: Bijuli (*Bambusa pallida*), Kako (*Dendrocalamus hamiltonii*)
2. Cane: Raidang (*Calamus flagellum*), Hauka (*Calamus latifolius*), Lejai (*Calamus floribundus*)
3. Climbers: Ghilalata (*Entadaphaseoloides*), Kochoikaint (*Acacia pruinescens*), Amrolialota (*Tapiriahirsuta*), and Kuchai (*Acacia*)

(2.3) Eastern Hollock forests:

The Eastern Hollock forests have an evergreen understory and a deciduous upper storey. These forests are generally found on alluvial flats along the river and stream banks. Hollock (*Terminalia myriocarpa*) is the dominant species. However, at present, Hollock has considerably reduced in numbers due to logging. The floristic composition these forests are as follows: The upper storey consists of Khokan (*Duabanga grandiflora*), Hilika (*Terminalia chebula*), Bohera (*Terminalia bellerica*), Titachampa or Champ (*Michelia champaca*), Sopa (*Magnolia* spp.), Hatipaila (*Pterospermum acerifolium*), Gamari (*Gmelina arborea*), Amari (*Aglaia spectabilis*), Sam (*Artocarpus chaplasha*), Urium (*Bischofia javanica*), Dhuna (*Canarium resiniferum*), Udal (*Sterculia villosa*), Borpat (*Ailanthus grandis*), Bogipoma (*Chukrasia tabularis*) and Jutuli (*Altingia excelsa*). The middle storey consists of Outenga (*Dillenia indica*), Banderdima (*Dysoxylum inectariferum*), Hingori (*Castanopsis indica*), Jamuk (*Syzygium cumini*), Pichola (*Kydiacalycina*), Boromthuri (*Talauma hodgsonii*), Morolia (*Macaranga denticulata*), Chalmugra (*Gynocardia odorata*), Morhal (*Vatica lanceaefolia*), Moj (*Albizia lucida*), Satiana/Chatiana (*Alstonia scholaris*) and undergrowth like Ghetu (*Clerodendron infortunatum*), Kaupat (*Phrynium imbricatum*), Tora (*Alpinia allughas*), Surat (*Laportea crenulata*), Jeng (*Calamus erectus*) and *Eupatorium* spp.

3) Fauna.

The buffer areas of the Tiger Reserve almost had similar faunal diversity and habitat conditions as that of the core area. However, due to anthropogenic activities in the buffer areas, it has reduced wildlife population and degraded the habitat. There is a record of presence of rich diversity from the buffer areas in the earlier past where there are reports of tiger sighting and other important wildlife sighting from the buffer areas.

Major Conspicuous Changes in the Habitat since Inception:

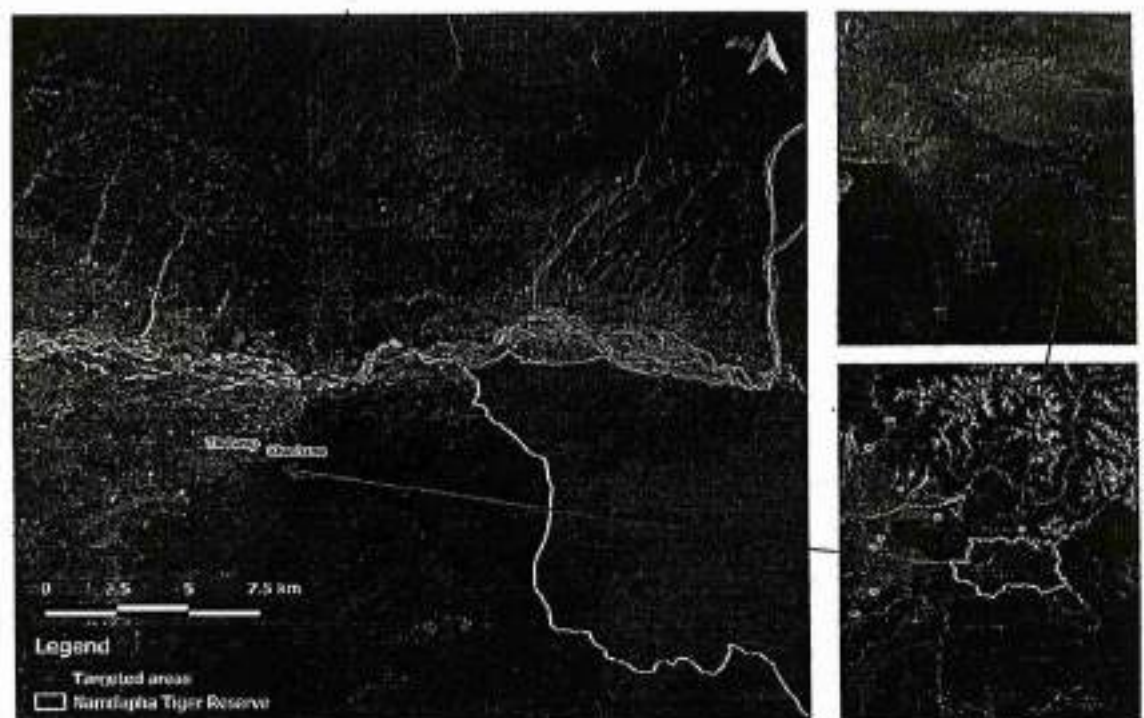
The buffer area was declared in the year 2012 and since then there have been a considerable conspicuous changes in the habitat since its inception. Land use changes occurred due to logging, conversion of forested land to tea estates and clearing of forest land for agriculture purposes. Also there has been a considerable loss of natural forests due to coal mining in the

last decade. The area now is in a degraded state with no natural forest in the village area. The community residing the area is totally dependent on farming for their livelihood generation with tea cultivation being the major cash crop. There are occasional reports of Human-Animal conflict from the area. Reports of wild elephant raids in the paddy fields during crop ripening is documented from the area and also reports of loss of poultry due to attack from small carnivores. The village members are also prolific hunters and often visit the forest for hunting.

GOOGLE MAP INDICATING THE AREA FROM WHERE THE PROPOSED 33KV POWER LINE WILL PASS:(FIG2)

1. Kachang Villlage
2. Tibetan Settlement Camp(TR Camp)

FIG2:



ECOLOGICAL THREATS:

- 1) Large electrical transmission lines are a hindrance for bird movement and a major reason for many Bird kill (includes migratory bird). Bird kill occur due to collision with the power lines which are often not visible to the birds during their flight.
- 2) Accidental killings of domestic as well as wildlife due to power leakages from the electrical poles.
- 3) Also further felling of existing trees will lead to creation of canopy distance which is not suitable for arboreal animals like squirrels and some tree dwelling species.

MITIGATION PLAN TO MINIMISE THE ECOLOGICAL DAMAGE:

1) *Install bird diverters in the power lines to save birds from getting electrocuted:*

Many bird species have poor frontal vision because of which they collide with power lines during their flight. So there is a need to install bird diverters in the powerlines to avoid the bird kills.

2) *Creation of Physical barriers:*

There is a need to restrict wild elephants in their natural habitats and also prevent them from entering the village or near the large electrical poles to avoid accidental killings due to power leakages. For this physical barriers like elephant trench can be constructed in the pathway from where the elephants enter the village area.

3) *Creation of Plantations:*

Create local fruit bearing tree plantation, fodder and bamboo plantation in the periphery of the village to augment wildlife and also act as a diversion for crop raiding wild animals.

4) *Employment generation:*

80% of the population residing in these fringe villagers are dependent on agriculture for their livelihood. Since the agriculture area is scarce, they clear forests for establishing new areas under agriculture. As a result there is a huge loss of forest cover every year in the area. An Alternative source of livelihood generation in the form of poultry, piggery and also bee keeping should be introduced in the area. This will help in income generation and also help minimising their dependence on forests.

5) *Equipping the Forest department and Communities for effective Management:*

For smooth monitoring and management of the fringe villages, Namdapha Tiger Reserve should be equipped with a vehicle, High beam torches, crackers and several field gadgets.

6) *Erection of Watch towers:*

Watch Towers are needed to be constructed at several points in the buffer village for monitoring of wild elephant movement during the crop harvesting season.

7) *Awareness and Training:*

There is a continuous need for generating awareness among the local community to imbibe a sense of responsibility for conserving our natural resources. To meet this objective timely awareness programmes on the importance of conservation should be held in the fringe area.

Also hands on training on bee-keeping, poultry and piggery keeping should be provided by inviting experts from respective fields.

8) *Installation of night vision signage and hoardings:*

Since a road passes nearby to the buffer village, Posters and billboards play an important role as early warning system in human psychology while in constant movement. Therefore, signage having night vision properties should be installed along the roadside in the areas where animals frequently visit. Signals indicating speed limit to avoid collision, animals crossing warning, reduce excessive honking etc. may be applied

9) *Canopy connectivity for animal crossings:*

Since the area is already devoid of large trees, felling of trees should be bare minimum. Attempt should be made to keep canopy connectivity so that the small arboreal and mammals can use it as a means of passage for their crossings.

10) *Waste Management Plan:*

The non-biodegradable waste generated during the implementation of the project shall be duly taken care of by the executing agency during the implementation of the said project.

CONCLUSION:

The mitigation plan is an effort to imbibe an efficient management planning to find a solution where in development and conservation walk in tandem. It is in no way a roadblock to developmental project but a solution where we endeavour to minimise the damage that may occur as a result of developmental projects.

FINANCIAL FORECAST

Financial (33kV Transmission line Miao to Kharsang)

no.	Description of works	Qty	Rate	Amount	Remarks
1	Creation of plantation (Bamboo, Fodder, Fruit bearing trees plantation)	20 Hect.	17289/- per Hect.	345780	
2	Employment generation (Poultry, Piggery, bee keeping) for 3 nos village @ 5 beneficiary per village	5 nos beneficiary	30000/-	450000	for 3 nos villages
3	Erection and Watch tower at strategic point	3 nos	365000/- each	1095000	As per Plint area rate
4	Awareness and training	4 nos	100000/- each	400000	
5	Installation of night vision vinyl sheet signage 1'2x0'90 on size with MS angle post at vulnerable and strategic places	10 nos	25000/-	250000	Along the M.V. Road, starting from M'Pen.
6	Canopy connectivity for animal crossings by plantation of tall sapling.	800 Sapling	20000/- per Hect.	200000	As per norms
7	Construction of check gate with hut at 17.063 Sqm at vulnerable site of Gibbonsland	1 nos	495300/- each	495300	As per Plint area rate
8	Engagement of protection squad 5 nos at 10000/- for 4 months for 5 years.	5 nos	10000/-	1000000	During vulnerable periods
9	a) Rescue of wild animals & treatment from Forest area to Mini zoo Miao.	5 years	L/S	300000	As an when required
	b) Identification of rich wildlife habitat/corridors and marking of the areas to be converted to community reserve i.e, documentation.	5 Nos	25,000/-	125000	Survey/de marcation of Biodiversity hotspot
10	Waste management plan	2 nos	100000/-	200000	
Grand Total				4861080	
Say Rs.				4861000	

(Rupees Forty Eight Lakh Sixty One Thousand) Only

Prepared by:-

Addl. Chief Estimator
O/o PCCF (WL & BD) & CW LW
Itanagar

Countersigned by:-

Dr. B. B. Bhatt (Res/Asst.)
O/o PCCF (WL & BD) & CWLW
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DCF (WL & BD)
O/o PCCF (WL & BD)
Itanagar



**WILDLIFE MITIGATION AND
CONSERVATION PLAN FOR
DAMBEUN- BRUNI ROAD
(36.7 KMS) IN DIBANG
WILDLIFE SANCTUARY**

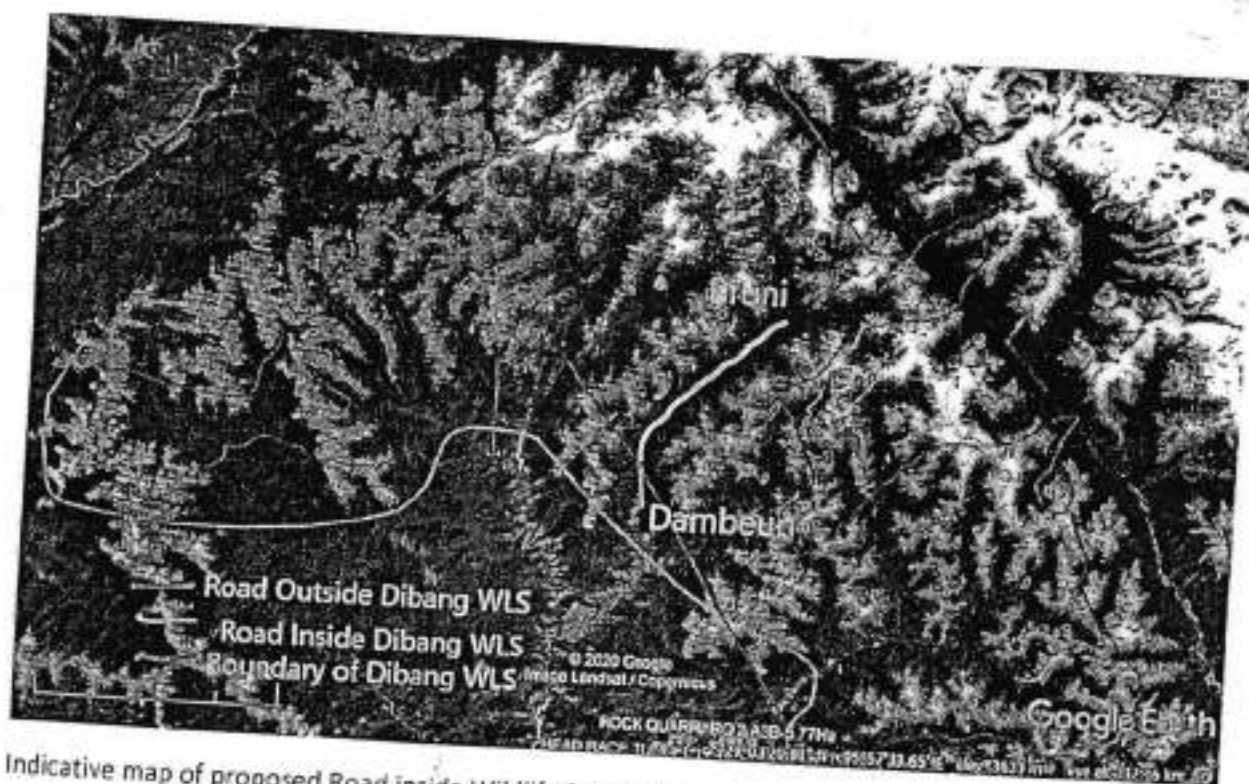
Project Title: Construction of Dambeun- Bruni
Road (36.7 Kms) Road

User Agency: Central Public Works Department to
be changed to NHIDCL

Prepared By:
Suraj Singh, IFS

Brief About the Project

The proposed road Damboun- Bruni is 36.3 Kms in total of which 6.2 Kms is in Unclassified State Forest (USF) while 30.1 kms is in Dibang Wildlife Sanctuary. The road is part of Indo-China Border Roads (ICBR) and is strategic project important from defense point of view. At the same time, it is part of Dihang- Dibang Biosphere Reserve (DDBR) and is one of the biological hotspots of the world which is ecologically significant. The road was initially awarded to Central Public Works Department who conducted the survey and have applied for the Forest and Wildlife Clearance while the project is under transfer to National Highway and Infrastructure Development Corporation Limited (NHIDCL) and would be made by them. The road is critical for Defense forces to gain access till borders.



Indicative map of proposed Road inside Wildlife Sanctuary

1.1

Introduction of the area

Dibang WLS is situated at the Dibang valley district of Arunachal Pradesh. The Dibang Wildlife Sanctuary (DWLS) is the second largest protected area (PA) in India. This sanctuary was

named after the river Dibang. It covers an area of 4149 km² and is situated between 95° 17' and 96° 38' East longitudes and 28° 38' and 29° 27' North latitudes with altitude varying from 1800 to 5500 m above mean sea level (msl). It partially falls in Dihang Dibang Biosphere Reserve. The DWLS was notified vide no. CWL/D/42/92/744-844 dated 12th March 1998. The northern part of wildlife sanctuary shares international boundary with Tibet Autonomous Region (China). The district has an area of 9,129 km² and is one of the largest districts of Arunachal Pradesh (Fig 2.1). It has a total population of 8,004 with population density of less than 1 inhabitant per km². It is the least populated district in India (2011 census report). The population growth rate over the previous decade 2001–2011 was 9.3% with sex ratio of 808 females for every 1000 males and a literacy rate of 64.8% (2011 census report). The Dibang valley of Mishmi hills are a unique landscape in having tiger population at over an altitude of 3630 meters in the Indian part of the Eastern Himalaya Biodiversity hotspot (Adhikarimayum and Gopi 2018). The district is administered under the 1 sub division, 3 blocks, 6 circles and Anini is the district headquarter which is located at an elevation of 1968 m. It shares International boundaries in the north and eastern sides with Tibet, the western region is bounded by Upper Siang district and southern side bounded by Lower Dibang valley district. Idu Mishmi, the main inhabiting tribe of Dibang valley district which is one the four sub-tribes of Mishmi, the other three sub-tribes are Digaru Mishmi, Miju Mishmi and Deng Mishmi. Idu Mishmi tribes are Schedule Tribes (ST) under The Constitution (Scheduled Tribes) Order, 1950; they also inhabit other three districts viz., Lower Dibang valley, East Siang and Upper Siang districts of Arunachal Pradesh. The Idu Mishmi tribes follow religion of animism and believe in the presence of spirits living in the natural surroundings. They have their own culture, languages, and healing practices and perform traditional ritual ceremony. The majority of households in this community are subsistence farmers, seasonal hunters and few are government employees, contractors and businessmen. They mostly practice shifting or *jhum* cultivation in different seasons for various crops. The *jhum cultivation* is the only practicable way of cultivation in such kind of rugged terrain in Dibang valley district. The major harvested crops are rice, buckwheat, maize, millet and a variety of vegetables. They maintain varieties of fruit orchards and horticulture plantations such as apple, kiwi, orange, plum, pear, cardamom, ginger etc. for the local consumption and sell in the local market. Additionally, some villagers go for hunting such as barking deer, Himalayan serow, Red goral, wild pig, Mishmi takin, musk deer, Asiatic black bear, etc., for wild meat and support their income. However, they follow

a unique traditional ecological culture and management system to control overexploitation of wild animals.

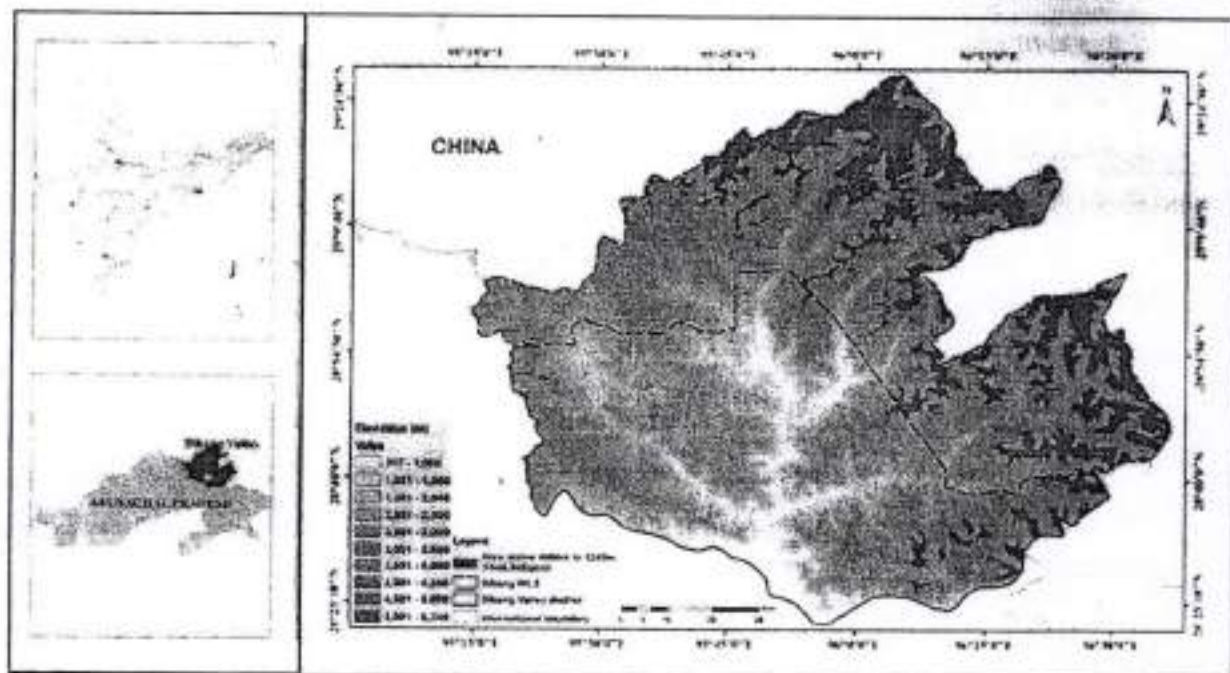


Figure 1.1: Map showing the Dibang Valley district and Dibang Wildlife Sanctuary, Arunachal Pradesh.

1.2 NAME, LOCATION, CONSTITUTION AND EXTENT

The name of the Sanctuary is Dibang Wildlife sanctuary. It lies between 95°17' & 96°38' East longitude and 28° 38' to 29° 27' North latitudes. It is located in the Dibang Valley district of Arunachal Pradesh, administered under Divisional Forest Officer, Mehao Wildlife Sanctuary Division headquarter at Roing. It covers an area of 4149km². The Sanctuary was notified on 26th Nov, 1991 vide Notification No.CWL/D/42/92/744-844 dated. 12/03/1998.

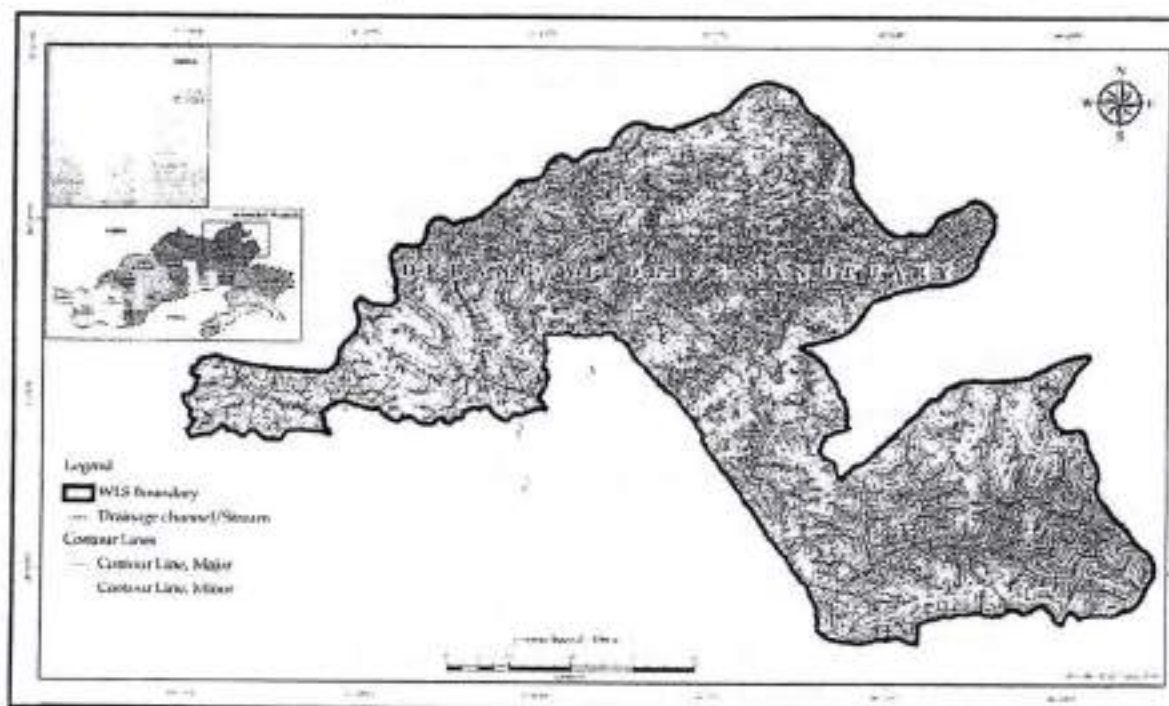


Figure 1: Location map of Dibang Wildlife Sanctuary, Arunachal Pradesh

1.3 APPROACH AND ACCESS

The main approach to Dibang Wildlife Sanctuary is by road. The road from Tinsukia town which leads to Dholla (a sub-station near river Brahmaputra) is NH/37. River Brahmaputra is crossed by Dhola- Sadiya Bridge. The entry point into Arunachal Pradesh is Shantipur which is 25 km from Roing. The road from Roing to Anini under construction and will be completed by 2022 with distance from Roing to Anini is 220 km. There is also helicopter service available for Anini, the district headquarters of Upper Dibang Valley district via Roing from Dibrugarh & Itanagar.

The nearest large airport is Dibrugarh Airport which is connected from the main cities of the country like Delhi and Kolkata with daily and regular flight. It takes 3 hours from Dibrugarh Airport to Roing and further Anini is connected by Road and Helicopter from Dibrugarh and Roing.

The Sanctuary is approachable from Mipi, Dembune & Malinye. All these three-way Points are approachable from southern boundary; The Sanctuary is not approachable from West, north & east being international boundary with China. There is road connectivity up to Mipi, Dambeun & Malinye, and the last administrative headquarters. The approach to the Sanctuary beyond them is by trekking.

path & patrolling path constructed by central Assistance.

1.4 STATEMENT OF SIGNIFICANCE

Due to high altitudinal variation the floral & the faunal diversity is very high. The faunal diversity consists of species of high mountain zones. As per mammalian survey conducted by Dr Asham Borang "Status of Assessed Mammals in Arunachal Pradesh" there are as many as 156 mammal's species found in Dibang Wildlife Sanctuary. The list is enclosed at Annexure-II. This huge faunal bio-diversity is due to presence of Indo-Chinese & Indo-Malayan fauna. This area lie in the confluence zone of three bio-geographical regions namely Indo- Malayan, Indo- Tibetan and Indic thus huge biodiversity is present due to edge effect. Mishmi Takin & Some Pheasants like Mishmi Monal & Tragopans are endemic to this region.

Avifaunal diversity of the sanctuary is also high. As per Bird Survey in selected localities of Arunachal Pradesh by Pratap Singh and published by WII Chandrabani, Dehradun there are as many as 137 species of birds in Dibang Valley District. The recorded list of birds is enclosed at Annexure-III. The sighted list of birds by staff includes important birds' species like – Red breasted hill partridge (*Arborophilamandellii*), Blyth's Tragopan (*Tragopanblythii*), Sclater's Monal (*Lophophorus sclateri*), Beautiful Nuthatch (*Sitta formosa*), Ward's Trogon (*Harpactus wardi*) and Kalij pheasant (*Lophura leucomelana*).

The Sub-Tropical & Temperate forests have a vital role in maintenance of water cycle. It is also gene bank of various medicinal plants like *Taxus baccata*, *Mishmi tecta*, *Acotinum* spp. etc. Many beautiful lakes inside the sanctuary enhance the recreational value as well as conservation of its aquatic fauna.

The area has great potential for recreation including wilderness experience, scenic landscape and birding. The aesthetics beauty due to presence of grassland interspersed with the dense forest make the experience mesmerizing.

Research opportunity in wildlife science for different spp. of Musk deer, Goral, pheasants etc. exists. Distribution & behavioural pattern of Mishmi Takin remains less studied. Similarly, the distribution & behavioural pattern of Mishmi Monal, Blyth's Tragopan, Blood Pheasant and Kalij Pheasant needs more study.

From National Security point of view as well, this area hold huge significance as it is constantly

claimed by our neighbor country. So enhanced work and management intervention would also enhance our claim in the area specially the research work and its publications.

Chapter 2. Physical Attributes

2.1 Boundary of Dibang Wildlife Sanctuary

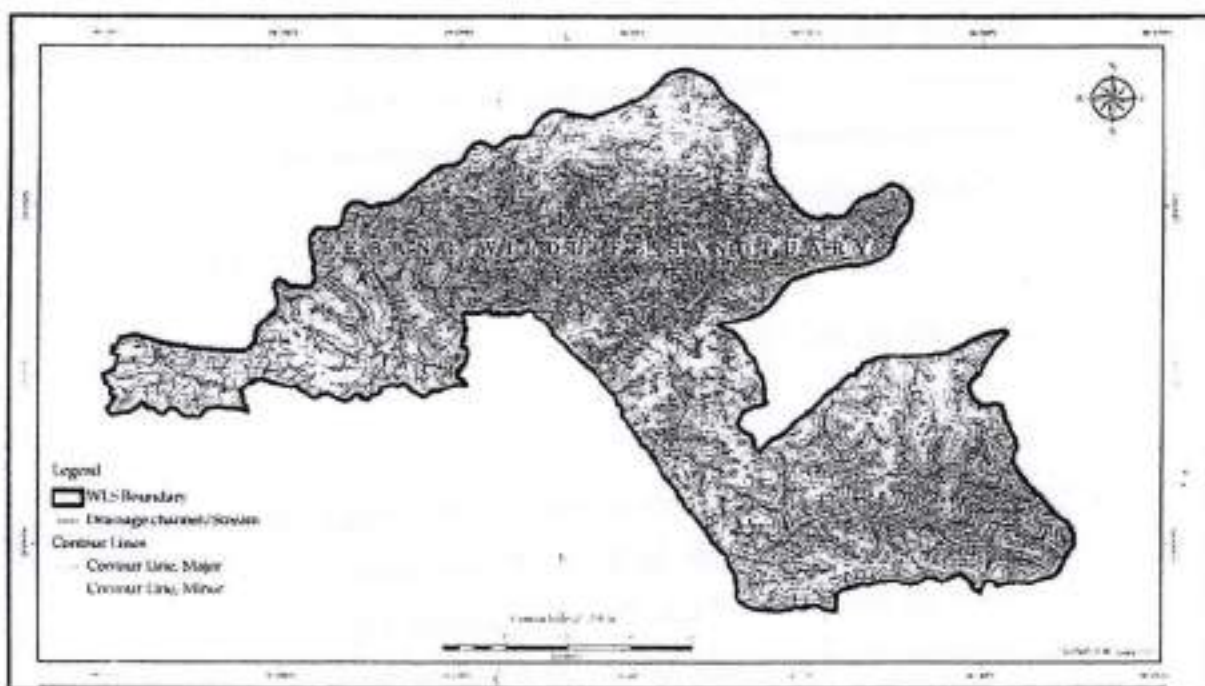


Figure 2: Map depicting physical features of Dibang WLS

Starting from the point A on Siang-Dibang boundary, the Sanctuary boundary follows a straight line up to point B. from C to D, the boundary follows an unnamed tributary to Ambropani river. Then from C to D, the boundary goes down stream Ambro river. From D boundary follows the unnamed right tributary of Ambropani River till point E. from Point E to F, follows a ridge through 4160 Mt. peak point F is joined with Point G by a straight line. Thence, boundary follows unnamed tributary of Emra river at Point H. from H to I the boundary follows Emra river upstream. From I to J, the boundary follows Iphiriver till 2319 Mt. point and then Iphi river upstream till its source at J point. From J to K, the boundary follows a straight line. From K to L, the boundary follows a ridge through

4040 Mt, 3769 Mt, 3625 Mt, 3595 Mt, to 3545 Mt. and another peak. From L to M, the boundary follows a branch of tributary of Andra river. Then from M to N it follows the said tributary and from N to O it follows Andra River downstream. From O to P, the boundary follows a northern (parallel to longitude) straight line till point P. from point P to Q, the boundary follows another east ward (parallel to longitude) straight line. Then point Q is joined with R by a straight line and further R is joined with point S by a south – east straight line. Then boundary follows Tayon river downstream up to point T. Thence, boundary follows Edzon river up to point U. from point U to V, the boundary follows Edza river upstream from V to A, the boundary follows international boundary of districts Siang & Dibang.

This map was created by the process of extraction of GPS coordinated from the Toposheet which was plotted by the notification, hence has a few error which need correction, so that it coincide with our international borders and also coincide with the physical boundaries which are of permanent in nature as far as possible.

2.2 EDAPHIC CHARACTERS

2.2 (a) Geology and Soil

The Arunachal Himalaya extends from the eastern part of Bhutan to the easternmost part of the Dibang and Lohit valley. The present study area, Dibang valley, lies in the Trans Himalaya on the eastern limb of the Eastern Himalayan Syntaxis (Gururajan & Choudhuri 2003, 2007) which is occupied by denudational structural hills consisting of diorite, tonalite, granodiorite, hornblende granite, pegmatites, gneiss, schist, marble bands, quartzites, etc. (CGWB 2013). The hills of Dibang valley are highly eroded, fractured with a weathered zone of 5 to 30 m thick and is geodynamically active resulting in many landslides and other mass movements due to high rainfall. The average rainfall of Dibang valley (headquarter at Anini) is about 2866 mm per annum which promotes chemical alteration in the region (Vyshnavi et al. 2013). Therefore, physical, chemical and biological weathering process, have played a major role for the development of soil profile. Soils of this valley generally contain high humus and nitrogen due to thick forest cover. In the downstream valleys, it is clayey in nature and rich in organic matter.

Generally, the soil is mainly acidic in nature and acidity increases with the amount of precipitation and heaviness of the soil (CGWB 2015).

2.2 (b) Terrain

The sanctuary has elements of lesser and greater Himalayan ranges having mountainous, gorges, rugged and consisting steep to very steep terrains. The altitude varies from 1800 to 5500 m msl and peaks remain snowcapped throughout the year. The peaks are also interspersed with valleys and natural lakes. Some major river valleys are Dri valley; Mathun valley; Talo valley; Ahi valley and Amra valley. All these valleys spread along the river side; however, the extent of the river valley depends on the narrowest part of river and mountains which are mainly accessible from the different parts of the sanctuary. All these valleys have their own characteristics with distinct geographical and biological features.

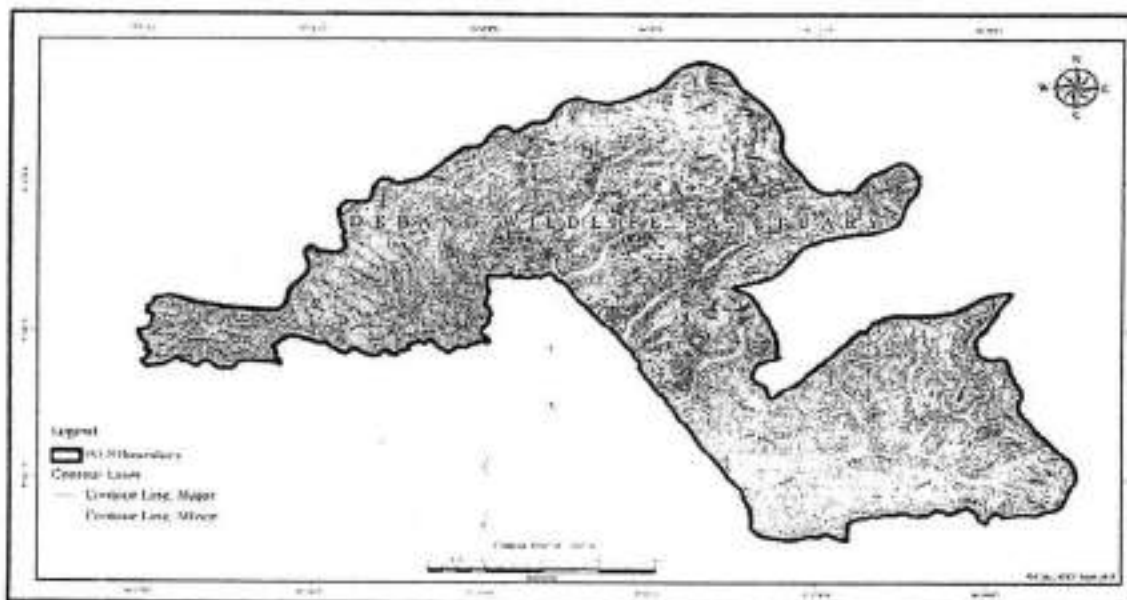


Figure 3: Contour lines depicting elevation variation within Dibang WLS

The altitude of Dibang WLS varies from 2245 to 4340 mts. The Sanctuary is a part of lower Himalayan range. Thus, the range runs east-west. The peaks are steep and remain snow-capped round the year. There is almost no vegetation in the peaks. The peaks are also interspersed with valleys and natural lakes. There are large numbers of natural big lakes in the eastern parts of the WLS.

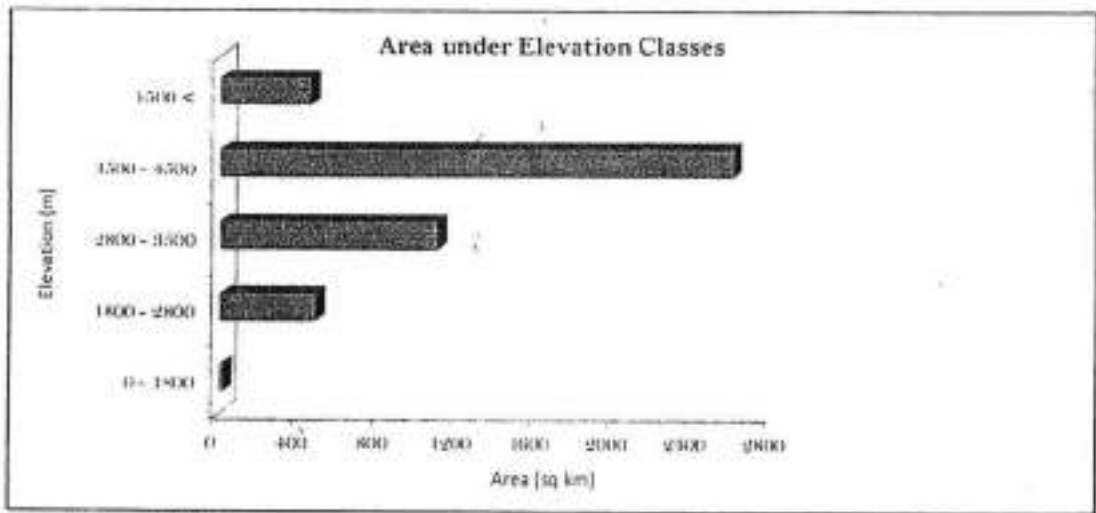


Figure 4: Area under Elevation ranges

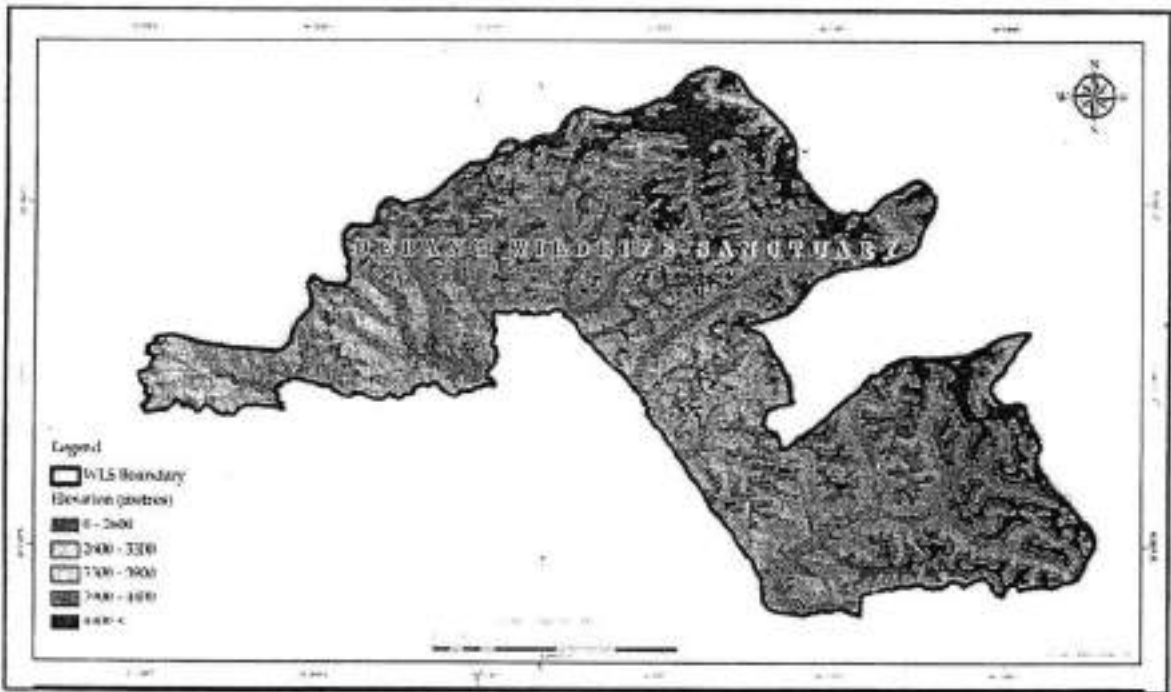


Figure 5: Dibang WLS divided into different elevation zones

2.3 (c) Climate and Rainfall

The climate of Arunachal Pradesh is tropical monsoon type but some regions in higher elevation like Mishmi Hills have 'mountain type' climatic condition (Rahmani et al. 2016). During summers, the average maximum temperature goes up to 24°C, and average minimum temperature

drops to 0°C . Harsh winter is experienced in the valley from November to March when snowfalls becomes quite frequent as thick as 2m to 6m. Between the months of December and February, the temperature drop to sub-zero level. Pre-monsoon prevails during March to May and is followed by monsoon season during June to October. It receives rainfall from the southwest monsoon of South Asia (May-October) and the northeast monsoon of East Asia (December- April) and the average annual rainfall recorded is about 2866 mm, but occasional rains occur throughout the year (Vyshnavi et al. 2013).

2.2 (d) Rivers

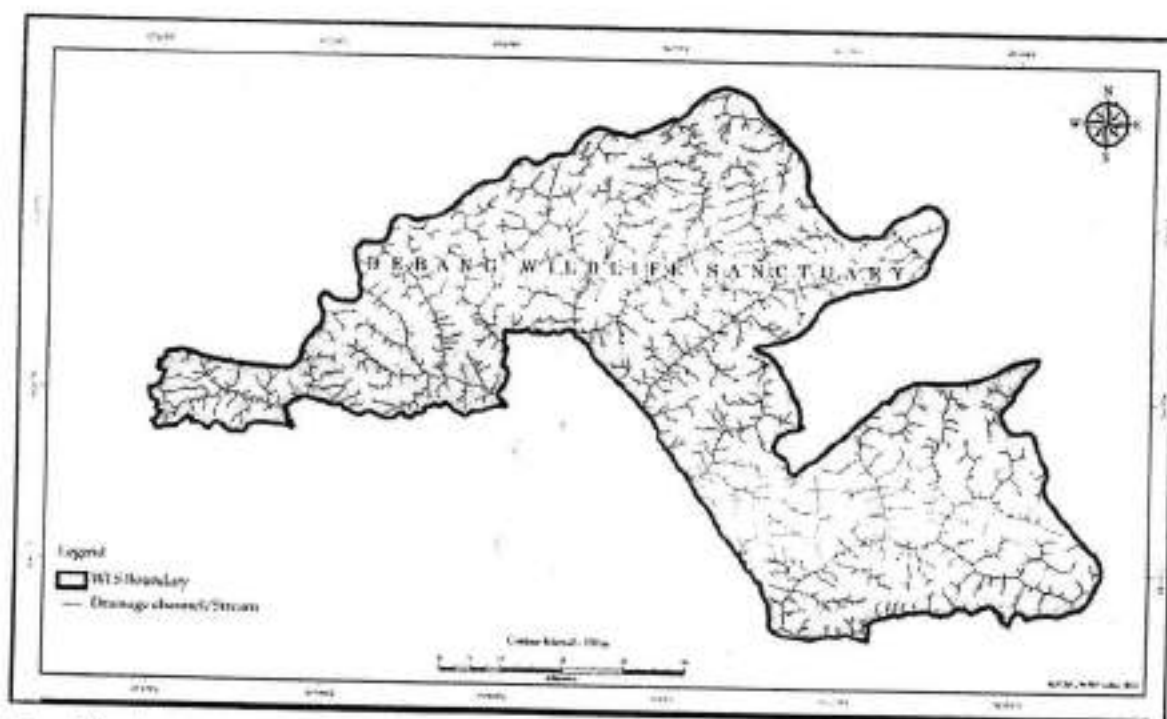


Figure 6: Map depicting drainage network within Dibrang WLS

Some of the important rivers are Ambropani, Emra, Iphi, Andra, Tangon, Edzon, Edza, Mathun and Dri rivers. All these rivers are perennial and carry very clear water in good volume

throughout the year. The Sanctuary is also endowed with numerous lakes. Some of them are as large as 150 ha. Some of the important lakes are Tapowuyan and Mathuwuyan (means Lake in Idu Mishmi tribe) in Mathu valley. Mathuwuyan is the origin of Mathun River. Tahunwuyan and Angiwuyan is the lake in Dri Valley. Ampiwuyan and Amowuyan are lakes in Tangon valley. There are also many small lakes in the PA on higher hills.

The "Dibang River" is one of the main tributaries of mighty Brahmaputra which originates from the southern slopes of Adzon Chhu peak of 5355 m high situated at the northernmost point of Arunachal Pradesh (Singh et al. 2004). There are numerous southerly flowing small rivers, perennial rivulet and nullah that are tributaries to Dibang River which flows through the sanctuary. The Mathun and Dri rivers flowing from the northern and northeastern side of Anini and confluence as one at the western side of Anini and flows as Dibang river from thereon. The Talo river on southeastern side finally merges with Dibang river at Etalin. Other tributaries such as Ithun River, Deopani and many small nullahs merges with Dibang river at the downstream. Finally, the Dibang river join the Dihang and Lohit rivers near Laikaghat about 52 km downstream from Pasighat. Afterward, the combined flow of the three Trans-Himalayan rivers viz., Lohit, Dihang and Dibang is called the Brahmaputra (Singh et al. 2004).

2.4 ECOLOGICAL ATTRIBUTES

2.3 (a) Floral Diversity

2.4.a Vegetation:

The vegetation of Dibang Wildlife Sanctuary is of temperate and alpine type. The composition of flora depends mainly on the locality factor i.e. climatic, topographic, edaphic and biotic factors.

The vegetation of temperate forest can be broadly classified as follows:

Temperate broad-leaved forests & temperate coniferous forests

- a. *Temperate broad-leaved forests*: This vegetation extends between the altitude 1800 to 2800m. The main associates are (1) *Michelia* – *Acer* (2) *Castanopsis* – *Magnolia* (3) *Magnolia* – *Quercus* – *Ex-bucklandia* and (4) *Populus ciliata*. In the foothill area there are wide coverage of

grassland.

b. *Temperate conifer forests*: The vegetation at this zone is *Tsuga*, *Abies*, *Pinus wallichiana*, *Rhododendron arboreum*, *Taxus baccata*.

Alpine Forests:

The Alpine type of vegetation occurs on the peaks of higher ridges above an altitude 4000 m to 5500 m. Major part of the year remains covered with snow and the physiological activities of plants are restricted only for a few months during the period snow melts. The trees are stunted and dwarf in bushes. The plants are mostly herbs with deep root. Plants like *Rhododendron nivale*, *Rhymaonii*, *Sedum* spp., *Saxifraga* spp., *Saussurea* spp., *Arenaria* spp., etc. are present.

Bamboo Forest:

Many pure patches of bamboo forests are also found in area. The various species found are *Phyllostachys bamboosoides*, *Arundinaria* spp, *Cephalostachyum* spp. These are special habitat for red panda and Mishmi Takin.

Shrubs & Herbs:

Zanthoxylum armatum, *Populus* spp, *Rumex hastatus*, *Swertia* sp, etc

2.4.a.1 *The Biogeographic classification:*

The Dibang Wildlife Sanctuary falls under 2D Himalaya–East Himalaya zone as classified under bio-geographic classification of India by Rodger & Panwar.

According to Champion and Seth's classification scheme (1968) following forest types are found in Dibang Valley –

- a) East Himalayan Dry Temperate Coniferous (13/C6): Coniferous forests with sparse xerophytic undergrowth.
- b) East Himalayan Sub-Alpine Birch/Fir (14C/2): These forests have been reported above 3000 m altitude, and comprised mainly of coniferous species. The type of

vegetation is characterized by *Abies spectabilis*, *Cupressus torulosa*, *Picea* sp.

- c) Dry Alpine scrub (16C/1): The alpine vegetation occurs from about 4000 to 5500 m altitude. Here tree species are generally replaced by shrubby species, viz. *Rhododendron* sp., *Lerthanscop* sp., *Primula* sp., *Polygonum* sp., etc.
- d) Secondary Moist Bamboo Crakes (2/2S1): Open tract of bamboos are found throughout the union territory up to the altitude of 1800 m. Common bamboo species are *Bambusa* sp., *Dendrocalamus hamiltonii*, *D hookeri*, etc.

2.4.a.2 The forest cover, food for wildlife animals and phenology of plants:

The different Forest types provide food & cover to different species found in the sanctuary. The dense vegetation has provided ideal habitat for various arboreal fauna like Assamese macaque, Rhesus macaque, Slow Loris, Leopard, Barking deer, Wild boar etc. Takin the endemic spp. found in the sanctuary feeds on bamboo. Similarly Red Panda is also found in bamboo forest.

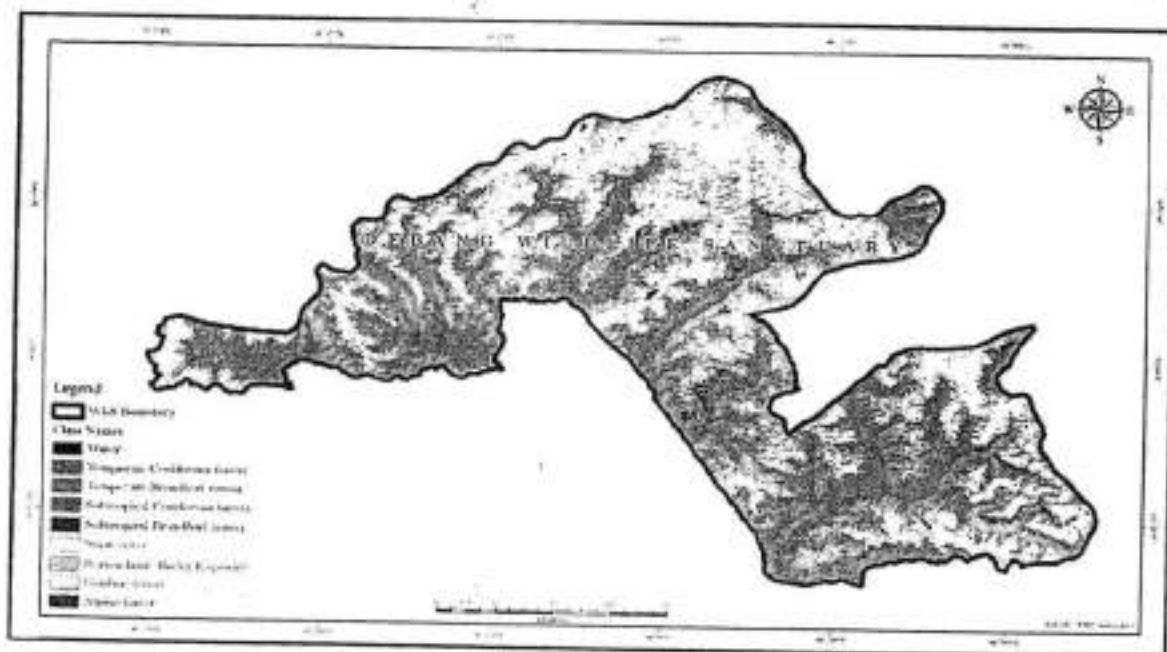


Figure 7: Forest Types within sanctuary area

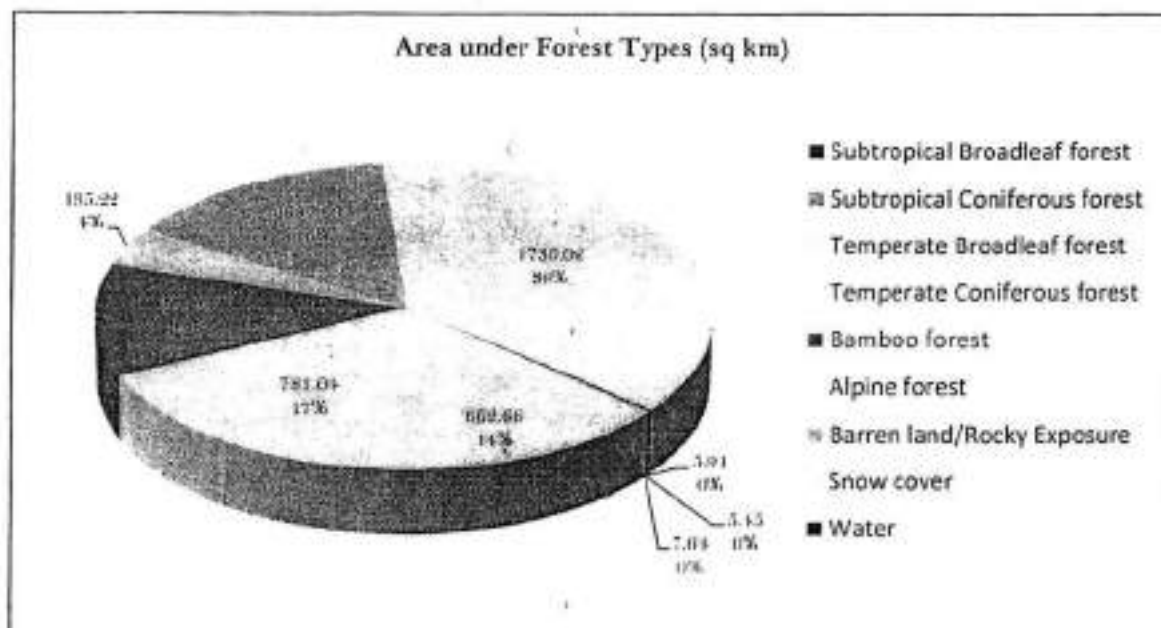


Figure 8: Forested area distribution within Dibrang WLS

The floristic composition of the Mishmi hill ranges of Dibrang valley comes under the wet temperate forest type IV/11/11B/C1, IV/11/11B/C2, IV/12/C1/3a, IV/12/C/3b, V/C2, VI/ISC3, VI/16/C1 and E1 of vegetation classification of India. Broadly, the vegetation of DWLS are classified into three categories which range from temperate broadleaf, temperate conifers to alpine forests while the peaks are barren and remain snow-capped for the greater part of the year (Campion & Seth 1968). The temperate broadleaf forest dominated by *Michelia* spp., *Quercus lamellosa*, *Quercus* spp., *Magnolia* spp., *Castanopsis indica*, *Castanopsis* spp., *Acer hookeri*, *Alnus nepalensis*, *Populus ciliata* etc., and the temperate conifer forest dominated by *Abies* spp., *Tsuga dumosa*, *Rhododendron arboretum*, *Taxus baccata* and *Pinus wallichiana* to alpine forest dominated by *Rhododendron* spp., *Saussurea* spp., *Sedum* spp. *Primula*, *Saxifraga* spp.

In the foothill areas there are wide coverage of grasslands. Apart from this diverse vegetation, many endemic and rare medicinal plants such as *Coptis teeta*, *Paris polyphylla*, *Panax pseudo*, *Panax sikkimensis*, *Artemisia nilagirica* etc. are also reported. Along with diverse forest type, bamboo such as *Phyllostachys bambusoides*, *Arundinaria* spp., *Cephalostachyum* spp. etc., wild banana, cane and varieties of ferns occur here. Many shrubs

and herbs such as *Zanthoxylum acanthodia* pyriformis, *Panax* spp., *Rumex* spp., etc. are also found. Most of the trees with epiphytic mosses and other epiphytic growth are also abundant. Diverse vegetation composition of the protected area mainly depends on the micro-climatic factors i.e., topographic, climatic, edaphic and biotic factors. The varied altitudinal gradient and associated factors have supported diverse forest type such as the temperate broadleaf forests which are distributed at an elevation ranges from 1800 to 2800 m above msl. While temperate conifer forest is confined at elevations of 2800 to 3500 m above msl and alpine forest are found between the elevation's ranges of 3000 and 5500 m above msl.

2.5 (b) Faunal Diversity

The DWLS and its adjoining landscapes harbor high diversity of faunal species with some of endangered, rare, endemic and threatened faunal species like Bengal Tiger (*Panthera tigris tigris*), Snow Leopard (*Panthera uncia*), Clouded Leopard (*Neofelis nebulosa*), Asiatic Golden Cat (*Catopuma temminckii*), Marbled Cat (*Pardofelis marmorata*), Leopard Cat (*Prionailurus bengalensis*), Fishing Cat (*Prionailurus viverrinus*), Jungle Cat (*Felis chaus*), Asiatic Wild dog (*Cuon alpinus*), Mishmi Takin (*Budorcas t. taxicolor*), Goral (*Naemorhedus goral*), Musk deer (*Moschus chrysogaster*), Barking deer (*Muntiacus muntjak*), Himalayan Serow (*Capricornis sumatraensis*), Wild pig (*sus scrofa*) (Gopi et al. 2014).

(i) **Dri Valley (Dri-mro):** The Dri valley was named after Dri River, which is formed by joining two tributaries Adjankho la (Adjankho river) and Tsang Khang la (Ekka-pani river) at Brunei which is around 56 km away from Dumbuen. The Dri valley originates at a place called Dumbuen (Achecho village), 3 km from Angrim valley and 29 km away from the district headquarter. The forest type is miscellaneous with thick temperate broad-leaved forest, bamboo forest, riparian forest and grasslands with hilly and undulating terrain. There is a well-established walkable track and along these track, many temporary hunting base camps were encountered, built by the local tribes for hunting. This valley is one of the identified long-range patrolling route (LRPs), which is mainly used by Indo-Tibetan Border Police (ITBP) and Indian Army, and there are four permanent base camps viz., Chelo (Chai pani), Chigu (Chigu-pani), Pather-one and Brunei which are used during patrolling.

(ii) **Angi-pani Valley (*Angi-mro*)**: The Angi-pani river is one of the principal tributaries of Dri river, which flows from northeastern hilly parts of the Dibang Wildlife Sanctuary. To reach the walkable track, which is also the local hunting track along the Angi-pani river in this valley, one has to start from the road point 28° 51' 38.1" North latitude and 95° 58' 50.2" East longitude which lies approximately 4 km ahead from Angrim village. The valley is at a distance of 20 km from the district headquarter. The forest type is miscellaneous, thick temperate broad-leaved forest with hilly terrain and highly undulating. Unlike the Dri Valley, this valley is exclusively only used by local people.

(iii) **Mathun Valley (*Mathun-mro*)**: Mathun valley is situated at the left side of the central part of the sanctuary. The track here starts from Mipi village which is 39 km away from Anini town. The Mathun valley is named after Mathun river which is soon joined by Enjoo river before Basam and the sides of Enjoo river is known as Enjoo valley (*Enjoo-mro*). Two more tributaries viz., Yonggyap chu and Andra chu joins at Basam and Mipi respectively flowing in from west to east.

It further flows south to merge with the Dri river little below Anini town. Mathun valley has hilly and highly undulating terrain, and comprises with different kind of forests such as miscellaneous, temperate broad leaved, bamboo, riparian forests and grasslands. There are four villages on the way to the sanctuary from Mipi, and they are Engolin basti, Beyanli basti, Adoni basti and Endulin basti. This valley also has one of the long ranging patrolling routes (LRPs) which are mainly used by Indo-Tibetan Border Police (ITBP) and Indian Army.

(iv) **Enjoo Valley (*Enjoo-mro*)**: The Enjoo valley is situated at the right side of the north-central part of the sanctuary, which is adjacent to Mathun valley, i.e., the left-wing valley. Enjoo valley name comes after Enjoo river which flows from the eastern to western direction and joins Mathun river before Basam (Basam ITBP camp). This valley gets diverted before reaching Basam ITBP camp on the way to Mathun valley. This valley also has highly undulating terrain with less open areas along the river bank. The major vegetations are miscellaneous type of forest with thick temperate broad-leaved forest, bamboo forest, riparian forest and grassland. There are no habitations in this valley. This valley is also used by ITBP and Indian Army as their LRPs route.

(v) **Talo Valley (*Talo-mro*):** The Talo valley is situated at the southern part of the sanctuary. The Talo valley has taken its name from the Talo river that originates from the east of the DWLS flowing towards western side. The Edzon and Edza rivers are the main tributaries of Talo river. It can be reached from Maliney side through Etalin town, and Maliney village is situated just on the boundary of the Wildlife Sanctuary which is around 90 km in southern side from the district headquarter. Around 8 to 10 km of track is highly undulating from the Maliney village towards the Talo valley. It has the miscellaneous type of forest with thick temperate broad-leaved forest, bamboo forest, riparian forest and grassland. There are no habitations inside this valley. Three ITBP camps are settled down up to Balua which is around 38 km far away from Maliney village, and local people frequently enter inside the forest mainly for collecting local medicinal plants.

Significance of the Project

The road project will provide access to defense forces till very near to the borders with China which will provide strategic advantage to the defense of the country. Added to this, it will also provide mode for conservation of the pristine and ecologically significant area in the following ways: -

1. It will provide scope for exploration of the area which is largely unexplored as it will provide easy access to research community and forest administration as well. This will go a long way on conservation of the flora and fauna of the wildlife sanctuary.
2. The access to the Wildlife sanctuary which is till now is accessible only on foot will provide means to check the illegal extraction of resources and by deployment of protection infrastructure in form of check posts and patrolling.
3. It will help developing eco-tourism in the area which will provide employment to the inhabitants reducing pressure on natural resources.

4. The increased income due to eco-tourism and development activities will put local populace in higher income group brackets which will reduce their dependence on primitive modes thereby reducing extraction of natural resources.
5. The enhanced tourist movement and dependence of economy on conservation would help enhance conservation efforts by local populace as has been seen in other parts of country like Kaziranga, Periyar TR to name a few.

Threats to Ecology and Environment

1. **Deforestation of the area:** The area of Dibang Wildlife Sanctuary (DWLS) is 414900 Ha of which diversion proposed is 58.49 ha. However, to compensate for the deforestation, compensatory afforestation measures are being deployed and the CA area which is selected is very near to the DWLS on Mipi side in Mathun Valley.
2. **Habitat Fragmentation:** The DWLS majorly has 3 major rivers namely R. Dri, R. Mathun, R. Talo/ R. Tangon which divides the whole landscape in 4 parts which act as natural barrier for faunal movement. The proposed Road is along one of the river R. Dri, hence is adjacent to one natural barrier. Still, mitigations measures need to be taken for easy movement of faunal species across the road which can't completely overturn the negative impacts due to habitat fragmentation but would mitigate the negative impact caused due to it.
3. **Wildlife Road kill:** Due to vehicle inflow inside sanctuary, threat lies that the animals would be killed in road accidents. To check this both mitigation efforts like control of speed and density of vehicle inside sanctuary need to be undertaken, along with this, remedial measures like animal rescue and medical attention need to be provided to save wildlife.
4. **Noise and Light Pollution:** Movement and Vehicle movement is bound to create light pollution and noise pollution inside sanctuary driving wildlife to road. In order to check

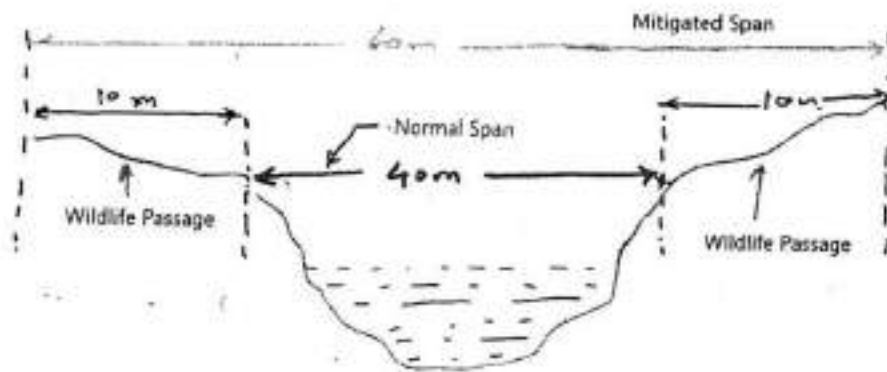
this both preventive and curative measures need to be undertaken. The preventive measures would include restricting the timing of movement of vehicle, secondly, creating sound and light barrier vegetation along the road in form of tall avenue plantations. The curative measures would require rescue of animals to safe locations.

5. **Man- Animal Conflict:** The access of forest to man have historically caused man- animal conflict, invariably being detrimental to wildlife. This would need careful management and mitigation. To start with, creating awareness and sensitization amongst the people using it, majorly the defense forces is the necessary condition. This would also need them to be trained in basic aspects of wildlife management like avoiding conflict, preventing any damage to man or wildlife in case of conflict. Along with this, all other measures mentioned above need to be followed in order to minimize the conflict.

The mitigation and conservation plan to minimize the damage:

1. **Animal Passage Plan:** Providing safe animal passage is key to mitigate wildlife habitat fragmentation for which number of methods could be applied, some of which are listed as follows:
 - i. **Mitigated Span of Bridge:** The common knowledge and the study in the area suggest that the wildlife follows the valleys created due to drainage pattern of the area. Hence, the easiest passage to provide for wildlife is along the bridges. Wherever, the bridges area to be created, if 20 m length on each side is extended added to the original span of the bridge, it could provide passage to the wildlife for crossing. The illustrative image is as shown in figure. The normal span is the point of slope inflexion along the drainage. Hence, extending the bridge beyond it to the low slope area will provide movement

passage to the wildlife.



$$\text{Mitigated Span of Bridge} = \text{Normal Span of bridge} \times 1.5$$

- ii. Use of Culverts: Culverts should be used in minimum ways, in most drainage, mitigated spanned bridge should be used. If at all culverts be used, it shouldn't be for more than 3 m. of drainage.
- iii. Speed Control: The speed of vehicles creates high chances for road kill, hence speed limit of 20-30 Kms should be set and appropriate structures like speed breakers, specially at animal crossings should be deployed.

2. Noise and Light Pollution Mitigation:

- i. Fixing time for vehicle movement: light pollution is generally caused during night times. Hence, setting time limit on the movement of vehicles inside wildlife sanctuary will also be helpful.
- ii. Creating tall avenue plantations along road: This will check noise and light interference caused by the vehicle
- iii. Banning Honking of vehicles on the road inside wildlife sanctuary.

3. Road Kill Mitigation Methods:

- i. Putting speed limit on vehicle movement: This will help reducing probability of road kill, this can be done by installing structures like speed breakers on the critical location where animal passage is there and otherwise as well.
 - ii. Creating animal rescue and treatment infrastructure: Animal rescue center needs to be created in Dambeun and vehicles for rescue need to be provided so that in case any road accident happen, the wildlife can be rescued and saved.
 - iii. Creating awareness amongst the stake holders: The stakeholders using the road would generally be from defense forces and government officials, so if sufficient awareness and training is provided to them, the road kills can be reduced to large extent, hence, regular awareness and training program need to be done on regular basis for at least 10 years so that it could be made part of behavior.
 - iv. Installation of fluorescent signages: This will help guiding the vehicles plying on the road.
4. Man- Animal Conflict mitigation: This could be reduced by reducing the human-animal interaction which could be done by restricting the movement and timing of movement inside sanctuary. Secondly, awareness regarding the same should be carried out in nearby villages and amongst the people using the road inside wildlife sanctuary. For this, creating an interpretation center in Dambeun area will be useful.

Financial Forecast

All the mitigation measures related to structural and Engineering part such as Bridges, Signages etc. as mentioned in the mitigation plan would be undertaken by the User Agency at their own cost as part of their Project while the mitigations measures that need to be implemented by the Forest Administration, the cost of it would be borne by the User Agency by transfer to the Forest Department.

Sl. No.	Description of work	Amount (in lakh)
1	Construction of Rescue, Treatment and Rehabilitation center in Dibang Wildlife Sanctuary including fencing, land purchase or lease of land subject to land availability within the sanctuary or nearby areas	75.00
2	Purchase of Equipment, Medicines, Tools, Rescue cages and other tools for rescue and rehabilitation of wildlife and also for equipment required for population monitoring.	25.00
3	Patrolling, Ambulance and Monitoring and Rescue Vehicles, 3 numbers	42.00
4	Staff wages (10000X12 MonthX2LabourerX10 Year) for rescue and rehabilitation and other works for conservation of wildlife	24.00
5.	Creation of Awareness amongst the stakeholders	5.00
6.	Creation of Interpretation center for training of stakeholders	100.00
7.	Population monitoring exercise, migration and landscape studies of wild animals and scientific research	5.00
8.	Creation of Avenue Plantation along Highway (200 Plants per Kms * 20 Kms * Rs. 1000)	60.00
	Sub Total	336.00
11	Contingency (3% of total financial outlay)	10.08
	Total	346.08

* The conservation plan period, works and the amount are subject to revision as per the field conditions subject to approval by Chief Wildlife Warden, Arunachal Pradesh. It will be preferable if the user agency may arrange for the land required for construction of wild animal Rescue Centre.

Conclusion

The mitigation and conservation plan aren't the roadblock for the development projects but is a management tool which could resolve the debate of Development Vs Environment, which may not prevent or undo the perpetual damage done to the ecology but could surely minimize the damage so that the net result from the change is the positive development. When it comes to the strategic security of the nation and environment security of the generations, this ethical dilemma becomes even more contesting, but as human development endeavor has made sustainability as its important pillar in past few decades, this mitigation plan is an effort in the same direction. If we could imbibe these principles and work towards effective and efficient management of our resources both natural and artificial, we would be able to achieve what we call is sustainable development.

Prepared by :

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I/C Dibang Wildlife Sanctuary
ANINI

ANIMAL PASSAGE PLAN
FOR
CONSTRUCTION OF ROAD FROM SUMWAL TO SARAIL CHOA

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Executive Engineer
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Ramnagar

ANIMAL PASSAGE PLAN FOR CONSTRUCTION OF ROAD FROM SUMWAL TO SARAIL CHOA

1. Introduction to the Project.

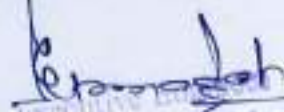
Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

The Sub-project road **Sumwal to Sarail Choa** is a link route with Code **JK14-402** in **Majalta Block of Udhampur District**. This road directly connects the habitations of Sarail Choa with total population of **295 souls** as per census 2001. Thus this link road serves the total population of 295 souls. Road is in mountainous terrain and starts from village Sumwal and connects village Sarail Choa. The length of road is 3.225 km and Width is 6 meter.

It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003.
- Providing all-weather road access to all villages/habitations of population greater than 500 people (250 in case of hill States North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal) by the end of the Tenth Five Year Plan i.e. 2007.

The rural road network required for providing the 'basic access' to all villages/habitations is termed as the Core Network. Basic access is defined as one all-weather road access from each village/ habitation to the nearby Market Centre or Rural Business Hub (RBH) and essential social and economic services.


EXECUTIVE ENGINEER
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Rannagar 1

A Core Network comprises of Through Routes and Link Routes. Through routes are the ones which collect traffic from several link roads or a long chain of habitations and lead it to a market centre or a higher category road, i.e. the District Roads or the State or National Highways. Link Routes are the roads connecting a single habitation or a group of habitations to Through Roads or District Roads leading to Market Centers. Link Routes generally have dead ends terminating on habitations, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a Market Centre.

The Core Network may not represent the most convenient or economic route for all purposes. However, since studies show 85-90% of rural trips are to market centers, the Core Network is likely to be a cost-effective conceptual framework for investment and management purposes, particularly in the context of scarce resources.

Objectives of Animal Passage Plan Study

The objectives of animal passage plan are:

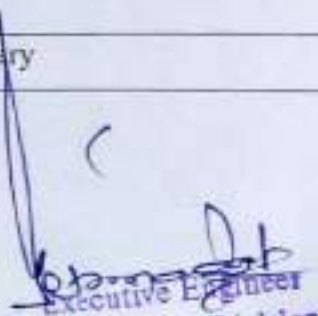
- To incorporate the needs of wildlife into transportation projects.
- To maintain the habitat connectivity
- To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

Achieving these goals will include restoring connections where they have been removed and ensuring that existing connections remain as the project road expands.

2. Project Location & Technical details of the Project Proposed.

Project:	Construction of Road from Sumwal to Sarail Choa (JK14-402)
Proposal No.	FP/JK/ROAD/46670/2020.
Project Proponent:	Executive Engineer PMGSY Division Ramnagar
Project Cost	237.87 Lakh.
Project Area inside PA	2.345 Ha.
Details of PA involved.	Surinsar-Mansar Wildlife Sanctuary

2


 Executive Engineer
 P.M.G.S.Y. Division
 Ramnagar

3. Justification for proposed route & alternative examined.

- I. The Project for construction of road from Sumwal to Sarailchoa (Package No.: JK14-402) is sanctioned in Phase-X under PMGSY. Some stretches of road pass through forest/wildlife area. The road namely Sumwal to Sarailchoa takes off from the end of PMGSY road Dhar road Larey to Sumwal in village Sumwal. The village Sarailchoa is benefitted by construction of this road on its completion and will provide connectivity to a population of about 295 souls inhabiting this village.
- II. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.
- III. Hence, the diversion of the forest/wildlife land is the only choice to construct the road.

4. Area details falling in Surinsar-Mansar Wildlife Sanctuary.

Total Length of Road = 3225 meter

Width of Road = 6.000 meter

Total area involved of Road within protected area = $3225 \times 6 = 19350 \text{ sqm}$

Dumping Sites :-

i) RD 0/235 (Non Forest Private Land) = $40 \text{ m} \times 10 \text{ m} = 400 \text{ sqm}$

ii) RD 1/050 (Non Forest Private Land) = $200 \text{ m} \times 12.5 \text{ m} = 2500 \text{ sqm}$

iii) RD 2/800 (Non Forest Private Land) = $100 \text{ m} \times 12 \text{ m} = 1200 \text{ sqm}$

Total Project area involved within protected area = $19350 + 400 + 2500 + 1200 =$

23450 sqm = 2.345 ha

Forest Land involved from RD 0/275 to 1/025 = 750 meter

Forest Land involved from RD 3/175 to 3/225 = 50 meter


Total Forest Land involved in road = 800 meter

Forest area involved in road = $800 \text{ m} \times 6 \text{ m} = 4800 \text{ sqm} = 0.48 \text{ ha}$

Total forest area involved within protected area = **0.48 ha**

Total non forest area involved within protected area = $2.345 \text{ ha} - 0.48 \text{ ha} = 1.865 \text{ ha}$

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S No	Total Project Area	Project area under protected area	Project area under non - protected area	Forest Area involved in project within protected area	Non Forest Area involved in project within protected area
1	2.345 ha	2.345 ha	Nil	0.48 ha	1.865 ha

5. Major Activities involved in the execution of Project.

A	Earthwork in excavation in Hilly area
1	Earthwork in Cutting
2	Earthwork in filling
B	CD Works
3	Construction of 1.0 M Dia HP Culvert
4	Construction of 2.0 M Span RCC Culvert
5	Construction of 3.0 M Span RCC Culvert
6	Construction of 6.0 M Span RCC Culvert
C	Construction of Semi Pucca Walling
7	R/Wall Ht. 2.00 M
8	R/Wall Ht. 3.00 M
9	R/Wall Ht. 4.00 M
10	B/Wall Ht. 2.55 m
11	Parapet
12	Pucca Drain
D	Providing & Fixing of PMGSY Boards
13	Citizen & Main Information Board
14	Logo Board
15	Road Sign Boards
16	KM Stones
17	200 M Stones

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6. Likely impact of the Project on Protected Area of Surinsar-Mansar Wildlife Sanctuary.

The Surinsar-Mansar Wildlife Sanctuary is situated between river Tawi in the North, Udhampur -Samba road and Gambir khad in the East, Battal-Billawar road in the Southeast, Surinsar-Mansar road in the Southwest and river Tawi and Surinsar lake in the North West. The total area of Surinsar-Mansar Wildlife Sanctuary is 9782 Ha. as per notification. The detail of mammals present in Wildlife Sanctuary is as under :

S No	Scientific Name	Common Name	Family
1	<i>Canis Aureus</i>	Jackal, Indian	Canidae
2	<i>Felis Chaus</i>	Cat, Jungle	Felidae
3	<i>Funambulus pennant</i>	Squirrel, Five-striped	Sciuridae
4	<i>Hystrixedwardsii</i>	Indian grey mongoose	Herpestidae
5	<i>Hystrix Indica</i>	Porcupine, Indian	Hystricidae
6	<i>Macaca Mulatta</i>	Macaque, Rhesus	Cercopithecidae
7	<i>Muntiacusmuntjak</i>	Barking Deer	Cervidae
8	<i>Panthera pardus</i>	Leopard, Indian	Felidae
9	<i>Paradoxurus hermaphroditus</i>	Asian palm Civet	Viverridae
10	<i>Rousettus leschenaultia</i>	Bat, Fulvous Fruit	Pteropodidae
11	<i>Sus Scrofa</i>	Wild boar	Suidae
12	<i>Viverricula Indica</i>	Civet, Small Indian	Viverridae

The road from Sumwal to SarailChoa (JK14-402) shall give benefit to village SarailChoa when completed and provide connectivity to a population of about 295 souls inhabiting this village.

6.1 Adverse effect associated with Linear Project vis-à-vis present project

The linear projects passing through wildlife protected areas are associated with:

- Loss of habitat resulting reduced carrying capacity.
- Fragmentation of habitat into spatially isolated parts.
- Injury/mortality to animals.


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- Presence of construction camps.
- Deprive animals from using their entire habitat.
- Increased human wildlife conflict.
- Pollution due to liquid or solid waste.

a. **Habitat Loss and Fragmentation:** Generally, linear Projects like Roads are known to affect many different animal groups, predominantly mammals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the Project corridor. The Project might impact the habitat and movement of others arboreal species like monkey, primates etc.

b. **Induced Impact on Wildlife from Construction workers:**

Construction manpower will be required for execution of the project and makeshift construction camps and will be set up as per site requirement. Generally, for construction works, local manpower/workers will be engaged. The induced impact on the wildlife of Surinsar-Mansar Wildlife Sanctuary from such construction workers is the likelihood of involvement in hunting/trafficking of wild animals and other unlawful activity during the execution of the project.

In case of construction of road from Sumwal to SarailChoa, no labour camp will be established in Sanctuary area. It shall be ensured that that no activity is carried out after sunset within the sanctuary area. Awareness-raising will be done to mitigate this risk. The contractor and his workers must be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.

7. Safeguard for Animal/Wildlife Passage.

7.1 Passage Plan

Animals move between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks,

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canals and power lines will now have to include a plan to provide for safe movement of wildlife and allocate budget for animal passages as per NBWL proceedings dated 25th January 2018.

7.2 Project Corridor

The present project under discussion, through a linear project has very negligible or null ill effect to the project. On critical analysis/ observation of this project is seen that:

- The project length of road Sumwal to Sarailchoa is 3.225 Km and the complete length is passing through Surinsar-Mansar Wildlife Sanctuary.
- The land required for this project is 2.345 Ha in protected area.
- The project road is a major rural link road and is in proposal to come within protected area.
- The problem of human wildlife conflict, depriving free flow of habitats will be avoided by the provision of under passages in the form of RCC Culverts.

Passage to the wildlife habitats will be provided in the form of under passages by means of RCC Culverts already proposed in the DPR. 4 No. of RCC culverts of Span 6 M, 3 M are proposed in the road. The locations of animal passage are also shown in the GPS Map attached below. The forest land involves in the road from RD 0/275 – 1/25. The passage at RD 0/575 will pass through forest land.

Table no. 1: Showing Location of RCC Culverts

S No	Location of Culvert	Span
1	RD 0/575	3 M
2	RD 1/915	6 M
2	RD 2/335	3 M
3	RD 2/575	3 M

The land use of the project area and the adjacent lands will play a large role in determining the type and extent of mitigation required. As the area surrounding the project is slated for high density residential/commercial development, the facilitating wildlife movement through this area is likely not feasible or desired. As per observation

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made in the site visits and during different survey proceedings, no wildlife crossings were found in the project stretch.

Common land uses in the project road include the following:

- Residential
- Agricultural
- Natural Area
- Drainage Channels

It is important to not only consider present development, but also consider future development. The present road is in hilly terrain. So, the landuse pattern is mostly open section with few stretches of built-up section and semi-builtup sections. Farming is found in many stretches. Few stretches come under forest region.

7.3 Conflict with Habitats

Generally, there may be conflicts between local wildlife and the transportation projects. But as per observations and information collected from the forest department, no passage of land animals is seen to cross the project road as the project corridor is full with patches of built-up sections and human interference.


The project has low traffic volume and/or speed or large vehicles. Different species will be less affected by the traffic volume and /or speed in different ways depending on their mobility. But as mentioned above, there is no crossing across the project road.

7.4 Conflict with road characteristics

Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than an absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

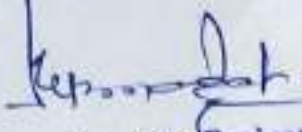
7.5 Conflicts with Existing Infrastructure

Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hindrance for wildlife, the followings are need to be kept in mind:

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- Removal of physical barriers
- Structures that incorporate both pedestrian and wildlife into the same structures
- No perched culverts
- Structures with insufficient water depth for aquatic passage
- Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced, so as to prevent accidental falling of mammals in the vicinity of the construction sites.
- Noise levels during the construction phase shall be monitored properly to avoid disturbance, if any to the animals.
- No construction activity shall be undertaken after sunset and during the night.
- No harm to wildlife habitat including fauna and flora of the sanctuary shall be ensured.
- The WLS area shall not be used for any other work other than the work permitted.
- No establishment of any temporary or permanent labour camp inside the sanctuary area.
- Alternate Fuel (LPG) shall be provided to Laborer's for cooking purpose.
- No vehicular movement inside sanctuary area shall be allowed from sunset to sunrise except emergency vehicle.
- Awareness-raising will be done to mitigate this risk. The contractor and his workers shall be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.
- In addition to above mitigation measures, any other measures as envisaged by the CWLW/State Board of Wildlife/National Board of Wildlife and as per provisions of wildlife(Protection) Act, 1972 shall be implemented by the company during execution of the project.

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7.6 Design Guidelines

The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- Consider the slope of the roadside
- Consider potential/known areas of higher wildlife activity
- Consider impact of drainage ditches
- Consider the implications of the roadway design for emergency response access and maintenance access.

7.7 Identify Ecological Design Group

The vast biodiversity in nature provides a challenge when attempting to maintain connectivity and reduce genetic isolation. Each species within an area will have slightly different habitat requirements and behavior making it difficult to design a corridor that will satisfy the requirements of all the species. In addition, there is insufficient data for many species which provides a challenge when attempting to understand their life history strategy and to design a corridor that will satisfy the requirements.

The category of species which special attention are as follows:

- Species that require dispersal for survival
- Species that are integral to ecological processes
- Species that are dominant but could become less important if connectivity is lost
- Species that need connectivity to prevent genetic divergence
- Species experiencing high vehicle associated mortality in or near the study area
- Rare, endangered or vulnerable species

7.8 Identify Mitigation

Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:

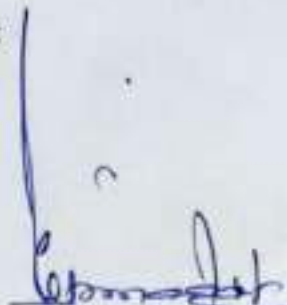

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Fig.1: Showing Locations of Animal Crossing



7.9 Calculation of Openness Ratio

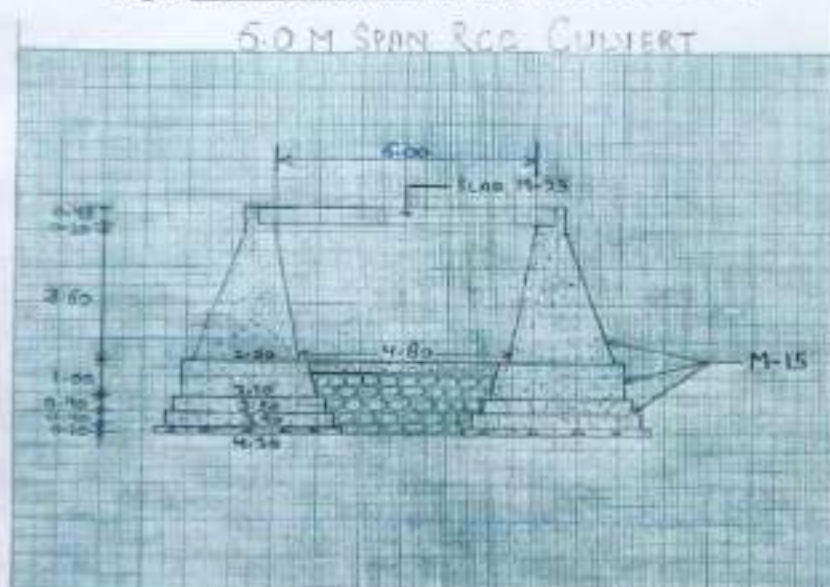
- Openness Ratio = $\frac{\text{height of the opening} \times \text{width of th structure}}{\text{length of the underpass}}$

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Fig.2 : Dimensions of an underpass determining its openness ratio



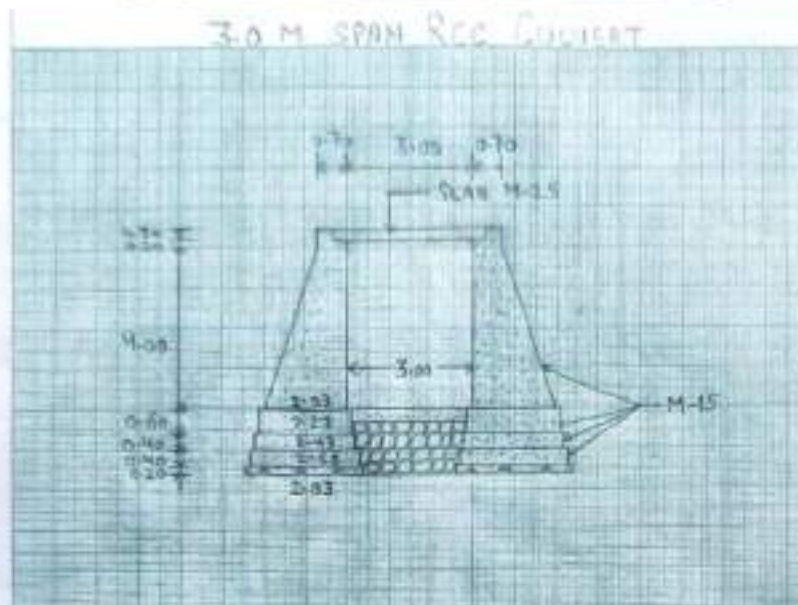
Fig.3: Specifications of 6 m Span RCC Culvert



- Length = 6.00 m
- Width = $\frac{(6.00 + 4.80)}{2} = 5.40$ m
- Height = 3.80 m
- Openness Ratio = $\frac{5.40 \times 3.80}{6.00} = 3.42$ m

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Fig.4: Specifications of 3 m Span RCC Culvert



- Length = 6.00 m
- Width = 3.00 m
- Height = 4.20 m
- Openness Ratio = $\frac{3.00 \times 4.20}{6.00} = 2.10$

Table No. 2: Showing Openness Ratio Value of RCC Culverts to be used as Underpass

S No	Location of Culvert	Span	Openness Ratio
1	RD 0/575	3 M	2.10
2	RD 1/915	6 M	3.42
2	RD 2/335	3 M	2.10
3	RD 2/575	3 M	2.10

7.10 Provision of Safety Features

- Cautionary / Warning Sign Boards will be provided at the start and at the end of each stretch of forest land. Fig. below showing board to be used:



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Table No. 3: Showing location of Animal Crossing Boards

S No	RD	Board Count
1	0/275	01
2	1/25	01
3	3/175	01
4	3/225	01
	Total	04

- **Road Studs / Reflectores / Speed Breakers** will be provided at the start and at the end of each stretch of forest land. Fig. below showing road studs to be used



Table No.4: showing location of Road Studs


S No	RD	Road Studs (No)
1	0/275	20
2	1/25	20
3	3/175	20
4	3/225	20
	Total	80


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ANIMAL PASSAGE PLAN
FOR
CONSTRUCTION OF ROAD FROM DHAR ROAD LAREY TO SUMAL

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ANIMAL PASSAGE PLAN FOR CONSTRUCTION OF ROAD FROM DHAR ROAD LAREY TO SUMAL

1. Introduction to the Project.

Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

The Sub-project road **Dhar Road Larey to Sumal** is a link route having Code **L026** in **Majalta Block of Udhampur District**. This road directly connects the habitations of Sumal with total population of **805 souls** as per census 2001. Thus this link road serves the total population of 805 souls. Road is in mountainous terrain and starts from Dhar Road Larey and connects village Sumal. The length of road is 3.325 km and Width is 6 meter.

It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003.
- Providing all-weather road access to all villages/habitations of population greater than 500 people (250 in case of hill States North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal) by the end of the Tenth Five Year Plan i.e. 2007.

The rural road network required for providing the 'basic access' to all villages/habitations is termed as the Core Network. Basic access is defined as one all-weather road access from each village/ habitation to the nearby Market Centre or Rural Business Hub (RBH) and essential social and economic services.

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A Core Network comprises of Through Routes and Link Routes. Through routes are the ones which collect traffic from several link roads or a long chain of habitations and lead it to a market centre or a higher category road, i.e. the District Roads or the State or National Highways. Link Routes are the roads connecting a single habitation or a group of habitations to Through Roads or District Roads leading to Market Centers. Link Routes generally have dead ends terminating on habitations, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a Market Centre.

The Core Network may not represent the most convenient or economic route for all purposes. However, since studies show 85-90% of rural trips are to market centers, the Core Network is likely to be a cost-effective conceptual framework for investment and management purposes, particularly in the context of scarce resources.

Objectives of Animal Passage Plan Study

The objectives of animal passage plan are:

- To incorporate the needs of wildlife into transportation projects.
- To maintain the habitat connectivity
- To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

Achieving these goals will include restoring connections where they have been removed and ensuring that existing connections remain as the project road expands.

2. Project Location & Technical details of the Project Proposed.

Project:	Construction of Road from Dhar Road Larey to Sumal
Proposal No.	FP/JK/ROAD/141991/2021.
Project Proponent:	Executive Engineer PMGSY Division Ramnagar
Project Cost	105.23 Lakh.
Project Area inside PA	1.995 Ha.
Details of PA involved.	Surinsar-Mansar Wildlife Sanctuary


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3. Justification for proposed route & alternative examined.

- I. The Project for construction of road from Dhar Road Larey to Sumal (Length=3.325 km) is sanctioned in Phase-VIII under PMGSY. Some stretches of road pass through forest/wildlife area. The road namely Dhar Road Larey to Sumal takes off from the existing main Dhar road village Larey. The village Sumal is benefitted by construction of this road on its completion and will provide connectivity to a population of about 805 souls inhabiting this village.
- II. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.
- III. Hence, the diversion of the forest/wildlife land is the only choice to construct the road.

4. Area details falling in Surinsar-Mansar Wildlife Sanctuary.

Total Length of Road = 3325 meter

Width of Road = 6.000 meter

Total area involved of Road within protected area = $3325 \times 6 = 19950$ sqm

Total Project area involved within protected area = **19950 sqm = 1.995 ha**

Forest Land involved from RD 0/600 to 1/050 = 450 meter

Forest Land involved from RD 1/375 to 1/675 = 300 meter

Forest Land involved from RD 1/900 to 2/025 = 125 meter

Total Forest Land involved in road = 875 meter

Forest area involved in road = $875 \text{ m} \times 6 \text{ m} = 5250 \text{ sqm} = \mathbf{0.525 \text{ ha}}$

Total forest area involved within protected area = **0.525 ha**

Total non forest area involved within protected area = $1.995 \text{ ha} - 0.525 \text{ ha} = \mathbf{1.47 \text{ ha}}$

S No	Total Project Area	Project area under protected area	Project area under non - protected area	Forest Area involved in project within protected area	Non Forest Area involved in project within protected area
1	1.995 ha	1.995 ha	Nil	0.525 ha	1.47 ha

5. Major Activities involved in the execution of Project.

1	Construction of 2.0 M Span RCC Culvert
2	Construction of 3.0 M Span RCC Culvert
3	R/Wall Ht. 3.00 M
4	B/Wall Ht. 2.55 m
5	Parapet
6	Pucca Drain
7	P/L GSB
8	P/L WBM-2 & WBM-3
9	Primer Coat
10	Tack Coat
11	OGPC
12	Seal Coat
13	Citizen & Main Information Board
14	Logo Board
15	Road Sign Boards
16	KM Stones
17	200 M Stones
18	Earthen Shoulders

6. Likely impact of the Project on Protected Area of Surinsar-Mansar Wildlife Sanctuary.

The Surinsar-Mansar Wildlife Sanctuary is situated between river Tawi in the North, Udhamp -Samba road and Gambir khad in the East, Battal-Billawar road in the Southeast, Surinsar-Mansar road in the Southwest and river Tawi and Surinsar lake in the North West. The total area of Surinsar-Mansar Wildlife Sanctuary is 9782 Ha. as per notification. The detail of mammals present in Wildlife Sanctuary is as under :

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The linear projects passing through wildlife protected areas are associated with:

- Loss of habitat resulting reduced carrying capacity.
- Fragmentation of habitat into spatially isolated parts.
- Injury/mortality to animals.
- Presence of construction camps.
- Deprive animals from using their entire habitat.
- Increased human wildlife conflict.
- Pollution due to liquid or solid waste.


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a. **Habitat Loss and Fragmentation:** Generally, linear Projects like Roads are known to affect many different animal groups, predominantly mammals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the Project corridor. The Project might impact the habitat and movement of others arboreal species like monkey, primates etc.

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Construction manpower will be required for execution of the project and makeshift construction camps and will be set up as per site requirement. Generally, for construction works, local manpower/workers will be engaged. The induced impact on the wildlife of Surinsar-Mansar Wildlife Sanctuary from such construction workers is the likelihood of involvement in hunting/trafficking of wild animals and other unlawful activity during the execution of the project.

In case of construction of road from Dhar Road Larey to Sumal, no labour camp will be established in Sanctuary area. It shall be ensured that that no activity is carried out after sunset within the sanctuary area. Awareness-raising will be done to mitigate this risk. The contractor and his workers must be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.

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Animals move between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks, canals and power lines will now have to include a plan to provide for safe movement of wildlife and allocate budget for animal passages as per NBWL proceedings dated 25th January 2018.


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7.2 Project Corridor

The present project under discussion, through a linear project has very negligible or null ill effect to the project. On critical analysis/ observation of this project is seen that:

- The project length of road Dhar Road Larey to Sumal is 3.325 Km and the complete length is passing through Surinsar-Mansar Wildlife Sanctuary.
- The land required for this project is 1.995 Ha in protected area.
- The project road is a major rural link road and is in proposal to come within protected area.
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Passage to the wildlife habitats will be provided in the form of under passages by means of RCC Culverts already proposed in the DPR. 2 No. of RCC culverts of Span 2 M, 3 M are proposed in the road. The locations of animal passage are also shown in the GPS Map attached below. The forest land involves in the road from RD 0/600-1/050, RD 1/375-1/675, RD 1/900-2/025.

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S No	Location of Culvert	Span
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The land use of the project area and the adjacent lands will play a large role in determining the type and extent of mitigation required. As the area surrounding the project is slated for high density residential/commercial development, the facilitating wildlife movement through this area is likely not feasible or desired. As per observation made in the site visits and during different survey proceedings, no wildlife crossings were found in the project stretch.

Common land uses in the project road include the following:

- Residential
- Agricultural


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- Natural Area
- Drainage Channels

It is important to not only consider present development, but also consider future development. The present road is in hilly terrain. So, the land use pattern is mostly open section with few stretches of built-up section and semi-built up sections. Farming is found in many stretches. Few stretches come under forest region.

7.3 Conflict with Habitats

Generally, there may be conflicts between local wildlife and the transportation projects. But as per observations and information collected from the forest department, no passage of land animals is seen to cross the project road as the project corridor is full with patches of built-up sections and human interference.

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Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than a absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

7.5 Conflicts with Existing Infrastructure

Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hindrance for wildlife, the followings are need to be kept in mind:

- Removal of physical barriers
- Structures that incorporate both pedestrian and wildlife into the same structures

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- No perched culverts
- Structures with insufficient water depth for aquatic passage
- Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced so as to prevent accidental falling of mammals in the vicinity of the construction sites.
- Noise levels during the construction phase shall be monitored properly to avoid disturbance, if any to the animals.
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7.6 Design Guidelines

The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- Consider the slope of the roadside
- Consider potential/known areas of higher wildlife activity
- Consider impact of drainage ditches
- Consider the implications of the roadway design for emergency response access and maintenance access.

7.7 Identify Ecological Design Group

The vast biodiversity in nature provides a challenge when attempting to maintain connectivity and reduce genetic isolation. Each species within an area will have slightly different habitat requirements and behavior making it difficult to design a corridor that will satisfy the requirements of all the species. In addition, there is insufficient data for many species which provides a challenge when attempting to understand their life history strategy and to design a corridor that will satisfy the requirements.

The category of species which special attention are as follows:

- Species that require dispersal for survival
- Species that are integral to ecological processes
- Species that are dominant but could become less important if connectivity is lost
- Species that need connectivity to prevent genetic divergence
- Species experiencing high vehicle associated mortality in or near the study area
- Rare, endangered or vulnerable species

7.8 Identify Mitigation

Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:


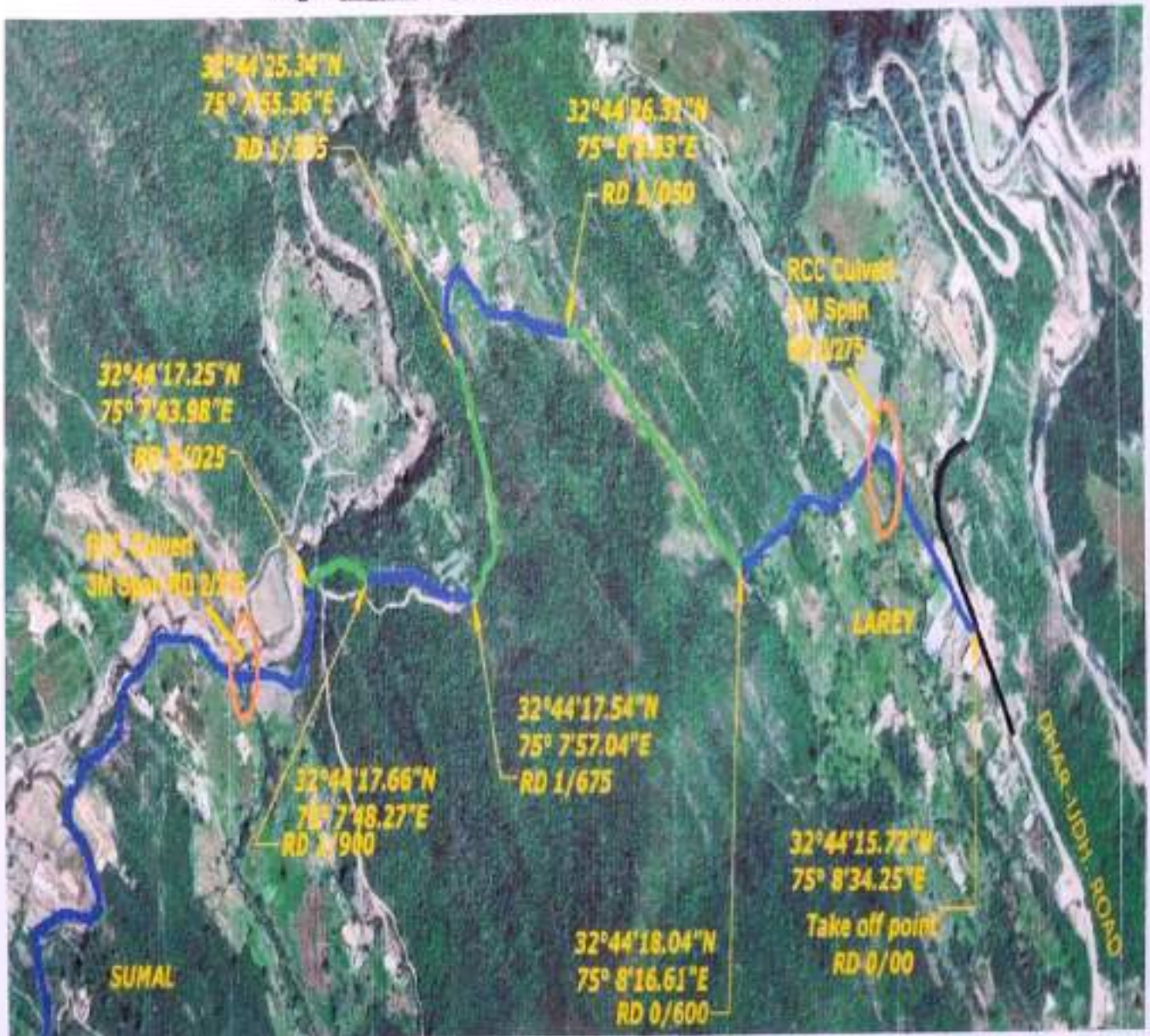

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Fig.1: Showing Locations of Animal Crossing



7.9 Calculation of Openness Ratio

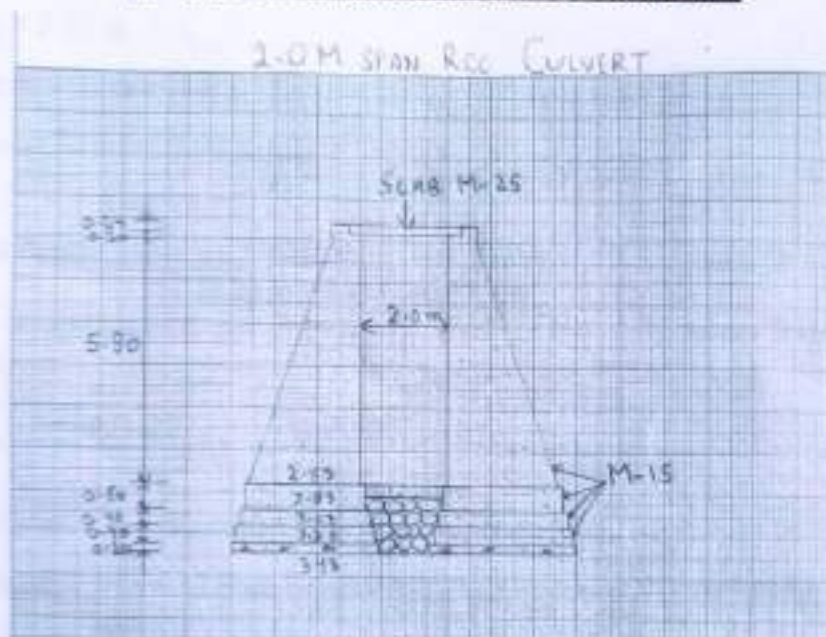
- Openness Ratio = $\frac{\text{height of the opening} \times \text{width of th structure}}{\text{length of the underpass}}$

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Fig.2 : Dimensions of an underpass determining its openness ratio



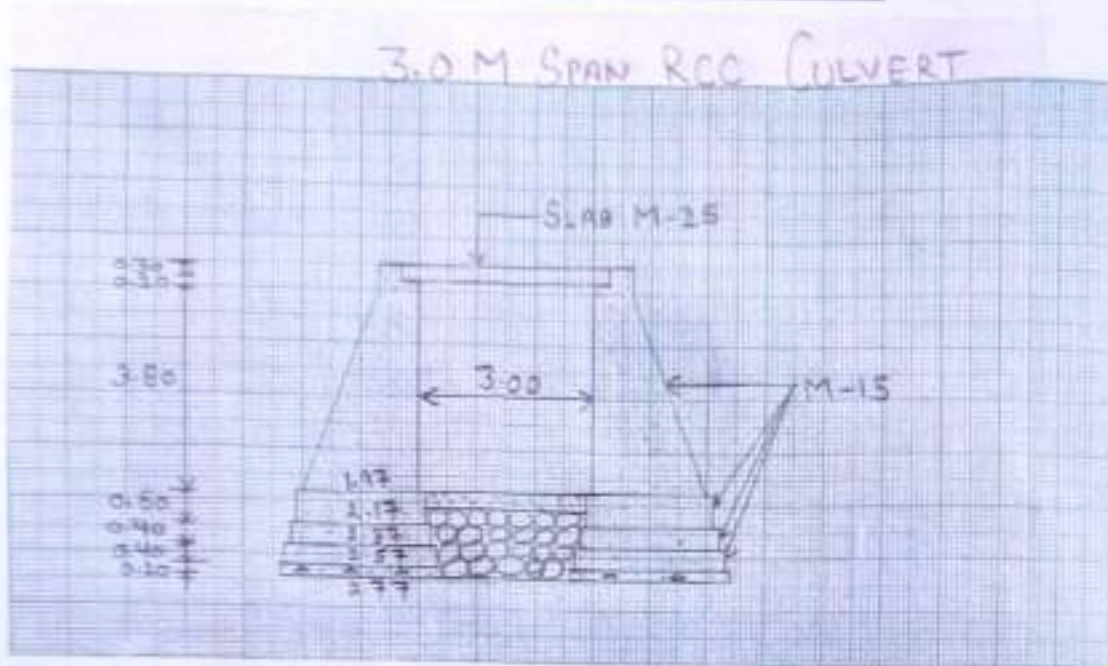
Fig.3: Specifications of 2 m Span RCC Culvert



- Length = 6.00 m
- Width = 2.00 m
- Height = 6.00 m
- Openness Ratio = $\frac{2.00 \times 6.00}{6.00} = 2.00$ m

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Fig.4: Specifications of 3 m Span RCC Culvert



- Length = 6.00 m
- Width = 3.00 m
- Height = 4.00 m
- Openness Ratio = $\frac{3.00 \times 4.00}{6.00} = 2.00$

Table No. 2: Showing Openness Ratio Value of RCC Culverts to be used as Underpass

S No	Location of Culvert	Span	Openness Ratio
1	RD 0/275	2 M	2.00
2	RD 2/275	3 M	2.00

7.10 Provision of Safety Features

- Cautionary / Warning Sign Boards will be provided at the start and at the end of each stretch of forest land. Fig. below showing board to be used:




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Table No. 3: Showing location of Animal Crossing Boards

S No	RD	Board Count
1	0/600	01
2	1/050	01
3	1/375	01
4	1/675	01
5	1/900	01
6	2/025	01
	Total	06

- **Road Studs / Reflectores / Speed Breakers** will be provided at the start and at the end of each stretch of forest land. Fig. below showing road studs to be used



Table No.4: showing location of Road Studs

S No	RD	Road Studs (No)
1	0/600	20
2	1/050	20
3	1/375	20
4	1/675	20
5	1/900	20
6	2/025	20
	Total	120

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ANIMAL PASSAGE PLAN
FOR
UPGRADATION OF ROAD FROM L-060 KOTHAR TO PONTAL

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6.	Likely impact of the Project on Protected Area of Surinsar-Mansar Wildlife Sanctuary.	5-6
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ANIMAL PASSAGE PLAN FOR UPGRADATION OF ROAD FROM
L-060 KOTHAR TO PONTAL

1. Introduction to the Project.

Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

The Sub-project road **Kothar to Pontal** is a link route with Code **JK05-210** in **Dansal** block of **Jammu** District. This road directly connects 4642 souls in village Kothar and 291 souls in village Pontal with total population of **4933 souls** as per census 2001. Thus this link road serves the total population of 4933 souls. Road is in mountaneous terrain and starts from village Kothar and connects village Pontal. The length of road is 8.000 km and Width is 6 meter.


It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003.
- Providing all-weather road access to all villages/habitations of population greater than 500 people (250 in case of hill States North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal) by the end of the Tenth Five Year Plan i.e. 2007.

The rural road network required for providing the 'basic access' to all villages/habitations is termed as the Core Network. Basic access is defined as one all-weather road access from each village/ habitation to the nearby Market Centre or Rural Business Hub (RBH) and essential social and economic services.




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A Core Network comprises of Through Routes and Link Routes. Through routes are the ones which collect traffic from several link roads or a long chain of habitations and lead it to a market centre or a higher category road, i.e. the District Roads or the State or National Highways. Link Routes are the roads connecting a single habitation or a group of habitations to Through Roads or District Roads leading to Market Centers. Link Routes generally have dead ends terminating on habitations, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a Market Centre.

The Core Network may not represent the most convenient or economic route for all purposes. However, since studies show 85-90% of rural trips are to market centers, the Core Network is likely to be a cost-effective conceptual framework for investment and management purposes, particularly in the context of scarce resources.

Objectives of Animal Passage Plan Study

The objectives of animal passage plan are:

- To incorporate the needs of wildlife into transportation projects.
- To maintain the habitat connectivity
- To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

Achieving these goals will include restoring connections where they have been removed and ensuring that existing connections remain as the project road expands.

2. Project Location & Technical details of the Project Proposed.

Project:	Upgradation of Road from L-060 Kothar to Ponthal (JK 05-210)
Proposal No.	FP/JK/ROAD/120321/2021.
Project Proponent:	Executive Engineer PMGSY Division Jammu
Project Cost	682.60 Lakh.
Project Area inside PA	2.442 Ha.
Details of PA involved.	Surinsar-Mansar Wildlife Sanctuary

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3. Justification for proposed route & alternative examined.

- I. The Project for Upgradation of road from L060- kothar to Ponthal (Package No.: JK05-210) is sanctioned by MORD Govt. of India under PMGSY-II Batch-I 2019-20. Some stretches of road pass through forest/wildlife area. The road namely L060- kothar to Ponthal takes off from the railway station Manwal and ends at village Ponthal. It directly connects 4642 souls in village kothar and 291 souls in village Ponthal with a total population of 4933 souls as per census 2001 and the road on its completion shall provide connectivity to the population as enumerated above.
- II. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.
- III. Hence, the diversion of the forest/wildlife land is the only choice to construct the road.

4. Area details falling in Surinsar-Mansar Wildlife Sanctuary.

Total Length of Road = 8000 meter

Width of Road = 6.000 meter

Total area involved of Road within protected area = $4070 \times 6 = 24420$ sqm

Total Project area involved within protected area = 2.442 ha

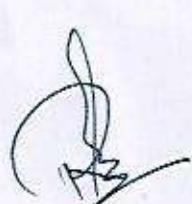
Forest Land involved from RD 3/930 to 6/400 = 2470 meter

Total Forest Land involved in road = **2470 meter**

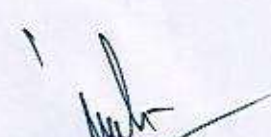
Forest area involved in road = $2470 \text{ m} \times 6 \text{ m} = 14820 \text{ sqm} = 1.482 \text{ ha}$

Total forest area involved within protected area = **1.482 ha**

Total non forest area involved within protected area = $2.442 \text{ ha} - 1.482 \text{ ha} = 0.96 \text{ ha}$



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S No	Total Project Area	Project area under protected area	Project area under non - protected area	Forest Area involved in project within protected area	Non Forest Area involved in project within protected area
1	4.925 ha	2.442 ha	2.483ha	1.482 ha	0.96 ha

5. Major Activities involved in the execution of Project.

A	Earthwork in excavation in Hilly area
1	Earthwork in Cutting
2	Earthwork in filling
B	CD Works
3	Construction of 60.0M span Bridge
4	Construction of 15.0 M span Vented Causeway
5	Construction of 1.0 M Dia HP Culvert
6	Construction of 2.0 M Span RCC Culvert
7	Construction of 3.0 M Span RCC Culvert
8	Construction of 6.0 M Span RCC Culvert
C	Construction of Semi Pucca Walling
9	R/Wall Ht. 3.00 M
10	R/Wall Ht. 4.00 M
11	B/Wall Ht. 2.55 m
12	Parapet
13	Pucca Drain
D	Providing & Fixing of PMGSY Boards
14	Citizen & Main Information Board
15	Logo Board
16	Road Sign Boards
17	KM Stones
18	200 M Stones

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6. Likely impact of the Project on Protected Area of Surinsar-Mansar Wildlife Sanctuary.

The Surinsar-Mansar Wildlife Sanctuary is situated between river Tawi in the North, Udhampur -Samba road and Gambirkhad in the East, Battal-Billawar road in the Southeast, Surinsar-Mansar road in the Southwest and river Tawi and Surinsar lake in the North West. The total area of Surinsar-Mansar Wildlife Sanctuary is 9782 Ha. as per notification. The detail of mammals present in Wildlife Sanctuary is as under :

S No	Scientific Name	Common Name	Family
1	<i>Canis Aureus</i>	Jackal, Indian	Canidae
2	<i>Felis Chaus</i>	Cat, Jungle	Felidae
3	<i>Funambulus pennant</i>	Squirrel, Five-striped	Sciuridae
4	<i>Hystrixedwardsii</i>	Indian grey mongoose	Herpestidae
5	<i>Hystrix Indica</i>	Porcupine, Indian	Hystriidae
6	<i>Macaca Mulatta</i>	Macaque, Rhesus	Cercopithecidae
7	<i>Muntiacusmuntjak</i>	Barking Deer	Cervidae
8	<i>Panthera pardus</i>	Leopard, Indian	Felidae
9	<i>Paradoxurus hermaphroditus</i>	Asian palm Civet	Viverridae
10	<i>Rousettus leschenaultia</i>	Bat, Fulvous Fruit	Pteropodidae
11	<i>Sus Scrofa</i>	Wild boar	Suidae
12	<i>Viverricula Indica</i>	Civet, Small Indian	Viverridae


The road from L060-Kothar to Ponthal (JK05-210) shall give benefit to village Ponthal when completed and provide connectivity to a population of about 4933 souls inhabiting this village.

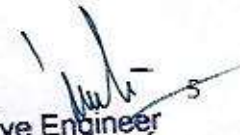
6.1 Adverse effect associated with Linear Project vis-à-vis present project

The linear projects passing through wildlife protected areas are associated with:

- Loss of habitat resulting reduced carrying capacity.
- Fragmentation of habitat into spatially isolated parts.
- Injury/mortality to animals.


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- Presence of construction camps.
- Deprive animals from using their entire habitat.
- Increased human wildlife conflict.
- Pollution due to liquid or solid waste.

a. Habitat Loss and Fragmentation: Generally, linear Projects like Roads are known to affect many different animal groups, predominantly mammals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the Project corridor. The Project might impact the habitat and movement of others arboreal species like monkey, primates etc.

b. Induced Impact on Wildlife from Construction workers:

Construction manpower will be required for execution of the project and makeshift construction camps and will be set up as per site requirement. Generally, for construction works, local manpower/workers will be engaged. The induced impact on the wildlife of Surinsar-Mansar Wildlife Sanctuary from such construction workers is the likelihood of involvement in hunting/trafficking of wild animals and other unlawful activity during the execution of the project.


In case of Upgradation of road from L060- kothar to Ponthal, no labour camp will be established in Sanctuary area. It shall be ensured that that no activity is carried out after sunset within the sanctuary area. Awareness-raising will be done to mitigate this risk. The contractor and his workers must be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.


7. Safeguard for Animal/Wildlife Passage.

7.1 Passage Plan

Animals move between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks, canals and power lines will now have to include a plan to provide for safe movement of


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wildlife and allocate budget for animal passages as per NBWL proceedings dated 25th January 2018.

7.2 Project Corridor

The present project under discussion, through a linear project has very negligible or null ill effect to the project. On critical analysis/ observation of this project is seen that:

- The project length of road L060- kothar to Ponthal is 8.000 Km and the 4.070Km length is passing through SurinsarMansar Wildlife Sanctuary.
- The land required for this project is 2.442 Ha in protected area.
- The project road is a major rural link road and is in proposal to come within protected area.
- The problem of human wildlife conflict, depriving free flow of habitats will be avoided by the provision of under passages in the form of RCC Culverts.

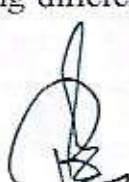
Passage to the wildlife habitats will be provided in the form of under passages by means of RCC Culverts and vented causeway already proposed in the DPR. 1 No. of vented causeway and 2No. of RCC culverts of Span 3M are proposed in the road. The locations of animal passage are also shown in the GPS Map attached below. The forest land involves in the road from RD 3/930 – 6/400.


Table no. 1: Showing Location of RCC Culverts

S No	Location of Culvert	Span
1	RD 4/475	15 M
2	RD 5/475	3 M
3	RD 6/350	3 M

The land use of the project area and the adjacent lands will play a large role in determining the type and extent of mitigation required. As the area surrounding the project is slated for high density residential/commercial development, the facilitating wildlife movement through this area is likely not feasible or desired. As per observation made in the site visits and during different survey proceedings, no wildlife crossings were found in the project stretch.


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Common land uses in the project road include the following:

- Residential
- Agricultural
- Natural Area
- Drainage Channels

It is important to not only consider present development, but also consider future development. The present road is in hilly terrain. So, the landuse pattern is mostly open section with few stretches of built-up section and semi-builtup sections. Farming is found in many stretches. Few stretches come under forest region.

7.3 Conflict with Habitats

Generally, there may be conflicts between local wildlife and the transportation projects. But as per observations and informations collected from the forest department, no passage of land animals is seen to cross the project road as the project corridor is full with patches of built-up sections and human interference.

The project has low traffic volume and/or speed or large vehicles. Different species will be less affected affected by the traffic volume and /or speed in different ways depending on their mobility. But as mentioned above, there is no crossing across the project road.

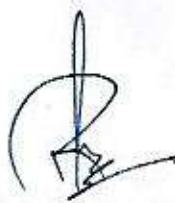
7.4 Conflict with road characteristics

Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than a absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

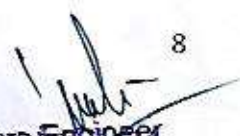
7.5 Conflicts with Existing Infrastructure:

Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hinderence for wildlife, the followings are need to be kept in mind:

- Removal of physical barriers




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- Structures that incorporate both pedestrian and wildlife into the same structures
- No perched culverts
- Structures with insufficient water depth for aquatic passage
- Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced, so as to prevent accidental falling of mammals in the vicinity of the construction sites.
- Noise levels during the construction phase shall be monitored properly to avoid disturbance, if any to the animals.
- No construction activity shall be undertaken after sunset and during the night.
- No harm to wildlife habitat including fauna and flora of the sanctuary shall be ensured.
- The WLS area shall not be used for any other work other than the work permitted.
- No establishment of any temporary or permanent labour camp inside the sanctuary area.
- Alternate Fuel (LPG) shall be provided to Laborer's for cooking purpose.
- No vehicular movement inside sanctuary area shall be allowed from sunset to sunrise except emergency vehicle.
- Awareness-raising will be done to mitigate this risk. The contractor and his workers shall be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.
- In addition to above mitigation measures, any other measures as envisaged by the CWLW/State Board of Wildlife/National Board of Wildlife and as per provisions of wildlife(Protection) Act, 1972 shall be implemented by the company during execution of the project.

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7.6 Design Guidelines

The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- Consider the slope of the roadside
- Consider potential/known areas of higher wildlife activity
- Consider impact of drainage ditches
- Consider the implications of the roadway design for emergency response access and maintenance access.

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The vast biodiversity in nature provides a challenge when attempting to maintain connectivity and reduce genetic isolation. Each species within an area will have slightly different habitat requirements and behavior making it difficult to design a corridor that will satisfy the requirements of all the species. In addition, there is insufficient data for many species which provides a challenge when attempting to understand their life history strategy and to design a corridor that will satisfy the requirements.

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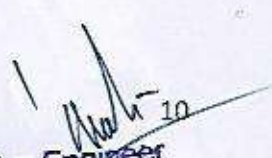
- Species that require dispersal for survival
- Species that are integral to ecological processes
- Species that are dominant but could become less important if connectivity is lost
- Species that need connectivity to prevent genetic divergence
- Species experiencing high vehicle associated mortality in or near the study area
- Rare, endangered or vulnerable species

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Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:

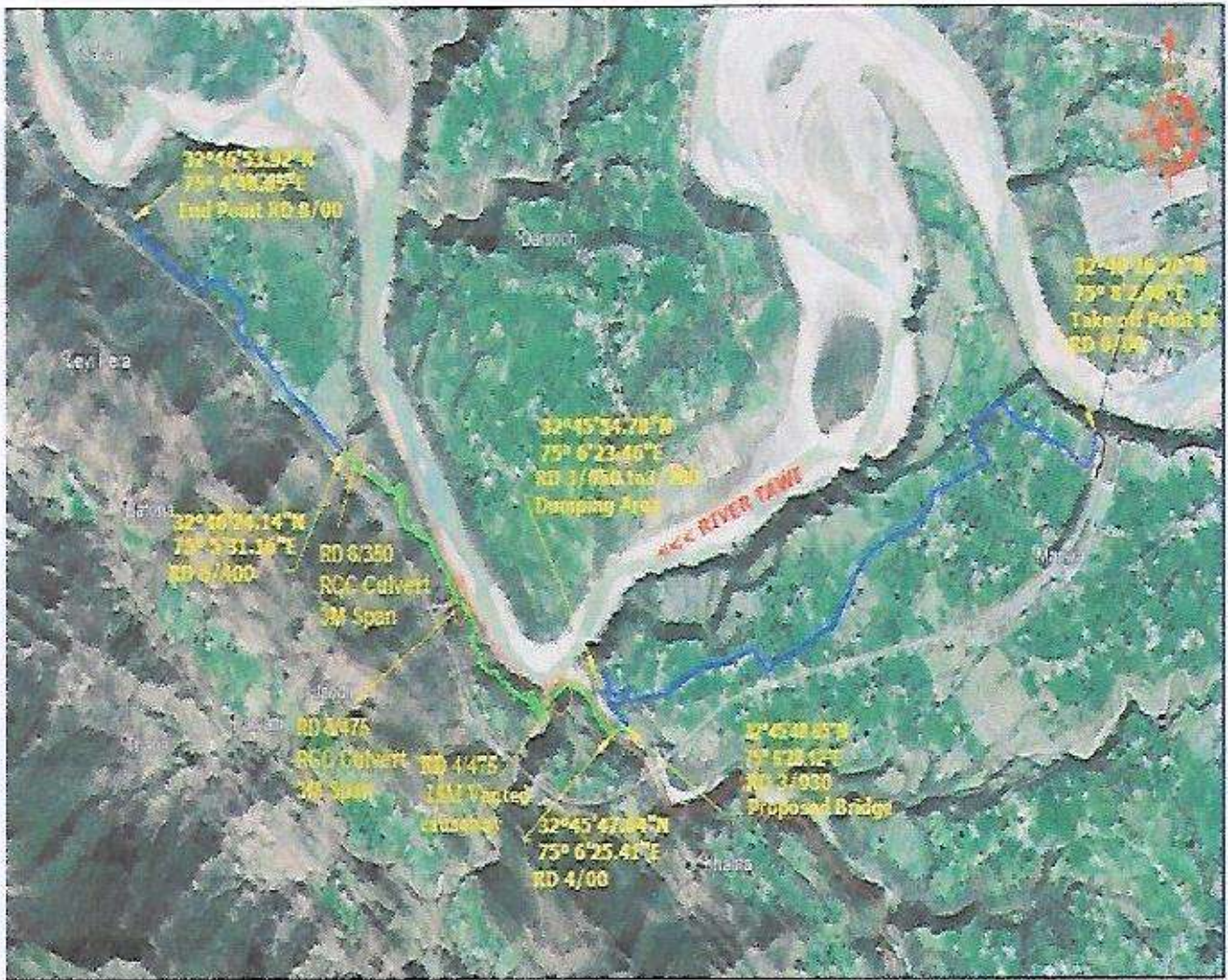


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Fig.1: Showing Locations of Animal Crossings



7.9 Calculation of Openness Ratio

- Openness Ratio = $\frac{\text{height of the opening} \times \text{width of th structure}}{\text{length of the underpass}}$

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PMGSY Division, Jammu

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PMGSY Division
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Fig.2 : Dimensions of an underpass determining its openness

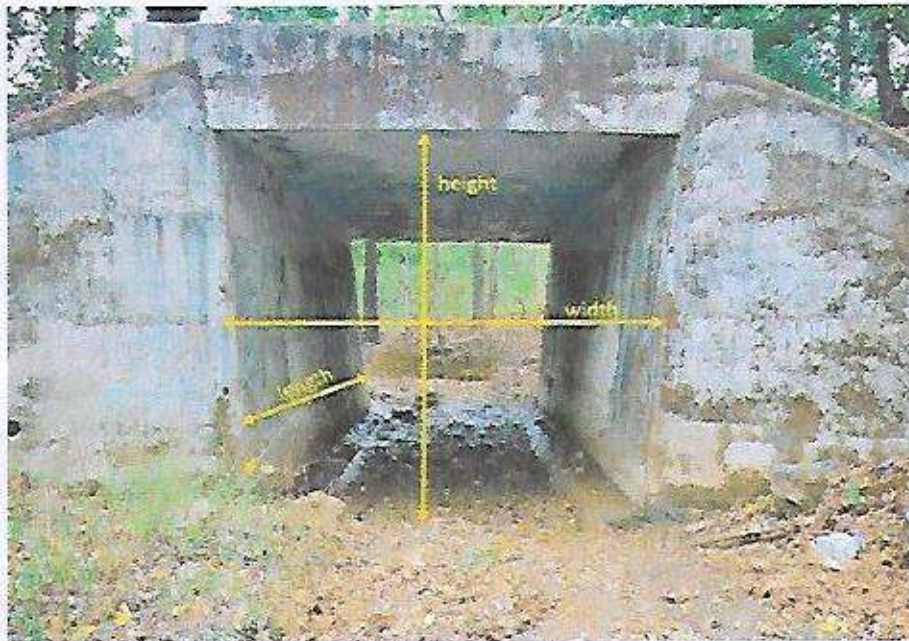
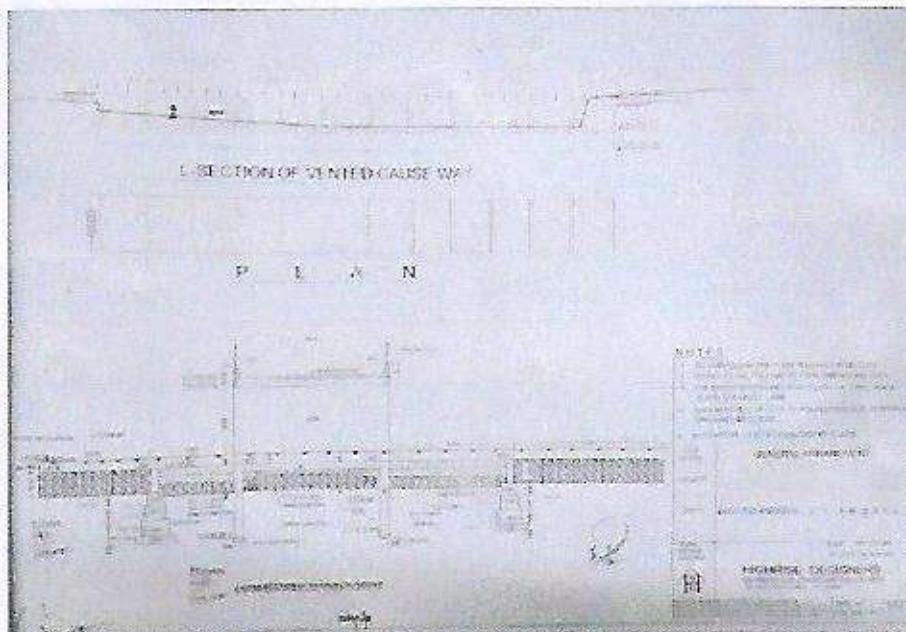


Fig.3: Specifications of 15m Span Vented Causeway



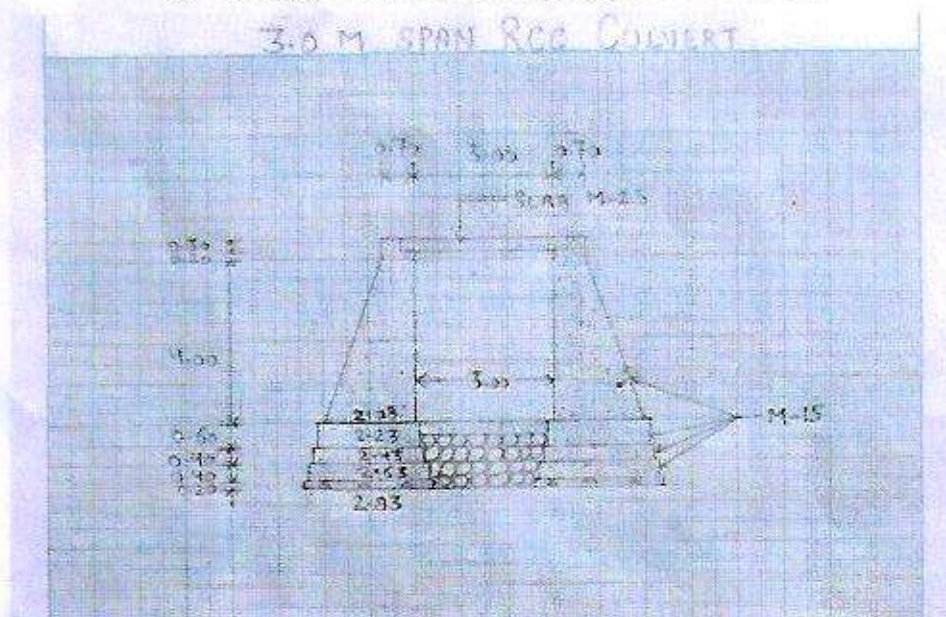
- Length = 6.00 m
- Width = 4.50 m
- Height = 3.00 m
- Openness Ratio = $\frac{4.50 \times 3.00}{6.00} = 2.25$ m
- NO. Of vents = 3 No.

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Fig.4: Specifications of 3 m Span RCC Culvert



- Length = 6.00 m
- Width = 3.00 m
- Height = 4.20 m
- Openness Ratio = $\frac{3.00 \times 4.20}{6.00} = 2.10$

Table No. 2: Showing Openness Ratio Value of RCC Culverts to be used as Underpass

S No	Location of Culvert	Span	Openness Ratio
1	RD 4/475	15 M	2.25
2	RD 5/475	3 M	2.10
2	RD 6/350	3 M	2.10

Provision of Safety Features

- Cautionary / Warning Sign Boards will be provided at the start and at the end of each stretch of forest land. Fig. below showing board to be used:



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Table No. 3: Showing location of Animal Crossing Boards

S No	RD	Board Count
1	3/930	01
2	6/400	01
	Total	02

- **Road Studs / Reflectores / Speed Breakers** will be provided at the start and at the end of each stretch of forest land. Fig. below showing road studs to be used

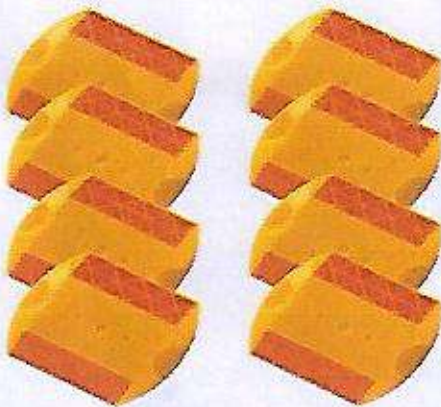


Table No.4: showing location of Road Studs

S No	RD	Road Studs (No)
1	3/930	20
2	6/400	20
	Total	40

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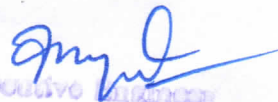
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ANIMAL PASSAGE PLAN
FOR
CONSTRUCTION OF ROAD FROM BARKUNDA TO KHARWA

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6.	Likely impact of the Project on Protected Area of Sudhmahadev Conservation Reserve.	5-6
7.	Safeguard for Animal/Wildlife Passage.	6-14


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ANIMAL PASSAGE PLAN FOR CONSTRUCTION OF ROAD FROM BARKUNDA TO KHARWA

1. Introduction to the Project.

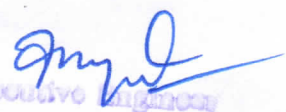
Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

The Sub-project road **Barkunda to Kharwa** is a link route with Code **JK14-507** in **Chenani** Block of **Udhampur** District. This road directly connects the habitations of Sarail Choa with total population of **262 souls** as per census 2001. Thus this link road serves the total population of 262 souls. Road is in mountainous terrain and starts from village Barkunda and connects village Kharwa. The length of road is 5.850 km and Width is 6 meter.

It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003.
- Providing all-weather road access to all villages/habitations of population greater than 500 people (250 in case of hill States North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal) by the end of the Tenth Five Year Plan i.e. 2007.

The rural road network required for providing the 'basic access' to all villages/habitations is termed as the Core Network. Basic access is defined as one all-weather road access from each village/ habitation to the nearby Market Centre or Rural Business Hub (RBH) and essential social and economic services.


Executive Engineer
PMGSY Division Udhampur
Udhampur

A Core Network comprises of Through Routes and Link Routes. Through routes are the ones which collect traffic from several link roads or a long chain of habitations and lead it to a market centre or a higher category road, i.e. the District Roads or the State or National Highways. Link Routes are the roads connecting a single habitation or a group of habitations to Through Roads or District Roads leading to Market Centers. Link Routes generally have dead ends terminating on habitations, while Through Routes arise from the confluence of two or more Link Routes and emerge on to a major road or to a Market Centre.

The Core Network may not represent the most convenient or economic route for all purposes. However, since studies show 85-90% of rural trips are to market centers, the Core Network is likely to be a cost-effective conceptual framework for investment and management purposes, particularly in the context of scarce resources.

Objectives of Animal Passage Plan Study

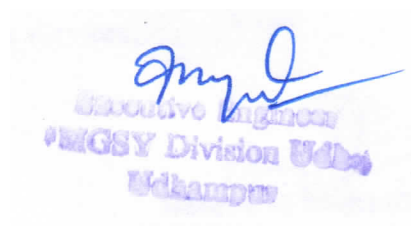
The objectives of animal passage plan are:

- To incorporate the needs of wildlife into transportation projects.
- To maintain the habitat connectivity
- To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

Achieving these goals will include restoring connections where they have been removed and ensuring that existing connections remain as the project road expands.

2. Project Location & Technical details of the Project Proposed.

Project:	Construction of Road Barkunda to Kharwa (JK 14-507)
Proposal No.	FP/JK/ROAD/5063/2021.
Project Proponent:	Executive Engineer PMGSY Division Udhampur-1
Project Cost	431.15 Lakh.
Project Area inside PA	0.225Ha.
Details of PA involved.	Sudhmahadev Conservation Reserve



Handwritten signature and official stamp of the Executive Engineer, PMGSY Division Udhampur.

3. Justification for proposed route & alternative examined.

- I. The Project for construction of road from Barkunda to Kharwa (JK 14-507) is sanctioned in Phase-X under PMGSY. Some stretches of road pass through forest/wildlife area. The road namely Barkunda to Kharwa (JK 14-507) takes off from the end of PMGSY road Bupp to Barkunda Road in village Barkunda. The village Kharwa is benefitted by construction of this road on its completion and will provide connectivity to a population of about 262 souls inhabiting this village.
- II. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.
- III. Hence, the diversion of the forest/wildlife land is the only choice to construct the road.

4. Area details falling in Sudhmahadev Conservation Reserve

Total Length of Road = 5850meter

Width of Road = 6.000 meter

Total Project area = **35100 sqm = 3.51ha**

Forest Land involved from RD 4/100 to 4/475 = 375 meter

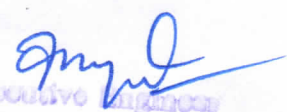
Total Forest Land involved in road = 375 meter

Forest area involved in road = 375 m x 6 m = **2250 sqm = 0.225 ha**

Total forest area involved within protected area = **0.225 ha**

Total project area under non protected area = 3.51 ha – 0.225 ha = **3.285 ha**

S No	Total Project Area	Project area under protected area	Project area under non - protected area	Forest Area involved in project within protected area	Non Forest Area involved in project within protected area
1	3.51 ha	0.225 ha	3.285ha	0..225ha	Nil


Executive Engineer
PMGSY Division Udaipur
Udhampur

5. Major Activities involved in the execution of Project.

A	Earthwork in excavation in Hilly area
1	Earthwork in Cutting
2	Earthwork in filling
B	CD Works
3	Construction of 1.0 M Dia HP Culvert
4	Construction of 2.0 M Span RCC Culvert
5	Construction of 3.0 M Span RCC Culvert
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7	R/Wall Ht. 2.00 M
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11	Parapet
12	Pucca Drain
D	Providing & Fixing of PMGSY Boards
13	Citizen & Main Information Board
14	Logo Board
15	Road Sign Boards
16	KM Stones
17	200 M Stones

6. Likely impact of the Project on Protected Area of Sudhmahadev Conservation Reserve

The Sudhmahadev Conservation Resrve lies at the heart of Shivalik Range of the Himalayan Mountains and outer/lesser Himalayas(Southern flanks of the Pir Panjal just adjacent to Shivalik.).The Conservation Reserve, named after the Sudhmahadev Temple, encompasses vast cliffy area of Dudu Range.The area has been

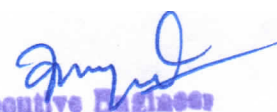
notified as Conservation Reserve by the Govt. Order no. FST-20 of 1981 dated:04-02-81. The Sudhmahadev Conservation Reserve is spread over 1455 Km areas and is located between **33° 01' 14" North and 75° 21' 36" East** longitude and is about 112 km from Jammu and 60 km from Udhampur the nearest town Chenani is 25 km

The Sudhmahadev Conservation Reserve support scrub forest and tropical Pine forest Of the Group 9 (including Type 9/C1-Himalayan Sub-Tropical Forests, Sub type9/C1b, Group 10 sub tropical dry evergreen Forests and Group 12 Himalayan Moist Temperate Forest) of the Champion and Seth classification

The Conservation Reserve is known to inhabit species like Black Bear,Goral, Musk,Deer,Jackal,Leopard,Jungle Cat, small Indian Mongoose,Northern Himalyan Civet , Squirrel and many avian species like Red Jungle Fowl,Peafowl, Babblers, Indian Shikra, Indian Magpie Robin. The flora mainly comprises of Deodar, Kail,Fur and Oak species. The broad leaved species like walnut,Aesculus,Prunus and Acer are also found besides shrubs like Viburnum and Berberis.

Fauna

S No	Scientific Name	Common Name
1	<i>Canis Aureus</i>	Jackal, Indian
2	<i>Felis Chaus</i>	Cat, Jungle
3	<i>Funambulus pennant</i>	Squirrel, Five-striped
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6	<i>Macaca Mulatta</i>	Macaque, Rhesus
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9	<i>Paradoxurus hermaphroditus</i>	Asian palm Civet
10	<i>Ursus thibetanus</i>	Himalayan Black Bear
11	<i>Viverricula Indica</i>	Civet, Small Indian


Executive Engineer
MGSY Division Udh-
Udhampur

Avi Fauna

S No	Scientific Name	Common Name
1	<i>Lophophorus impejanus</i>	Monal Pheasant
2	<i>Accipiter badius</i>	Indian Shikra
3	<i>Athene brama</i>	Spotted owlette
4	<i>Columbalivia intermedia</i>	Blue Rock Pigeon
5	<i>Gallus gallus</i>	Red jungle fowl
6	<i>Gyps indicus</i>	Indian long billed vulture
7	<i>Halcyon smyrnesis</i>	White breasted kingfisher
8	<i>Turdoidescaudata</i>	Common babbler

The road from Barkunda to Kharwa (JK14-507) shall give benefit to village Kharwa when completed and provide connectivity to a population of about 262 souls inhabiting this village.

6.1 Adverse effect associated with Linear Project vis-à-vis present project

The linear projects passing through wildlife protected areas are associated with:

- Loss of habitat resulting reduced carrying capacity.
- Fragmentation of habitat into spatially isolated parts.
- Injury/mortality to animals.
- Presence of construction camps.
- Deprive animals from using their entire habitat.
- Increased human wildlife conflict.
- Pollution due to liquid or solid waste.

a. Habitat Loss and Fragmentation: Generally, linear Projects like Roads are known to affect many different animal groups, predominantly mammals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the Project corridor. The Project might impact the habitat and movement of

others arboreal species like monkey, primates etc.

b. Induced Impact on Wildlife from Construction workers:

Construction manpower will be required for execution of the project and makeshift construction camps and will be set up as per site requirement. Generally, for construction works, local manpower/workers will be engaged. The induced impact on the wildlife of Sudhmahadev conservation Reserve from such construction workers is the likelihood of involvement in hunting/trafficking of wild animals and other unlawful activity during the execution of the project.

In case of construction of road from Barkunda to Kharwa, no labour camp will be established in protected area. It shall be ensured that that no activity is carried out after sunset within the protected area. Awareness-raising will be done to mitigate this risk. The contractor and his workers must be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.

7. Safeguard for Animal/Wildlife Passage.

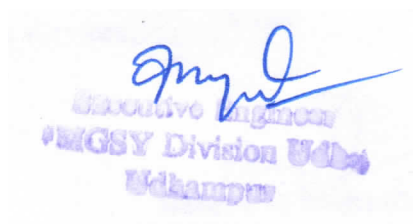
7.1 Passage Plan

Animals move between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks, canals and power lines will now have to include a plan to provide for safe movement of wildlife and allocate budget for animal passages as per NBWL proceedings dated 25th January 2018.

7.2 Project Corridor

The present project under discussion, through a linear project has very negligible or null ill effect to the project. On critical analysis/ observation of this project is seen that:

- The project length of road Barkunda to Kharwa is 5.850 Km and only some length is passing through Sudhmahadev conservation reserve..
- The land required for this project is 0.225 Ha in protected area.



Handwritten signature and official stamp of the MGSY Division, Udhampur.

- The project road is a major rural link road and is in proposal to come within protected area.
- The problem of human wildlife conflict, depriving free flow of habitats will be avoided by the provision of under passages in the form of RCC Culverts.

Passage to the wildlife habitats will be provided in the form of under passages by means of RCC Culverts already proposed in the DPR. 2 No. of RCC culverts of Span 3 M are proposed in the road. The locations of animal passage are also shown in the GPS Map attached below..

Table no. 1: Showing Location of RCC Culverts


S No	Location of Culvert	Span
1	RD 4/200	3 M
2	RD 4/300	3M

The land use of the project area and the adjacent lands will play a large role in determining the type and extent of mitigation required. As the area surrounding the project is slated for high density residential/commercial development, the facilitating wildlife movement through this area is likely not feasible or desired. As per observation made in the site visits and during different survey proceedings, no wildlife crossings were found in the project stretch.

Common land uses in the project road include the following:

- Residential
- Agricultural
- Natural Area
- Drainage Channels

It is important to not only consider present development, but also consider future development. The present road is in hilly terrain. So, the landuse pattern is mostly open section with few stretches of built-up section and semi-builtup sections. Farming is found in many stretches. Few stretches come under forest region.


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Udhampur

7.3 Conflict with Habitats

Generally, there may be conflicts between local wildlife and the transportation projects. But as per observations and information collected from the forest department, no passage of land animals is seen to cross the project road as the project corridor is full with patches of built-up sections and human interference.

The project has low traffic volume and/or speed or large vehicles. Different species will be less affected by the traffic volume and /or speed in different ways depending on their mobility. But as mentioned above, there is no crossing across the project road.

7.4 Conflict with road characteristics

Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than a absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

7.5 Conflicts with Existing Infrastructure

Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hindrance for wildlife, the followings are need to be kept in mind:


- Removal of physical barriers
- Structures that incorporate both pedestrian and wildlife into the same structures
- No perched culverts
- Structures with insufficient water depth for aquatic passage
- Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced,so as to prevent accidental falling of mammals in the vicinity of the construction sites.
- Noise levels during the construction phase shall be monitored properly to avoid disturbance,if any to the animals.
- No construction activity shall be undertaken after sunset and during the night.

- No harm to wildlife habitat including fauna and flora of the sanctuary shall be ensured.
- The WLS area shall not be used for any other work other than the work permitted.
- No establishment of any temporary or permanent labour camp inside the sanctuary area.
- Alternate Fuel (LPG) shall be provided to Laborer's for cooking purpose.
- No vehicular movement inside sanctuary area shall be allowed from sunset to sunrise except emergency vehicle.
- Awareness-raising will be done to mitigate this risk. The contractor and his workers shall be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.
- In addition to above mitigation measures, any other measures as envisaged by the CWLW/State Board of Wildlife/National Board of Wildlife and as per provisions of wildlife(Protection) Act, 1972 shall be implemented by the company during execution of the project.

7.6 Design Guidelines

The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- Consider the slope of the roadside
- Consider potential/known areas of higher wildlife activity
- Consider impact of drainage ditches
- Consider the implications of the roadway design for emergency response access and maintenance access.

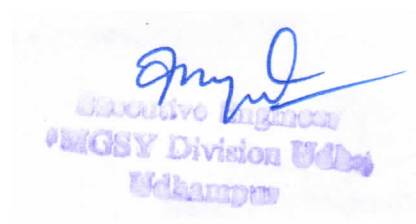

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Udhampur

7 Identify Ecological Design Group

The vast biodiversity in nature provides a challenge when attempting to maintain connectivity and reduce genetic isolation. Each species within an area will have slightly different habitat requirements and behavior making it difficult to design a corridor that will satisfy the requirements of all the species. In addition, there is insufficient data for many species which provides a challenge when attempting to understand their life history strategy and to design a corridor that will satisfy the requirements.

The category of species which special attention are as follows:

- Species that require dispersal for survival
- Species that are integral to ecological processes
- Species that are dominant but could become less important if connectivity is lost
- Species that need connectivity to prevent genetic divergence
- Species experiencing high vehicle associated mortality in or near the study area
- Rare, endangered or vulnerable species

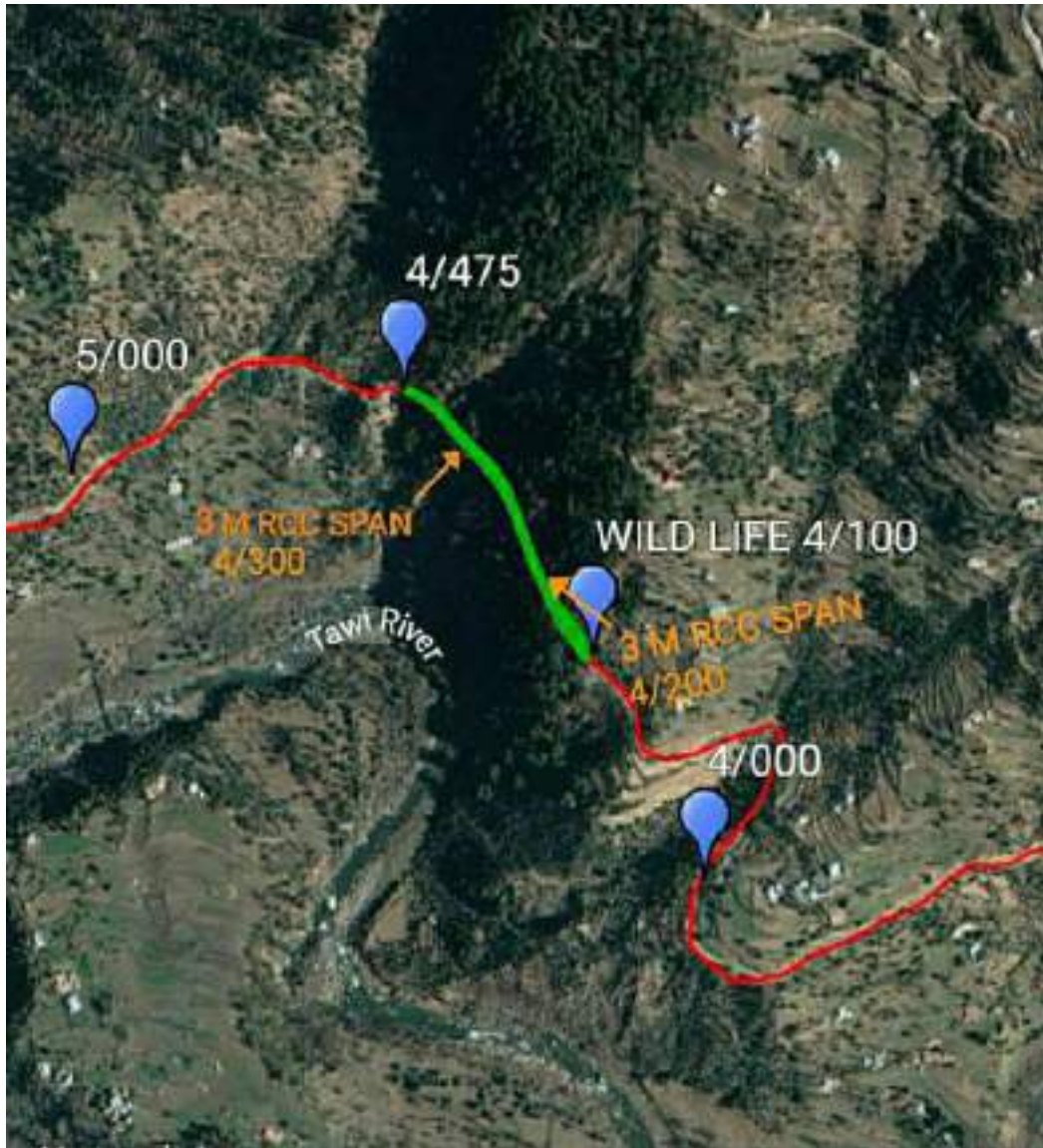


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Udhampur

7.8 Identify Mitigation

Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:

Fig.1: Showing Locations of Animal Crossing



7.9 Calculation of Openness Ratio

- Openness Ratio = $\frac{\text{height of the opening} \times \text{width of th structure}}{\text{length of the underpass}}$


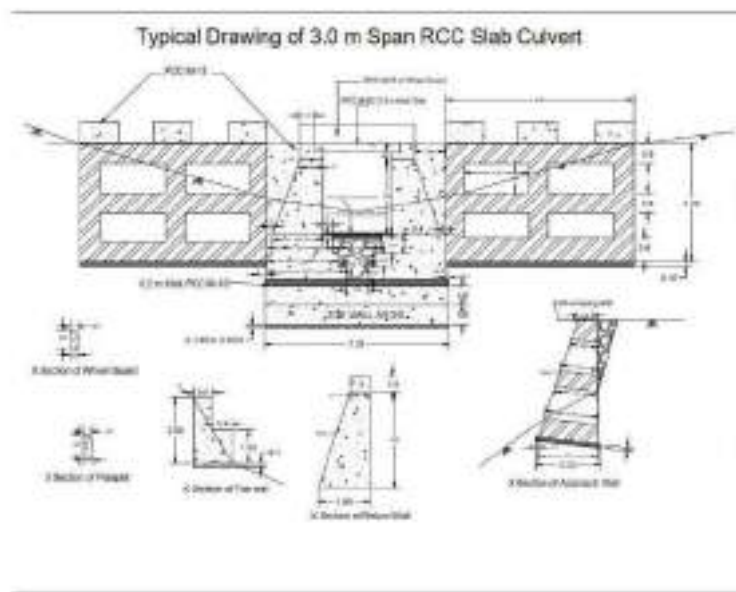

Executive Engineer
HGSY Division Udh.
Udhampur

Fig.2 : Dimensions of an underpass determining its openness ratio



Fig.3: Specifications of 3 m Span RCC Culvert



- Length = 6.00 m
- Width = 3.00 m
- Height = 4.20 m
- Openness Ratio = $\frac{3.00 \times 4.20}{6.00} = 2.10 \text{ m}$

[Signature]
 Executive Engineer
 MGSY Division Udhampur
 Udhampur

**Table No. 2: Showing Openness Ratio Value of RCC Culverts
to be used as Underpass**

S No	Location of Culvert	Span	Openness Ratio
1	RD 4/200	3 M	2.10
2	RD 4/300	3 M	2.10

7.10 Provision of Safety Features

- Cautionary / Warning Sign Boards will be provided at the start and at the end of each stretch of forest land. Fig. below showing board to be used:



Table No. 3: Showing location of Animal Crossing Boards

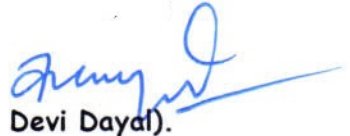
S No	RD	Board Count
1	4/100	01
2	4/475	01
	Total	02

- **Road Studs / Reflectores / Speed Breakers** will be provided at the start and at the end of each stretch of forest land. Fig. below showing road studs to be used



Table No.4: showing location of Road Studs


S No	RD	Road Studs (No)
1	4/100	20
2	4/475	20
	Total	40


(Er. Devi Dayal).
Executive Engineer
PMGSY Division Udampur-I,
Udampur.

ANIMAL PASSAGE PLAN
FOR
CONSTRUCTION OF ROAD FROM MANTLAI TO GAMSADU

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Executive Engineer
MGSY Division Udh.
Udhampur

ANIMAL PASSAGE PLAN FOR CONSTRUCTION OF ROAD FROM
MANTLAI TO GAMSADU

1. Introduction to the Project.


Rural Road connectivity is a key component of rural development by promoting access to economic and social services and thereby generating increased agricultural incomes and productive employment opportunities. It is also a key ingredient in ensuring poverty reduction.

The Sub-project road **Mantlai to Gamsadu** is a link route with Code **JK14-501** in **Chenani** Block of **Udhampur** District. This road directly connects the habitations of Sarail Choa with total population of **390 souls** as per census 2001. Thus this link road serves the total population of 390 souls. Road is in mountainous terrain and starts from village Mantlai and connects village Gamsadu. The length of road is 10.050 km and Width is 6 meter.

It was against this background of poor connectivity that the Prime Minister announced in 2000, a massive rural roads program. The Prime Minister's Rural Road Program (Pradhan Mantri Gram Sadak Yojana, PMGSY) set a target of:

- Achieving all-weather road access to every village/habitation with a population greater than 1000 by 2003.
- Providing all-weather road access to all villages/habitations of population greater than 500 people (250 in case of hill States North-Eastern states, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttaranchal) by the end of the Tenth Five Year Plan i.e. 2007.

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Executive Engineer
PMGSY Division Udhampur
Udhampur

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Objectives of Animal Passage Plan Study

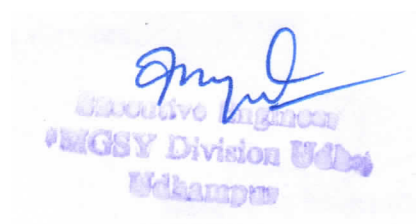
The objectives of animal passage plan are:

- To incorporate the needs of wildlife into transportation projects.
- To maintain the habitat connectivity
- To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

Achieving these goals will include restoring connections where they have been removed and ensuring that existing connections remain as the project road expands.

2. Project Location & Technical details of the Project Proposed.

Project:	Construction of Road Mantlai to Gamsadu (JK 14-501)
Proposal No.	FP/JK/ROAD/5064/2021.
Project Proponent:	Executive Engineer PMGSY Division Udhampur-1
Project Cost	768.3 Lakh.
Project Area inside PA	0.78ha.
Details of PA involved.	Sudhmahadev Conservation Reserve (Co: 109)



Handwritten signature and official stamp of the Executive Engineer, PMGSY Division Udhampur-1.

3. Justification for proposed route & alternative examined.

- I. The Project for construction of road from Mantlai to Gamsadu (JK 14-501) is sanctioned in Phase-X under PMGSY. Some stretches of road pass through forest/wildlife area. The road namely Mantlai to Gamsadu (JK 14-501) takes off from the end of PDA road in village Mantlai.. The village Gamsadu is benefitted by construction of this road on its completion and will provide connectivity to a population of about 390 souls inhabiting this village.
- II. Forest/Wildlife area cannot be avoided as the alignment proposed is the only feasible alignment providing vital connectivity to the hamlets.
- III. Hence, the diversion of the forest/wildlife land is the only choice to construct the road.

4. Area details falling in Sudhmahadev Conservation Reserve

Total Length of Road = 10050meter

Width of Road = 6.000 meter

Total Project area = **60300 sqm = 6.03ha**

Forest Land involved from RD 1/825-2/350 = 525 meter

RD 2/625-3/100=475 meter

RD 3/225-3/525=300 meter

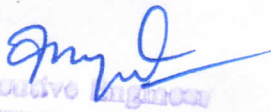
Total Forest Land involved in road = 1300 meter

Forest area involved in road = 1300 m x 6 m = **7800 sqm = 0.78ha**

Total forest area involved within protected area = **0.78 ha**

Total project area under non protected area = 6.03ha – 0.78 ha = **5.25 ha**

S No	Total Project Area	Project area under protected area	Project area under non - protected area	Forest Area involved in project within protected area	Non Forest Area involved in project within protected area
1	6.03 ha	0.78 ha	5.25ha	0.78ha	Nil


Executive Engineer
PMGSY Division Udaipur
Udaipur

5. Major Activities involved in the execution of Project.

A	Earthwork in excavation in Hilly area
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The Sudhmahadev Conservation Resrve lies at the heart of Shivalik Range of the Himalayan Mountains and outer/lesser Himalayas(Southern flanks of the Pir Panjal just adjacent to Shivalik.).The Conservation Reserve, named after the

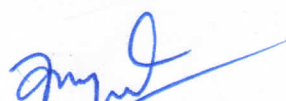
Sudhmahadev Temple, encompasses vast cliffy area of Dudu Range. The area has been notified as Conservation Reserve by the Govt. Order no. FST-20 of 1981 dated: 04-02-81. The Sudhmahadev Conservation Reserve is spread over 1455 Km areas and is located between **33° 01' 14" North and 75° 21' 36" East** longitude and is about 112 km from Jammu and 60 km from Udhampur the nearest town Chenani is 25 km

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10	<i>Ursus thibetanus</i>	Himalayan Black Bear
11	<i>Viverricula Indica</i>	Civet, Small Indian


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Avi Fauna

S No	Scientific Name	Common Name
1	<i>Lophophorus impejanus</i>	Monal Pheasant
2	<i>Accipiter badius</i>	Indian Shikra
3	<i>Athene brama</i>	Spotted owlette
4	<i>Columbalivia intermedia</i>	Blue Rock Pigeon
5	<i>Gallus gallus</i>	Red jungle fowl
6	<i>Gyps indicus</i>	Indian long billed vulture
7	<i>Halcyon smyrnensis</i>	White breasted kingfisher
8	<i>Turdoidescaudata</i>	Common babbler

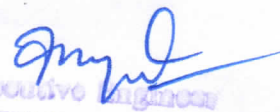
The road from Mantlai to Gamsadu (JK14-501) shall give benefit to village Kharwa when completed and provide connectivity to a population of about 390 souls inhabiting this village.

6.1 Adverse effect associated with Linear Project vis-à-vis present project

The linear projects passing through wildlife protected areas are associated with:

- Loss of habitat resulting reduced carrying capacity.
- Fragmentation of habitat into spatially isolated parts.
- Injury/mortality to animals.
- Presence of construction camps.
- Deprive animals from using their entire habitat.
- Increased human wildlife conflict.
- Pollution due to liquid or solid waste.

a. Habitat Loss and Fragmentation: Generally, linear Projects like Roads are known to affect many different animal groups, predominantly mammals. These impacts are largely associated with fragmentation & degradation of wildlife habitats along the Project corridor. The Project might impact the habitat and movement of others arboreal species like monkey, primates etc.


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b. Induced Impact on Wildlife from Construction workers:

Construction manpower will be required for execution of the project and makeshift construction camps and will be set up as per site requirement. Generally, for construction works, local manpower/workers will be engaged. The induced impact on the wildlife of Sudhmahadev conservation Reserve from such construction workers is the likelihood of involvement in hunting/trafficking of wild animals and other unlawful activity during the execution of the project.

In case of construction of road from Mantlai to Gamsadu, no labour camp will be established in protected area. It shall be ensured that that no activity is carried out after sunset within the protected area. Awareness-raising will be done to mitigate this risk. The contractor and his workers must be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.

7. Safeguard for Animal/Wildlife Passage.

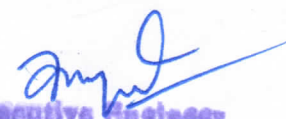
7.1 Passage Plan

Animals move between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks, canals and power lines will now have to include a plan to provide for safe movement of wildlife and allocate budget for animal passages as per NBWL proceedings dated 25th January 2018.

7.2 Project Corridor

The present project under discussion, through a linear project has very negligible or null ill effect to the project. On critical analysis/ observation of this project is seen that:

- The project length of road Mantlai to Gamsadu is 10.050 Km and only some length is passing through Sudhmahadev conservation reserve..


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- The land required for this project is 0.78 Ha in protected area.
- The project road is a major rural link road and is in proposal to come within protected area.
- The problem of human wildlife conflict, depriving free flow of habitats will be avoided by the provision of under passages in the form of RCC Culverts.

Passage to the wildlife habitats will be provided in the form of under passages by means of RCC Culverts already proposed in the DPR. 3 No. of RCC culverts of Span 3 M are proposed in the road. The locations of animal passage are also shown in the GPS Map attached below..

Table no. 1: Showing Location of RCC Culverts

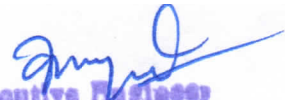
S No	Location of Culvert	Span
1	RD 1/900	3M
2	RD 2/800	3M
3	RD 3/400	3M

The land use of the project area and the adjacent lands will play a large role in determining the type and extent of mitigation required. As the area surrounding the project is slated for high density residential/commercial development, the facilitating wildlife movement through this area is likely not feasible or desired. As per observation made in the site visits and during different survey proceedings, no wildlife crossings were found in the project stretch.

Common land uses in the project road include the following:

- Residential
- Agricultural
- Natural Area
- Drainage Channels

It is important to not only consider present development, but also consider future development. The present road is in hilly terrain. So, the landuse pattern is mostly open section with few stretches of built-up section and semi-builtup sections. Farming is found in many stretches. Few stretches come under forest region.


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7.3 Conflict with Habitats

Generally, there may be conflicts between local wildlife and the transportation projects. But as per observations and information collected from the forest department, no passage of land animals is seen to cross the project road as the project corridor is full with patches of built-up sections and human interference.

The project has low traffic volume and/or speed or large vehicles. Different species will be less affected by the traffic volume and /or speed in different ways depending on their mobility. But as mentioned above, there is no crossing across the project road.

7.4 Conflict with road characteristics

Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than a absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

7.5 Conflicts with Existing Infrastructure

Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hindrance for wildlife, the followings are need to be kept in mind:


- Removal of physical barriers
- Structures that incorporate both pedestrian and wildlife into the same structures
- No perched culverts
- Structures with insufficient water depth for aquatic passage
- Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced,so as to prevent accidental falling of mammals in the vicinity of the construction sites.
- Noise levels during the construction phase shall be monitored properly to avoid disturbance,if any to the animals.
- No construction activity shall be undertaken after sunset and during the night.

- No harm to wildlife habitat including fauna and flora of the sanctuary shall be ensured.
- The WLS area shall not be used for any other work other than the work permitted.
- No establishment of any temporary or permanent labour camp inside the sanctuary area.
- Alternate Fuel (LPG) shall be provided to Laborer's for cooking purpose.
- No vehicular movement inside sanctuary area shall be allowed from sunset to sunrise except emergency vehicle.
- Awareness-raising will be done to mitigate this risk. The contractor and his workers shall be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.
- In addition to above mitigation measures, any other measures as envisaged by the CWLW/State Board of Wildlife/National Board of Wildlife and as per provisions of wildlife(Protection) Act, 1972 shall be implemented by the company during execution of the project.

7.6 Design Guidelines

The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- Consider the slope of the roadside
- Consider potential/known areas of higher wildlife activity
- Consider impact of drainage ditches
- Consider the implications of the roadway design for emergency response access and maintenance access.


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7.7 Identify Ecological Design Group

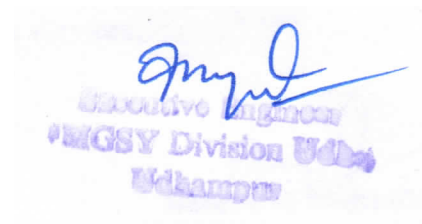
The vast biodiversity in nature provides a challenge when attempting to maintain connectivity and reduce genetic isolation. Each species within an area will have slightly different habitat requirements and behavior making it difficult to design a corridor that will satisfy the requirements of all the species. In addition, there is insufficient data for many species which provides a challenge when attempting to understand their life history strategy and to design a corridor that will satisfy the requirements.

The category of species which special attention are as follows:

- Species that require dispersal for survival
- Species that are integral to ecological processes
- Species that are dominant but could become less important if connectivity is lost
- Species that need connectivity to prevent genetic divergence
- Species experiencing high vehicle associated mortality in or near the study area
- Rare, endangered or vulnerable species

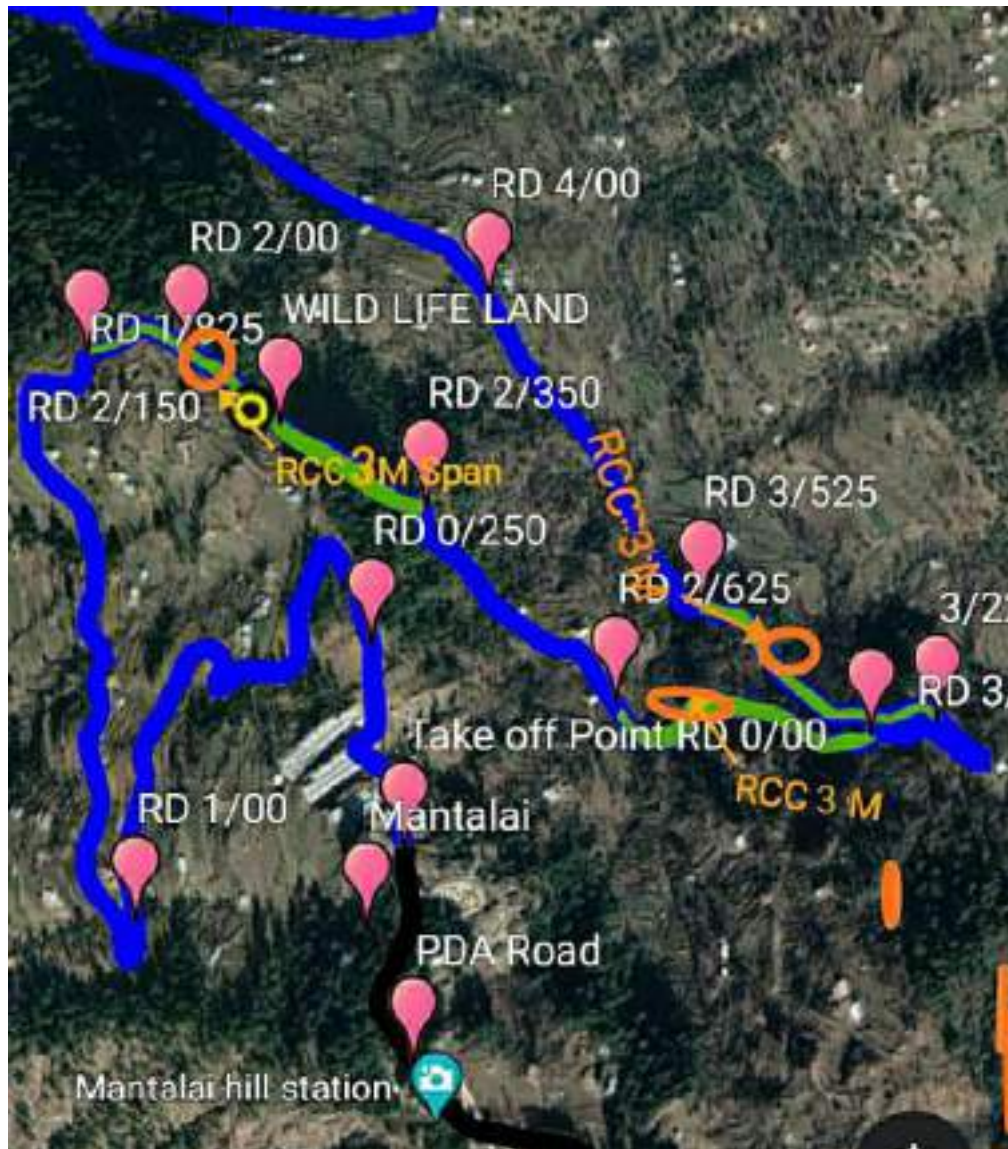
7.8 Identify Mitigation

Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:



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Fig.1: Showing Locations of Animal Crossing



7.9 Calculation of Openness Ratio

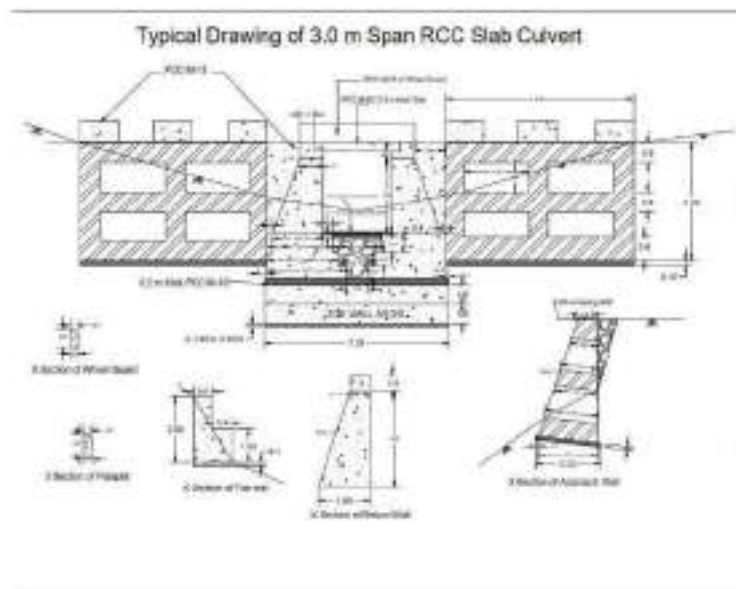
- Openness Ratio = $\frac{\text{height of the opening} \times \text{width of th structure}}{\text{length of the underpass}}$

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Fig.2 : Dimensions of an underpass determining its openness ratio



Fig.3: Specifications of 3 m Span RCC Culvert



- Length = 6.00 m
- Width = 3.00 m
- Height = 4.20 m

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- Openness Ratio = $\frac{3.00 \times 4.20}{6.00} = 2.10 \text{ m}$

Table No. 2: Showing Openness Ratio Value of RCC Culverts to be used as Underpass

S No	Location of Culvert	Span	Openness Ratio
1	RD 1/900	3 M	2.10
2	RD 2/800	3 M	2.10
3	RD 3/400	3M	2.10

7.10 Provision of Safety Features

- Cautionary / Warning Sign Boards will be provided at the start and at the end of each stretch of forest land. Fig. below showing board to be used:



Table No. 3: Showing location of Animal Crossing Boards

S No	RD	Board Count
1	1/890	01
2	2/790	01
3	3/390	01
	Total	03

- **Road Studs / Reflectores / Speed Breakers** will be provided at the start and at the end of each stretch of forest land. Fig. below showing road studs to be used

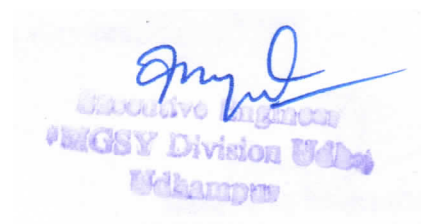
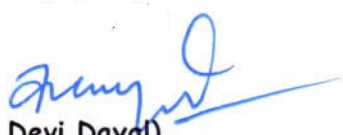




Table No.4: showing location of Road Studs

S No	RD	Road Studs (No)
1	1/825	20
2	2/325	20
3	2/625	20
4	3/100	20
5	3/225	20
6	3/525	20
	Total	120


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