



182

**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE ADDL. CHIEF SECRETARY-cum-PCCF**  
FORESTS AND ENVIRONMENT DEPARTMENT  
FOREST SECRETARIAT, DEORALI, GANGTOK-737 102  
Email: fca.sikkim@gmail.com

**DEMAND NOTE NO. III**

[Rule 8(b) of Forest (Conservation) Amendment Rules 2014]

Name of User Agency : The Chief Engineer,  
Border Roads Organization  
Burtuk, Gangtok Sikkim

Name of project proposal: **Proposal for diversion 141.124 Ha of Forest Land for construction of road from Toong to Partem Pt. 4865 under Mangan (T) Range, Mangan Sikkim by 48<sup>th</sup> Bn ITBP, Govt of India.**

As per Stage-I (In-Principle) approval accorded by the Central Govt. vide letter No. SK/ROAD-82/2021/FC/135 dated 06.04.2022 under Section 2 of Forest (Conservation) Act, 1980 and the guidelines dated 7/06/2022 for charging of lump sum amount for implementation. of Bio-diversity Conservation & Management Plan, the following cost of Bio-diversity Conservation & Management Plan is hereby charged as under :-

Sl. No.	Charges of compensatory levies.	Amount (Rs.)
1	Bio-diversity Conservation & Management Plan (2% of the sanctioned Project Cost i.e 1388.10 Cr.)	27,76,20,000.00
	<b>TOTAL</b>	<b>27,76,20,000.00</b>


**(Rupees twenty seven crore seventy six lakh twenty thousand) only**

The above is subject to revision upon finalization of the Bio-diversity Conservation & Management Plan by the Wildlife Institute of India, Dehradun (WI). The revised Demand Note, if applicable shall be raised accordingly and the balance shall be payable by the User Agency.

The above payment shall be transferred to Saving Account No. **100134029100112** Account Name: **PCCF-cutting & felling IFSC Code No. IBKL0108SIC in SISCO Bank Ltd, Gangtok Branch**, for onward transfer to Ad-hoc CAMPA after finalization of the Bio-diversity Conservation & Management Plan.

Copy to:

1. Commandant,  
48<sup>th</sup> BN ITBP Force,  
Chungthang, Mangan District.
2. Financial Advisor-cum-CAO (CAMPA)
3. File

  
(Jigme T. Sharmgoe, SFS)  
Divisional Forest Officer (CAMPA),  
Jigme T. Sharmgoe, SFS  
Divisional Forest Officer  
Forest Conservation Act (FCA), 1980  
Forests & Environment Department  
Government of Sikkim

Doc No: 673/FCA/P



**GOVERNMENT OF SIKKIM**  
**FORESTS AND ENVIRONMENT DEPARTMENT**  
**FOREST SECRETARIAT, DEORALI, GANGTOK-737 102**  
Email: fca.sikkim@gmail.com

**DEMAND NOTE NO. V**

[Rule 8(b) of Forest (Conservation) Amendment Rules 2014]

Name of User Agency : The Chief Engineer,  
Border Roads Organization  
Burtuk, Gangtok Sikkim

Name of project proposal: Proposal for diversion of 141.124 Ha of forest land for construction of road from Toong to Partem Pt. 4865 under Mangan Territorial Range in North Sikkim by 48<sup>th</sup> Bn ITBP, Govt. of India.

As per Stage-I (In-Principle) approval accorded by the Central Govt. vide letter No. SK/ROAD-82/2021/FC/135 dated 06.04.2022 under Section 2 of Forest (Conservation) Act, 1980 and in compliance to revised minimum daily wage rates vide Notification No. 29/DL dated 14.09.2022, the revised compensatory levies are hereby charged as under :-

Sl. No.	Charges of compensatory levies	Amount (Rs.)
1	Bio-diversity Conservation & Management Plan (difference in cost)	9,65,00,000.00
2	Cost for Boundary Demarcation of diverted forest land	1,43,67,658.00
3	Avenue Plantation	3,82,25,383.00
	<b>TOTAL</b>	<b>14,90,93,041.00</b>

(Rupees fourteen crore ninety lakh ninety three thousand and forty one) only

This is in addition to the earlier issued Demand Note II & III.

The aforesaid payment shall be transferred into the Savings Account No. 100134029100112 IFSC Code No. IBKL0108SIC in SISCO Bank Ltd, Gangtok Branch and in favour of Secretary, Forest & Environment cutting and felling account furnish the payment details along with the compliance report for seeking the Final Approval under the said Act accordingly, please.

*[Signature]*  
12/10/2022

(Brijendra Swaroop, IFS),  
APCCF-cum-Nodal Officer (FCA)  
Brijendra Swaroop, IFS  
APCCF, Env. & S.C., SBFP,  
SF, Plng, M&E.  
Forests & Environment Department  
Government of Sikkim.



# COMPREHENSIVE BIODIVERSITY CONSERVATION PLAN

REPORT SUBMITTED TO THE INTEGRATED REGIONAL OFFICE, MOEFCC, KOLKATA



February 2023



FOREST & ENVIRONMENT DEPARTMENT  
GOVERNMENT OF SIKKIM  
GANGTOK





# **Comprehensive Biodiversity Conservation Plan**

Report submitted to the Integrated Regional Office, MoEFCC, Kolkata



**February, 2023**



**FOREST AND ENVIRONMENT DEPARTMENT  
GOVERNMENT OF SIKKIM  
GANGTOK**



## Executive summary

The Comprehensive Biodiversity Conservation Plan has been prepared in response to the six new roads of NWD and BRO planned in the Mangan district of Sikkim. All these roads are required for providing defence purpose connectivity for rapid movement of troops, transportation of commodities, armaments and other essential facilities to defence needs. These roads give connectivity to the Indo-China border and are hence, important from strategic point of view. Instead of a piecemeal approach, a comprehensive proposal has been prepared to account for the cumulative impacts and to also ensure transparency and efficiency during execution. The project area for the Comprehensive Biodiversity Conservation Plan spans across the northern and eastern part of the Khangchendzonga landscape in the Eastern Himalaya which is the third highest landscape globally and the highest and steepest terrain in the country. This area is also a biodiversity hotspot spanning across both the greater Himalaya and the Trans-Himalaya and lies in the fringe of the Khangchendzonga National Park a UNESCO designated world heritage site. This landscape harbours significant biodiversity including two third of the country's Tibetan gazelle, one third of the Tibetan argali, the only population of southern Kiang, the only breeding population of the black-necked crane in the eastern Himalaya along with several other rare, endangered and threatened species. This region also forms the corridor of the Royal Bengal Tiger and there is evidence of it migrating from the neighbouring Neora Valley National Park in West Bengal during winter. The main thrust of this proposal is to mitigate the threats to biodiversity arising out of the new linear infrastructure coming up and the consequent rise in human presence. The main threats perceived are increased predation of wildlife by feral dogs and rising human wildlife conflict. While the main gaps are limited infrastructure, human capacity and research inputs. The project aims to address these threats and gaps by developing an integrated biodiversity management plan. The nine main components of this plan are reducing human wildlife conflict, strengthening forest protection, strengthening participatory conservation, strengthening forest protection infrastructure, reducing wildlife predation by feral dogs, strengthening ex-situ conservation, mitigation of biodiversity loss due to project-driven landslides and erosion, building capacity and knowledge management. The total budget of this plan amounts to Rs 49.80 crore for a period of 5 years. The monitoring mechanism has also been spelt out. The wildlife passage plan adapted to this steep mountain terrain is also provided along with the non-structural mitigation and management measures. This biodiversity conservation plan has been prepared in consultation with Wildlife Institute of India and their suggestions have been incorporated. The plan has been approved by the Chief Wildlife Warden for onward submission to the Integrated Regional Office of MoEFCC.



### 1.1.1. Location, context and biodiversity values

The reported area spans across the northern and eastern part of the Khangchendzonga landscape in the Eastern Himalaya which is the third highest landscape globally and the highest and steepest terrain in the country. This area is also a biodiversity hotspot spanning across both the greater Himalaya and the trans-Himalaya and lies in the fringe of the Khangchendzonga National Park, a UNESCO designated world heritage site. Consequently, it is designated as a separate biogeographic province 1D by the Wildlife Institute of India. The area also forms the headwaters of the river Teesta and is dotted with several glaciers and high-altitude lakes many of which are regarded as sacred. Improved ecological health of this ecosystem translates to sufficient water in the rivers and streams even in the lean season, which sustains agricultural and horticulture crops, directly translating to food and health security of the downstream towns and villages. This area is also contiguous with the Tibetan Plateau with the altitude ranging from between 4000m and 5500m. The vegetation here is sparse, devoid of trees, dominated by graminoids, forbs and a few shrubs. The biodiversity significance of the area is unmatched. This area harbours globally significant biodiversity including snow leopard, two third of the country's Tibetan gazelle, one third of the Tibetan argali, the only population of southern Kiang, the only breeding population of the black-necked crane in the eastern Himalaya along with several other rare, endangered and threatened species. This region also forms the corridor of the Royal Bengal Tiger and there is evidence of it migrating from the neighbouring Neora Valley National Park in West Bengal. The Himal is also a repository of valuable medicinal plants, which form the basis for the indigenous systems of medicine. Most of the peaks, lakes, rivers and caves here are considered sacred and are visited by pilgrims to pay homage. This area is also traditionally used by native herders for yak and sheep herding who practice transhumant rotational grazing practices. These areas are also under heavy defence deployment with extensive presence of the Indian Army and the Indo Tibetan Border Police (ITBP). After the 2017 Doklam and 2020 Galwan incidents along the Sino-Indian border, the border areas have been further reinforced with more troops and development of new infrastructure. Dogs being camp followers have benefitted from this development and their population has increased several-fold. Due to its remoteness, harsh climate and lack of infrastructure this area has a weak presence of the forest department. The detailed list of biodiversity elements (flora and fauna) is provided for in Annexure-I.

**Figure 1: Endangered biodiversity of the Sikkim Trans-Himalaya**



**Tibetan gazelle**



**Tibetan argali (Nayan)**





Southern Kiang



Black-necked crane

## 2. Proposed linear infrastructure projects

There are a total of 6 linear infrastructure projects being implemented by CPWD and BRO, for which this Comprehensive Biodiversity Conservation Plan has been prepared. All these roads are required for providing defence purpose connectivity for rapid movement of troops, transportation of commodities, armaments and other essential facilities to defence needs. These roads give connectivity to the Indo-China border and are hence, important from strategic point of view. The details of these diversions is placed below. The map of these roads is also provided in Annexure-II. The distribution of the total outlay of this plan amongst the 6 roads is in proportion to the length of the road and is also detailed in the last column with heading 'cost to be levied for BC plan'.

Table 1: Details of the 6 linear infrastructure projects

Sl no.	Diversion	User Agency	Declared Project Cost	Declared Road Length	Rs in Crores	
					Cost Ratio	Cost Levied for BC plan
1	Diversion of 141.124 ha. forest land for non-forest use in Toong Partem Pt. 4865 Tamze Border Road Forest Proposal	BRO	1498.89	84.42	65%	32.15
2	Diversion of 19.36 ha. of Forest land for Muguthang to 20r link road by ITBP	CPWD	278.08	10.70	12%	5.96
3	Diversion of 11.1521 ha of forest land for widening of existing road (NH310A) to NHDL specification with Paved Shoulder from Toong KM )+00 to Chungthang of design KM 27+476 in Mangan Division, Sikkim by BRO	BRO	296.40	29.00	13%	3.36

4	Diversion of 10.6759 Ha of forest land for widening of existing road (NH310A) to NHDL specification with Paved Shoulder from Mangan KM)+00 to Toong of design KM 17+870 in Chungthang Division, Sikkim by BRO	BRO				3.
5	Diversion of 4.86 Ha. KNP/Wildlife land for construction of ITBP Ph-II road from 20r Link point to 20r (Goma)	CPWD	39.25	2.70	2%	0.8
6	18.82 Ha. Forest/WL land for construction of ITBP road from 20r Link point to Zanak	CPWD	209.00	10.40	9%	4.4
			<b>2321.62</b>	<b>137.22</b>	<b>100%</b>	<b>49.8</b>

The justification for preparing a Comprehensive Biodiversity Conservation Plan instead of six separate biodiversity conservation plans is as follows:

- Comprehensive projects with pooled resources enable perspective planning and adopt a more diagnostic approach with a futuristic outlook
- Economy of scale becomes a reality as many functions such as procurement, research, planning and evaluation can be integrated
- The cumulative impact of projects is often much more than the sum of the individual impacts as these projects have a cascading effect on biodiversity
- Implementing several projects with similar components in the same geographical area run the risk of overlap
- Review of this management plans by WII also highlights the need for adopting an integrated approach of a Comprehensive Biodiversity Conservation Plan

### 3. Process followed

Instead of piecemeal preparation of biodiversity conservation plan for the six roads separately, an integrated biodiversity conservation plan has been prepared to ensure that the cumulative impacts of these linear infrastructure intrusions are addressed in a comprehensive manner. The implementation of this comprehensive plan will also be efficient as the activities will all be integrated without the risk of duplicacy or overlap. A participatory process involving consultations and field visits by scientists and field managers was followed for the preparation of this biodiversity conservation plan. Field visits were undertaken by the Wildlife Institute of India during September 2022. Also, several rounds of consultations were organized by the department with other stakeholders such as Animal Husbandry and Veterinary Services Department (AHVS), Sikkim Anti Rabies and Animal Health Programme (SARAH), forest wildlife divisions, forest territorial divisions, FCA wing, WWF and others before finalizing this plan. A presentation of the draft plan was made on 21<sup>st</sup> Jan, 2023 followed by a finalization workshop on 30<sup>th</sup> Jan, 2023 in the Forest Department. This draft plan was shared with the Wildlife Institute of India (WII) and their comments obtained as well (Annexure III). The review of the plan by WII and the details of the cross drainage structures from the user agencies (CPWD and BRO) was obtained in Feb 2023, following which this plan was finalized.