भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
क्षेत्रीय कार्यालय, चंडीगढ़ / Regional Office, Chandigarh

7-02/2025-Sub-OfficeJammu **Dated: As per E-Siganture**

To,

Assistant Inspector General of Forests
Forest Conservation Division,
MoEF&CC, New Delhi.

Sub: Site Inspection Report for the proposal for diversion of 847.17 ha of Forest land for construction of Sawalkot Hydro-Electric Project (1856 MW) in Udhampur Forest Division, Mahore Forest Division, Batote Forest Division, and Ramban Forest Division, Union Territory of Jammu and Kashmir (Online proposal No. FP/JK/HYD/150591/2021) -reg.

Sir,

I am directed to enclose herewith the Site Inspection Report for the proposal for diversion of 847.17 ha of Forest land for construction of Sawalkot Hydro-Electric Project (1856 MW) in Udhampur Forest Division, Mahore Forest Division, Batote Forest Division, and Ramban Forest Division, Union Territory of Jammu and Kashmir (Online proposal No. FP/JK/HYD/150591/2021).

The report has approval and recommendation of the Deputy Director General of Forests (C), Regional Office, Chandigarh (Point No 24 and 25 of the enclosed SIR).

Encl: As above

Digitally signed by
RAJA RAM SINGH
Date: 22-05-2025
18:21:59

Yours Sincerely,
Sd/-
(Raja Ram Singh)
Dy. Inspector General of Forests

बेज नं. **24-25,** सेक्टर **- 31** ए, चंडीगढ़ -160030 / **Bays No.** 24-25, **Sector**-31 A, **Chandigarh** - 160030
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Site Inspection Report

Proposal for diversion of 847.17 ha of Forest land for construction of Sawalkot Hydro-Electric Project (1856 MW) in Udhampur Forest Division, Mahore Forest Division, Batote Forest Division, and Ramban Forest Division, Union Territory of Jammu and Kashmir (Online proposal No. FP/JK/HYD/150591/2021)

Background of the proposal

As per the data uploaded in PARIVESH portal and Detailed Project Report, the Sawalkot Hydroelectric Project (HEP), with an installed capacity of 1856 MW, is a major hydropower initiative located in the Union Territory of Jammu & Kashmir, intended to harness the potential of the Chenab River. Originally allotted in 1999 to the Sawalkot Consortium by the Government of J&K, the project saw minimal progress and remained dormant for over two decades.

The project was actually initiated with an installed capacity of 1200 MW (600 MW Stage I and 600 MW Stage II) in 1984 and handed over to NHPC for execution in 1985. After no significant progress, NHPC returned the project to Jammu & Kashmir State Power Development Corporation (JKSPDC) in 1997. JKSPDC decided to pursue the project via the MoU route with private developers and invited international firms in 1997. But the funding was denied by Ministry of Power, since it did not follow GoI's competitive bidding guidelines.

The project witnessed revival due to concerted efforts by NHPC, the Ministry of Power (MoP), and the UT Government of J&K. It was officially entrusted to NHPC Limited on a BOOT (Build-Own-Operate-Transfer) basis for a period of 40 years, as per an MoU signed on 3rd January 2021 between NHPC and JKSPDC. The Implementation Agreement followed on 11th December 2021.

The Public Investment Board (PIB) recommended ₹973 crore for pre-investment activities in May 2022, and this was approved by the Ministry of Power on 12th July 2022.

Status of Clearances: -

DPR Appraisal: Approved by CEA in 2018 and revalidated till 17 April 2025.

Environment Clearance: Recommended by EAC in 2017, pending submission of Stage-I Forest Clearance.

Defence Clearance: Pending due to the relocation requirement of Army Transit Camp; discussions are ongoing at Central and UT Government levels.

Land Acquisition: Awards issued for private and government land; some legal cases pending under the new Land Acquisition Act.

The UT Government of Jammu and Kashmir submitted this proposal for diversion 847.17 ha of forest land for construction of Sawalkot HE Project (1856 MW) in Udhampur Forest Division, Mahore Forest Division, Batote Forest Division and Ramban Forest Division, in the UT of Jammu and Kashmir on PARIVESH Portal 1.0 seeking prior approval of Central Government under Van (Sanrakhshan Evam Samvardhana) Adhiniyam, 1980.

As per the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 & Van (Sanrakshan Evam Samvardhan) Rules, 2023, Guidelines & Clarification, the site inspection of this instant proposal was conducted by Sub-Office, Jammu, Regional Office, Chandigarh during 15.05.2025 to 20.05.2025. The inspection was carried out along with the following officials of the State Forest Department and representatives of User Agency:

1. Shri Ankit Sinha, DFO, Ramban
2. Shri Vinod Sharma, Range Officer, Ramban
3. Shri Amrik Singh, Forester
4. Shri Sandeep Singh, Forest Guard
5. Shri Sajad Hussain, Range Officer, Gool
6. Shri Nazir Ahmed Naik, BO Sangaldhan
7. Shri Abdul Rashid Hajam, BO Dheda
8. Shri Mohd. Ashraf Shekh, Forest Gaurd Dachan
9. Shri Choudary Zulfkar, Forest Guard, Dheda
10. Shri Harveer Singh, RO Gandhri
11. Shri Raj Kumar Sharma, BO kanga and Bathni
12. Shri Angraz Singh, Forest Guard
13. Shri Rajesh Singh, Forest Guard
14. Shri Mohd. Shafi, Forest Guard
15. Shri D. Boral, General Manager (HOP), NHPC
16. Dr. G S S H Vara Prasad, Senior Manager (Environment), NHPC
17. Shri Omkar Kumar, Senior Manager (Civil), NHPC
18. Shri Manoj Kumar, Assistant Manager, NHPC
19. Shri Kasturi Lal, Survey Assignment, NHPC
20. Shri Ayush Gupta, Range officer, Udhampur Forest Division
21. Shri Naresh Sharma, Block Officer, Guddar Saniyal, Udhampur Forest Division
22. Shri Rajeev Gupta, Block Officer, Pathi Mali, Udhampur Forest Division
23. Shri Rattan Lal, Block Officer, Hartiyan, Udhampur Forest Division
24. Shri Nand Lal, Forest Guard, Jasarkote, Udhampur Forest Division
25. Shri Shakti Bhadur, Range officer, Panchari

The Legal Status of the forests land proposed for diversion: -

District	Forest Division	Area involved and its break up(ha)	Legal Status	Aerial distance (approx.) of the proposed area from the nearest PA/WLS/NP (in Km)
Udhampur	Udhampur	189.75	Reserved Forest	38.21
Reasi	Mahore	39.6	Reserved Forest	40.94
Ramban	Batote	165.4	Reserved Forest	49.93
Ramban	Batote	120.14	Jungle-Jhari Land	41.00
Ramban	Ramban	289.58	Reserved Forest	40.34
Ramban	Ramban	42.7	Revenue Forest	48.35

The detailed component-wise area break-up of proposed 847.17 ha of forest land for construction of Sawalkot Hydro-Electric Project (1856 MW) as submitted by the User Agency is as under:

S.No.	Component	Forest Land Proposed for diversion (ha)	Non- Forest Land Proposed for diversion (ha)
1	Underground works left bank (HRT, Power, House, TRT)	101.4	0
2	Explosive Magazine	2.4	0
3	Site instalment and facilities on left bank	0	2
4	Worker Colony at Village Pari	0	9
5	Colony/ Officers/ Fabrication Yard at Tanger villa	0	13
6	Underground Works right bank (HRT, Power House, DT	39.6	0
7	Muck Disposal Area MDS1 and MDS2 above FRL	9	33
8	Open works Power intake, Dam, Plunge pool, DT outlet	18.209	0
9	Reservoir (Submergence)	663.56	496.17
10	Quarry Sites above FRL	12.001	0
11	Roads within Project are above FRL	1	1.01
Total		**847.17**	**554.18**

The details on Project Configuration & Capacity for the proposed Hydel Project:

As per the information provided in detailed project report, the details are as under: -

1	Location		
	(i)	Country	India
	(ii)	UT	Jammu and Kashmir
	(iii)	District	Ramban and Udhampur
	(iv)	River	Chenab
	(v)	Location of dam and Power House site Nothing Easting Topo sheet No. 43 O/4	33° 11' N 75° 06' E

	(vi)	Location of dam and power house site	Near Sedhu Village and d/s of confluence of Mandiyal and Talsuen Nala with river Chenab
	(vii)	Nearest Rail Head	Udhampur
	(viii)	Nearest Airport	Jammu
2	Purpose - Hydropower		
3	Hydrology		
	(i)	Catchment Area	19,475 Km^2
	(ii)	Location of catchment area latitude longitude	State - Himachal Pradesh and UT- Jammu and Kashmir Lat 32° to 34° 15' N Long 74° to 78° E
	(iii)	Design Flood (PMF)	18, 711 cumecs
	(iv)	Water Availability Series	From 1975-76 to 2008-09
4	Reservoir		
	(i)	Full Reservoir (FRL)	EL 695m
	(ii)	Maximum Water Level(MWL)	EL 695m
	(iii)	Mini Draw down Level	EL 692.80m
	(iv)	Reservoir Area	11Km^2
	(v)	Length of Reservoir at FRL	30 Km
	(vi)	Gross Storage at FRL	530 MCM
	(vii)	Live Storage/ Operational Pondage	23.84 MCM
	(viii)	Annual Sediment load	41.38 MCM
	(ix)	Pondage required for firm power	11.92 MCM
	(x)	Maximum Permissible Pondage	23.84 MCM
	(xi)	Pondage Provided	23.84 MCM
5	Concrete Dam		
	(i)	Type	Roller Compacted Concrete (RCC) Gravity Dam
	(ii)	Dam top elevation	EL 697.5m
	(iii)	FRL Elevation/Pond level	EL 605 m
	(iv)	River bed level at darn site	EL 534m
	(v)	Deepest foundation level	EL 505m
	(vi)	Height of dam (above deepest foundation level from river bed)	192.5m/163.5 m
	(vii)	Length of Dam at top	240 m
	(viii)	Type of foundation cut off	Curtain grouting in rock
6	Spillway		
	(i)	Design flood (PMF)	18,711 cumecs
	(ii)	Type	Sluice Spillway (5 bays) and Crest Spillway (2 bays)
	(iii)	Crest Elevation Lower Level Upper Level	 EL 657.0m EL 675.0m
	(iv)	Number and Size of Spillway Openings	> Lower Level • Number-five • Size (WXH)-11m x16.5 m

			> Upper Level • Number-Two • Size (W X H)-13m x 20m
	(v)	Energy dissipation	Ski jump bucket
	(vi)	Total length of Spillway Blocks	125m
	(vii)	Type of gate	Radial
	(ix)	Plunge of Pool EL	515m
7	Diversion Tunnel		
	(i)	Diameter, nos. & shape	13.5m X 19m, 3 nos, Horse shoe Shaped
	(ii)	Length	965m, 1130m, 1280m
	(iii)	Diversion discharge (Monsoon in 25 years return flood)	9,292 cumecs (Monsoon) 2,977 cumecs (Non Monsoon)
	(iv)	Invert Level at Entry	• DT-1: El. 535m • DT-2: EL. 539m • DT-3: EL. 543 m
	(v)	Invert Level at Exit	• DT-1: El. 532 m • DT-2: EL. 536 m • DT-3: El. 540 m
	(vi)	Diversion Tunnel Gate (Type of Gate)	Fixed Wheel Type
	(vii)	Size of Opening	6 m x 19 m each
	(viii)	Design Head	122 m
8	Coffer Dam		
	(i)	Type of u/s Coffer Dam/d/s Coffer Dam	Earth & Rock fill coffer dam
	(ii)	Max. height of u/s Coffer Dam	53 m
	(iii)	Top of upstream cofferdam	588 m
	(iv)	Max. height of d/s Coffer Dam	38 m
	(v)	Top of d/s coffer dam	570 m
9	Power Intake		
	(i)	Numbers	Three (Two for Stage-1 & One for Stage-II)
	(ii)	Design discharge per Intake	• Intake-2: 519.16 m³/s, (Including Environment flow 39.97 cumec)) • Intake-1: 479.19 m³/s, • Intake Stage II: 319.46 m³/s (Stage-II)
	(iii)	Invert Level	• El. 675.4 m (Intake 1 & 2) • EL. 677.4 m (Intake stage II)
	(iv)	Centre Line of Intake	• Intake 1 & 2: 679.75m cach • Intake stage II: 681.25m
	(v)	Trash Rack Dimension	• Stage-1 35 (excl. plers)x22.78 (Inclined)

		Number	• Stage-If 22.5 (excl. piers)x22.78 (inclined) • Stage -1 (2 nos) • Stage-II (One number)
	(vi)	Type of Gate	Vertical
	(vii)	Design Head	• Stage 1 20m • Stage-II 18m
10	Head Race Tunnel		
	(i)	Numbers and type	Two for Stage-1 & one for Stage-II (Circular type)
	(ii)	Size	• 12.8 m for Stage-I • 10.8 m for Stage-II
	(iii)	Length	About 200 m each
	(iv)	Design discharge	• Stage-I a) 519.16 m³/s, (Including Environment flow) b) 479.19 m³/s • Stage-II 319.46 m³/s
11	Pressure Shaft/ Penstock		
	(i)	Numbers	6 No. for Stage-18 2 no. for Stage - II
	(ii)	Type	Steel lined
	(iii)	Diameter	• PS-1 to PS-5:-6 m dia. Each • PS-6:- 6.7 m dia. • 2.75 m dia penstock for 56 MW Environmental unit (EU)
	(iv)	Length Inclined Horizontal	 130m-140m 50m to 115m
	(v)	Design Discharge (each penstock)	• 159.73 cumecs (PS 1,2,3,4,5,7 and 8 each) • 199.70 cumecs (PS 6), including discharge for EU
	(vi)	Velocity(Penstock)	• 5.65 m/s (PS 1,2,3,4,5,6,7 and 8 each) • 5.65 m/s(PS 6)
12	Power House		
	(i)	Type	Underground
	(ii)	Size	• 23m (W) x 46.5m (H) x 218m (L) for Stage- • 23m (W) x 46.5m (H) x 64m (L) for Stage-11
	(iii)	Type of turbine	Vertical Francis
	(iv)	Unit installed capacity	6x225 MW+1 x 55 MW (Stage-1) 2x225 MW (Stage-11) Total Capacity 1856MW

	(v)	Unit discharge	• 159.73 cumecs (Units 1,2,3,4,5,6,7 and 8 each) • 39.97 cumecs (for Environmental Unit)
	(vi)	Net Rated head	• 155.7m for Unit-1, 2, 3, 4, 7 and 8 • 153.5m for Unit 5, 6 and EU
	(vii)	Head Loss	• 4.565 m (Unit 1, 2, 3, 4,788) • 3.765 (Unit 5, 6 & EU)
	(viii)	Normal TWL. (all units running)	• Stage-I For unite-1,2,3 & 4=534 m For units -5 & 8 and environment unit 537 • Stage-II For units-7 & 8=534 m
	(ix)	Minimum TWL (One machine running at 50% load)	Stage-I For units-1,2,3 & 4=531 m For units -5 & 6 and environment unit =533.5 m. Stage-II For units-7 & 8= 531 m
	(x)	Maximum Tall Water Level (during July, August considering a spillesy discharge of 1000 cumecs)	• Stage- I For units-1, 2,3 & 4= 537 m For units -5 & 6 and environment unit= 545 • Stage-II For units-7&8 =537m
	(xi)	Turbine Axis Elevation	EL 625 m
13	Transformer Cavern		
	(i)	Type	Underground
	(ii)	Size	• 15m (W) x 23.5m (H) x 211m (L) for Stage-I • 15m (W) x 23.5m (H) x 56m (L.) for Stage-II
	(iii)	Number	Single continuous cavern
	(iv)	Transformer details	536.10 m
14	Power House Complex		
	(i)	Type of Power House (Underground/Surface/Semi)	Underground
	(ii)	Scheme of Hydro Electric Project (ROR/Storage)	RoR
	(iii)	Installed Capacity No. of Units	• 1406 MW (Stage-I) • 450 MW (Stage-II) Total= 1856 MW 6 x 225 MW + 1 x 56 MW (Stage-1) 2 x 225 MW (Stage-II)
	(iv)	Status of Overload capability of Unit	10%
	(v)	Status of Butterfly Valve Chamber (Yes/No)	No

	(vi)	Status of Desilting Chamber (Yes/No)	No
	(vii)	Rated Head including Maximum Net Head & Minimum Net Head.	• Rated Net Head 155.7m for Unit-1, 2, 3, 4, 7 and 8 153.5m for Unit 5, 6 and EU • Maximum Near Head 163m for unit 1,2,3,4,7 and 8 160.50m for units 5, 6 and EU • Minimum Not Head 154.30m for unit 1,2,3,4,7 and 8 152.20m for units 5, 6 and EU
	(viii)	Type of turbine	Vertical Francis
	(ix)	Turbine Efficiency	• 93% for unit size 225MW capacity • 92% for unit size 56MW capacity
	(x)	Synchronous speed	• 166.67 rpm (225 MW machine) • 300 rpm (56 MW Machine)
	(xi)	Power Factor	0.85
	(xii)	Generator Efficiency	98.5%
	(xiii)	Generation Voltage	• 16kV for 264.7 MVA • 11kV for 65.9 MVA
	(xiv)	Generator Bearing Arrangement (type)	Combined thrust and guide bearing arrangement
	(xv)	Bus Duct (type, rating)	Type Isolated Phase Bus Duct Rating:- • 12500Amps, 24KV (for 16KV generation voltage for 225MW generating units) • 12500Amps, 12KV (for 11KV generation voltage for 56MW generating units)
	(xvi)	Generator Step Up Transformer (type, rating)	Single Phase OFWF (Oil forced water forced) 97.1 MVA for 225 MW units Three phase OFWF (Oil forced water forced) 72.5 MVA, for 56MW unit)
	(xvii)	EOT Cranes (Nos, Capacity & Location)	Power House:- • 2 No. cranes each of 450/50/10 T capacity GIS building • 1 No. crane of capacity 10. T
	(xviii)	Transport Limitation	4.5m (W) x 4.5(H) x 10m(L) (Heaviest component is Transformer of size 4.0m(W) x 4.2m(H) x 6m(L) and weight 115 T
	(xix)	Type of Switchyard (GIS/AIS, rating)	420KVA, 6000A of GIS
	(xx)	Bus-bar Arrangement.	In stage-1, 17 No. of bays provided (6+1 bays for generator incoming. 8 bays for outgoing lines, one bay for bus coupler and one bay for

			reactor. In stage-II, 2 no. bays shall be provided for generator Incoming of stage-II units
15	Power System Planning		
	(i)	Generator Commissioning Schedule	Unit # 1-89th month & Unit #8-96th month with June 2018 as zero date.
	(ii)	Generating Voltage	• 16kV for 225 MW • 11kV for 56 MW
	(iii)	Transmission Voltage	400 KV
	(iv)	Transformer (GT) • Transformation Capacity (MVA) • Voltage rafio (KV/KV) • No. of Transformers • Single Phase Unit Phase/Three	• 3 X 97.1 MVA for each 225 MW unit & 1 X 72.5 MVA for 56MW unit. • 16/400 KV for 225 MW units & 11/400 kV for 56 MW unit • 26 nos. (incl. spares) for 225 MW units & 01 no. for 56 MW unit • Single Phase for 225 MW units & Three Phase for 56 MW units
	(v)	Switchyard: • Type • No. of Bays including Generator bays (at different voltages level) • Switching scheme • Switchyard Coordinates (latitude/longitude) • Switchyard Equipment Rating	420kV GIS (Indoor) 19 ((6+1) nos. generator bays, 1 no. bus coupler bay, 8 nos. of 400kV line bays and 1 no. bus reactor bay in the Stage-1 and 2 nos, generator bays in Stage-II) Double Busbar Scheme with bus coupler 33° 11'N 75°06' E 420 kVrms; 50 RA
	(vi)	Transmission System: Details of Transmission System (indicating no. of circuits, type of Conductor and length (in km) etc.)	400 k GIS Double main bus switching arrangement has been proposed at power house. Provision of total 19 nos., 400 kV bays, consisting of (6+1) nos, generator bays, 1 no bus coupler bay, 8 nos, of 400kV line bays and 1 no. bus reactor bay in the Stage 1 and 2 nos generator bays in Stage-II, has been kept. Out of total 19 no. 400 kV bays, & nos, 400 kV line bays are provided in pothead yard and others are in the underground GIS bus. GIS bus will be connected to 400 kV pothead yard (GIS) through 400 KV GIB bus duct for further transfer of power to the grid. The transmission system for the project along with bus reactor rating would be firmed up after grant of connectivity/ LTA.
	(vii)	Interconnection between Indoor Switchyard and Pothead Yard	Through 400 kV GIB bus duct

	(viii)	Bus Reactor: • Voltage level • MVAR capacity • Type (single/three phase units)	• 400kV • Would be firmed up after grant of connectivity/ LTA.
	(ix)	Whether applied for connectivity/LTA to CTU	JKSPDC shall approach CTU to seek connectivity/Long Term Access (LTA) as per CERC regulations at least five years before the anticipated commissioning of the project.
	(x)	All Generating units at the main power house incl. environment unit should be capable of operating in Synchronous Condenser mode.	
16	Surge Arrangement D/S Power House		
	(i)	Number & Type	Three Nos, type underground
	(ii)	Size	• 18m (W) x 42m (H) x 170m (L) combined for units 1, 2, 3 and 4 • 10m (W) x 57m (H) x 75m (L) combined for unit 5, 6 and EU • 18m (W) x 42m (H) x 85m (L) combined for units 7and 8 of Stage - II
17	Tail Race tunnel		
	(i)	Numbers & type	Three for Stage-1 & one for Stage-II
	(ii)	Diameter & shape	10.8 m dia (Circular) each
	(iii)	Design discharge	319.46 cumecs in TRT 1 & 2 TRT in Stage II 359.43 cumecs in TRT-3
	(iv)	Length(excluding outlet structure)	TRT-11743m TRT-21720m TRT-3199m TRT Stage-II = 1915m
	(v)	Adit to TRT	6.5 m dia, D-shaped
	(vi)	No. of gates and their size	Six No. for Stage-I and two No. for Stage-II Size 12 m (W) x 7.0 (H)
	(vii)	Type of Gate	Vertical lift roller gate
	(viii)	Sill level	530m for TRT 1, 2 and TRT Stage II 532.5m for TRT 3
	(ix)	Design Head (m)	39.50 M
	(x)	Outlet invert level	EL. 530m (TRT 1, 2 and TRT- Stage-II) El.532.5m (TRT-3)
	(xi)	TWL at Rated discharge at TRT Outlet (TRT-1, 2 and TRT-Stage II)	• EL.534 m • El 537 m
19	Power Generation		
	(i)	Installed capacity	1406 MW (Stage-1) 450 MW (Stage-II) Total 1856 MW

	(ii)	• Annual Energy Generation in 90% dependable year • Design Energy in 90% Dependable year with 95% machine availability	8196.10 MU (7711.03 MU for main plant both Stage-1 & Stage-ll and 485.07 MU for auxiliary plant) 7994.73 MU (7533.91 MU for main plant both Stage-I & Stage-ll and 460.82 MU for auxiliary plant)
	(iii)	• Corresponding Annual Load Factor • Corresponding Daily Peaking Duration (Minimum) • Environmental Flow	49.17% (for all units including environmental unit) 3 hours 39.97 cumec
	(iv)	E&M Cost	Rs. 3100.64 crore at February 2016 price level

2. Whether proposal involved any construction of buildings (including residential) or not. If yes details thereof:

No

3. Total Cost of the Project at present rates.

The total estimated cost of the project is **Rs. 22704.080 Crores**.

4. Whether forest area proposed for diversion is important from Wildlife point of view or not.

Yes. Wildlife reported in the area are House Sparrow, Common Myna, Red vented Bulbul, White Cheeked bulbul, Leopard, Khaleej Pheasant, White Backed Vulture, Himalayan Griffon Vulture, Common fox, Jackal, Grey Jungle Fowl, Goral etc.

5) Vegetation

S.No.	Name of Forest Division	Name of RF/ area involved	Total Nos. of Trees to be felled including poles.
1	Udhampur	Reserved Forest	44210
2	Mahore	Reserved Forest	819
3	Batote	Reserved Forest	50590
4	Batote	Jungle-Jhari Land	
5	Ramban	Reserved Forest	126462
6	Ramban	Revenue Forest	
	Total		**222081**

Effect of removal of tree on the general ecosystem in the area:

Total 222081 number of trees are proposed to be felled in the proposed project. The removal of tree would definitely affect the ecosystem in general, especially in terms of increased run-off and soil erosion that may lead to landslides. However, the proposed project is of national importance for harnessing hydropower potential of Chenab River, and hence, some trade-off is required between the developmental activities and environmental conservation. Therefore, effect of removal of trees can be minimised by proper monitoring and safety measures as per standard conditions of approval. The UT Govt and User Agency may take strict and necessary precautionary bio-engineering measures to reduce run-off and soil erosion. The muck to be generated during the construction are to be dumped in the designated muck dumping sites with properly engineered retaining wall in order to avoid rolling down of the muck debris/boulders to river/stream. Besides, strict monitoring of the implementation of the Catchment Area Treatment Plan during the project execution will aid to revive the anticipated loss to the ecosystem.

6. Background note on the proposal

As provided at page no. 1.

7. Field observations/ Actionable Points/recommendations: -

I. Project Description:

Sawalkot HEP, with an installed capacity of 1,856 MW, is to be developed on the Chenab River. A total of 847.174 hectares of forest land is proposed for diversion. Of this, 162.870 ha (120.145 hectares in the Ramban Forest Division and 42.725 hectares in the Batote Forest Division) are classified as Gair Mumkin Jhad/Jungle, which fall under the possession of the Revenue Department. The reservoir of the project begins near the TRT of Baghlihar Hydroelectric Project (Photo 1), while the dam site and powerhouse are planned to be located in Udhampur district.

Some forest land falling under the project have already been diverted under erstwhile Jammu and Kashmir Forest (Conservation) Act, 1997, and some components of the project have been already constructed, including one tunnel (approximately 1.57 km), roads, three bridges on nallahs, and part of the residential area.

The Full Reservoir Level (FRL) begins approximately 3.5 km downstream from the Baglihar Dam Tail Race Tunnel (TRT). The proposed forest land for diversion also starts from this point, which is considered the zero point of the FRL. This area extends along both the north (Ramban Forest Division) and south (Batote Forest Division) on banks of the Chenab River (refer to Photos 1 & 2). Scattered Chir Pine (*Pinus roxburghii*) trees were observed on both sides of the river up to the town of Ramban.

The forest and adjoining state land near Ramban are prone to landslides and require stabilization through measures such as jute coir matting and landscaping interventions to mitigate slope failure. The stretch between Ramban and Dharmkund is also susceptible to landslides, with the Chenab River flowing through a deep gorge. This region features a moderately dense forest comprising Chir Pine, Shisham (*Dalbergia sissoo*), Banj Oak (*Quercus leucotrichophora*), and other broadleaf species, and requires erosion control and slope stabilization.

Between Dharmkund and the TRT, there is healthy regeneration of Shisham, along with Banj and scattered Chir Pine trees. This section is similarly prone to landslides and must be reinforced accordingly.

II. Muck Dumping Sites

Three muck dumping sites are proposed under the project—one on forest land and two on non-forest land:

Muck Dumping Site 1: This is proposed on 21 ha of non-forest land along a nallah. A few households were observed within the proposed site. The User Agency (UA) has stated that this is private land and will be acquired before the commencement of project activities. This site is prone to landslides due to the presence of the nallah and must be stabilized as per the Muck Management Plan (**Photo 9**).

Muck Dumping Site 2: This is located on non-forest (12 ha) land near Parri Village and includes some residential structures. The UA has confirmed that this private land will be acquired prior to the project's commencement (**Photo 10**).

Muck Dumping Site 3: This is located on 9.0 ha of forest land, adjacent to Muck Dumping Site 2 near Parri village (**Photo 10**).

Thus, the out of total area for muck-dumping i.e 42 ha, total out which 9.0 ha is on forest land. UA informed that the muck to be generated during the construction are to be dumped in these designated muck dumping sites with properly engineered retaining wall in order to avoid rolling down of the muck debris/boulders to river/stream.

III. Quarry Site

One quarry site, covering approximately 12.001 ha, is proposed near already-constructed tunnel. It is located on a steep slope with scattered Chir Pine vegetation. As the area is also landslide-prone, all necessary stabilization measures must be in place before quarry operations begin. Additionally, all required No Objection Certificates (NoCs) must be obtained from the competent authorities prior to initiation of quarrying activities.

IV. Explosive Magazine Site

User agency has also proposed an area of 2.4 ha for Explosive Magazine site, which is located near the already-constructed tunnel and quarry site.

V. Compensatory Afforestation (CA) Sites

The CA sites have been identified in an area of 2115.878 ha on degraded forest land. A total of 175 Compensatory Afforestation (CA) sites of varying sizes has been proposed across four forest divisions: Ramban, Batote, Udhampur, and Mahore (**Annexure I**). Out of 175 CA sites, 43 CA sites were visited randomly during the site visit due to time constraint and majority of the proposed sites are located far from the roadside and are accessible only on foot or using pony.

Notably, the CA site located in Compartment No. 73 G of the Batote Forest Division has been designated for muck dumping also and, therefore, must be removed from consideration or relocated to an alternative site.

Many areas within these forest divisions experience significant anthropogenic pressures, particularly due to overgrazing, which could impede the success of afforestation efforts. To mitigate these impacts and ensure the long-term sustainability of the plantations, **chain-link fencing** is recommended at sites facing intense grazing pressure.

Details and photographs of the 43 physically inspected CA sites are provided in **Annexure II**.

8. Whether land for compensatory afforestation is suitable from plantation and management point of view or not.

Most of the CA sites are located far flung area and not connected with motorable road. These CA sites are approachable by tracking or by pony as informed by Range Officers. The identified CA sites are devoid of dense tree canopy and mostly shrub land with scattered Chir pine. These identified CA sites are suitable for plantation and from management point of view. However, **chain-link fencing is recommended at sites facing intense grazing pressure**.

9. Whether land for compensatory afforestation is free from encroachments/other incumbencies.

Some kotha/mud houses were seen in few CA sites, Range Officer informed that they are seasonal and will be removed prior to plantation. The UT Govt is required to give an undertaking in this regard.

10. Whether land for compensatory afforestation is important from religious and archaeological point of view.

No.

11. Land identified for compensatory afforestation is in how many patches. whether patches are compact or not.

CA identified in 175 Nos of patches and are not compact. The smallest CA patch is 1 ha in area and biggest is of 202 ha and others fall in between these two.

12. Whether DPR (Detailed project report) is approved?

Yes, Approved and has been submitted by JKPDC to CEA on 08.03.2018.

13. Status of Techno-economic clearance obtained?

Techno-Economic Clearance (TEC) has been obtained. CEA accorded appraisal vide O.M. No. 2/J&K/19/CEA/03-PAC/1047-1090 dated 18.04.2018.

14. Details on catchment area under the project. Catchment Area Treatment Plan to prevent siltation of reservoir.

The total Catchment Area of Chenab River is 19475 sq km out which 7878 sq km is in Himachal Pradesh. Free Drainage Catchment Area considered in CAT Plan is 1307.85 sq km. Total Cost of the CAT Plan: **22525.77 Lakhs**

15. Status of approval of catchment Area Plan

The Catchment Area Treatment (CAT) Plan has been approved by the J&K Forest Department vide letter No. PCCF/FCA/3434-I/24-28 dated 01.04.2024.

16. Maps with the details.

Submitted in Sol toposheet as well as soft copies of shape file along with proposal.

17. Whether the UA has prepared Muck disposal plan?

Yes, a Muck Disposal Plan has been prepared.

18. Detail of Mining

i. Whether mining plan is approved?

The details of the Quarry site as per DPR were submitted to Directorate of Geology & Mining, Govt of Jammu & Kashmir. Further, the Directorate of Geology & Mining, Govt of Jammu & Kashmir has issued NOC in favour of JKSPDC.

ii. Status of reclamation already undertaken / proposed to be undertaken as per the approved Mine Closure Plan

The project is currently in the approval stage. Reclamation Plan is proposed. All reclamation and rehabilitation measures shall be undertaken progressively, starting after the commencement of mining operations, and will be implemented as per the prescribed schedule and regulatory guidelines.

19. Financial allocation, expenditure incurred or proposed to be incurred

The Total cost of the Project is Rs. 22704.080 Crores, out which an amount of Rs. 209.53 Crores has been earmarked under Environment & Ecology Head. Accordingly, expenditure is proposed out of the budget under Environment & ecology.

20. Whether proposal involves violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 or not. If yes a report on violation including action taken against the concerned officials:

As per data in PARIVESH portal and site visit, no violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, is involved.

21. Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Govt or not.

Yes. Survey has been initiated for the Rehabilitation & Resettlement Plan and UA has assured to finalize the rehabilitation plan before the final approval.

22) Cost Benefit ratio: 202.64

23) Recommendation of the Principal Chief Conservator of Forests/State Govt.

The proposal has been recommended at all levels by the UT of Jammu & Kashmir.

24) Recommendation of DDGF(C), Regional Office, Chandigarh along with detailed reasons.

The Sawalkot Hydroelectric Project (HEP), with an installed capacity of 1856 MW, is a major hydropower initiative, intended to harness the potential of the Chenab River. Being a renewable energy source and the electricity to be generated from the proposed project, will improve the power scenario in the region, and likely to strengthen the economic condition of the UT. Moreover, the project will generate employment which will benefit the local population. Hence the proposal is recommended with general and specific conditions of hydroelectric project along with the following conditions: -

(i) The CA site located at Compartment No. 73 G of the Batote Forest Division has been designated for muck dumping and, therefore, must be removed from consideration or relocated to an alternative site.
(ii) The magazine explosive site is not connected with main road, hence, the UA is required to clarify regarding the requirement of approach road and if the Forest land is involved for same.
(iii) The proposed quarry site is located at steep slope, hence need to prepare Mining Plan and detail of Over Burden benches for the stabilization of rock.
(iv) The strict implementation and monitoring by higher authority of CAT plan and Wildlife Mitigation Plan approved by the CWLW within the time bound period.

25) DDGF(C), Regional Office, Chandigarh shall give detailed comments on whether there are any alternatives examined for locating the proposal in non-forest land.

No alternative for this project as it is a site-specific project determined technically on hydrological and geological parameters. Moreover, no non-forest land is available around this identified location for the proposed project.

26) Utility of the proposal.

The proposed diversion project is for construction of a concrete gravity dams of 697.5 m on river Chenab to generate 1856 MW of electricity. As per the DPR, the project will generate energy to the tune of approx. Rs. 10588140 lakh in 35 yrs of Operation and maintenance life of the project. As per MoU, UT of Jammu & Kashmir will get 12% power free contributing approx. Rs. 1460420 lakh to the UT exchequer, besides providing direct and indirect employment to the locals. In addition, the NHPC shall contribute 1% of the cost commensurate with the 12% free power to the Local Area Development Fund.

27) Whether land being diverted has any socio-cultural/religious value.

No.

28) Whether any scared grove or very old growth trees/forests exits in the area proposed for diversion.

No

29) Situation w.r.t. any Protected Area

The proposed forest land is 38 km (approx.) away from nearest Surinsar-Mansar Wildlife Sanctuary.

30. The Schedule I species reported are as under:

House Sparrow, Common Myna, Red vented Bulbul, White Cheeked bulbul, Leopard, Khaleej Pheasant, White Backed Vulture, Himalayan Griffon Vulture, Common fox, Jackal, Grey Jungle Fowl, Goral etc.

31) Whether the land under diversion forms part of unique eco-system.

No. As per the Working plan of the area proposed for diversion, the area falls under the Chir Irregular Working Cirlce, Reboisement Working Circle and Deodar-Kail Working Circle. The most part of the area is devoid of vegetation, and the available vegetation, as per the species composition are *Acacia catechu*, *Dalbargia sisso*, *Melia azadirachta* etc and no unique flora/fauna species has been indicated by the DFO in part II of PARIVESH portal..

32) Any other information relating to the proposal.

NA

Photo. 1 Start point/zero point of RFL near village Chanderkote, Ramban

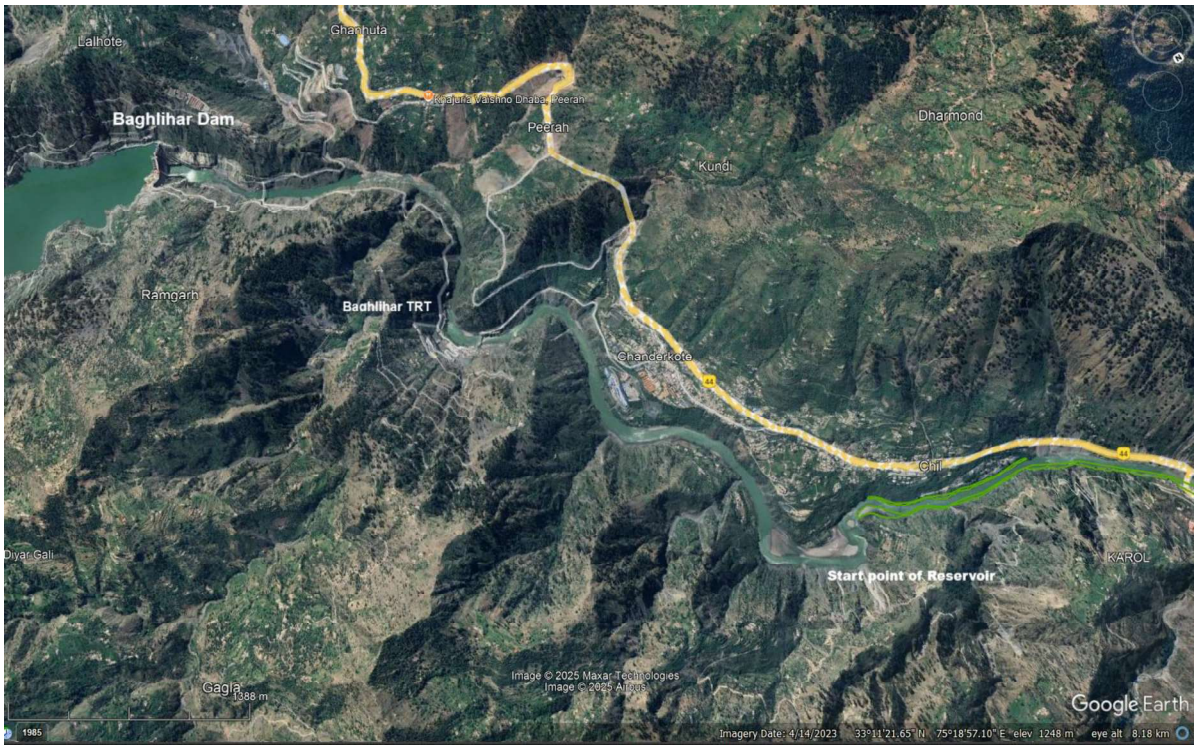


Photo 2. Strat point of Sawalkot Reservoir, Baghlihar Dam and TRT of Baghlihar Dam

Photo 3. Proposed Dam site near Sawalkot village.

Photo 4. River Chenab near Dharamkund.

Photo 5. Diversion tunnel site in reservoir.

Photo 6. Proposed Muck Dumping site I on private land.

Photo 7. Proposed Muck Dumping site in forest and private land (9.0 ha +21 ha).

Photo 8. Proposed area for quarry site.

Photo 9. Proposed area for explosive magazine site.

Photo 10. Vegetation near the Dam site.

Photo 11. Inspection team interacting with forest officials at Dharmkund.

(Dr. Khursid Alam Khan)
Scientist-C
Sub-Office, Jammu

Digitally signed by
Satya Prakash Negi
Date: 22-05-2025
17:18:08

(Satya Prakash Negi)
Deputy Director General of Forests (C)
Regional Office, Chandigarh

Annexure-I

Proposed CA Sites

Batote Forest Division

S.no	Patch No.	Area(ha.)	Name of PF/RF	Range	Compartment No
1	1	11.6	Sanna Papriya	Batote	27 Batote
2	2	41.5	Maitra Ballout	Batote	34 Batote
3	3	5.51	Maitra Ballout	Batote	38 Batote
4	4	32.6	Maitra Ballout	Batote	40a Batote
5	5	24.1	Sawni Papriya	Batote	25 Batote
6	6	15	Kothi Badhole	Batote	67 Gandhri
7	49	8.5	Kothi Tanger	Batote	71 Gandhri-II
8	50	202.69	Kothi Badhole, Kothi Tanger, Gandhri Parnote, Surnikund	Batote	72 Gandhri, 73 Gandhri, 74 Gandhri-I, 74 Gandhri-II, 74 Gandhri-III 75 Gandhri-I 75 Gandhri-II 76 Gandhri-I 76 gandhri-II 76 Gandhri-III 78 Gandhri, 78 Gandhri-II55 Gandhri, 76 Gandhri, 59 Gandhri, 6
9	43	1	Surnikund	Batote	66 Gandhri-II
10	44	5.67	Surnikund	Batote	66 Gandhri-III
11	45	14	Kothi Badhole	Batote	69 Gandhri
12	46	14.2	Surnikund	Batote	70 Gandhri-I
13	47	10	Surnikund	Batote	70 Gandhri-II
14	48	21.06	Gandhri-Parnot	Batote	56 Gandhri-III
15	37	5.6	Gandhri-Parnot	Batote	61 Gandhri
16	38	7.68	Gandhri-Parnot	Batote	62 Gandhri
17	39	5	Gandhri-Parnot	Batote	63 Gandhri
18	40	3.15	Gandhri-Parnot	Batote	64 Gandhri-I
19	41	16.6	Gandhri-Parnot	Batote	64 Gandhri-II
20	42	5.45	Surnikund	Batote	66 Gandhri-I
21	31	16.4	Gandhri-Parnot	Batote	58 Gandhri-II
22	32	1	Gandhri-Parnot	Batote	58 Gandhri-I
23	33	1.82	Gandhri-Parnot	Batote	58 Gandhri

24	34	13	Gandhri-Parnot	Batote	58 Gandhri-III
25	35	23.4	Gandhri-Parnot	Batote	58 Gandhri-IV
26	36	1	Gandhri-Parnot	Batote	59 Gandhri
27	25	15	Gandhri-Parnot	Batote	53 Gandhri-III
28	26	8	Gandhri-Parnot	Batote	55 Gandhri-I
29	27	13	Gandhri-Parnot	Batote	55 Gandhri-II
30	28	4.4	Gandhri-Parnot	Batote	56 Gandhri-I
31	29	12.5	Gandhri-Parnot	Batote	56 Gandhri-II
32	30	26.3	Gandhri-Parnot	Batote	57 Gandhri
33	19	1	Gandhri-Parnot	Batote	49 Gandhri-IV
34	20	3	Gandhri-Parnot	Batote	50 Gandhri
35	21	10	Gandhri-Parnot	Batote	51 Gandhri
36	22	24	Gandhri-Parnot	Batote	52 Gandhri
37	23	13	Gandhri-Parnot	Batote	53 Gandhri-I
38	24	5.7	Gandhri-Parnot	Batote	53 Gandhri-II
39	13	6.81	Maitra Ballout	Batote	47 GAndhri-IV
40	14	24	Maitra Ballout	Batote	48 Gandhri -I
41	15	26.5	Maitra Ballout	Batote	48 Gandhri-II
42	16	3.7	Gandhri-Parnot	Batote	49 Gandhri-I
43	17	2.4	Gandhri-Parnot	Batote	49 Gandhri -II
44	18	3	Gandhri-Parnot	Batote	49 Gandhri-III
45	7	3.1	Maitra Ballout	Batote	38 Batote
46	8	4.32	Maitra Ballout	Batote	39 Batotte
47	9	1.81	Maitra Ballout	Batote	43 Batote
48	10	6.11	Maitra Ballout	Batote	47 Gandhri-I
49	11	2.00	Maitra Ballout	Batote	47 Gandhri-II
50	12	7.28	Maitra Ballout	Batote	47 Gandhri-III

Mahore Forest Division

S.No.	Patch No.	Area(ha.)	Name of PF/RF	Range	Compartment No
1	1	25.2	76/Ar	Mahore	76/Ar
2	2	23	126/Ar	Mahore	126/Ar
3	3	19	100/Ar	Mahore	100/Ar

4	4	12	113/Ar	Mahore	113/Ar

Ramban Forest Division

S.no	Patch No.	Area(ha.)	Name of PF/RF	Range	Compartment No
1	1	7.0327	Khairkoot Krawah Forest	Banihal	43 B
2	2	20.0371	Doligam Chanjloo	Banihal	47/B
3	3	10.0298	Doligam Chanjloo	Banihal	51/B
4	6	10.0738	Mangit Forest	Banihal	39/B
5	7	9.9961	Mohu Trigam Forest	Banihal	23b/B
6	8	6.0995	Mohu Trigam Forest	Banihal	25/B
7	50	11.0914	Chinjara Forest	Gool	8/Ar
8		12.1755	Gajpat Forest	Ramban	65/R
9	40	25.0361	Mohu Forest	Banihal	34/B
10	44	43.0118	Sarbagni Forest	Banihal	4/B
11	45	46.0292	Bajmasta Forest	Banihal	1/B
12	46	25.0298	Darsa Forest	Gool	59/Ar
13	48	35.0698	Chinjara Forest	Gool	7/Ar
14	49	38.0458	Chinjara Forest	Gool	8/Ar
15	27	10.0215	Balihote Demote	Soil Range Banihal	46/R SC
16	28	6.019	Digdole Forest	Soil Range Banihal	39/R SC
17	29	33.1785	Charhalan Forest	Ramban	19a/R
18	34	35.2456	Neel Dhanmasta Forest	Ramban	9/R
19	37	16.9638	Bhangara Paristan Forest	Ramban	35/R
20	39	11.0117	Saryala Forest	Ramban	40/R
21	13	21.0933	Kundi Forest	Ramban	47/R
22	14	6.0336	Khairkoot Krawah Forest	Soil Range Banihal	46/SC B
23	19	2.1911	Khairkoot Krawah Forest	Soil Range Banihal	46/SC B
24	20	20.0199	Khairkoot Krawah Forest	Soil Range Banihal	42/B
25	25	25.0983	Pogal Paristan Forest	Soil Range Banihal	17/R SC

26	26	24.9896	Pogal Paristan Forest	Soil Range Banihal	17/R SC
27	43	9.0016	Bhangara Paristan Forest	Ramban	31/R
28	47	10.0565	Pogal Paristan Forest	Ramban	17a/R
29	21	11.027	Darsa Forest	Gool	59/Ar
30	5	13.0659	Ganote Dandrath	Ramban	61/R
31	4	6.1083	Gajpat Forest	Ramban	48/R
32	12	10.0444	Ganote Dandrath	Ramban	63/R
33	33	5.0694	Ganote Dandrath	Ramban	53/R
34	35	10.1002	Kahubagh Forest	Ramban	45/R
35	36	5.9976	Balihote Demote Forest	Ramban	51/R
36	38	7.0073	Digdole Forest	Ramban	36/R
37	41	5.0371	Bhangara Paristan Forest	Ramban	24/R
38	42	16.0981	Bhangara Paristan Forest	Ramban	27/R
39	22	18.9011	Darsa Forest	Gool	61/Ar
40	23	6.0245	Darsa Forest	Gool	64/Ar
41	24	4.0279	Darsa Forest	Gool	62/Ar
42	30	15.2903	Seripura Famrote	Gool	51/Ar
43	31	15.0734	Dalwah Famrote	Gool	38/Ar
44	32	9.0368	Balihote Demote	Ramban	46/R
45	9	7.0357	Mangit Forest	Banihal	37a/B
46	10	24.9851	Shagan Forest	Banihal	9b/B
47	15	22.0448	Gool Ramakunda	Gool	25/Ar
48	16	7.0151	Bolnara Forest	Gool	35/Ar
49	17	10.4039	Gool Ramakunda	Gool	26/Ar
50	18	13.0689	Gool Ramakunda	Gool	29/Ar

Udhampur Forest Division

S.no	Patch No.	Area(ha.)	Name of PF/RF	Range	Compartment No
1	1	17	Pattan Forest	Dudu	3d/D
2	2	5.45	Jig Forest	Dudu	1a/D
3	3	10.90	Sabar Forest	Dudu	59/D

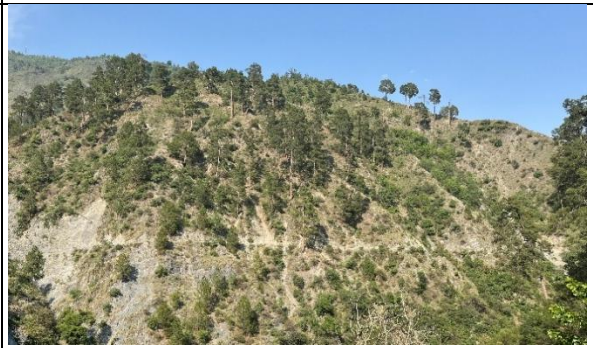
4	4	10.80	Bainachaun Forest	Dudu	58/D
5	5	5	Rasaru Forest	Dudu	53a/D
6	6	5.00	Galiote Badhota	Panchari	55/P
7	26	5	Latyar Forest	Panchari	3/P
8	39	6.27	Bhatti Bhangara Forest	Udhampur	36/U
9	40	8.32	Hartaryan Forest	Udhampur	43/U
10	41	12	Jadserkote Forest	Udhampur	35/U
11	42	2.85	Jadserkote Forest	Udhampur	42/U
12	43	16.70	Jadserkote Forest	Udhampur	41/U
13	31	13.90	Chulna Forest	Panchari	13/P
14	33	14.70	Ossu Forest	Udhampur	87b/U
15	34	8.48	Ossu Forest	Udhampur	96/U
16	35	21.60	Battal Forest	Udhampur	7/U
17	36	34.30	Ladha Thani Forest	Udhampur	73a/U
18	37	4.17	Kambal Sula	Udhampur	72/U
19	38	7.45	Jadserkote	Udhampur	40/U
20	25	3	Diggi Forest	Panchari	64/P
21	27	1.76	Katti Forest	Panchari	3/P
22	28	11.50	Galiote Badhota	Panchari	55/P
23	29	4	Sadhota Forest	Panchari	62/P
24	30	11.20	Chulna Forest	Panchari	13/P
25	32	42.30	Bhatti Bhangara Forest	Udhampur	53c/U
26	19	2.50	Jnori Forest	Panchari	18/P
27	20	4	Nal Sunkh	Panchari	19/P
28	21	3	Chulna Forest	Panchari	14/P
29	22	11	Kultair Forest	Panchari	10/P
30	23	2.80	Chulna Forest	Panchari	13/P
31	24	11	Diggi Forest	Panchari	64/P
32	13	5	Jhori Forest	Panchari	20/P
33	14	6	Moungri Basnote	Panchari	31/P
34	15	17.40	Kandhar Kalsote	Panchari	27/P
35	16	7.30	Lali Sarhi	Panchari	44/P
36	17	25.80	Moungri Basnote	Panchari	43/P

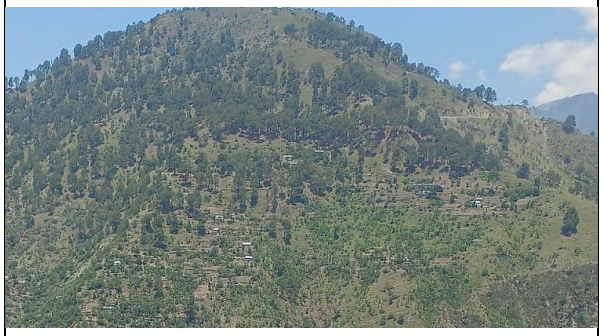
37	18	14.60	Lali Sarhi	Panchari	45/P
38	7	16.00	Galiote Badhota	Panchari	56/P
39	8	3.10	Galiote Badhota	Panchari	57/P
40	9	4.10	Galiote Badhota	Panchari	57/P
41	10	19.50	Galiote Badhota	Panchari	56/P
42	11	9.80	Galiote Badhota	Panchari	60/P
43	12	22	Moungri Basnote	Panchari	31/P

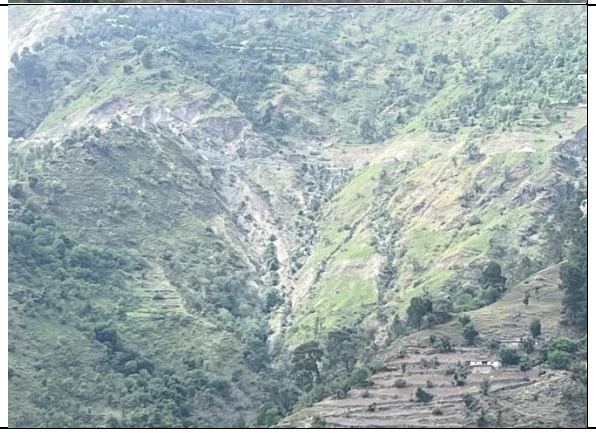
Annexure-II

Compensatory Afforestation sites visited during the site inspection of Sawalkote Hydroelectric Project

1. Ramban Forest Division

S.no	Name of CA site	Comp-No	Area (ha)	Name of PF/RF	Range	Photographs	Observations/ Remarks
1.	Chakwa Nallah/Sildhar	47/R	21.0933	Kundi Forest	Ramban		The proposed CA site has scattered pine and shrub species. The site has vacant space available for plantation.
2.	Neera	46/R	10.0215	Balihote Demote	Soil Range Banihal		The proposed CA site has scattered Chir pine and Oak species and vacant space is available for plantation.

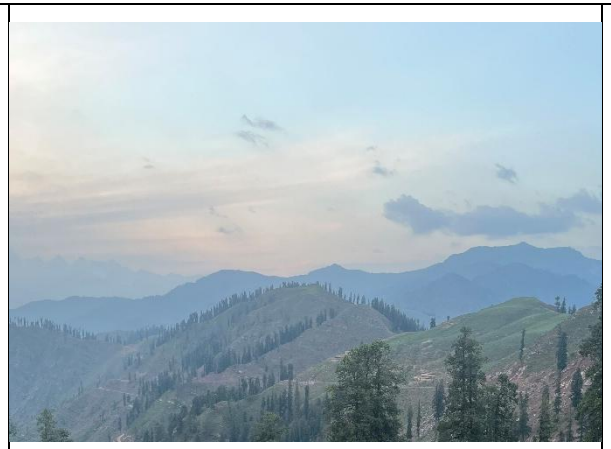
3.	Tragga Kanthi	46/R	9.04	Balihote Demote	Ramban		The proposed CA site has moderately dense Chir pine located above the habitation. and vacant space is available for plantation.
4.	Muradbass/Sumber Upper-A (II)	7/Ar	25.0712	Chinjara Forest	Gool		The proposed CA site has moderately dense Chir pine and few patches of Oak species and vacant space is available for plantation.
5.	Muradbass/Sumber Upper-A (I)	7/Ar	9.998	Chinjara Forest	Gool		The proposed CA site has scattered Chir pine located above the households and vacant space is available for plantation.

6.	Jignabass/Sumber Upper-B	9.998	Chinjara Forest	Gool	9.998		The proposed CA site has scattered Chir pine and shrub located above the gypsum mine and vacant space is available for plantation.
7.	Megdhar/Sumber Upper B	8 Ar	11.091	Chinjara Forest	Gool		The proposed CA site has scattered Chir pine and vacant space is available for plantation.
8.	Gagar/Sumber Upper-B	8/Ar	10.089	Chinjara Forest	Gool		The proposed CA site has scattered Chir pine and Oak species and vacant space is available for plantation.

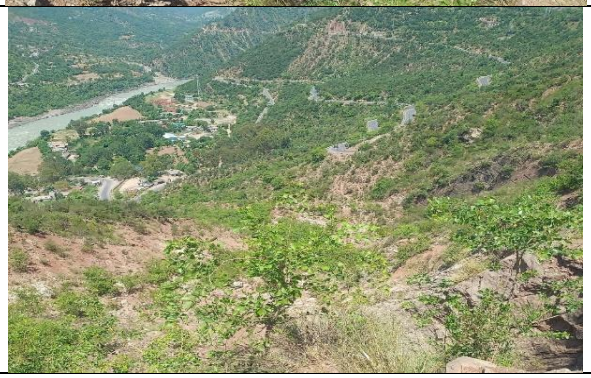
9.	Sharora Brala/Seripura	51/Ar	15.2903	Seripura Famrote	Gool		The proposed CA site has scattered Chir pine and open space, and vacant space is available for plantation.
10.	Gwadi/Dalwah Lower	38/Ar	15.0734	Dalwah Famrote	Gool		The proposed CA site has scattered Chir pine and open space located near the Tatapani.

11.	Dugsar/Gool-Parthmulla	35/Ar	7.00942	Bolnara Forest	Gool		The proposed CA site has scrubs and scattered Chir pine and vacant space is available for plantation.
12.	Chamwali/Gool-C	61/Ar	18.9011	Darsa Forest	Gool		The proposed CA site has meadow with degraded Spruce and Fir forest and vacant space is available for plantation.

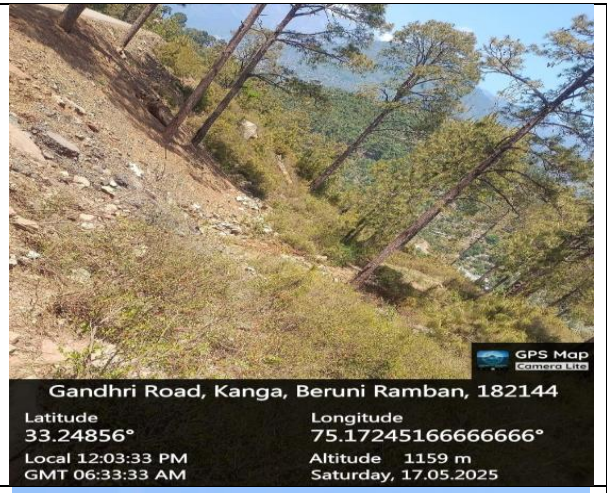
13.	Dagantop/Dachan (I)	59/Ar	10.9864	Darsa Forest	Gool		The proposed CA site has meadow with degraded Spruce and Fir forest and vacant space is available for plantation.
14.	Dagantop/Dachan (II)	59/Ar	14.0434	Darsa Forest	Gool		The proposed CA site is located near the meadow and have grazing pressure and vacant space is available for plantation.

15.	Kathiawali/Dedha Dachan	62/Ar	4.0279	Darsa Forest	Gool		The proposed CA site is the meadow with degraded conifer forest and vacant space is available for plantation.

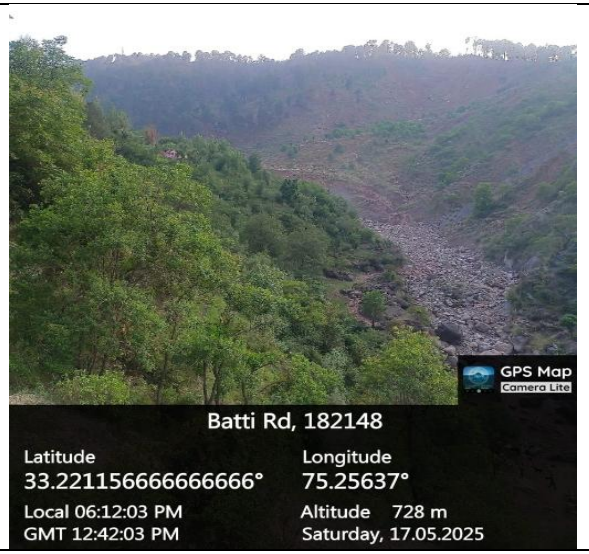
2. Batote Forest Division

S.no	Name of CA site	Comp-No	Area (ha)	Name of PF/RF	Range	Photographs	Observations/ Remarks
1.	Gandhri	58/G-III	13.00	Gandhri - Parnot	Batote		The proposed CA site is located near the Dharamkund, having regeneration of Shisham and shrubs. Vacant space is available for plantation.
2.	Gandhri	58/G-II	16.4	Gandhri - Parnot	Batote		The proposed CA site is located near the Dharamkund, having regeneration of Shisham and shrubs. Vacant space is available for plantation.

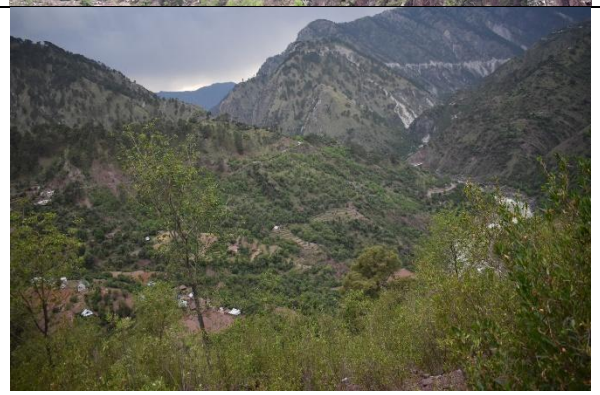
3.	Gandhri	58/G	1	Gandhri - Parnot	Batote		The proposed CA site is also located near the Dharamkund, having regeneration of Shisham, chir pine and shrubs. Vacant space is available for plantation.
4.	Gandhri	60/G	9.306	Gandhri - Parnot	Batote		The proposed CA site is highly degraded having scattered Chir pine and prone to land slide. Vacant space is available for plantation.
5.	Kanga Bishali	53-I	12.968	Gandhri - Parnot	Batote		The proposed CA site is highly degraded having scattered Chir pine and prone to land slide. Vacant space is available for plantation.

6.	Kanga Bishali	53/G-II	5.694	Gandhri - Parnot	Batote		The proposed CA site is highly degraded having scattered Chir pine. Vacant space is available for plantation.
7.	Kanga	56/G-I	12.403	Gandhri - Parnot	Batote		CA site is located near the Dharamkund, having moderately Chir Pine and shrubs. Vacant space is available for plantation.
8.	Kanga	57/G	26.3	Gandhri - Parnot	Batote		CA site is located near the Dharamkund, having moderately Chir Pine and shrubs. Vacant space is available for plantation.

9.	Gandhri	58/G-III	13.00	Gandhri - Parnot	Batote		Degraded Chir Pine with open area. Vacant space is available for plantation.
10.	Gandhri	58/G-Lad II	1.809	Gandhri - Parnot	Batote		Near the habitation degraded Chir pine forest. Vacant space is available for plantation.

11.	Maitra Kundi	40a/Btt	32.6	Maitra Ballout	Batote		The proposed CA site has degraded Chir Pine forest and area devoid of vegetation along the right bank of nallah. Vacant space is available for plantation.
12.	Kanga	55/G-I	8.00	Gandhri - Parnot	Batote		The proposed CA site has good regeneration of Chir pine and moderately dense Chir Pine and shrubs. Vacant space is available for plantation.

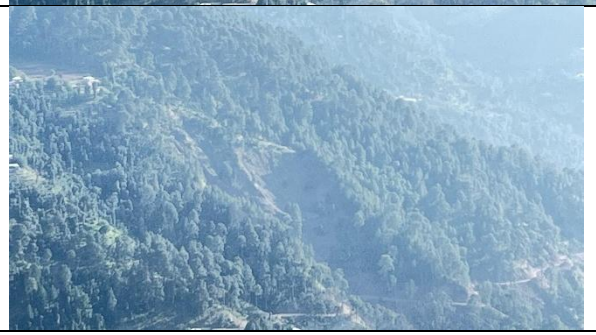
13.	Gandhri-Parnot	59/G	1.0	Gandhri - Parnot	Batote		The proposed CA site has scattered Chir Pine with open area available for plantation.
14.	Tanger	69/G III	13.9	Gandhri - Parnot	Batote		The proposed CA site has landslide area near the landru bridge having shisham saplings, scrub and scattered chir pine. **The area is beside the proposed Muck Dumping site I** (Private land).

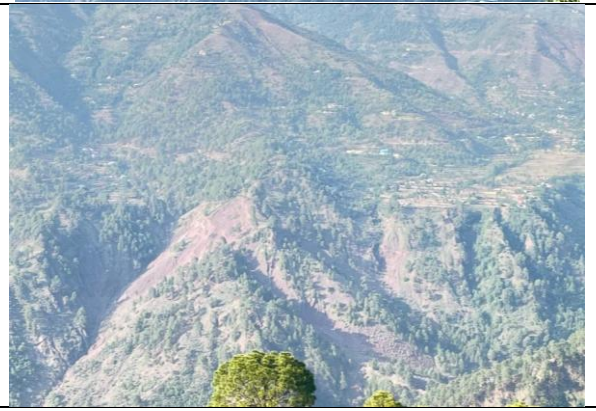
15.	Tanger	62-G	7.66	Gandhri - Parnot	Batote		The proposed CA site has shisham sapling, scrub and scattered chir pine. **The area is above the proposed Muck Dumping site I (Private land).**
16.	Tanger	73-G	14.8	Gandhri - Parnot	Batote		Among the 14.8 ha area of CA site 9 ha is proposed for the Muck dumping site. The proposed CA site have shrubs, scattered chir pine and shisham. Vacant space is available for plantation.
17.	Tanger	72-G		Gandhri - Parnot	Batote		The proposed CA area is located below the NHPC office, below the Tanger village, having scattered chir pine, shisham and shrubs. Vacant space is available for plantation.

3. Udhampur Forest Division

S.no	Name of CA site	Comp-No	Area (ha)	Name of PF/RF	Range	Photographs	Observations/ Remarks
1.	Mali	53/Cu	42.312	Bhatti Bhangara	Udhampur		The proposed CA site has scattered Chir pine with bare ground. Vacant space is available for plantation.
2.	Jadsarkote	36/Cu	6.266	Bhatti Bhangara	Udhampur		The proposed CA site has few Chir pine and shrubs. Vacant space is available for plantation.
3.	Jadsarkote	35/Cu	12.00	Jadserkote Forest	Udhampur		The proposed CA site has scattered Chir pine, shrubs and grasses. Vacant space is available for plantation.

4.	Jadsarkote	40 U	7.45	Jadserkote	Udhampur		The proposed CA site has scattered Chir pine and shrub. Vacant space is available for plantation.
5.	Jadsarkote	41U	16.70	Jadserkote	Udhampur		The proposed CA site has Chir pine and shrub. Vacant space is available for plantation.
6.	Mali	43 U	8.32	Hartaryan Forest	Udhampur		The proposed CA site has Chir pine and open area without vegetation. Vacant space is available for plantation.

7.	Pancheri Udhampur	10 P	10.995	Kultair Forest	Panchari		The proposed CA site has degraded Chir pine and open /landslide area devoid of vegetation. Vacant space is available for plantation.
8.	Pancheri Udhampur	64 P-I	11.001	Diggi Forest	Panchari		The proposed CA site has degraded Chir pine and open /landslide area devoid of vegetation. Vacant space is available for plantation.
9.	Pancheri Udhampur	64 P-II	3.042	Diggi Forest	Panchari		Adjacent to the 64 P I. The proposed CA site has degraded Chir pine and open /landslide area devoid of vegetation. Vacant space is available for plantation.

10.	Pancheri Udhampur	19 P	4.017	Nal Sunkh	Panchari		The proposed CA site has degraded Chir pine and open area devoid of vegetation around the households. Vacant space is available for plantation.
11.	Pancheri Udhampur	20 P	4.995	Jhori Forest	Panchari		The proposed CA site has degraded Chir pine and open /landslide area devoid of vegetation. Vacant space is available for plantation.