

Government of India
Ministry of Environment Forest and Climate Change
(Forest Conservation Division)

Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003
Dated: 17th October, 2023

To,

The Principal Secretary (Forest),
Department of Forest and Environment,
Government of Rajasthan,
Jaipur.

Subject: Proposal for diversion of 407.8227 ha for construction of Shahpur (1800 MW) Pumped Storage Project by M/s Greenko Energies Private Limited, in Hanumanth khera, Mungawali villages, G.P.-Mundiyar, Tehsil-Shahbad, Baran District, Rajasthan.

Madam/Sir,

I am directed to refer to the Government of Rajasthan's proposal as uploaded on PARIVESH portal vide proposal No. FP/RJ/HYD/121439/2021 on 28.09.2023 for seeking prior approval under Forest (Conservation) Act, 1980..After preliminary scrutiny of the proposal, the following observation are made:

(i)The CAT Plan for the total catchment area of both the reservoir of 6.48 Sq.Km. and Wildlife Conservation Plan for Schedule-I species have been prepared towards instant proposal by R S Envirolink Technologies Pvt.Ltd. But it is not clear whether these plans have been approved by the competent authority as per prescribed guidelines or not. Therefore, this needs to be clarified and copy of approval of the competent authority needs to be submitted.

(ii)Satellite imagery of the proposed diversion shows that the plantation work was carried out in the past at the Segment-7 (3.82 ha.) and there is presence of Agriculture land in the forest area proposed for diversion. The same needs clarification.

(iii)Satellite imagery of proposed CA area over Non-forest land of Ekalpar and Kolu Tala villages in patche No 12 & 16 under Jaisalmer District shows the presence of settlements. Also Satellite imagery of the RDF patches for CA under Baran district are showing the encroachment for Agriculture land having few built-up areas as well. The State Govt. shall ensure that the area proposed for CA is free from all encumbrances.

(iv)The State Govt. has not provided the complete KML file of Non-forest land involved in the project. The same needs to be furnished.

(v)In the component wise break-up, an area of 57.225 ha forest land has been proposed for the WCS & Power House which is a huge area and no breakup of the same has been given. Therefore, the details of each component involved in the said area with justification may be provided.

(vi)The suitability certificates for CA area proposed over the NFL and DFL located under

the Jaisalmer District are given. However, the proposed CA area appears to be in sand dunes, which may not be suitable for raising plantation and its survival. Therefore, the State Govt. shall re-examine the suitability of the NFL provided for CA and ensure that the area proposed is suitable for raising plantation.

(vii) State shall clarify as to how the requirement of electricity will be met by the user agency to run project and its components. The detail of forest area required for the purpose (if any) shall be submitted.

(viii) The detailed plan for evacuation and transmission of power so generated from this project shall be submitted.

(ix) The status of muck disposal plan shall be submitted.

(x) The State Govt. has reported that the proposed forest land for diversion is located within the notified conservation reserve "Shahbad upreti". Moreover King vulture is also reported in the area as per the site inspection report of CCF/DCF. Therefore, the comments of the CWLW in this regard needs submission.

(xi) In Part-1 of the application, many of the documents uploaded against the *Copy of ownership proof of CA land* and the *Copy of MoU/agreement executed between the Present owner and the User Agency* are either not legible or the same are not commensurate with the requirement. The State Govt shall therefore ensure to submit the legible copies of the ownership proof of CA land and the MoU/agreement executed between the Present owner and the User Agency. The copy of revenue documents and an abstract indicating the owner wise detail of non-forest land shall also be submitted.

(xii) Satellite imagery shows that, a road is passing through the forest land wherein a component i.e. Upper Reservoir has been proposed. The status of the same shall be submitted. Further, the connectivity of the local people may be hampered in case said road is submerged. In this regard, the comments of the State Govt. are required to be submitted.

In view of above, Govt. of Rajasthan is requested to furnish the reply on the above observation to this Ministry for further consideration of the proposal in the Ministry.

Encl. DSS report

Signed by

Suneet Bhardwaj

Date: 17-10-2023 12:55:37

Yours faithfully,

Sd/-

(Suneet Bhardwaj)

Assistant Inspector General of Forests

Copy to: -

1. The Principal CCF & (HoFF), Government of Rajasthan, Jaipur;
2. The Dy. Inspector General of Forests, Sub-office, MoEF&CC, Jaipur
3. Regional Officer of MoEF&CC, Gandhinagar;
4. The Nodal Officer-cum-APCCF (FCA), Government of Rajasthan, Jaipur.
5. User Agency.
6. Monitoring Cell, FC Division, MoEF & CC, New Delhi

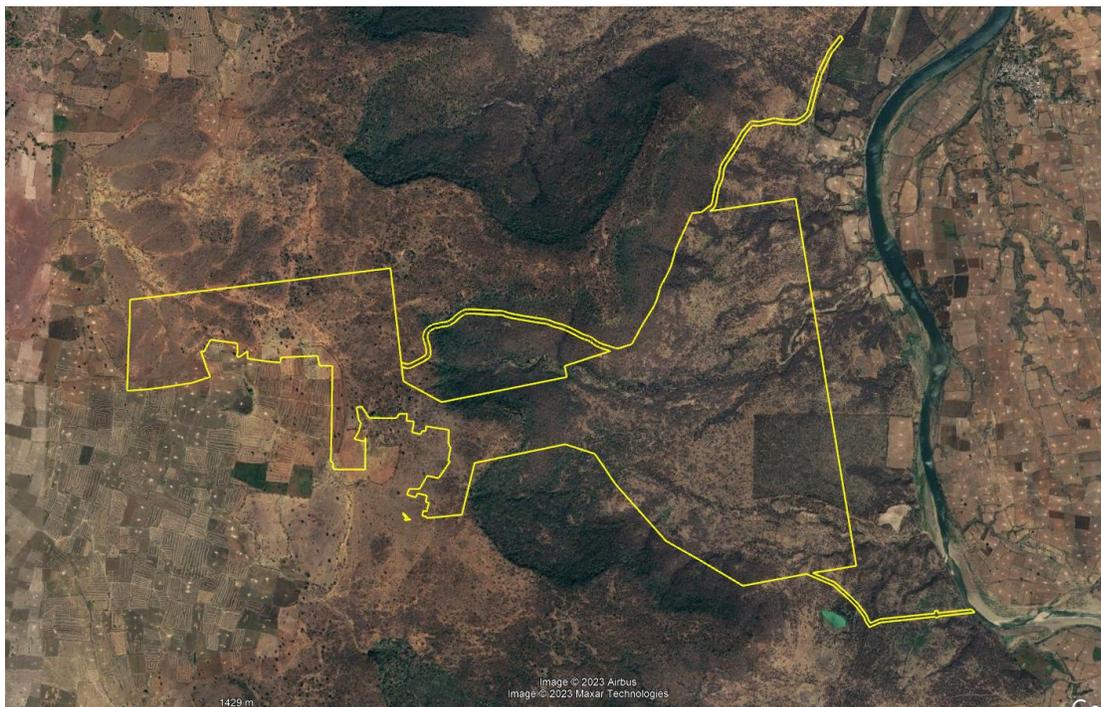
Proposal: Diversion of 407.8227 ha forest land for construction of Shahpur (1800 MW) Pumped Storage Project by M/s Greenko Energies Private Limited, in Hanumanthkhera, Mungawali villages, G.P.-Mundiyyar , Tehsil-Shahbad , Baran District , Rajasthan (FP/RJ/HYD/121439/2021)

Summary of DSS Analysis Report:

I. In Case of Land proposed for Diversion:

1. Proposed forest area for diversion falls under Baran district of Rajasthan State.
2. Calculated area of Shape file/ KML file of Forest land proposed for diversion is found 407.160 Ha (software calculated).
3. As per DSS, there is no Wildlife Sanctuary, National Park, Tiger Reserve and Tiger Corridor is located at a distance of 10 KM from the proposed forest land for diversion. However, the CF, Kota in their Site inspection report informed that the proposed forest land for diversion is part of notified conservation reserve "Shahbad upreti" and the having the presence of King Vulture, leopard, jackal, hyaena, jungle cat etc., in the proposed area.
4. The instant proposal falls under Inviolable Zone due to presence of Hydrological feature i.e. Kuno River within 250-meter distance from the proposed diversion site. However, Not-Inviolable or Not-In high conservation zone (NHCV) category as per the DSS Rule-2 because out of 17 grids of 1x1 sq. km size, none of the grids are having average score above 70. Thus, final result is Not-Inviolable.
5. **Forest Cover in the instant project:** Out of total 407 Ha (DSS calculated) forest area of instant project, 55 ha of land is characterized with Moderately Dense Forest, 261 ha of land as Open forest, 13 ha is Scrub and 78 ha is Non-forest/Non-wooded (land devoid of tree cover) in terms of forest classes (as per the ISFR 2021) based on the interpretation of satellite data period 2019.
6. **Forest Types details:** 5/DS1 Dry Deciduous Scrub: 70 ha, 5/E1 Anogeissus Pendula Forest: 191 ha, 5A/C1 a Very Dry Teak Forest: 33 ha, 5B/C2 Northern Dry Mixed Deciduous Forest: 42 ha and Non-Forest: 71 ha
7. Satellite imagery shows that the plantations work was carried out in the past by the State Forest Department at the Segment-7 which has been proposed for the construction of Lower Reservoir.
8. Satellite imagery shows the presence of Agriculture land within the proposed forest land for diversion.
9. The State Govt. may be requested to provide the complete KML file of Non-forest land involved in the project.

Google imagery showing the proposed forest land for diversion



II. In Case of Compensatory Afforestation Land:

1. Compensatory afforestation has been proposed over the Non-forest land (NFL)/ Agriculture land in 21 (twenty-one) patches comprising an area of 432.526 Ha (Software Calculated) in the Ekalpar and Kolu Tala villages of the Jaisalmer District. However, for the analysis purpose, all the proposed NFL patches have been merged into a single patch.
2. The CF, Kota in their recommendation letter informed that “the user agency is providing CA land in Jaisalmer District which cannot compensate the ecological loss occurred in proposed area of Shahbad and so user agency will have to bear the cost of raising mixed forest in at least equivalent degraded forest land of Shahbad area”. Accordingly, the State Govt. has proposed 184.82 ha degraded forest land in Jaisalmer District and 408 ha Rehabilitation of degraded forest (RDF) in Baran District of Rajasthan State.
3. In terms of standards followed in ISFR 2021 (interpretation of satellite data period 2019-2020) regarding density classes is given below:

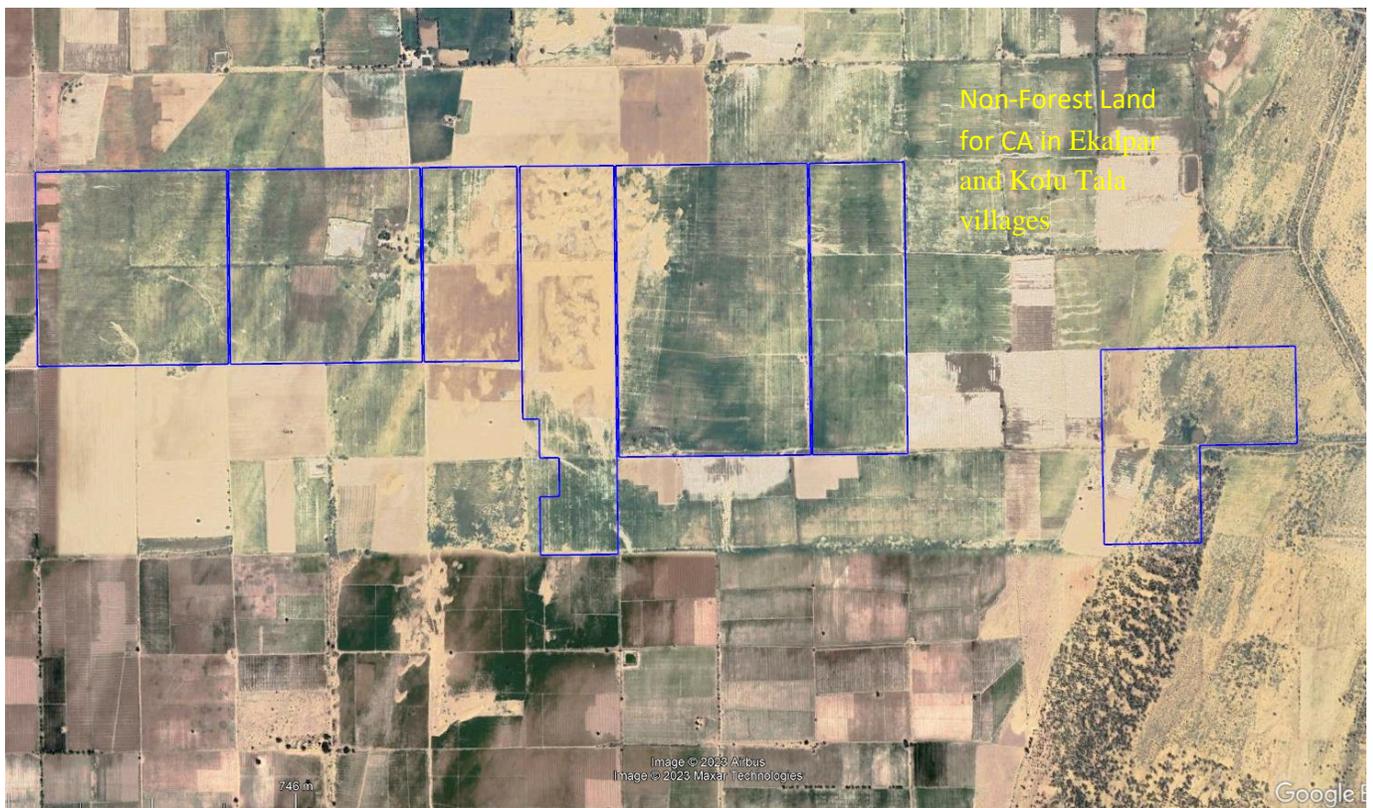
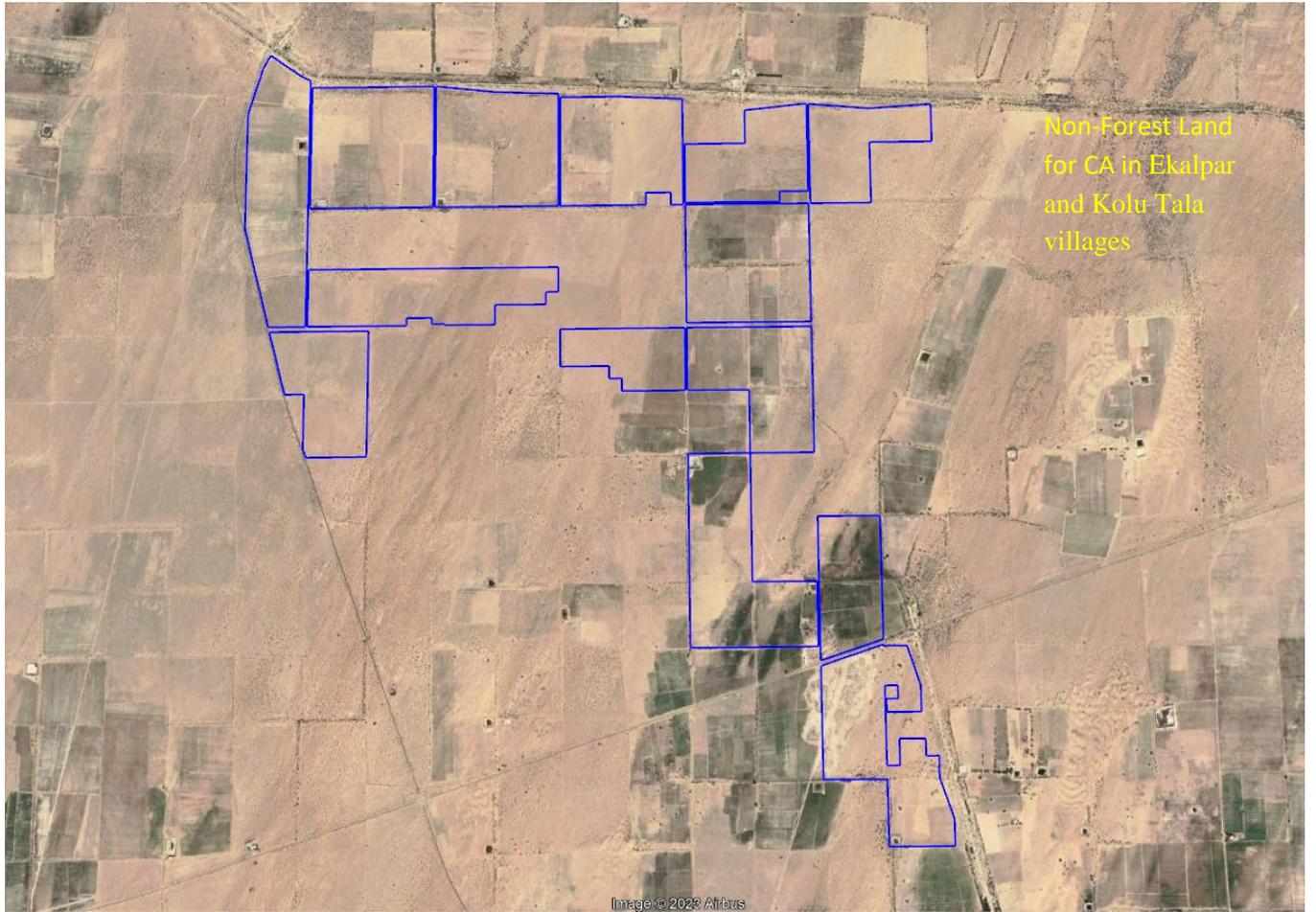
S.No.	District	Legal Status of Land	Village	State Govt. Area (Ha)	Software Area (Ha)	DSS Area (Ha)	Open Forest	Non-Wooded
1	Jaisalmer	Non-Forest Land (NFL)	Chak-SLM-3 Ekalpar(V) Jaisalmer No 1(T) and Kolu Tala A (V), Chak - 13,14,15RMM & 5 RMSM, Ramgarh2(T)	431.03	432.526	433	1	432
2	Jaisalmer	Degraded Forest Land	Forest Block Chak 8 NLD, Nachna no 2(T), Jaisalmer(D)	184.82	184.581	184	0	184
3			Bichi(V), Shahbad(T), Baran(D) Patch-1	408	119.750	118	75	43
4	Baran	RDF	Bichi(V), Shahbad(T), Baran(D) Patch-2		293.767	290	192	98
			Total	1023.85	1030.623	1025	268	757

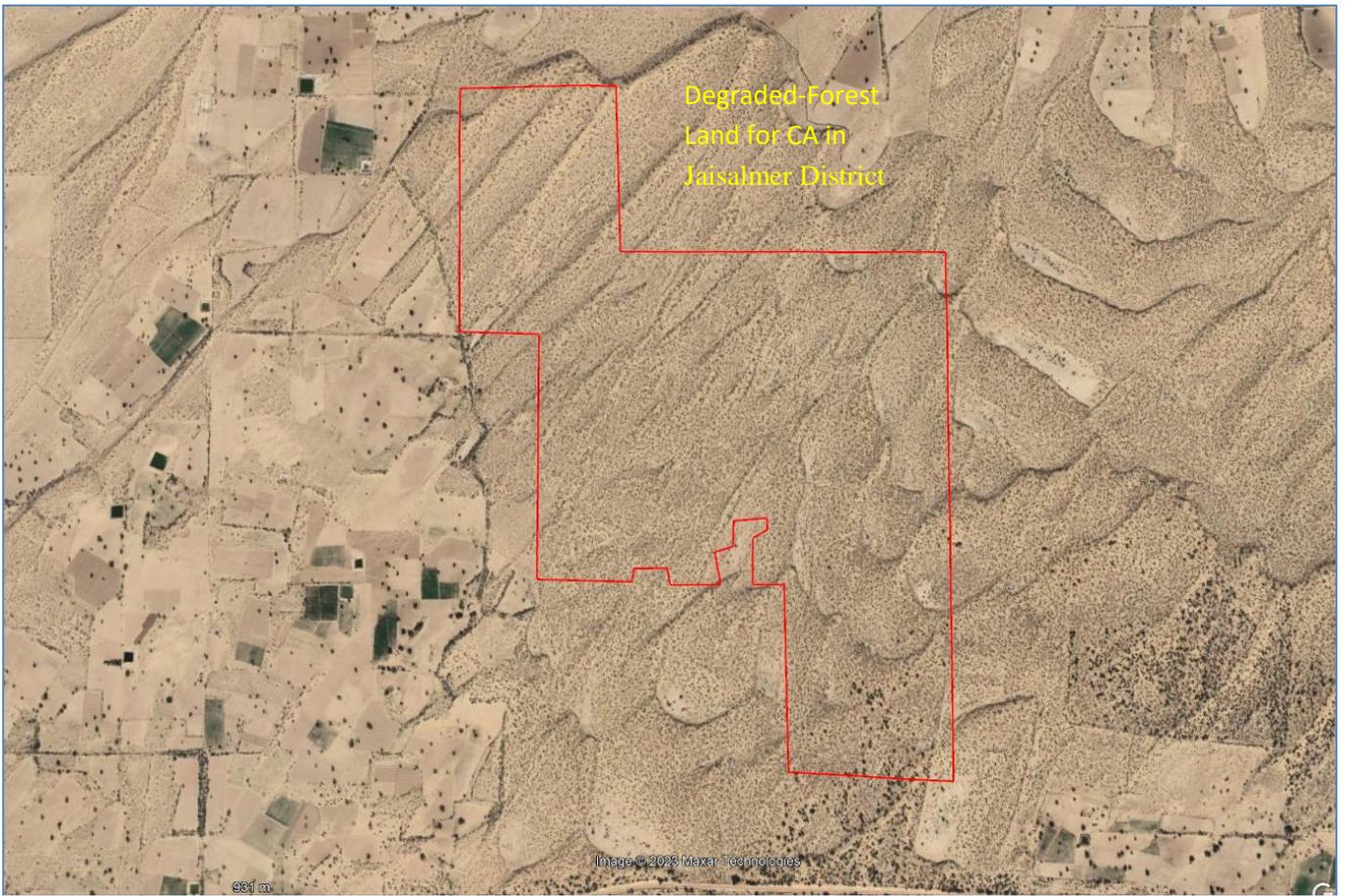
4. **Forest Cover in CA land:** Out of total 1025 ha (DSS Calculated) Non-forest land (NFL) as well as Forest land proposed area for CA, 268 ha of land is characterized with Open Forest and 757 ha. of land as Non Forest/ Non-wooded in terms of forest classes (as per the ISFR 2021) based on the interpretation of satellite data period 2019-2020.
5. Satellite imagery shows the presence of settlements in the CA patches No 12 & 16 proposed over Non-forest land of Ekalpar and Kolu Tala villages under Jaisalmer District.
6. Satellite imagery shows that the RDF patches proposed for CA under Baran district are affected with the encroachment of Agriculture land and having few built-up area.

Submitted please.

Prashant Tiwari
Sr. Technical Associate,
DSS Cell (FC)
05.10.2023

Google imagery showing the proposed CA patches;





Decision Support System (DSS):

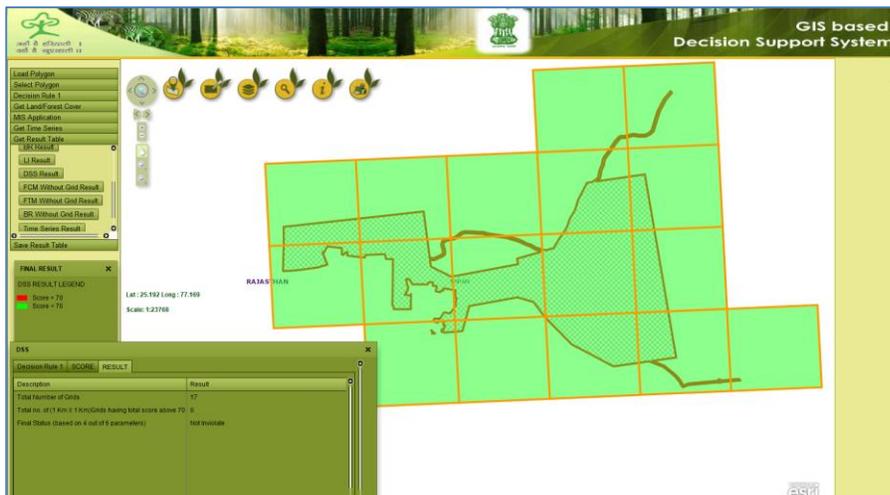
Decision Rule no. 1:

Whether forms part of:

- I. Hydrological Layer:
 - a. Major River: **Yes, Kuno River**
 - b. Wetland (Area more than 10 ha.): N/A
 - c. Water bodies (irrigation/Hydropower/water storage): N/A
- II. Very Dense Forest patch (>1 sq km): N/A
- III. Remnant Forest Type: N/A
- IV. Protected area/Tiger Reserves/Tiger corridors: N/A
- V. Wild life Species: **N/A**

Decision Rule no.2: Without 50% Rule:

GRIDID	SCOREFCM	SCOREFTM	SCOREBR	SCORELANDSCAPE	AGGREGATESCORE
1259365	69.62	79.29	72.62	48.53	67.51
1259366	49.02	52.09	40.57	42.01	45.92
1261495	15.78	6.61	30.73	43.01	24.03
1261494	63.65	70.77	71.75	47.72	63.47
1261491	23.24	24.71	42.18	56.52	36.66
1263585	40.61	24.48	48.14	42.92	39.04
1263581	2.24	12.31	11.93	52.89	19.84
1263583	69.84	79.81	74.64	50.86	68.79
1263584	59.81	73.11	70.55	47.35	62.7
1263582	24.29	60.18	69.75	53.38	51.9
1261492	56.81	73.82	57.12	55.36	60.78
1261493	71.54	79.62	74.11	51.94	69.3
1265652	41.07	46.27	59.39	43.87	47.65
1265649	28.31	50.78	49.17	51.53	44.95
1265650	69.87	77.75	74.4	50.5	68.13
1265651	68.34	77.42	72.56	48.1	66.61
1265653	0.55	6.86	4.22	39.02	12.66



DESCRIPTION	RESULT
Total Number of Grids	17
Total no. of (1 Km X 1 Km)Grids having total score above 70	0
Final Status (based on 4 out of 6 parameters)	Not-Inviolate

Final Result: Not-Inviolate (Based on Decision Rule 2)

Forest Cover Map:

In terms of standards followed in ISFR 2021 (interpretation of satellite data period 2019-2020) regarding density classes:

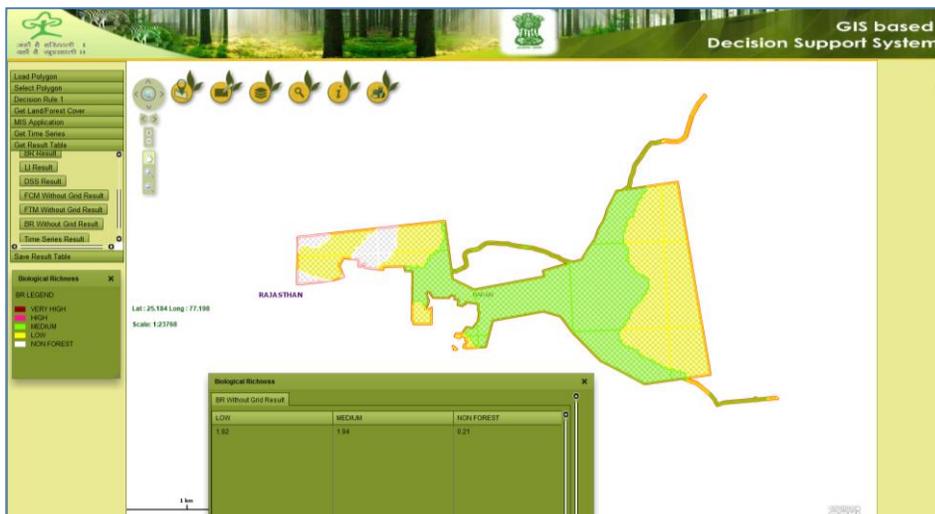
- I. Very Dense Forest (Canopy density 70% & above): Nil
- II. Moderately dense Forest (canopy density 40-70%): 55 ha.
- III. Open Forest (canopy density 10-40%): 261 ha.
- IV. Scrub: 13 ha
- V. Non-forest: 78 Ha



Forest Type Map: 5/DS1 Dry Deciduous Scrub: 70 ha, 5/E1 Anogeissus Pendula Forest: 191 ha, 5A/C1 a Very Dry Teak Forest: 33 ha, 5B/C2 Northern Dry Mixed Deciduous Forest: 42 ha and Non-Forest: 71 ha



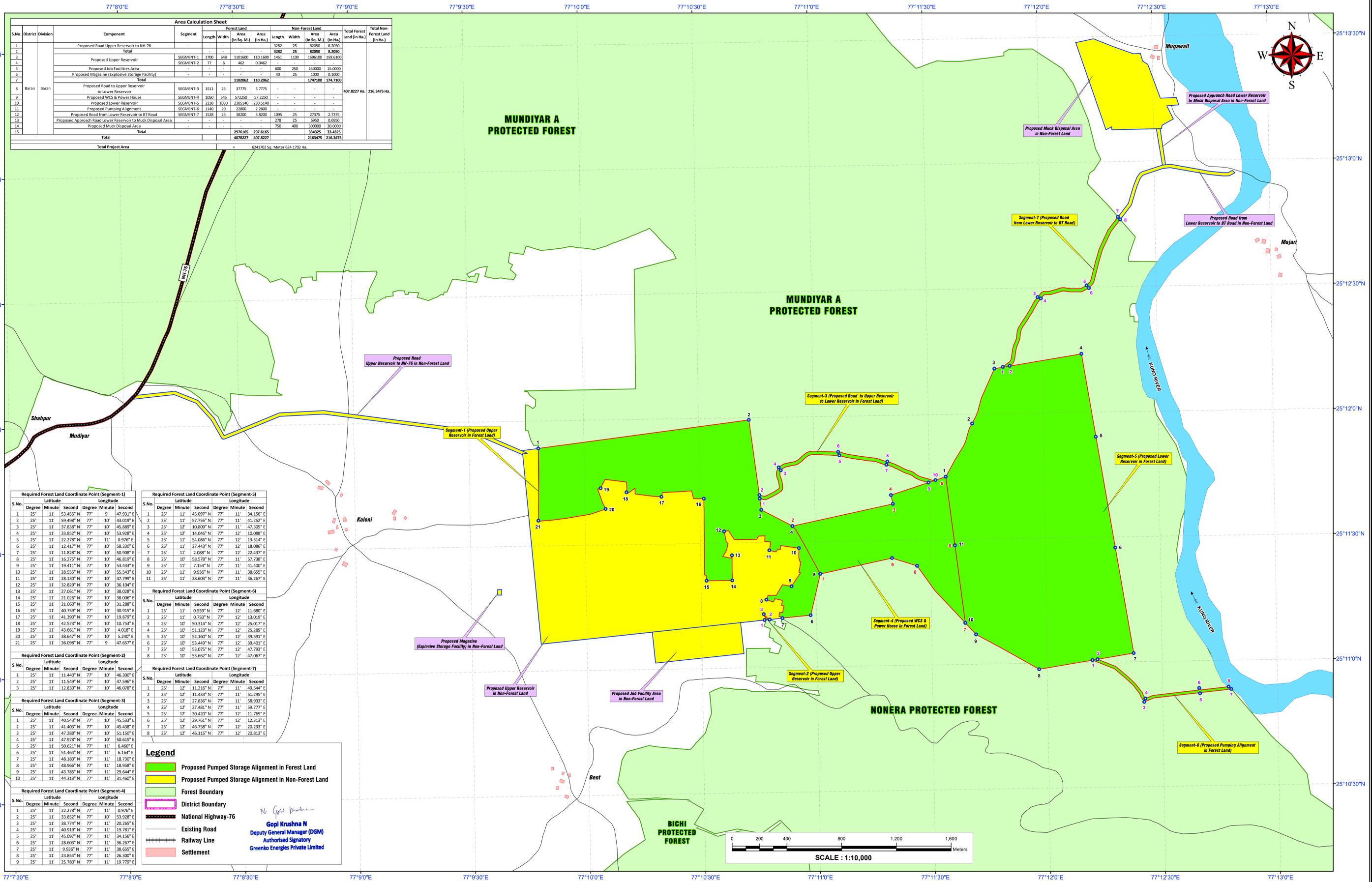
Biological Richness: Medium: 194 ha, Low: 192 ha and Non-forest: 21 ha



ZOOM VIEW DIGITAL MAP SHOWING PROPOSED SHAHPUR PUMPED STORAGE ALIGNMENT IN FOREST AND NON-FOREST AREA

Full Title of the Project : "Construction of Shahpur (2520 MW) Pumped Storage Project by M/s Greenko Energies Private Limited"

Proposal No. : FP/RJ/HYD/121439/2021 Applied Area : 407.8227 Ha.



Area Calculation Sheet												
S.No.	District	Division	Component	Segment	Forest Land			Non-Forest Land			Total Forest Land (In Ha.)	Total Non-Forest Land (In Ha.)
					Length	Width	Area (In Sq. M.)	Length	Width	Area (In Sq. M.)		
1			Proposed Road Upper Reservoir to NH-76	-	-	-	-	-	3382	25	82050	8.2050
2			Total	-	-	-	-	-	3382	25	82050	8.2050
3			Proposed Upper Reservoir	SEGMENT-1	1700	648	1101600	1451	1100	1596100	159.6100	159.6100
4			Proposed Job Facilities Area	SEGMENT-2	77	6	462	0.0462	-	-	-	-
5			Proposed Magazine (Explosive Storage Facility)	-	-	-	-	-	600	250	150000	15.0000
6			Total	-	-	-	-	-	40	25	1000	0.1000
7			Total	-	-	1102062	110.2062	-	1747100	174.7100	-	-
8	Baran	Baran	Proposed Road to Upper Reservoir to Lower Reservoir	SEGMENT-3	1511	25	37775	3.7775	-	-	-	-
9			Proposed WCS & Power House	SEGMENT-4	1050	545	572250	57.2250	-	-	-	-
10			Proposed Lower Reservoir	SEGMENT-5	2238	1030	2305140	230.5140	-	-	-	-
11			Proposed Pumping Alignment	SEGMENT-6	1140	20	22800	2.2800	-	-	-	-
12			Proposed Road from Lower Reservoir to BT Road	SEGMENT-7	1528	25	38200	3.8200	1095	25	27275	2.7275
13			Proposed Approach Road Lower Reservoir to Muck Disposal Area	-	-	-	-	-	278	25	6950	0.6950
14			Proposed Muck Disposal Area	-	-	-	-	-	750	400	300000	30.0000
15			Total	-	-	2976165	297.6165	-	334325	33.4325	-	-
			Total Project Area	-	-	4078227	407.8227	-	2163475	216.3475	-	-

Required Forest Land Coordinate Point (Segment-1)					
S.No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	25° 11' 53.455" N	77° 10' 47.931" E	9	25° 11' 45.097" N	77° 11' 34.156" E
2	25° 11' 59.498" N	77° 10' 43.019" E	10	25° 11' 57.755" N	77° 11' 41.252" E
3	25° 11' 37.838" N	77° 10' 45.889" E	11	25° 12' 10.809" N	77° 11' 47.305" E
4	25° 11' 33.852" N	77° 10' 53.928" E	12	25° 12' 14.046" N	77° 12' 10.088" E
5	25° 11' 22.278" N	77° 11' 0.976" E	13	25° 11' 54.086" N	77° 12' 13.514" E
6	25° 11' 12.417" N	77° 10' 58.330" E	14	25° 11' 27.443" N	77° 12' 18.086" E
7	25° 11' 11.829" N	77° 10' 50.908" E	15	25° 11' 2.086" N	77° 12' 22.437" E
8	25° 11' 16.275" N	77° 10' 46.819" E	16	25° 10' 58.578" N	77° 11' 57.738" E
9	25° 11' 19.411" N	77° 10' 53.433" E	17	25° 11' 7.154" N	77° 11' 41.400" E
10	25° 11' 28.555" N	77° 10' 55.543" E	18	25° 11' 9.936" N	77° 11' 38.655" E
11	25° 11' 28.130" N	77° 10' 47.799" E	19	25° 11' 28.603" N	77° 11' 36.267" E
12	25° 11' 39.829" N	77° 10' 36.104" E			
13	25° 11' 27.051" N	77° 10' 38.029" E			
14	25° 11' 21.026" N	77° 10' 38.006" E			
15	25° 11' 21.060" N	77° 10' 31.288" E			
16	25° 11' 40.759" N	77° 10' 30.915" E			
17	25° 11' 41.399" N	77° 10' 19.879" E			
18	25° 11' 42.573" N	77° 10' 10.753" E			
19	25° 11' 43.661" N	77° 10' 4.018" E			
20	25° 11' 38.647" N	77° 10' 5.240" E			
21	25° 11' 36.098" N	77° 9' 47.657" E			

Required Forest Land Coordinate Point (Segment-2)					
S.No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	25° 11' 11.440" N	77° 10' 46.300" E	1	25° 11' 11.216" N	77° 11' 49.544" E
2	25° 11' 11.549" N	77° 10' 47.596" E	2	25° 12' 11.433" N	77° 11' 51.295" E
3	25° 11' 12.830" N	77° 10' 46.078" E	3	25° 12' 27.986" N	77° 11' 58.933" E

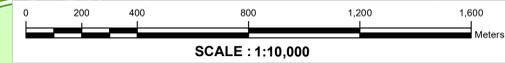
Required Forest Land Coordinate Point (Segment-3)					
S.No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	25° 11' 40.543" N	77° 10' 45.533" E	1	25° 12' 30.420" N	77° 12' 11.765" E
2	25° 11' 41.403" N	77° 10' 45.438" E	2	25° 12' 29.761" N	77° 12' 12.313" E
3	25° 11' 47.288" N	77° 10' 51.150" E	3	25° 12' 46.758" N	77° 12' 20.233" E
4	25° 11' 47.978" N	77° 10' 50.615" E	4	25° 12' 46.115" N	77° 12' 20.813" E
5	25° 11' 50.621" N	77° 11' 6.466" E			
6	25° 11' 51.464" N	77° 11' 6.164" E			
7	25° 11' 48.180" N	77° 11' 18.730" E			
8	25° 11' 48.966" N	77° 11' 18.958" E			
9	25° 11' 43.785" N	77° 11' 29.641" E			
10	25° 11' 44.313" N	77° 11' 31.460" E			

Required Forest Land Coordinate Point (Segment-4)					
S.No.	Latitude	Longitude	S.No.	Latitude	Longitude
1	25° 11' 22.278" N	77° 11' 0.976" E	1	25° 11' 0.559" N	77° 12' 11.680" E
2	25° 11' 33.852" N	77° 10' 53.928" E	2	25° 11' 0.750" N	77° 12' 13.019" E
3	25° 11' 38.774" N	77° 11' 20.265" E	3	25° 10' 50.314" N	77° 12' 25.017" E
4	25° 11' 40.919" N	77° 11' 19.781" E	4	25° 10' 53.123" N	77° 12' 25.289" E
5	25° 11' 45.097" N	77° 11' 34.156" E	5	25° 10' 52.160" N	77° 12' 39.591" E
6	25° 11' 28.603" N	77° 11' 36.267" E	6	25° 10' 53.449" N	77° 12' 39.401" E
7	25° 11' 9.936" N	77° 11' 38.655" E	7	25° 10' 53.075" N	77° 12' 47.793" E
8	25° 11' 23.854" N	77° 11' 26.300" E	8	25° 10' 53.662" N	77° 12' 47.067" E
9	25° 11' 25.780" N	77° 11' 19.779" E			

Legend

- Proposed Pumped Storage Alignment in Forest Land
- Proposed Pumped Storage Alignment in Non-Forest Land
- Forest Boundary
- District Boundary
- National Highway-76
- Existing Road
- Railway Line
- Settlement

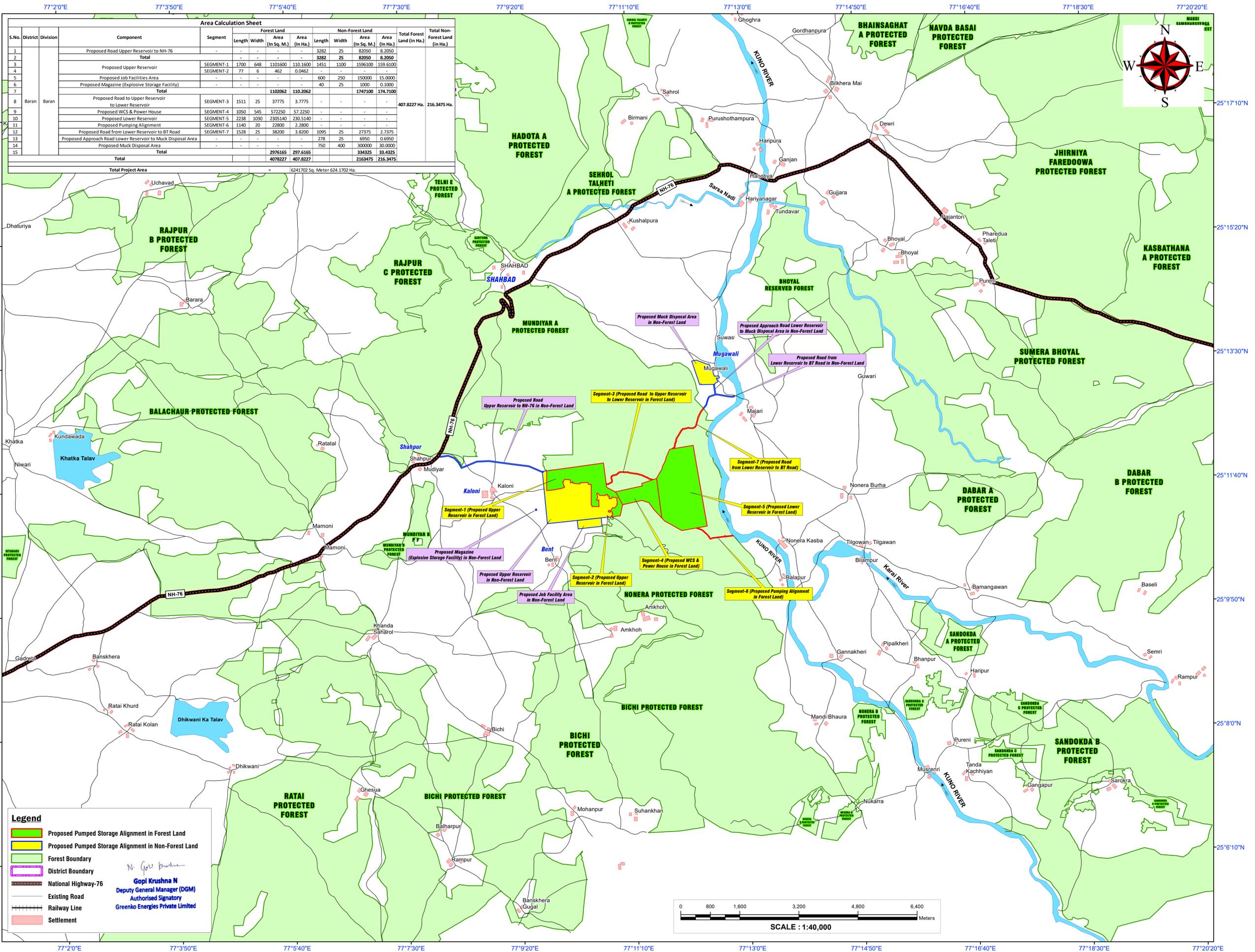
N. Gopal Prasad
Gopi Krushna N
 Deputy General Manager (DGM)
 Authorised Signatory
 Greenko Energies Private Limited



DIGITAL MAP SHOWING PROPOSED SHAHPUR PUMPED STORAGE ALIGNMENT IN FOREST AND NON-FOREST AREA

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1			Proposed Road Upper Reservoir to NH-76					3282	25	82050	8.2050			
2			Total					3282	25	82050	8.2050			
3			Proposed Upper Reservoir	SEGMENT-1	1700	648	1101600	110.1600	1451	1100	1596100	159.6100		
4			Proposed Job Facilities Area	SEGMENT-2	77	6	462	0.0462						
5			Proposed Magazine (Explosive Storage Facility)					40	25	1000	0.1000			
6			Total					1102062	110.2062	1747100	174.7100			
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9			Proposed Lower Reservoir	SEGMENT-5	2238	1030	2305140	230.5140						
10			Proposed Pumping Alignment	SEGMENT-6	1140	20	22800	2.2800						
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12			Proposed Approach Road Lower Reservoir to Muck Disposal Area					278	25	6950	0.6950			
13			Proposed Muck Disposal Area					750	400	300000	30.0000			
14			Total					2976165	297.6165	334325	33.4325			
15			Total					4078227	407.8227	2163475	216.3475			
Total Project Area												6241702 Sq. Meter 624.1702 Ha.		

Legend

- Proposed Pumped Storage Alignment in Forest Land
- Proposed Pumped Storage Alignment in Non-Forest Land
- Forest Boundary
- District Boundary
- National Highway-76
- Existing Road
- Railway Line
- Settlement

N. Gopi Krishna
Gopi Krishna N
 Deputy General Manager (DGM)
 Authorised Signatory
 Greenko Energies Private Limited

