



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
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**BY SPEED POST**

F.No.4-KRA1323/2021-BAN  
Dated the 22<sup>nd</sup> December, 2021

1194

To

The Additional Director General of Forests (FC),  
Ministry of Environment, Forests and Climate Change,  
Indira Paryavaran Bhavan,  
Aliganj, Jor Bagh Road,  
New Delhi – 110 003.

Subject: Diversion of 160.4 ha. of forest land in Sy.No.138 and 146 of Karlakatti village, Sy.No.128, 129 & 130 of Chakrageri village and Sy.No.3 & 4 of Kagihal village, Savadatti (Saundatti) Taluk, Belagavi District (Ghataprabha Division Gokak) for construction of Standalone Pumped Storage Component of Saundatti Integrated Renewable Energy Project (IREP) in favour of M/s. Greenko Solar Energy Private Ltd, Bengaluru (Online Proposal No. FP/KA/HYD/37723/2018) -reg.

Sir,

With reference to MoEF&CC, New Delhi letter No. 8-29/2021-FC dated 01/12/2021 on the above subject, it is informed that the site inspection of the forest land proposal for diversion has been carried out by the undersigned along with Dr. Murali Krishna, Scientist 'E', IRO, Bengaluru and Shri. S. Elamuruganan, IFS, Deputy Director, Forest Survey of India, South Zone, Bengaluru on 17/12/2021. A detailed site inspection report in this regard is enclosed.

Since the Compensatory Area identified is in Bidar District of Karnataka, Shri. B.N.Anjan Kumar, Assistant Inspector General of Forests (Central) was directed to inspect the Compensatory Afforestation area and submit the report. Accordingly, AIGF(C) has inspected the area on 20/12/2021 & 21/12/2021 and submitted the report, which is also enclosed herewith.

Yours faithfully,

(K.P.Singh)

Regional Officer

Encl: As above.

### PROFORMA FOR SITE INSPECTION

In pursuance of Ministry's letter No.8-29/2021-FC, dated 1.12.2021, Sh.K.P.Singh IFS, DDGF/Regional Officer, Integrated Regional Office, Bengaluru along with Sh. S. Elamurugannan IFS, Deputy Director, FSI, Southern Zone, Bengaluru and Dr.Murali Krishna, Scientist E, IRO, Bengaluru had visited the forest area proposed for diversion for the above mentioned project on 17.12.2021.The Divisional Forest Officer, Assistant Conservator of Forest, Range Forest Officer and other field forest officers having the jurisdiction of the area under consideration for the project, representatives of the user agencies were also present during the site visit.

	Title of the Project:	Diversion of 160.4 ha of forest land in Sy.No.138 and 146 of Karlakatti Village, Sy.No.128, 129 and 130 of Chakrageri Village and Sy.No.3 and 4 of Kagihar Village, Savadatti (Saundatti) Taluk, Belagavi District (Ghataprabha Division Gokak) for construction of Standalone Pumped Storage Component of Saundatti Integrated Renewable Energy Project (IREP) in favour of the M/s.Greenko Solar Energy Private Limited, Bengaluru, Karnataka																								
1.	Legal status of the forest land proposed for diversion:	Reserved Forest																								
2.	Item wise break-up details of the forest land proposed for diversion:	<table border="1"><thead><tr><th>S. No.</th><th>Project Component</th><th>Extent in ha.</th></tr></thead><tbody><tr><td>1</td><td>Upper Reservoir</td><td>128.58</td></tr><tr><td>2</td><td>Penstock</td><td>5.79</td></tr><tr><td>3</td><td>Pressure shaft</td><td>5.84</td></tr><tr><td>4</td><td>Power House, Switch Yard &amp; Tailrace outfall including permanent access road to Power House</td><td>12.93</td></tr><tr><td>5</td><td>Adit to pressure shaft</td><td>0.73</td></tr><tr><td>6</td><td>Approach road to all other project components</td><td>6.53</td></tr><tr><td></td><td style="text-align: center;"><b>Total</b></td><td><b>160.4</b></td></tr></tbody></table>	S. No.	Project Component	Extent in ha.	1	Upper Reservoir	128.58	2	Penstock	5.79	3	Pressure shaft	5.84	4	Power House, Switch Yard & Tailrace outfall including permanent access road to Power House	12.93	5	Adit to pressure shaft	0.73	6	Approach road to all other project components	6.53		<b>Total</b>	<b>160.4</b>
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3.	Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof:	Construction of power house, etc., as it is a hydel project.																								
4.	Total cost of the project at present rates:	Rs.606325 lakhs																								





5.	Wildlife:	<p>There are no rare/ endangered/ unique species of flora and fauna in the proposed area. Proposed area does not form part of any Wildlife Sanctuary, National Park, Biosphere Reserve, Tiger Reserve or Elephant Corridor, etc.</p> <p>It is reported that Main wild animals reported in and around the project area including Hyena, Monitor Lizard, Reptiles, Porcupine Indian Hare, Common Mongoose, etc., and various birds.</p>
6.	Vegetation:	<p>As per the details in the proposal, the area is Eco-Class III (Tropical Dry Deciduous Forest) with a canopy density of up to 0.25 (Open Forest). It is reported that 5086 trees in different girth classes present in the area. The area is predominantly having scrub forest and Main species include <i>Ficus religiosa</i>, <i>Acacia auriculiformis</i>, <i>Terminalia chebula</i>, <i>Azadirachta indica</i>, <i>Lagerstroemia parviflora</i>, <i>Cassia fistula</i>, <i>Terminalia tomentosa</i>, <i>Holoptelia integrifolia</i>, <i>Albizia amara</i>, <i>Diasporus melanoxylon</i>, <i>Ixora parviflora</i>, <i>Phyllanthus emblica</i>, <i>Pongamia pinnata</i>, <i>Semecarpus anacardium</i>, <i>Pterocarpus marsupium</i> and others.</p> <p>During the inspection, the State Forest Department officials and User Agency were requested to explain the enumeration process conducted. The Forest officials and the representatives of the user agency informed that a total number of 5086 trees and poles of various girth classes are proposed to be felled. It was also explained that only the number of trees and poles which were enumerated in 16 numbers of 1 ha. area sample plots (10% of the total forest area) and 6 sample plots with different plot sizes varying between 0.15 ha to 0.18 ha (cumulatively 0.96 ha) in the road area and the number of trees &amp; poles enumerated in the sample plots were not extrapolated for the</p>

		<p>entire area i.e., 160.4 hectares to arrive at the total number of trees &amp; poles to be felled for this proposed project. Further, the forest department officials and the representative of the user agencies could not able to explain the sampling procedure adopted to ensure that the sample plots laid were the true representative of the entire area. Hence, the Forest officials and the representative of the user agency were directed to ensure that the sample plots laid were the true representative of the entire forest area proposed to be diverted and to submit the revised enumeration list of trees &amp; poles (species wise and dia-class wise) prepared either from working plans or by standard sampling methods duly extrapolating for the entire forest area proposed for diversion.</p>
7.	Background note on the proposal:	<p>M/s. Greenko Solar Energy Private Limited, Bengaluru has submitted an online proposal for diversion of the said forest land for construction of 1260 MW Standalone Pumped Storage Component of Saundatti Integrated Renewable Energy Project (IREP) for obtaining approval under Forest (Conservation) Act, 1980.</p> <p>Saundatti IREP is a 4 GW project i.e., 2 GW of Solar project and 2 GW of wind project with storage capacity of 1260 MW/13734 MWH.</p> <p>The project is designed to lift the water from Renuka Sagar Reservoir through the pipeline and store it at the top of the hillock by constructing embankment. The stored water will flow down through penstock to generate the electricity and the same will be purchased by HESCOM/ KPTCL for stabilization of the grid and to provide power during peak hours. The location was selected mainly because of its proximity to the Renuka Sagar Reservoir and also due to availability of</p>



		head for generation of power. The capacity of the Renuka Sagar reservoir is 29.34 TMC reportedly out of which the requirement for the proposed project would be of 1.0 TMC and the gross storage of the upper reservoir would be 1.03 TMC.
8.	Compensatory afforestation:	User agency has identified 161 ha of non-forest land in Sy.No.136, 116, 117, 124, 125, 126, 123, 127, 128, 129, 130, 131, 134, 135, 148, 149 of Dhabaka village and in Sy.No.57 in Chimagaon village, Dhabaka Hobli, Aurad Taluk, Bidar District. Since the Compensatory Afforestation area identified is in Bidar district of Karnataka, the IRO Bengaluru, vide order dated 09.12.2021 has directed the AIGF, IRO, Bengaluru to inspect the site and submit the report. Accordingly, the AIGF has inspected the site on 20 <sup>th</sup> and 21 <sup>st</sup> December 2021 and submitted his report which is <b><u>Annexed.</u></b>
9.	Whether proposal involves violation of Forest (Conservation) Act, 1980 or not. If yes, a detailed report on violation including action taken against the concerned officials:	No violation reported.
10.	Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Government or not:	Yes.  As per the letter dated 16.08.2021 of PCCF and as per discussions during the visit, the following are learnt:  1. It was informed that as per the Government of Karnataka order No.RD 453 FGL 69 Dated 18.10.1969, about 1020 acres have been allotted to displaced persons of Malaprabha project in Kagihal forest under various survey numbers out of which an area of 72 acres have been allotted for displaced persons in survey no.146 (total area in Sy.No.146 is reported as 445 acres). The user



		<p>agency requires part of land falling under Sy.No.146 i.e., an area of 15.35 acres only for the proposal under consideration. The land bearing the Sy.No.146 is still under forest as per the forest records and the same has not been denotified. Remaining area in Sy.No.146 is being utilised by the displaced people of Malaprabha project but the copies of the Notifications regarding dereservation and denotification are reportedly not available with the Forest Department.</p> <p>2. The Forest officials and the user agencies have also shown the committee of the solid structures such as petrol pump, poultry shed and agricultural fields with banana plantations etc., reportedly in the Survey No.146 in connection with the issue of displaced people of Malaprabha project.</p> <p>3. The representatives of user agency have informed that no family is fully displaced in the proposed project and only partial land holding is being affected for which detailed compensation package has been prepared in the EIA/EMP report, which was duly approved by MoEF&amp;CC while recommending the project for Environmental Clearance.</p>
11.	Reclamation Plan	Not applicable.
	Details and financial allocation:	
12.	Details on catchment and command area under the project:	<p><b>Applicable.</b> The proposed area for diversion itself is the catchment area for the Renuka Sagar Reservoir.</p>

		Hence, as per para 9.2 of Handbook of FC Guidelines, the Catchment Area Treatment Plan is applicable for this project proposal, as being the Hydroelectric project.
13.	Cost benefit ratio:	Cost benefit ratio is reported to be 1 : 7.41
14.	Recommendations of the Principal Chief Conservator of Forests/State Government:	<p>PCCF and State Government have recommended the proposal.</p> <p>PCCF has stated that the diversion of the forest land for establishing the project may be considered by the Government and forest land so diverted may be handed over to the project proponent only after getting necessary approvals from the Government Departments such as Water Resources, Energy, Environment and Other statutory authorities.</p>
15.	Recommendations of Regional Chief Conservator of Forests along with detailed reasons:	<p>Since the project proposal is aiming at generation of 1260 MW of hydro energy to be supplied to HESCOM/KPTCL for stabilization of the grid and the proposed area for the project is unavoidable and site specific. Accordingly, the proposal may be considered favourably based on its merits, observations of the inspection committee subject to fulfilment of various statutory compliances / approvals, as applicable.</p>
16.	Regional Chief Conservator of Forests shall give detailed comments on whether there are any alternatives routes/alignments for locating the project on the non-forest land:	<p>The User Agency has in its justification in Part-I of the proposal reportedly examined two sites for the proposal and the site proposed in the current proposal was reportedly feasible considering its proximity to the Renuka Sagar reservoir and the availability of sufficient head for power generation.</p>



17.	Utility of the Project:	<p>As per the User Agency, the entire project is a self-identified project and first of its kind in the country which will supply firm dispatchable renewable power to the DISCOM/ Grid for round the clock.</p> <p>As per the project authorities, the project is aiming at generation of 1260 MW of electricity which will be purchased by HESCOM/ KPTCL for stabilization of the grid and to provide power during peak hours</p> <p>Reportedly, the project is likely to generate regular employment to 400 persons and 2080500 temporary employment.</p>
18.	Whether land being diverted has any socio-cultural/ religious value:	There are no monuments of historical, recreational archaeological importance in the proposed area. There are no Protected/ Archaeological/ Heritage sites or Defense establishments or important monuments in the area.
19.	Situation w.r.t. any P.A.	The forest land proposed for diversion does not form part of any Wildlife Sanctuary, National Park, Biosphere Reserve, Tiger Reserve or Elephant Corridor, etc., or coming within the ESZ of any Protected Area.
20.	Any other information relating to the Project:	1. As the major chunk of forest area proposed is for the reservoir purpose at the uphill side, the user agency was requested to explain whether it is possible to reduce the area required for the reservoir. The representatives of the user agency have explained that the area proposed for reservoir is actually required for storing of required quantity of water and it is not possible/ feasible to reduce it further.





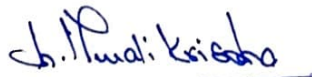
		<p>2. During the discussion, the representatives of the user agency have informed that the average height of the upper reservoir would be around 30 metres to store the 1.00 TMC of water. On the question of safety and stability of the upper reservoir (as there are villages at the downhill of the reservoir), the user agency representatives have informed that all the possible measures for ensuring the safety and stability of the reservoir will be taken including obtaining necessary approval from the competent authorities of statutory bodies such as Central Water Commission, Water Resources, Energy, Electricity, and other statutory bodies as applicable.</p> <p>3. It was informed that as per the Government of Karnataka order No.RD 453 FGL 69 Dated 18.10.1969, about 1020 acres have been allotted to displaced persons of Malaprabha project in Kagihal forest under various survey numbers out of which an area of 72 acres have been allotted for displaced persons in survey no.146 (total area in Sy.No.146 is reported as 445 acres). The user agency requires part of land falling under Sy.No.146 i.e., an area of 15.35 acres only for the proposal under consideration. The land bearing the Sy.No.146 is still under forest as per the forest records and the same has not been denotified. Remaining area in Sy.No.146 is being utilised by the displaced people of Malaprabha project but the copies of the Notifications regarding dereservation and denotification are reportedly not available with the Forest Department. The Forest officials and the user agencies have also shown the committee of</p>
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**K.P. Singh, IFS**  
DDG (C) / Regional  
Officer, IRO, Bangalore



**Dr. Murali Krishna**  
Additional Director/  
Scientist-E, IRO  
Bangalore



**S. Elamurugannan, IFS**  
Deputy Director, FSI,  
Southern Region,  
Bangalore

Date of Inspection: 17.12.2021



**Site inspection Report of Land identified for Compensatory Afforestation in relation to Diversion of 160.4 ha of forest land Ghataprabha Forest Division of Belagavi district for Construction of Standalone pumped storage component of Saundatti Integrated Renewable Energy Project in favor of M/s Greenko Solar energy Private limited.**

The CA land identified is in an extent of 161 ha in 16 survey numbers (116, 117, 123 to 131, 134 to 136, 148 and 149) of Dabka village and survey number 57 in Chimagoan village of Aurad Taluk of Bidar district. The identified land is in continuity with a small patch of forest land in survey number 150. The Topography of the area is ranging from moderately sloping to flat surface with intermittent hillocks. Most of the area is comprise of murram soil type with very shallow soil depth. The CA land parcel is revenue land which includes both cultivated as well as uncultivated land. Roughly about 50 percent of the area is cultivated with dry land crops like Maize, Jawar and Pulses and the remaining 50 per cent of the area is not under cultivation but there are very sparse tree certain pockets of the uncultivated land. Sy. No 116 and 136 are having one house each constructed in a portion of the land. The user agency has informed that, the constructed houses will be evicted before handing over the land to the Forest Department. There were indirect evidences of grazing by the domestic animals in this area. Availability of soil moisture seems to be very poor especially during summers. Since the summer temperature in this area will reach up to 38°C, conservation of soil moisture and measures to prevent grazing area very crucial for establishment of successful plantation in this area.

DFO has mentioned in his CA land suitability certificate that there are reports of presence of endangered bird species Lesser Florican in Aurad and Bidar Taluk of Bidar District and the birds are actively breeding, with direct sighting of the birds and chicks of Lesser Floricans during Feb-2020 in Aurad Taluk. In his report DFO has recommended that the identified CA land may be maintained as grassland without tree planting, to ensure availability of nesting and breeding areas for endangered Lesser Florican species since grasslands are the main habitats for Lesser Floricans. The same was brought to my notice during the field visit and further it was informed that the Karnataka Forest Department is funding Bombay Natural History Society (BNHS) to carryout the study on distribution of Lesser Florican and identifying potential sites in Aurad and Bidar Taluk of Bidar district, which can serve as habitat for long-term conservation of endangered bird. When asked about any reports regarding the presence of Lesser Florican population in and around the identified CA land, it was informed that the study is in progress and at present BNHS has not submitted any reports with respect to population and habitat distribution of Lesser Florican in Aurad and Bidar.

DFO informed that as per the CA norms, for the purpose of taking up tree plantation at the rate of 1000 plants per hectare, an extent of 161 ha of degraded forest land in Sy. No 82 in Karakanalli is identified. The site was





visited the location was verified with KML file available with officials of Forest Department. The identified degraded forest land is part of Chenglera Block reserve forest for which preliminary notification under sec 4 of the Karnataka Forest Act was issued during 1966. Final notification is yet to be issued. Looking in to the already existing tree density, I am of the opinion that the area identified for raising CA plantations cannot accommodate 1000 trees per hectare. A maximum of 250 to 300 trees may be planted in this area.

During the visit to the non-forest land identified for CA purpose, the presence of Lesser Floricans was not witnessed, may be due to the very short time window. The local inhabitants are not much aware of the presence of these birds. Lesser Florican is an endangered species. The population of this bird has come down drastically over the past few decades. Since it is reported by the DFO, Bidar that the CA land may be maintained as grassland, the suggestions and recommendations made by the DFO may be considered and the Identified CA land may be maintained as grassland, without planting any trees and by providing adequate protection through proper chain link fencing at the cost of user agency. If necessary further clarification may be sought from the Forest Department with respect to retaining the identified non-forest land as habitat for Lesser Floricans. Since the degraded forest land identified for planting of trees cannot accommodate requisite number of plants per hectare the State Government may be requested to identify larger extent of degraded forest land so as to accommodate 1000 per ha as per the guidelines issued under F(C) Act, 1980.



(B. N Anjan Kumar)  
AIGF (C)

IRO, MoEF&CC, Bangalore

Date of Site Inspection: 20<sup>th</sup> and 21<sup>st</sup> of December, 2021  
Date of Submission of Report: 22<sup>nd</sup> December, 2021

