

**Sub: Diversion of 280.54 ha of forest land for construction of Talong Londa Hydro Electric Project (225 MW) in East Kameng District of Arunachal Pradesh by M/s GMR Londa Hydro Power Pvt. Ltd.**

The State Govt. of Arunachal Pradesh vide their letter No. FOR.329/Cons/2010/584-89 dated 27.05.2015 was submitted a proposal for diversion of 280.54 ha of forest land for construction of Talong Londa Hydro Electric Project (225 MW) in East Kameng District of Arunachal Pradesh by M/s GMR Londa Hydro Power Pvt. Ltd. seeking approval under section 2 (ii) of Forest (Conservation) Act, 1980.

2. Details indicated in the proposal submitted by the Government of Arunachal Pradesh vide their letter dated 27.05.2015 are as below:

### FACT SHEET

1.	Name of the Proposal	Diversion of 280.54 ha of forest land for construction of Talong Londa Hydro Electric Project (225 MW) in East Kameng District of Arunachal Pradesh by M/s GMR Londa Hydro Power Pvt. Ltd.
2.	Location i. State ii. District	Arunachal Pradesh East Kameng
3.	Particulars of Forests: i. Name of Forest Division and Forest area involved. ii. Legal status/Sy.No. iii. Map	Seppa Forest Division 280.54 ha Un-classed State Forest (USF) Forest type – Tropical wet Evergreen Forest --
4.	Topography of the area	-
5.	i. Geology ii. Vulnerability to erosion	-  <ul style="list-style-type: none"> <li>Reservoir rim area prone for erosion, However, comprehensive rim treatment plan proposes to be implemented to avoid erosion in forest area.</li> <li>Potential landslide zone shall be identified and <b>to be treated as part of Catchment Area Treatment Plan.</b></li> <li>User agency may take up the necessary steps to mitigate soil erosion.</li> </ul>
6.	(i) Vegetation  (ii) Density	Poma, Siris, Uria, Pichola, Jutuli, Hingori, Simul, Selloni, Selleng, etc.  <b>07, Eco class - VI</b>

	(iii) No. of trees to be felled	32118 Nos
7.	Whether area is significant from wildlife point of view	No
8.	Whether forms part of National park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant Corridor, etc. (if so, details of the area and comments of the Chief Wildlife Warden	No
9.	Whether any RET species of flora and fauna are found in the area. If so details thereof	No
10.	Approximate distance of the proposed site for diversion from boundary of forest.	It is 63 km from Pakke Wildlife Sanctuary and Village Reserve Forest are Lower Kapak Modi and No one nearest reserve forest area
11.	Whether any protected archaeological/heritage site/defence establishment or any other important monuments is located in the area.	Not required
12.	Whether any work of in violation of the Forest (Conservation) Act, 1980 has been carried out (Yes/No). If yes details of the same including period of work done, action taken on erring officials. Whether work in violation is still in progress.	No
13.	Whether the requirement of forest land as proposed by the user agency in col. 2 of Part-I is unavoidable and barest minimum for the project, if no recommended area item-wise with details of alternatives examined.	Yes, it is unavoidable and barest minimum for the project and the present location is more technically viable, requiring less forest land than the alternate site are considered.
14.	Whether clearance under the Environment (protection) Act, 1986 is required?	Not given
15.	<b>Compensatory Afforestation</b>	
	i. Details of non-forest area/degraded forest area identified for CA, its distance from adjoining forest, number of patches, size of each patches.	Compensatory Afforestation Plan in four patches. Locations are Pakiapur under shoshi Bagang Village (250 ha), N.K. Doka under Doka Village (102.08 ha) Mebua camp (107 ha) and Rongbuk Mebua (102 ha) under Seppa circle.
	ii. Map showing non-forest/degraded forest area identified for CA and adjoining forest boundaries.	--
	iii. Detailed CA scheme including species to be planted, implementing agency, time schedule, cost structure, etc.	given
	iv. Total financial outlay for CA	Rs. 12,67,19,500/-
	v. Certificate from the competent authority regarding suitability of the area identified for CA and from management point of view.	It is mentioned in suitability certificate that proposed <b>notified VFR areas are suitable</b> for raising of compensatory Afforestation and management point of view.

<b>16.</b>	Catchment Area Treatment	<b>Not given</b>
<b>17.</b>	Rehabilitation of Oustees  a. No of families involved  b. Category of families c. Details of rehabilitation plan	2000 Nos of Local people (ST) of the area are to be benefited.  All the families are Scheduled Tribe <b>Rehabilitation and resettlement plan not given.</b>
<b>18.</b>	Compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	<b>Not Given</b>
<b>19.</b>	Cost Benefit Ratio	1:8.9 (Cost benefit analysis is not as per guidelines)
<b>20.</b>	Total Cost of the Project	Rs. 2172.90 Crores
<b>21.</b>	Recommendation  i. DFO  ii. CCF iii. Nodal Officer iv SG	In the context of Arunachal Pradesh, power sector is the most vital infrastructure input for socio-economic development and has assumed centre stage because of huge hydropower potential. Considering importance of development of border areas, which are tied in a vicious cycle of poverty, unemployment, under development and remoteness, it is felt that Establishment of Hydro Power Plants would be necessary and important. In view of the above, this proposal has been recommended for favourable consideration.  Recommended Recommended Recommended
<b>22.</b>	District Profile  i. Total Geographical area of the district ii. Total Forest area/Divisional Forest area iii. Total area diverted since 1980 iv. Total CA stipulated since 1980 (Forest land)  a. Forest land including penal CA b. Non-Forest Land	4134 Sq. Km.  2787 Sqkm.  138.7 ha at Kamrong VRF, under Seppa Forest Range  N/a  Nill No

	<b>v. Progress of Compensatory Afforestation</b>  <b>a. Forest land</b> <b>b. Non Forest land</b>	92 ha C.A. Plantation created and 46.7 ha Advance nursery work done at Kamrong VRF under Seppa forest range.
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3. The SIR has been carried out by the Regional Office, Shillong and forwarded vide their letter dated 28.03.2016 ([Pg.1-14/ToC](#)) which is reproduced below:

**I. Legal Status of the forest land proposed for diversion:** Unclassed State Forest under Seppa Forest Division, East Kameng District.

**II. Item wise break-up details of the forest land proposed for diversion:**

- a.** Dam, Power House, TRC, Coffor Dams and Switch Yard -**4.31 ha**
- b.** (Upstream) Approach road DT inlet, Portal and Slope Protection Area -**1.62 ha.**
- c.** (Downstream) Approach road DT inlet, Portal and Slope Protection Area -**2.98 ha.**
- d.** River Bed area -**110.44 ha.**
- e.** Submergence area- **161.18 ha**

**Total area of forest land required for diversion is 280.54 ha**

**III. Whether proposal involves any construction of buildings (including residential) or not. If yes details thereof:** Yes, such construction is identified in the Non-forest land as per the break up at Annexure 16 A.

**Total cost of the project at present rates:** Rs. 2172.90 Crs. As mentioned in form A Part-I Sl. No. 1 (iii).

**IV.** Whether forest area proposed for diversion is important from wildlife point of view or not : No.

**V. Vegetation:** The vegetation consists of miscellaneous Spps and in the disturbed area were Jhum Cultivation exist the Agricultural crops and horticultural crops are Mingle with Forest Patches. These Forest patches are seen along the river to a certain extent.

**Total number of trees to be felled:** The Divisional Forest officer, Seppa has enumerated and complied the list of trees to be felled for both Forest and Non-Forest area. Therefore, it is not possible to carry out sample checking on the Forest area since there were no sample plots and the trees are not marked in the forest area. The Divisional Forest Officer is to enumerate all the trees in the forest land as mentioned in the item wise break up details at Sl. No. 2 above.

As per the records in the proposal the number of trees is to be felled upto 60 cm girth is 14370 and trees above 60 cm girth is 17748. **The enumeration has been carried out 3-4 years back, with the biotic interference and the Jhuming of the Forest land by the local people the number of trees in the forest land will definitely be less each year.**

**The DFO, Seppa will again have to carry out fresh enumeration in the Forest area of 280.54 ha as per the break up at Sl. No. 2 above. The trees enumerated are to be serially numbers and the enumeration plot is to be provided by the GPS Co- ordinates.**

**Effect of removal of trees on the general eco-system in the area:** The effect of removal of trees on the general eco-system in the area cannot be estimated as the exact no of trees to be felled the Forest area is not known to the Forest Department and the Project Proponent.

**VI. Background note on the proposal:** The Talong Londa hydro Electric Project was identified as a part of Hon'ble Prime Minister 50,000 MW accelerated Hydro Power Development Scheme. Initial investigations

and prefeasibility Report of the project was carried out by North Eastern Electric Power Corporation Ltd. (NEEPCO) in December, 2003. As per the Government Policy for involvement of the private developers, this project was awarded to GEL in January, 2007.

The project is located about 20 Km upstream from Seppa, the district head quarter of East Kameng. The nearest rail head (broad gauge) is at Nayagaon, Assam (310 km). Seppa is at about 290 km by metalled road from Nayagaon. The nearest airport is at Guwahati which is 410 km from the project site, Itanagar, the Capital of Arunachal Pradesh is at 290 km from the project site.

**VII. Compensatory afforestation:** The compensatory afforestation area has been proposed in four separate sites namely viz:-

- i. Pakiapu under Shoshi Bagan Village 250.00 ha, ii. N.K. Doka under doka village 102.08 ha, iii. Mebua Camp 107.00 ha and iv. Rongbuk Mabua 102.00 ha. these sites has been proposed as village Reserved Forest by the Government of Arunachal Pradesh.

These 4 sites are not in a compact Block but located at a separate location far from each other. The distance from S. No. i. to ii. is about 4 hrs journey on foot and by vehicle in the remote area. S. No. iii and iv. are located at a distance of about 2 hr journey on foot and is near the PWD road.

The Rongbuk Mabua was inspected along with the Forest Department and it was found that the patches of natural forest are separated by open Area of Jhum cultivation. Photograph taken during the site inspection are appended as Annexures. As observed in the field through the area proposed is 102 ha but the Jhum area which is suitable for plantation is approximately 50 % . Therefore in order to raise plantation for an area of 102 ha. some additional area is to be acquired by the user Agency.

It is to be mentioned that the CA scheme has been prepared for an area of 280.54 x 2 which is 561.08 ha. The presence of Forest patches in the 3 other sites will definitely lesser the area for a purpose of Compensatory Afforestation of double the area.

The G.P.S Co-ordinates of the 4 sites proposed for Compensatory afforestation are processed in the Decision Support System. The final results on 4 proposed site for C.A is indicates as Inviolable (Annexure-1)

- VIII.** 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 of FC Act 1980.
- IX.** **Whether proposal involves rehabilitation of displaced persons.** If yes, whether rehabilitation plan has been prepared by the State Government or not : Yes, As in the State Govt. letter No. FOR. 329/ cons/2010/584-89 Dated 27.05.2015.S.L. No. 8.
- X.** **Reclamation Plan:** Details and financial allocation. The R&R Plan is under Revision as in the State govts. Letter No. FOR. 329/ cons/2010/584-89 Dated 27.05.2015.S.L. No. 8.
- XI.** **Details on catchment and command area under the project.** Catchment area treatment plan to prevent siltation of reservoir: The Catchment and Command area under the project as per the CAT Plan at Table.2.9 is 1968 ha. These areas are Community Forest Area and Non-Forest Area and No Government Forest area is involved. Submitted by the User Agency in the proposal.
- XII.** **Cost benefit ratio:** the project proponent has submitted the cost Benefit Ratio in the proposal which has been approved by the State Government while forwarding the proposal to MoEF& CC, Government of India.
- XIII.** **Recommendations of the Principal Chief Conservator of forest/State Government:** The PCCF of the State Government has recommended the proposal in Part V dated 20.05.2015.
- XIV.** **Recommendations of Regional Chief Conservator of Forests along with details reasons:** the recommendation of the Additional Principal Chief Conservator of forests will be his forwarding letter to the Ministry. But it is mentioned in the forwarding letter that the forwarding of SIR has the approval of the then Addl.PCCF (Central),Regional Office, Shillong.

- XV. Regional Chief Conservator of Forests shall give detailed comments on whether there are any alternatives routes/alignment for locating the project on the non-forest land:** As this is a Hydroelectric Project there are no other alternative routes or sites as the percentage of the forest in Arunachal Pradesh is 81.21 % source, India's State of Forest Report 2015.

Number of Scheduled Caste/Scheduled Tribe to be benefited by the project: the area of the project is inhabited by the local tribal propole of the Arunachal Pradesh. Therefore, any development and other related fringe benefit due to the construction of the project will directly benefit these local tribals.

- XVI.** Whether land being diverted has any socio-cultural/religious value. Whether any sacred grove or very old growth trees/forests exists in the area proposed for diversion. Whether the land under diversion forms part of any unique eco-system: **the forest land proposed for diversion is disturbed by the local people for Jhum purpose. Therefore, there are no sacred groves etc and does not form a part of any of any unique eco system.**

- XVII. Situation W.r.t any P.A:** It is located at distance of approximately 63 kms away from pakke Wildlife sanctuary.

- XVIII.** Any other information relating to the project.

**Observation made during the site visit: -**

- i. The dam axis was marked only on the left bank of the river and not on the right bank.
- ii. The State Government will have to select other sites for raising compensatory afforestation as the proposed compensatory afforestation site has been shown as Inviolate in the DSS
- iii. The Compensatory Afforestation sites which are to be identified must be in a compact location to ensure Protection and Management of the Plantation.

In view of the above, **before the recommendation of this proposal the Divisional Forest Officer, Seppa (i) will have to carry out the enumeration of the trees in the forest area, (ii) To identify 561.08 ha of degraded land for raising of CA.**

- iv. The Photograph taken during the site visit showing the location of the dam submergence area and compensatory afforestation as enclosed as **Annexure-2.**

- 4.** After examination of the said proposal, the certain shortcomings were noticed and the same has been communicated to the State Govt. vide this Ministry's letter dated 08.02.2017([Pg.255/ToC](#) ). The State Govt. of Arunachal Pradesh, Itanagar vide their letter no. For.329/Cons/2010/1461-65 dated 10.11.2017 ([Pg.256-257/ToC](#) ) has submitted their reply. The point-wise reply is as under:

S. N.	Information sought by MoEF&CC	Reply of State Govt.
1.	The compliance on scheduled Tribe and other Traditional Forest Dwellers Act, 2006 has not been submitted.	The State Govt. said that the compliance on FRA under process.

2.	The State Government has to identify revised CA area in a compact location to ensure protection and Management of the plantation the CA scheme and submit with suitability certificate as the proposed CA site has been shown as inviolate/pristine forests as reported in SIR by RO	<p>In this regard, the state Govt. reported that the revised CA area of 561.10 ha has been identified by the DFO, Seppa in the following VFRs under Seppa FD.</p> <table><tr><th>S. No.</th><th>VFR Name</th><th>Area (in ha)</th><th>Suitability pg. no.</th></tr><tr><td>i.</td><td>Fyodang Yar VFR</td><td>89.00</td><td>248/c</td></tr><tr><td>ii.</td><td>Komrong VFR</td><td>54.77</td><td>250/c</td></tr><tr><td>iii.</td><td>Kupta Doka VFR</td><td>81.00</td><td>252/c</td></tr><tr><td>iv.</td><td>Pipo Soro VFR</td><td>70.97</td><td>254/c</td></tr><tr><td>v.</td><td>Gangro Mobia VFR</td><td>102.00</td><td>256/c</td></tr><tr><td>vi.</td><td>Kerma Pao VFR</td><td>153.062</td><td>258/c</td></tr><tr><td>vii.</td><td>Kamrung Flago VFR</td><td>11.00</td><td>260/c</td></tr><tr><td colspan="2">Total</td><td>561.802</td><td></td></tr></table> <p>The estimated amount of CA over 561.10 ha is Rupees 14,62,34,00/-</p> <p>The suitability Certificate and map of the area identified for CA in respect of the above mentioned VFRs are given and placed in file at Pg. 247-260/c.</p>	S. No.	VFR Name	Area (in ha)	Suitability pg. no.	i.	Fyodang Yar VFR	89.00	248/c	ii.	Komrong VFR	54.77	250/c	iii.	Kupta Doka VFR	81.00	252/c	iv.	Pipo Soro VFR	70.97	254/c	v.	Gangro Mobia VFR	102.00	256/c	vi.	Kerma Pao VFR	153.062	258/c	vii.	Kamrung Flago VFR	11.00	260/c	Total		561.802	
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3.	The DFO, Seppa will have to carry out the enumeration of the trees in the forest area.	<p>In this regard, the State Govt. reported that the DFO, Seppa has carried out the re-enumeration of the trees in the forest area. The table showing the revised abstract and valuation of forest vegetation carried over 280.54 ha in Talong Londa HEP (225 MW ) is given and placed in file at Pg. 267-272/c.</p>																																				
4.	It is not clear whether the R&R Plan and CAT plan have been approved by the copies of the same are required.	<p>In this regard, the State Govt. reported that</p> <p>i) <b>R&amp; R plan has not yet been approved by the competent Authority.</b></p> <p>ii) CAT plan has been approved by the competent authority with revised estimated amount of <b>Rs. 599.23 lakhs</b> vide letter dated 28.07.2017 (<b>pg. 274-315/c</b>)</p>																																				
5.	The shape file/ KML file for the proposed area of diversion and CA of this project has not been provided.	<p>In this regard, the state Govt. reported that that the shape file / KML for the proposed area of diversion (280.54 ha ) and CA of the area in a soft copy has been given.</p>																																				

5. After examination of the reply as indicated in para (4) above, the certain shortcomings were noticed and accordingly the State Govt. again requested vide this Ministry's letter dated 18.12.2017([Pg.335/ToC](#)) for their response.

6. Now the State Govt. of Arunachal Pradesh, Itanagar vide their letter no. For. 329/Cons/2010/730-34 dated 12.02.2020 ([Pg. 337-339/ToC](#)) has submitted their reply in response to Ministry's letter dated 18.12.2017. Details are as under:

S. N.	Observations made by MoEF&CC	Reply from the State Government
(i)	The shape file / KML file of the propose CA area has been examine by the DSS Cell and found that out of Seven Patches proposed for CA, Shape file/KML file of Two patches, namely Gangro Mobia VFR (102 Ha) & Kerma Pao VFR (153.062 Ha) has not been given CD's Moreover, co-ordinates of these Two patches are unreadable from the maps submitted with compliance report and it is also observed through Topo Map of proposed CA land that the shape/drawing & location of Two CA patches namely fyodang Yar VFR & Gangro Mobia VFR are found identical. Moreover, the shape file / KML file for the proposed area of diversion under this project has not been provided. <b>Accordingly, the shape file / KML file for the proposed area of diversion of 280.54 ha and entire sites proposed for CA may be provided.</b>	The State Government informed that as stated by the user agency, the Shape file/ KML file of the proposed CA area has been modified. Modified Shape file is given.  The Shape file/ KML file for the proposed area of diversion of 240.54 ha of forest land is given.
(ii)	It is informed by the State Govt. that R&R plan has not been approved by the competent authority and compliance on FRA is under process . Therefore, the present status on R&R Plan & FRA.	In this regard, it is reported that the user agency has submitted the R&R Plan to the Dy. Commissioner, which is under scrutiny. With regard to FRA, the user agency requested the Dy. Commissioner, Seppa for completing the FRA process. Thus, R&R plan and FRA are yet to be received.

7. **Summary of DSS Analysis Report:** The instant proposal has also been analyzed by the DSS cell of this division and their report may kindly see at [Pg. 340-344/ToC](#). The major observation is as under:

**I. In Case of Land proposed for Diversion:**

- i. Calculated area of Shape file/ KML file of Forest land **proposed for diversion is found 417 ha. (DSS calculated) whereas the project proponent has applied for diversion of 280.54 ha forest land.** Thus, the discrepancy has been observed in the calculated area through shape file and area mentioned in the proposal.
- ii. Proposed area for diversion classified as **inviolate area or In High Conservation value** (in HCV) based on Decision Rule No. 1 & 2. The instant **project is falling under inviolate Zone based on Decision Rule No. 1 due to presence of VDF (Very Dense Forest) & it is also Inviolate based on Decision Rule 2** because, out of total 39 Grids of 1X1 Km size, 33 Grids having the average score above 70.
- iii. Forest Cover: Out of total 417 Ha (as per DSS Calculated) forest area proposed for diversion, 19 ha of land is characterized with Very Dense Forest, 112 ha of land as Moderately Dense Forest, 161 ha. of land as Open forest, 37 ha of land as Water and 76 ha. of land as Non Forest (land devoid of vegetation cover) in terms of forest classes (as per the ISFR 2015) based on the interpretation of satellite data period 2013-2014.
- iv. Forest Types details: 12/C3 A EAST HIMALAYAN MIXED CONIFEROUS FOREST: 224 ha, 2B/ C1A ASSAM ALLUVIAL PLAINS SEMI-EVERGREEN FOREST: 84 ha, 8B/C1 EAST HIMALAYAN SUBTROPICAL WET HILL: 28 ha, Water: 35 ha & Non-Forest: 46 ha.

**II. In Case of Compensatory Afforestation Land:**



- i. The CA has been proposed in 12 patches located in East Kameng district of Arunachal Pradesh State.
- ii. CA has been proposed in Forest land, twice in extent to the forest land being diverted and calculated area of CA land is found 555 Ha (DSS calculated).
- iii. Out of total 555 ha area proposed for CA, 12 ha of land is having canopy density of Very Dense Forest, 42 ha. of land having the canopy density of Moderately Dense Forest, 475 ha. of land as Open forest and remaining 26 ha of land as Non-Forest (land devoid of tree cover) in terms of forest classes (as per the ISFR 2015) based on the interpretation of satellite data period 2013-2014.
- iv. Patch-wise details of proposed CA patches w.r.t density classes (based on interpretation of satellite data period 2013-14) as per ISFR 2015 along with patch wise observation based on Google earth imagery is as follows:

S.No.	CA Patch Name	Area (Ha)	VDF	MDF	OF	Scrub	NF	Remarks
1	GANGRO_MOBIA_VFR	101	1	3	97	0	0	This CA patch has dense tree cover as per Google earth imagery dated 12.11.2013
2	KAMRONG FLAGO VFR	15	1	2	12	0	0	
3	KAMRONG VFR patch-ii	9	0	0	9	0	0	Some part of proposed CA patch is falling on River
4	KAMRONG VFR patch-iii	5	0	1	4	0	0	
5	KAMRONG VFR patch-i	40	0	2	38	0	0	

It is proposed that the facts related to the proposal may be placed before FAC in its next meeting scheduled to be held on 27.02.2020 for their examination and appropriate recommendation.

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