

Sub: Proposal for seeking prior approval of the Central Government for non-forestry use of 190.0 ha of forest land for collection of minor mineral from Chandrabhaga River in favour of UTTARAKHAND FOREST DEVELOPMENT CORPORATION (UAFDC) under Narendra Nagar Forest Division and District Dehradun, Uttarakhand (Online proposal No. FP/UK/MIN/8878/2014)-reg.

Part-A

1. The Government of Uttarakhand has submitted the above-mentioned subject proposal through online PARIVESH portal bearing Number FP/UK/MIN/46859/2020 dated **01.08.2020**.
2. The salient features of the proposal are as under:

FACT SHEET

1.	Name of the Proposal	Collection of minor minerals from Chandrabhaga River in favour of UTTARAKHAND FOREST DEVELOPMENT CORPORATION (UAFDC)
2.	Online Proposal No.	FP/UK/MIN/46859/2020
3.	Location:	
(i)	State	Uttarakhand
(ii)	District	Dehradun.
4.	Detail of user agency	
(i)	Name of the user agency	Uttarakhand Forest Development Corporation, Dehradun(UKFDC)
(ii)	Shape of forest land proposed to be diverted	Non-linear
(iii)	Nature of user agency	State Government
5.	Category of the Proposal	Mining
6.	Total period for which the forest land is proposed to be diverted (in year)	10 years
7.	Particular of Forests	
(i)	Name of Forest Division	Narendra Nagar, Muni ki Reti
(ii)	Proposed area of forest land	190.0 hectare
(iii)	Legal Status of Forest land	Reserved Forest
(iv)	Density of Vegetation	Density = 0.3 Eco class =V
8.	Maps	
(i)	Differential GPS map of the area proposed for diversion	Uploaded in the PARIVESH portal.
(ii)	Differential GPS map of the area identified for raising CA	Uploaded in the PARIVESH portal.
(iii)	Survey of India toposheet on 1:50,000 scale showing the area proposed for diversion	Uploaded in the PARIVESH portal.
(iv)	Survey of India toposheet on 1:50,000 scale showing the area identified for CA	Uploaded in the PARIVESH portal.

9.	Land use plan	S. No.	Name of the Activity	Forest land (ha.)	NFL
		1	Safety zone Kot-Mot	12.3	0
		2	Mining area Kot-Mot	177.7	
		Total		190.0	
10.	Forest Cover map	Not given.			
11.	Vegetation	NA			
(i)	Species-wise and diameter class wise enumeration of trees.	Not Applicable.			
(ii)	Density	0.3			
(iii)	Number of trees proposed for removal	Nil			
12.	Vulnerability of area to soil erosion	As per the Geological Report.			
13.	Working plan prescription for the forest land proposed for diversion.	Not applicable			
14.	Approximate distance of proposed site for diversion from boundary of forest (in Km.)	0.115 km			
15.	Details of wildlife present in and around the forest land proposed for diversion:	Jackal, Indian Crow, Rabbit, etc.			
16.	Whether forms part of National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant Corridor etc. (if so, the details of the area and comments of the Chief Wildlife Warden to be annexed)	No			
17.	Whether any rare/ endangered/ unique species of flora and fauna found in the area if so, details thereof.	No			
18.	Whether the forest land proposed for diversion is located within eco-sensitive zone (ESZ) of the protected Area notified under Wildlife (Protection) Act, 1972 (Note in case, ESZ of a Protected Area should be treated as ESZ):	No			
19.	Whether any national park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant corridor, wildlife migration corridor etc., is located within 1 Km. from boundary of the forest land proposed for diversion:	No			
20.	Whether any protected archaeological/ heritage site/ defence establishment or any other important monument is located in the area. If so, the details thereof with NOC from competent authority, if required.	No.			
21.	Whether the requirement of forest land as proposed by the User Agency in col.2	Yes.			

	of Part-I is unavoidable and bare minimum for the project. If no, recommended area item-wise with details of alternatives examined.				
22.	Whether any work in violation of the Act 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 under progress.	No.			
23.	Details of Compensatory Afforestation Scheme:				
(i)	Details of non-forest area/ degraded forest area identified for compensatory Afforestation, its distance from adjoining forest, number of patches, size of each patch.	S. No.	Compartment No.	Area (ha.)	Range
		1.	Dangyu-2	20	Maniknath
		2.			Maniknath
		3.	Durogi-1	30	Maniknath
		4.	Devpryag-2a	40	Maniknath
		5.	Kanfulakhal	10	Maniknath
		6.	Bargru	20	Maniknath
		7.	Tungta	20	Maniknath
		8.	Gullargad	20	Shivpuri
		9.	Lachmoli-1	20	Maniknath
		10.	Tyuna-1	20	Maniknath
		11.	Khansi	20	Maniknath
		12.	Maroda-12	20	Maniknath
		13.	Jijali	30	Saklana
		14.	Khanana-2	30	Manikanth
		15.	Pathudi 01a	20	Saklana
		16.	Pathudi 02	20	Saklana
		17.	Saur	40	Saklana
		Total	380		

(ii)	Map showing non-forest/ degraded forest area identified for compensatory Afforestation and adjoining forest boundaries.	Uploaded in the PARIVESH portal
(iii)	Detailed compensatory Afforestation scheme including species to be planted, implementing Agency, time schedule, cost structure etc.	CA scheme has been provided and uploaded in the PARIVESH portal
(iv)	Total financial outlay for compensatory Afforestation scheme.	1281.2992 lakhs
(v)	Certificate from competent authority regarding suitability of area identified for compensatory Afforestation and from management point of view. To be signed by the concerned Deputy Conservatory of Forests.	Uploaded in the PARIVESH portal.
24.	Documentary evidence in support of settlement of rights in accordance with the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 on the forest land proposed to be diverted enclosed.	FRA certificate has been provided by the DM Dehradun vide letter No. 540 dated 07.07.2020 for 190 ha of proposed forest land in favour of UKFDC for extraction of RBM in Chandrabhaga River in Tehri Garhwal District falls within jurisdiction of Dhalwala, Gujrada, Talai, Daor and Auri Villages in Narendra Nagar Tehsil. Documentary evidence in support of settlement of rights in accordance with the provisions of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has been submitted with the Gram Sabha resolutions.
25.	Site Inspection Report of the Divisional Forest Officer in compliance to the conditions stipulated in the col. 7 (xi, xii) 8 and 9 previous approval.	The Site Inspection Report carried out by the Divisional Forest Officer, Narendra Nagar, Muni ki Reti, Forest Division on 24.07.2020 , copy of the same has been uploaded in the PARIVESH portal.
26.	Whether the project requires environment clearance	Yes: EC application yet to be submitted
27.	Catchment Area Treatment Plan	Not applicable.
28.	Rehabilitation of Oustee	No
(i)	Number of SC Families	
(ii)	Number of ST families	
(iii)	Number of Backward Families	
(iv)	Copies of R&R Plan	Not applicable
29.	Cost Benefit Analysis	Uploaded in the PARIVESH portal.
30.	Total Cost of the project (in Crore)	₹36.53
31.	Employment Potential	Permanent Employee/ Temporary Employee: 8 Total Total man days: 2700000
32.	Undertakings to bear the cost of CA and NPV	uploaded in the PARIVESH portal.
33.	Details of Mining lease	
(i)	Whether the forest land is acquired under Coal Bearing Areas Act	No
(ii)	(a). Reference number of Letter of Intent for grant of mining lease:	71/खनन/ व०वि०नि०/आशय पत्र/ भू०खानी०ई०/2019-20 (Pg. No. 11-12/c)

	(b). Date of issue of the Letter of Intent(LOI) for grant of mining lease:	31st December, 2019
	(c).Total area of the mining lease (in ha.):	190.0 ha
	(d).Area of forest land located in the mining Lease (in ha.):	190.0 ha
(iii)	Details of Mining Plan	Uploaded in the PARIVESH portal and same is attached at Page No. /c
(iv)	(a).Date of approval of mining plan: (b) Approval authority: (c) Nature of mining (underground/opencast)	31.12.2019 Director Bhu Khanan, Uttarakhand Dehradun Open Cast
(vi)	Total area of safety zone of the mining lease in ha	Not applicable
(vii)	Details of safety zone of mining lease	Not applicable
(viii)	Detail of prospecting activity under taken in the mining lease:	No
34.	Profile of the District / Department / Dehradun Division.	
(i)	Geographical Area of the Dist.	3,83,700 ha
(ii)	Total Forest Area	1,43,268 ha.
(iii)	Total area diverted since 1980	Area 6512.45 ha Number of case - 560
(iv)	Total area proposed for afforested since 1980	Degraded forestland 7807.48 ha. Penal CA over Forest land -- ha. Non-forest land ---- ha
(v)	Total area afforested since 1980 as on 23.07.2020	Degraded forest land ---- ha Forest land 2571.56 ha. Non-forest land 4090.37 ha.
35.	Recommendation with Specific conditions, (if any)	
(i)	DFO	Recommended (Pg.162-164/c)
(ii)	CF	Recommended (Pg.167/c)
(iii)	PCCF/ Nodal Officer (FCA)	Recommended (Pg.165-166/c)
(iv)	State Govt.	Recommended (Pg.161/c)

3. Other Information related to the Proposal:

- i. Full NPV has been exempted as per the FCA Act, 1980 Comprehensive Guidelines dated 28.03.2019 para 3.5.
- ii. LOI has been issued by the SG of UK, Department of Mines in favour of UKFDC on **31.12.2019**.

4. Detail of prospecting activity undertaken in the mining lease: A Study was undertaken by IISWC Dehradun carried out at Chandrbhaga River in length of about 7.814 km.

Estimated Reserve along with accuracy and confidence level						
Minerals	Estimated Reserve (million tones)	% accuracy (+ -)	% confidence level	Estimated Reserve (million tones)	% accuracy (+ -)	% confidence level
Extraction of minor mineral, riverbed material	3.135	100	100	0	0	0

Mineral wise details:

Mineral wise details						
Mineral	Estimated reserve in non forest land(million tons.)	Estimated reserve in forest land(million tons.)	Estimated annual Extraction (million tons.)	Estimated life of mine (Yrs.)	Total estimated extraction during mining lease period(million tons.)	Estimated mineral reserve at the end of mining lease(million tons.
Estimated Reserve along with accuracy and confidence level	0	3.135	3.135	10	31.35	3.135

5. It is to inform that the State Government has conducted A Study by IISWC Dehradun at Chandrbhaga River in length of about 7.814 km (Copy of the Study Report has been uploaded in the additional information column in the part-I at PARIVESH portal) with the following objectives:

- i. Study of the hydro-logical profile of River Chandrabhaga (for the defined river reach) with respect to the extraction of riverbed material
- ii. Estimation of permissible extraction of riverbed material (RBM) for the year 2019-20.

6. Description of River Chandrabhaga:

The geographic location of the Chandrabhaga River Catchment extends from 30.11°N to 30.26°N Latitude and 78.14°E to 78.24°E longitude. A total area of the watershed is about 6832.89ha (Fig. 3) Topography of the area exhibits distinct variation and contains moderate slope to surround by steep hills and rugged land features. Thus, catchment can be divided into a narrow steep upper catchment draining the flanks of Mount Himalayas range, and the remainder on relatively flat plateau sloping gently. Elevation ranges between 314m and 2078m. The nature of the topographical features has made the area very liable to heavy gully formation and extensive soil erosion. Chandrabhaga river is a tributary of the Ganga River meeting near Triveni ghat at Rishikesh.

7. Recommendations:

- i. As the method and depth of extraction of RBM to be made will depend upon the pattern and quantity of RBM deposited during the monsoon, hence the quantity of RBM extraction will be estimated by surveying the river before the monsoon (after extraction of RBM is over i.e. in the month of June) and after the monsoon is over (before the extraction of RBM starts i.e. in the month of November/ December).
- ii. The extraction duration of RBM in the seasonal river Chandrabhaga may be kept from January to May.
- iii. The very big boulders in the river should not be removed from the junction of the hilly area and plain area as these big boulders serve for dissipating the energy of the flowing water.
- iv. The extraction may be carried out as per the methodology explained in the report and the concerned authorities responsible for extraction may please be communicated accordingly.
- v. As explained to the staff present during survey and communicated in the earlier report and in this report as well, permanent pillars on both sides of the river at every one kilometer of length may be erected as permanent bench post. Further the pillars constructed to demarcate width of extraction leaving 25 % of river width from the bank may be erected with a depth of 1.5 m below the ground and 1.2 m above the ground. Probably this may not be carried over by river during monsoon and hence reduce the periodical

construction of pillar every year. However, this year only 5-6 such pillars may be erected to observe its stability. While erecting the pillar, the corner of the pillar may face upstream.

- vi. The four pillars constructed to help for confining the extraction of RBM may please be marked from the right hand side of the river to the left hand side of the river as 1/1, 1/2, 1/3, and 1/4 starting from zero length of the river and then at the interval of about 1 Km distance in the river length till the last of the river reach up to which the extraction of RBM is made. These will serve as the permanent bench mark for the survey of the cross section.

8. DSS Analysis:

The KML file of proposed forest land and proposed CA site has also been analyzed on DSS. Following has been observed by the DSS Cell:

In case of proposed forest land: Proposed forest land for diversion is located on the border of Dehradun and Tehri Garhwal district and its calculated area is found 190.46 ha. Component wise breakup of the proposed forest land is given below:

S.No.	Component	Given Forest Area (ha.)	Calculated Area (ha.)
1.	Safety Zone	12.3	12.58
2.	Mining Area	177.7	177.88
Total		190.0	190.46

- ii. Proposed forest land is located at an aerial distance of 3.00 km (approx.) from Rajaji Tiger Reserve.
- iii. Proposed area for diversion classified as **Not in High Conservation Value(HCV) Zone** based on Decision Rule 1 and Decision Rule 2.
- iv. Out of total forest area proposed for diversion, 1 ha of land is classified as very dense forest (VDF), 31 ha. of land as moderately dense forest (MDF), 10 ha. area of land as open forest (OF) and 148 ha. of land as Non Forest in terms of forest classes (as per the ISFR 2019) based on the interpretation of satellite data period 2017-2018. (Note: VDF, MDF, OF is not present in the proposed forest land and same can be verified through High resolution Google Earth Imagery).

In case of proposed CA land:

- i.
 - i. CA has been proposed in 17 patches located in Tehri Garhwal district of Uttarakhand State.
 - ii. The calculated area of total land proposed for CA is found 380.52 ha.
 - iii. In terms of standards followed in ISFR 2019 (interpretation of satellite data period 2017-2018) regarding forest density classes:

S.No.	Compartment No.	Given Area (ha)	Calculated Area (ha)	VDF	MDF	OF	Scrub	NF
1	Dangyu-2	20	10.07	0	0	3	5	2
2			10.07	0	0	0	1	9
3	Durogi-1	30	29.96	0	0	7	0	23
4	Devpryag-2a	40	39.99	0	0	20	2	18
5	Kanfulakhal	10	10.02	0	0	2	0	8

6	Bargru	20	19.99	0	5	3	0	12
7	Tungta	20	20.14	0	0	6	14	0
8	Gullargad	20	19.94	0	0	10	0	10
9	Lachmoli-1	20	19.94	0	0	15	0	5
10	Tyuna-1	20	20.11	0	1	5	9	5
11	Khansi	20	20.07	0	0	3	2	15
12	Maroda-12	20	20.06	0	1	19	0	0
13	Jijali	30	30.03	0	20	4	0	6
14	Khanana-2	30	30.06	0	7	10	0	13
15	Pathudi 01a	20	19.95	4	16	0	0	0
16	Pathudi 02	20	20.05	0	8	12	0	0
17	Saur	40	40.08	0	0	20	0	20
Total		380	380.52	4	58	139	33	146

9. After analysis the proposal the EDS was raised by the Ministry on 27.09.2020.

10. The Government of Uttarakhand vide their letter No. 1660/FP/UK/MIN/46859/2020 dated 17.12.2020 has replied the Ministry's letter dated 27.09.2020. The point wise reply of the Govt. of UK are as follows:

Sl. No.	Question	Answer
1	Undertaking to bear the cost of Compensatory Afforestation.	The Govt. of UK has informed that necessary undertaking from user agency has been uploaded at S.N. 13 (additional information) in Part-II.
2	Undertaking for non use of the heavy machinery for the mining.	The Govt. of UK has informed that necessary undertaking from user agency has been uploaded at S.N. 16 (additional information) in art-II.
3	Undertaking for no work during monsoon season.	The Govt. of UK has informed that necessary undertaking form user agency has been uploaded at S.N. 17 (additional information) in Part-II.
4	As per the DSS, it is fund that the project site is falling within 10 km range of the Eco-Sensitive Zone of the Rajaji national park, therefore, the status regarding approval of wildlife Clearance may be Informed accordingly.	The Govt. of UK has informed that approval from State Wildlife Board has been obtained and recommendation of State Wild Life Board has been forwarded to National Board of Wild Life on 02.09.2020. Copy of the application forwarded to the National Board for Wildlife.
5	As per the DSS analysis, out of 190.00 ha proposed forest land about 1 ha. Is VDF and 31.00 ha is MDF.	The Govt. of UK has informed that area was inspected by the SDO and field team and it was found that the area proposed for collection of RBM is devoid of any vegetation and it falls under open forest category. The necessary certificate has been uploaded at S.N. 14 (additional information) in Part-II.
6	A certificate conveying that no plantation/afforestation has been taken up in the past under any scheme/plan in the proposed site for CA.	The Govt. of UK has informed that certificate of Divisional Forest Officer, Narendranagar, regarding no plantation/ Afforestation has been taken up in the past under any scheme/plan in the proposed sites for CA, has been uploaded in the PARIVESH portal.

Out of 380.00 Ha. CA area following areas are found VDF and MDF:

S.No.	Name of the Compartment	Area proposed	VDF	MDF
1	Jijali	30	0	20
2	Khanana-2	30	0	7
3	Pathudi 01 a	20	4	16
4	Pathudi 02	20	0	8
5	Saur	40	0	0
5	Bargru	20	0	5
Total		160	4	56

Divisional Forest Officer Narendranagar has rectified the areas of CA by removing the 60 hectare MDF and VDF areas from the proposed CA areas as detailed under:

1. 30 ha. of Jijali compartment is completely removed from the proposal.
2. 7.00 ha MDF area of Khanana-2 has been removed from the proposal.
3. Pataudi 01 ha, 20 ha. CA area is completely removed from the proposal.
4. 8.00 ha. MDF area of Pataudi-02 has been removed from the CA proposal.
5. 5.00 ha MDF area of Bargru compartment has been removed from the CA proposal.
6. 70 ha. New CA area is proposed in Gulargad compartment-6 in place of 70 hac. removed CA areas.

PART-B

1. The revised KML file of the revised CA sites have again checked on the DSS by the STA, DSS Cell of FC Division and following is observed:

(i) CA has been proposed in total 16 patches located in Tehri Garhwal district of Uttarakhand State and patch-wise area of proposed CA land is given below:

S.No.	Compartment No.	Old CA Area (ha)	Revised CA Area (ha)	Status of the proposed CA land
1	Dangyu-2	10	10	No change in the CA site
2	Dangyu-2 (II)	10	10	No change in the CA site
3	Durogi-1	30	30	No change in the CA site
4	Devpryag-2A	40	40	No change in the CA site
5	Kanfulakhhal	10	10	No change in the CA site
6	Tungta	20	20	No change in the CA site
7	Barguru	20	15	5 ha MDF area in Bargru compartment has been removed
8	Khanana-2	30	23	7 ha MDF area in Khanana-2 compartment has been removed
9	Pathudi 01a	20	CA site is completely removed
10	Pathudi 02	20	12	8 ha MDF area in Pathudi-2 compartment has been removed
11	Gullargard-6	70	New CA site
12	Maroda-12	20	20	No change in the CA site
13	Saur	40	40	No change in the CA site
14	Gullargard-3	20	20	No change in the CA site
15	Lachmoli-1	20	20	No change in the CA site
16	Tyuna-1	20	20	No change in the CA site

17	Khansi	20	20	No change in the CA site
18	Jijali	30	CA site is completely removed
Total		380	380	

(ii) Forest cover density of the revised and newly proposed CA site as per ISFR 2019 (interpretation of satellite data period 2017-2018) is given below:

S.No.	Compartment No.	VDF	MDF	OF	Non-Forest	Observations based on Google Earth
1	Barguru	0	1	3	11	MDF and VDF is not present in the proposed CA sites.
2	Khanana-2	1	6	10	6	
3	Pathudi 02	0	0	11	1	
4	Gullargard-6	0	4	27	39	
Total		0	11	51	57	

2. It is submitted that IRO Dehradun has submitted the SIR via e-mail on **08.01.2021** and same has been uploaded on PARIVESH portal.

3. The detailed of SIR is given below:

A. Name of the Inspecting Officer – Shri. T. C. Nautiyal, IFS, DIG(F), Integrated Regional Office, Dehradun, MoEF&CC, Dehradun.

Site inspection of the above mentioned proposal was carried out on **05.01.2021** with the officials of State Forest Department and representatives of the User Agency. The following Officers were present during the inspection:

Officers/Staff from the State Forest Department

- i. Shri Dheeraj Pandey, IFS, CF Shiwalik.
- ii. Shri D S Meena, IFS, DFO Narendranagar, Muni-ki-Reti
- iii. Field staff of forest Department.

Officer staff from the User Agency

- i. Shri Nishant Verma, IFS, General Manager, Uttarakhand Forest Development Corporation.
- ii. Shri Inder Singh Negi, RM, Uttarakhand Forest Development Corporation.
- iii. Shri Sher Singh, DLM, Uttarakhand Forest Development Corporation.
- iv. Field Staff from UKFDC.

B. Legal Status of the Forest Land Proposed for Diversion

Legal status of the land proposed for Diversion is Reserve Forest land.

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

The forest area proposed for diversion propose the construction of various components in the project as mentioned below:

S.no	Component	Forest Land (ha.)	Non-Forest Land (ha.)
1	Safety Zone	12.3	0
2	Mining Area	177.7	0
Total		190	0

Since, the proposal is related to river bed material extraction, the safety zone is to be kept far higher than the 7.5 mtrs. As per the study conducted by Indian Institute of Soil and Water Conservation, the peripheral 25% width of the river bed is to be kept as safety zone and RBM mining is to be carried out only in the middle 50% of the area. The User Agency will suitably demarcate the peripheral boundary with concrete pillars at the interval of 500 mtrs. The middle 50% of the area will be demarcated with smaller concrete pillars at 50 mtrs interval as per the mining policy of the state. The pillars needs to be geo-referenced for future monitoring .

C. Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof. No.

D. Total cost of the project at present rates. Total project cost is ₹3653 lakhs.

E. Wildlife

Whether forest area proposed for diversion is important from wildlife point of view or not?

The Divisional Forest Officer present on site has informed that the area is visited by elephants and other wildlife. It is around 3 KM aerial distance from the boundary of the Rajaji National Park and therefore is a part of the deemed Eco-sensitive zone as the Eco sensitive zone has not been notified. It was informed that the proposal has been submitted for NBWL clearance by the User Agency separately. It is recommended that the User Agency will comply with the directions of NBWL for wildlife mitigation measures.

F. Vegetation:-

The density of the area proposed for diversion has been reported as 0.3 by the DFO, Narendranagar, Muni-ki-Reti Forest Division but it is seen that there are no trees on the river bed. On certain patches shrubs like Adatoda, etc. have come up which are not significant.

Effect of removal of trees on the general ecosystem in the area: Nil.

G. Background note on the proposal.

The proposal is for removal of River Bed Material (RBM i.e. sand, gravel and silt) from the river bed of River Chandrabhaga, a tributary of river Ganga, by Uttarakhand Forest Development Corporation. During the rainy season, huge quantity of clay, silt, sand and boulders are brought down by overflowing streams in the nearby hills. The coarse and fine particles of sand, silt and clay are settle down once the river/ stream comes to the level surfaces and get deposited. Thus, every rainy season brings in a fresh layer of RBM. This material is economically valuable for construction purposes and is in great demand. In absence of regulated removal, the river bed gets elevated and leads to overflow of streams resulting into floods in the nearby villages. Therefore, consistent removal of RBM helps in training of the river bed and is an effective means of flood control in the adjoining villages. However, the removal of RBM needs to be properly regulated so that it serves the economic as well as ecological purposes.

Uttarakhand Forest Development Corporation had executed a study through Indian Institute of Soil and Water Conservation, Kaulagarh Road, Dehradun, on assessment of extractable RBM from river Chandrabhaga in Tehri distt. for the year 2019-20. The study made following recommendations:-

- i. *The extraction duration is to be kept from January-May.*
- ii. *The extraction is to be carried out as per the methodology given in the report.*
- iii. *Permanent bench posts are to be erected on both sides of the river at every 01 Km length.*
- iv. *The pillars also demarcate the width of extraction leaving 25% of river width from the bank as safety zone.*
- v. *The middle 50% of the width of the river can be used of extraction of RBM. This is to ensure the stability of the river bank and also to rehabilitate the reclaimed area by suitable plantation.*
- vi. *The above recommendation would help in channelization and centralization of the river which is relevant from river training point of view to avoid the tendency of periodical flooding in the adjoining areas.*
- vii. *The extraction and removal of RBM should be executed in the scientific manner. The maximum depth of cut should be from the middle of the river coarse and should be nil at the boundary of the middle half of the river.*

It has been stated by the User Agency that the mineral extraction will be done manually from 1.5 m upper surface only and the total proposed quantity for extraction is 31,35,000 tonnes.

H. Compensatory afforestation:

Compensatory afforestation land has been proposed over an area of 380 ha of degraded forest land in Maniknath Range, Saklana Range and Shivpuri Range, Narendranagara, Muni Ki Reti Forest Division, Tehri Garhwal District in the State of Uttarakhand. The area is in 16 patches with smallest area of 10 ha and the largest patch of 70 ha.

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

As reported by the DFO in the field, the proposed CA land is suitable for compensatory afforestation and appropriate local species will be selected for plantation depending on the altitude aspect ,slope etc.

- ii. **Whether land for compensatory afforestation is free from encroachments/ other encumbrances.**

As reported by the DFO in the field, the CA patches are free from any encroachment.

- iii. **Whether land for compensatory afforestation is important from Religious/ Archaeological point of view: No.**

- iv. **Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not.**

An area of 380 ha of degraded forest land identified in Tehri Garhwal District involves 16 patches in Maniknath Range, Saklana Range and Shivpuri Range, Narendranagara, Muni Ki Reti Forest Division.

- v. **Map with details :-** Differential GPS map submitted by User Agency on Parivesh portal.
- vi. **Total financial outlay :-** ₹12,81,29,920 /- has been submitted for Compensatory afforestation.

- I. **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 the Forest (Conservation) Act, 1980 has been reported. No violation has been observed during inspection.

J. Cost Benefit Ratio Analysis :- Detailed Cost Benefit Ratio Analysis have been provided by the User Agency.

K. Recommendations of the Principal Conservator of Forests/State Government. :- The PCCF, Government of Uttarakhand recommended the proposal with general, standard conditions.

L. Utility of the project:

The proposed area lies close to Rishikesh-Chamba National Highway and starts from confluence point of Chndrabhaga river and Dayagad Rao and downstream up to **7,660 meter** . At certain places the river stream also affects Dehradun-Rishikesh National Highway and at times overflow threatens the highway also. The proposed manual mining of RBM will give required depth in the central portion of the river and will reduce chances of breach on the river bank and subsequent flooding in the adjoining areas. The extraction of RBM will also provide construction material to the industry and will generate employment in the nearby areas. The removal of RBM will also be helpful in checking soil erosion.

M. Whether land being diverted has any socio-cultural /religious value. Whether any sacred grove or very old grown trees/forests exists in the areas proposed for diversion:

No. As per information provided by the User Agency and the representative of the State Forest Department, the area is not important from the socio cultural/religious view point. No sacred grooves/ old grown trees/ forests are existing in the area.

N. Any other information relating to the project:

- i. There is railway bridge coming up in the downstream of the mining area at around 650 mtr. Due care should be taken to avoid any damage to the railway bridge.
- ii. To avoid accidental injury to wildlife due to excavation of RBM suitable preventive measures may be taken in consultation with the local DFO/ Wildlife Warden.
- iii. Suitable river training measures in the form of spurs, gabion structures may be required at certain places to keep the river flow towards center.
- iv. The RBM will be transported from the northern as well as the southern side of the proposed area and therefore technology must be used for monitoring the transportation of RBM. Similarly, the extraction and collection of RBM on site can also be monitored using GIS techniques/drone survey so that there is uniformity in extraction and no specific area is over exploited.
- v. The safety zone, as given in the proposal should not be fenced keeping in mind the movement of wildlife from one part of the forest to other. Instead, the area should be suitably planted or seed sowing of riverine trees species viz. Sheesham, Khair, Jamun, etc be carried out to regenerate the vegetation along the safety zone

O. COMMENTS AND RECOMMENDATIONS OF THE ADDITIONAL PRINCIPAL CHIEF CONSERVATOR OF FORESTS (CENTRAL), INTEGRATED REGIONAL OFFICE DEHRADUN, MoEF&CC, DEHRADUN.

Extent proposal, involving diversion of 190 ha of forest land for extraction of RBM under the project. The detailed observations on the proposal submitted by State Govt. of Uttarakhand have been recorded above in the field inspection report of DIG (F). As per observations made in the inspection report, the project involves collection/removal of RBM from the middle 50% of the proposed area. The removal of RBM is beneficial for the local eco-system as well as economy. It is helpful in controlling floods and soil erosion on

one hand and on the other hand gives impetus to construction industry and consequent generation of employment. As no trees are involved in the proposed area, there is no loss of vegetation. The diversion of forest land for removal of RBM from Chandrabhaga river in Narendranagar, Muni Ki Reti Forest Division accordingly recommended with following conditions:-

- (i) The peripheral 25% of the area being diverted on either side of the river bed should be demarcated as safety zone and suitably planted by the User Agency/Forest Department under the supervision of the local Divisional Forest Officer.
- (ii) There should not be any fencing for protection of safety zone as it will hamper free movement of wildlife during night time.
- (iii) Extraction, removal and transportation of RBM should be allowed only during day-time only. No movement of vehicles/ workers should take place in the night. Appropriate technology v.i.z. GIS techniques/drone survey should be used for monitoring of entire process of collection and transportation of RBM.
- (iv) The User Agency will construct suitable river training structures wherever required to avoid soil erosion and destruction of forest vegetation due to floods.
- (v) The User Agency will comply with the recommendations of standing committee of NBWL for wildlife mitigation measures.

The above agenda may be placed in forthcoming FAC meeting scheduled to be held on 27.01.2021 for further consideration of the instant proposal.
