



No.5-ORA525/2022-BHU

29th September, 2022

To

The Addl. Director General of Forests (FC),
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi - 110 003.

Sub: Proposal for diversion of 697.979 ha forest land for Pattangi Bauxite Mining Lease in village Pottangi of Koraput Forest Division under Pattangi Tahasil of Karaput District by M/s NALCO Ltd.


Ref: Ministry's letter No.8-17/2022-FC dated 27.07.2022.

Sir,

With subject and reference cited above, I am to inform that the site inspection of the above mentioned project was carried out by Smt. Padma Mahanti, DIGF (C) on 13.09.2022. The site inspection report along with recommendation of the undersigned is attached for kind information and necessary action.

Encl: As state above.

Yours faithfully,


(A.T. Mishra)

Dy. Director General of Forests (C)

SITE INSPECTION REPORT IN RESPECT OF DIVERSION PROPOSAL FOR DIVERSION OF 697.979 HA FOREST LAND FOR POTTANGI BAUXITE MINING LEASE IN VILLAGE POTTANGI OF KORAPUT FOREST DIVISION UNDER POTTANGI TAHASIL OF KORAPUT DISTRICT BY M/S NALCO

The site inspection of the above project was carried out by the undersigned on 13.09.2022 along with Divisional Forest Officer, Koraput Forest Division, ACF, Koraput and officials of the NALCO.

1. Legal status of the forest land proposed for diversion:

The break up of forest land involved in the project is furnished below:

Sl. No.	Mouza/RF/PRF	Tehsil	Forest land involved (in ha)
1.	Pottangi PRF	Pottangi	491.042
2.	Galigabeda	Pottangi	206.937
	Total		697.979

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

The item wise break up of the proposed forest land required for the project is furnished below:

Sl. No.	Purpose	Total PRF (in ha)
1.	Mining and back filling	564.177
2.	Waste and Soil Dump	5.230
3.	Statutory building and infrastructure (Office Building, Work shop, Fire Station)	28.326
4.	Power Corridor (Sub-station, 33 KV Power line)	12.400
5.	Primary crusher/Conveyor belt	10.230
6.	Proposed road (including service/approach road)	8.139
7.	Safety zone	23.400
8.	Scattered patches between mineralized zones proposed for plantation	46.077
	Total	697.979

During site inspection, and discussion with the field officials, it was reported that the land use pattern for 46.077 ha as given in the FDP, submitted on 13.11.2017 prior to approval of Mining plan was a tentative one. Subsequently, Mining Plan was approved on 27.07.2018 by IBM. NALCO undertake to abide by the Mining Plan stipulation.

The area of 28.326 ha proposed for the statutory Building is for entire life of the mine (conceptual period). However, mining operations proposed to be taken up in South Block only and for this an area of 5.333 ha has been demarcated for statutory Buildings. Rest of the area proposed is in other Blocks, which will be under use as and when mining is taken up in those Blocks.

3. Whether proposal involves any construction of buildings (including residential) or not. If yes, details thereof:

Yes. The item wise break up of the proposed forest land is detailed in Point No.2 wherein statutory building and infrastructure has been proposed in 28.326 ha of forest land.

4. Total cost of the project at present rates:

The cost of the project is Rs.143690 lakhs.

5. Wildlife:

As per the site inspection report of the DFO, Koraput Forest Division, the wild fauna like Barking deer, Hare, Porcupine, Wild boar, Bear, Wild cat, Jackal, etc. are found in the area. A Site Specific Wildlife Conservation Plan is prepared to address the habitat conservation of the wildlife. The DSS analysis shows that there is no rare or endangered species in the area. The DSS report is annexed herewith. During site inspection, it was noticed that the habitat was suitable for small mammals.

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

As reported by the DFO, Koraput Forest Division, no rare and endangered species are found in the area as far as wildlife is concerned.

6. Vegetation:

The canopy density of the forest growth is 0.1. The proposed site was located at a height of about 1500 meters from the mean sea level.

(a) Total number of trees to be felled.

721 number of trees have been enumerated in forest land over 697.979 ha area.

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

Removal of trees has impact on the general ecosystem in terms of loss of habitat to fauna, soil and moisture conservation, local climate, etc. Soil and moisture conservation work needs to be carried out in the ML area to prevent soil erosion.

(b) Important species:

As per enumeration list, floral species viz. Cassia spp, Dalbergia sissoo (Sissoo), Mangifera indica (Mango), Syzygium cumini (Jackfruit), Diospyros melonoxylon (Kendu), Terminalia belerica, pongamina pinnata, Terminalia chebula, Cassia fistula, etc. are present in the proposed forest diversion area.

Number of trees of girth below 60 cm.

The number of trees of girth below 60 cm. is 525.

Number of trees of girth above 60 cm

The number of trees of girth above 60 cm. is 196.

7. Background note on the proposal:

The Pottangi Bauxite mine is situated over Serubandha Parbat, which is coming under Proposed Reserved Forest (PRF) and Galigabeda PRF under Semiliguda Forest Range of Koraput Forest Division and Koraput District.

As reported by the Environment & Climate Change Department, Government of Odisha, the Pottangi bauxite deposit has been initially explored by Geological Survey of India during 1972-77. Subsequently MECL carried out exploration in two phases viz. Phase-I (1976-1977) and Phase-II (1977-1978). GSI have carried out exploration activity of the Pottangi Bauxite deposit with the aid of broad spaced drilling (69 core boreholes with a total meterage of 1929.39 m) and estimates the bauxite deposits of about 50 million tons considering Al₂O₃ and SiO₂ cut off + 40% and -5% respectively from all the four blocks of the Pottangi ML area.

The exploration work of MECL which comprises dry drilling of 181 boreholes on grids of 100 m x 50 m, 100m x 100m and 200m x 200m at different areas. The total drilled meterage of 5161.65 m with boreholes depths varying 6m to 50m. A few deep pits at 100 m interval were sunk with depths ranging from 20.20 m to 35.60 m and a few audits (2 numbers in east-west direction and one number in south to north direction) were driven as a check on the interpretations of the Bauxite horizon made through borehole data. The Phase-II exploration programme was conducted by MECL in some areas covering all four blocks during 1977-78. As per exploration report of MECL, the proved mineral reserve in the Mining lease of Pottangi Bauxite mine of NALCO is 40.935 million tons with an average grade of 45.59 % Al₂O₃ and 1.99% SiO₂ in South Block and Central Block. The segments of the exploration are visible as a T-shaped excavations along with the bore holes at the project site. The DFO, Koraput has confirmed that the T-shaped on the proposed forest land for diversion were the trenches and bore holes used for prospecting/exploration of minerals. The DFO had also confirmed that the road in the proposed ML site was an approach road used for exploration.

As per the exploration report of GSI & MECL the total mineralized area in lease is 354.777, ha considering the threshold value 45.59 % Al₂O₃ and 1.99% SiO₂. However, the notification made by IBM, Nagpur dated 16.10.2009 the Threshold Value of Bauxite Ore is 30 % Al₂O₃ (Min.) and 5 % SiO₂ (Max.). Therefore, under Rule 12 (3) of MCDR 2017, the future exploration programme has been proposed for this plan period to carry out detailed exploration (G1 level) over the entire potentially mineralized area over 209.40 ha. Accordingly, the Mining Plan along with Progressive Mine Closure Plan (PMCP) over an area of 697.797 ha of Pottangi Bauxite Mine of NALCO is approved by IBM, Nagpur.

As per the application, the total forest land involved in this project is 697.979 ha, out of which in Pottangi PRF is 491.042 ha and in Galigabeda PRF is 206.937 ha under Koraput Forest Division.

8. Compensatory afforestation:

A scheme is prepared for Compensatory Afforestation in degraded forest land for diversion of 697.979 ha of forest land by M/s NALCO over 1349.58 ha [(697.979 ha – 23.4 ha SZ) x 2]. Accordingly, 1400 ha degraded forest land had been identified at 14 different RFs/PRFs (15 sites) for compensatory Afforestation at different ranges of Koraput Forest Division. Out of the 1400 ha, 139 ha was found to be MDF by DSS analysis of MoEF&CC. The CA scheme was further revised by identifying additional 140.548 ha of degraded forest land in Godmark PRF-II. The observations on the CA sites are as follows:

Sr. No.	Compensatory Afforestation		Area as per kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)				Total No. of Saplings
				Suitable (Plantation)			Not Suitable (Plantation)	
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	
1	Ampavally RF	Semiliguda	90.054	56	25	8	1	3,85,000 no of

2	Godabeda PRF	Lamtaput	100.312	18	27	56	0	saplings
3	Janigurha PRF	Semiliguda	100.001	70	12	7	11	
4	Kankadabari RF	Semiliguda	100	48	4	0	49	
5	Kasandi PRF	Semiliguda	50.002	37	5	7	0	
6	Malibhimdol RF	Semiliguda	100.079	24	63	13	0	
7	Malibhimdol RF 2	Semiliguda	100.075	53	1	2	44	
8	Nandapur PRF	Semiliguda	27.118	13	4	9	1	
9.	Nandapur PRF	Semiliguda	13.346	0	2	11	0	
9	Raisil	Semiliguda	90.002	38	32	0	19	
10	Jamugurha PRF	Semiliguda	100	0	65	35	0	2,00,000 no of seedlings
11	Totaguda PRF	Semiliguda	100.246	0	41	60	0	
12	Hatibari	Semiliguda	60.001	0	38	22	0	6,88,000 no of seedlings
13	Hatimali DPF	Semiliguda	100.306	51	6	29	14	
14	Goudaramji PF	Semiliguda	150.098	50	14	86	0	
15	Gadamarrk PRF-I	Semiliguda	123.006	1	52	70	0	
16	Godmark PRF-II	Semiliguda	140.548	11	38	95	0	
Total			1545.194	470	429	510	139	12,73,000

DSS analysis report is attached in the report.

Species proposed for plantation are *Gmelina arborea* (Gambhar), *Terminalia alata* (Asana), *Karanj* (*Pongamia pinnata*), *Amla* (*Emblica officinalis*), *Adina cardifolia* (Kurum), *Artocarpus heterophyllus* (Jack fruit), etc.

In most of the CA sites, shifting cultivation by the local tribals was noticed and also un-metalled roads leading to the agriculture fields and tribal hamlets. The State Forest Department needs to ensure that the CA sites are free of all encumbrances and adequate measures need to be taken to ensure that once the CA plantation is done, it would not be destroyed by shifting cultivation. Planting of native fruit bearing plants in the CA areas need to be taken up with usufruct sharing mechanism with the local tribal communities to reduce the negative dependency on the forest. By organizing the local communities around the CA areas into Vana Sanrakshyana Samitis and developing usufruct sharing mechanism, value addition and proper market linkage through these Vana Sanrakshyana Samitis, their livelihood can be ensured.

Out of 1400 ha of CA land identified, 139 ha were found to be MDF. Accordingly, 140.548 ha of additional DFL has been identified by the Forest Development in Godmark PRF-II to compensate for the 139 ha of MDF. Site inspection of the proposed site along with 6 other CA sites viz. Gouda Ramiji,

Godmark I, Godmark II, Totaguda, Ghodabeda, and Nandpur were done during the 3 day visit to Koraput. Other CA sites were checked in DSS. Photograph of site inspection attached along with DSS report.

(a) Whether land for compensatory afforestation is suitable from plantation and management point of view or not:

The DFO, Koraput has reported in the Land Suitability Certificate that 1400 ha + 140.548 ha of degraded forest land in Koraput Forest Division identified for Compensatory Afforestation is suitable from management point of view. It was observed during site inspection that shifting cultivation/non metalled roads had been observed. Plantation of fruit bearing trees to be preferred keeping in view with the requirement of livelihood of the adjoining tribal population around the CA area. During the site inspection, 6 numbers of CA sites including the newly identified CA site of 140.548 ha in Godmark-II PRF were physically inspected and found suitable for plantation. Other CA sites were viewed in DSS. The DFO has also committed to free the CA lands from shifting cultivation before starting of the CA plantation.

(b) Whether land for compensatory afforestation is free from encroachment/other encumbrances:

The DFO, Koraput has reported that the land for compensatory Afforestation is free from encroachment and encumbrances. Boundary pillars were erected in all the CA sites. During site inspection the boundary pillars were randomly inspected and found to be in place. But patches of shifting cultivation were noticed in almost all the CA lands. The State Forest Department has to ensure that the CA plantation are duly freed from any encumbrance and protected.

(c) Whether land for compensatory afforestation is important from Religious/ Archaeological point of view:

Not reported.

(d) Land identified for raising compensatory afforestation is in how many patches, whether patches are compact or not:

The land identified for compensatory Afforestation is 15 patches.

(e) Map with details:

Submitted.

(f) Total financial outlay:

A CA scheme has been prepared and the total financial outlay is estimated to be Rs.126,18,59,400/- with maintenance for 10 years.

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:

Not reported. During site inspect to the mining lease area too, no such violation was visible.

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

The Divisional Forest Officer, Koraput Forest Division has stated that 'the project does not involve displacement of any human habitation' and therefore the Re-settlement and Rehabilitation policy is not warranted.

11. Reclamation plan:

Phased Reclamation Plan for Pottangi Bauxite mine has been submitted.

Details and financial allocation:

-

12. Details on catchment and command area under the project:

Not applicable.

Catchment area treatment plan to prevent siltation of reservoir:

13. Cost benefit ratio:

The Cost Benefit Ratio as submitted by the DFO, Koraput Forest Division is 1:26.13. The activities to enhance livelihood options and ensure water security to be included and planned explicitly under CSR & CER activities, a few of which are detailed in the other information.

14. Recommendations of the Principal Chief Conservator of Forests/State Government:

The Principal Chief Conservator of Forests & Head of Forest Force, Odisha has recommended for diversion of 697.979 ha of forest land for Bauxite mining in Pottangi Bauxite Mining Lease in village Pottangi under Koraput Forest Division of Koraput District, Odisha by M/s NALCO for approval under Section 2 (ii) of Forest (Conservation) Act, 1980, which has been placed in the page No.28 of the Diversion proposal.

15. Recommendations of Additional Principal Chief Conservator of Forests (Central) along with detailed reasons:

Enclosed in the report.

16. Conservator of Forests (Central) shall give detailed comments on whether there are any alternative routes/alignment for locating the project on the non-forest land:

Not applicable.

17. Utility of the project:

The project may create employment opportunity for the local people. As reported in the proposal, the project will provide regular employment to 551 persons and temporary employment to 1000 persons.

Numbers of Scheduled Caste/Scheduled Tribes to be benefited by the project:

The project area is in the tribal belt of Odisha. The tribes around the project are Bada Paraja, Sana Paraja and Kandha, which comprises around 500-600 families residing in 7-8 villages in the periphery of the proposed mining lease area. The project may provide indirect employment to the local communities. However, number of Scheduled Caste/Scheduled Tribes people benefitted by the project, has not been not specified in the proposal.

It is pertinent to ensure that all possible steps need to be taken for better livelihood of the indigenous communities inhabiting around the project site, at project cost. Documentation of urban forestry model practiced in Koraput Forest Division and replicating the same by the user agency around the project site and in suitable location, will ensure supplementary livelihood for the local inhabitants during the project period.

18.

(a) **Whether land being diverted has any socio-cultural/ religious value:**

Not reported.

(b) **Whether any sacred grove or very old growth trees/forests exist in the areas proposed for diversion:**

Not reported.

(c) **Whether the land under diversion forms part of any unique eco-system:**

Not reported.

19. **Situation with respect to any Protected Area:**

Not reported.

20. **Any other information relating to the project:**

During discussion on field during the site inspection with user agency and field officials, it was observed that the said proposal was delayed for almost 5 years due to delay in re-identification and re-allotment of suitable degraded forest land for CA due to presence of MDF and VDF as observed during the scrutiny of the proposal which resulted in re-allotment, resurvey of the entire patch repeatedly. A chronology of events is enclosed which significantly reflects the inordinate delay in allotment of suitable CA land and inability of proper analysis of DSS resulting in such delay. It is a matter of concern and needs to be resolved to avoid such delays in future that negates the very principle of time bound decision & action of forest diversion proposals.

Sl. No.	Description of item	Date
1.	On line application of FC filled by user agency	01.11.2017
2.	1785 Ha of degraded forest land (21 patches) was allotted by DFO, Koraput.	31.12.2018
3.	1688Ha of degraded Forest Land allotted by DFO Nabarangapur for CA in Nabarangapur forest division.	31.12.2018
4.	Survey / demarcation / pillar posting / CA scheme was prepared by DFO Nabarangapur in-house and submitted to DFO Koraput.	01.08.2019
5.	DFO Koraput forwarded the FDP proposal along with CA scheme to RCCF, Koraput.	03.09.2020
6.	FDP returned by APCCF (Nodal) due to unsuitability of 924 Ha of CA land out of 1688 Ha, due to presence of MDF+VDF.	05.07.2021
7.	Re-allotment of CA land (1400 Ha.) by DFO Koraput.	02.12.2021
8.	Survey / demarcation / pillar posting and preparation of CA Scheme (1400 Ha.) done afresh and submitted to DFO Koraput.	23.12.2021
9.	DFO Koraput wrote back to NALCO for submission of authenticated	21.03.2022

	DGPS map and its soft copy for processing of the FDP.	
10.	Authentication and verification done by ORSAC for all the patches of CA Land and the same is forwarded to DFO Koraput.	03.06.2022
11.	FDP was forwarded to AIG ,MOEF& Cc ,GoI for further consideration.	08.07.2022
12.	MOEF & CC New Delhi raised 12 no. of observation to ACS F & Env, GoO. One of the major observations was regarding presence of 139 Ha of MDF in 1400 Ha of CA land allotted in favor of NALCO.	27.07.2022
13.	After re-allotment of 140 Ha. of DFL in Koraput division, its DGPS survey was carried out and authentication of the map was completed	20.09.2022
14.	FDP is now pending with DFO, Koraput as on date of site inspection.	13.09.2022

Hence, creation of land bank by State Government with proper DSS analysis needs to be ensured at the earliest to prevent delay in processing of FC proposals in future. The land bank creation was already a mandate as a part of FC guidelines 2019 and needs to be expedited.

- i. Trees should be felled when it is absolutely necessary.
- ii. Site Specific Wildlife Conservation Plan shall be implemented as approved by the CWLW.
- iii. Plan for sharing of usufruct with local tribals through Vana Sanrakshyana Samitis (VSS) and Forest Development Agencies (FDAs) as regards to plantation under CA and ensuring the reduction of negative dependency on the forest to be ensured by the Forest Department, both around the mining lease area as well as the tribal population around the CA areas in Koraput district.
- iv. Proper protection of CA sites also to be ensured by the State Forest Department once the afforestation is carried out.
- v. As a part of the Corporate Social Responsibility and Corporate Environment Responsibility, the user agency should ensure imparting education and health care facility to the local inhabitants so that their standard of living will be improved around the mining lease area.
- vi. Ensuring water security by providing check dams, storage of their perishable cultivated products and ensuring suitable market to the tribal population around CA area as well as mining lease area, and with a move to discourage shifting cultivation in and around the proposed CA lands to be taken up by the user agency during the project period.
- vii. Documentation of traditional knowledge of the local tribal community around the mining lease area as well as documentation of traditional cultural expressions to be taken up as a part of CCR/CER and steps to protect the socio traditional cultural heritage in the changing socio-cultural scenario to be ensured by the project proponent in association with State Government agencies during implementation of the project.
- viii. Urgent need for land bank creation as per the FC guidelines 2019 to be implemented by the State Government.

Padma Mahanti

(Padma Mahanti)
Dy. Inspector General of Forests (Central)

RECOMMENDATION OF DEPUTY DIRECTOR GENERAL OF FORESTS (CENTRAL)

The Govt. of Odisha, Department of Steel & Mines vide letter dated 12.07.2016 granted mining lease over 1738.04 ha in Pottangi village under Koraput District in favour of M/s NALCO. Subsequently, M/s NALCO vide letter dated 30.10.2017 has requested for reduction of the mining lease area from 1738.04 ha to 697.979 Ha. The said proposal of NALCO has been duly recommended to the Ministry of Mines in suppression of its earlier notification has reserved an area of 697.979 Ha under Section 17A (1A) of MMDR Act, 1957 for undertaking prospecting or mining operation through NALCO. Accordingly, State Govt., Department of Steel & Mines vide letter No.3794/SM dated 14.05.2018 considered the mining lease area of Pottangi Bauxite Mines of NALCO from 1738.04 Ha to 697.979 Ha.

Total forest land involved in this mining lease area is 697.979 ha comprising of Pattangi PRF 491.042 ha and Galigabeda PRF 206.937 Ha. The purpose wise break up of proposed forest land by the State Govt. and as approved in the Mining Plan is as below

Sl. No.	Purpose	Proposed by State Govt. (in Ha)	As per approved Mining Plan (in Ha)
1.	Mining and back filling	564.177	354.777
2.	Waste and Soil Dump	5.230	0
3.	Statutory building and infrastructure (Office Building, Work shop, Fire Station)	28.326	28.326
4.	Power Corridor (Sub-station, 33 KV Power line)	12.400	12.400
5.	Primary crusher/Conveyor belt	10.230	10.230
6.	Proposed road (including service/approach road)	8.139	8.139
7.	Safety zone	23.400	23.400
8.	Scattered patches between mineralized zones proposed for plantation/Green Belt	46.077	260.707
	Total	697.979	697.979


The Mining plan including Mine Closure Plan has been approved by IBM over an area of 697.979 Ha vide letter No.MP/FM/13-ORI/BHU/2018-2019 dated 27.07.2018.

The proposed site was inspected by Smt. Padma Mahanti, DIGF (C) along with DFO, Koraput and representative of User Agency. As per the site inspection, the following has been reported.

- 1) The canopy density of the forest growth is 0.1. The proposed site is located at height of about 1500 meters from the mean sea level.
- 2) Total 721 number of trees have been enumerated over 697.979 ha of forest land. Removal of trees should be done only when it becomes absolutely necessary.
- 3) The applied area does not form any part of National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve and Elephant corridor.
- 4) The project does not involve displacement of any human habitation and therefore resettlement and rehabilitation plan is not required.

- 5) No violation of FC Act, 1980 has been reported for this project.
- 6) The DFO, Koraput has furnished land suitability certificate for degraded forest land identified for compensatory afforestation as well for management point of view. During inspection by the DIG, the identified land found suitable for afforestation.
- 7) A Site Specific Wildlife Conservation plan duly approved by the CWLW, Odisha shall be implemented at project cost.
- 8) Soil and moisture conservation work needs to be carried out in the forest area around the ML area to prevent soil erosion and conserve moisture.
- 9) As part of the Corporate Social Responsibility and Corporate Environment Responsibility, the user agency should ensure basic infrastructure, education and health facility as well as income generating activities to the local inhabitants around the mining lease area.

Mining is a site specific activity. So the diversion of 697.979 Ha of forest land may be considered under the provision of FC Act, 1980 with all statutory conditions and the observations and suggestion in the site inspection report.


29/9/22

Dy. Director General of Forests (Central)

PHOTOGRAPHS OF INSPECTION OF CA SITES:



Latitude: 18.941938
 Longitude: 82.892678
 Elevation: 830.33±10 m
 Accuracy: 11.2 m
 Azimuth: 117° (SE)
 Pitch: -7.0° (1.5°)
 Time: 09-13-2022 17:07
 Note: CA Tataguda PRF Dasananth Pur

Powered by AngleCam



Latitude: 18.991031
 Longitude: 82.848172
 Elevation: 775.6±13 m
 Accuracy: 20.5 m
 Azimuth: 334° (NW)
 Pitch: -7.8° (-1.7°)
 Time: 09-13-2022 16:00
 Note: CA Godmark Dasananth Pur

Powered by AngleCam



Latitude: 18.488361
 Longitude: 82.715332
 Elevation: 934.49±19 m
 Accuracy: 10.2 m
 Time: 09-06-2022 12:23
 Note: NALCO CA KASANDI SEMILIGUDA RANGE

Powered by AngleCam



Latitude: 18°34'15"
Longitude: 82°29'8"
Elevation: 807.35±32 m
Accuracy: 3.4 m
Time: 14-09-2022 11:35
Note: NALCO CA GHODABEDA

Powered by Xerox



Latitude: 18.998455
Longitude: 82.83384
Elevation: 820.26±21 m
Accuracy: 6.8 m
Time: 09-13-2022 4:35
Note: NALCO CA GODMARK LAXMIPUR



Latitude: 18°56'31"
Longitude: 82°53'33"
Altitude: 739.4±216 m
Accuracy: 11.8 m
Time: 13-09-2022 17:08
Note: NALCO CA TOTAGUDALAXMIPUR

PHOTOS OF PROPOSED MINE LEASE AREA:



DISCUSSION WITH THE OFFICIALS OF FOREST DEPARTMENT & NALCO AT DAMANJODI, KORAPUT:



GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

1. File No. FP/ORA/525/2022

Date: 23rd September 2022

2. Area- 697.979 ha

3. Name of the Project: Proposal for diversion of 697.979 Ha. forest land for Pottangi Bauxite Mines by National Aluminium Company Limited (NALCO) in Koraput Forest Division and District.

4. Location

- State: Odisha
- District: Koraput

5. Data provided by the User/State:

- Shape file/KML/DGPS Point/ Map file of Land to be Diverted: Available
- Shape file/KML/DGPS Point/ Map file for Compensatory Land: Available

6. GIS- DSS analysis of Land to be diverted

Sr. No	Land to be Diverted	Area as per .kml file (In hectares)	GIS-DSS Analysis		Result
			DR-1	DR-2	
1	Koraput Forest Division	698.242	Not-Inviolate	Not-Inviolate	Not-Inviolate
Total			698.242		
(*Not-Inviolate -Land can be diverted for any Non-Forest activity) (*Inviolate- Land can not be diverted for any Non-Forest activity)					



Fig:1 Google Earth image of diversion land (Date:25.03.2019)

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST VDF= VERY DENSE FOREST)

Decision Support System (DSS):

- Area of Proposed Land (DSS Calculated): 698 hectare.

Forest Cover Map Statistics of Proposed Land (DSS Calculated)		
SL No	Forest Cover	Area in hectare
1	VERY DENSE FOREST	2
2	MODERATELY DENSE FOREST	30
3	OPEN FOREST	43
4	SCRUB	59
5	NON FOREST	564
Total		698

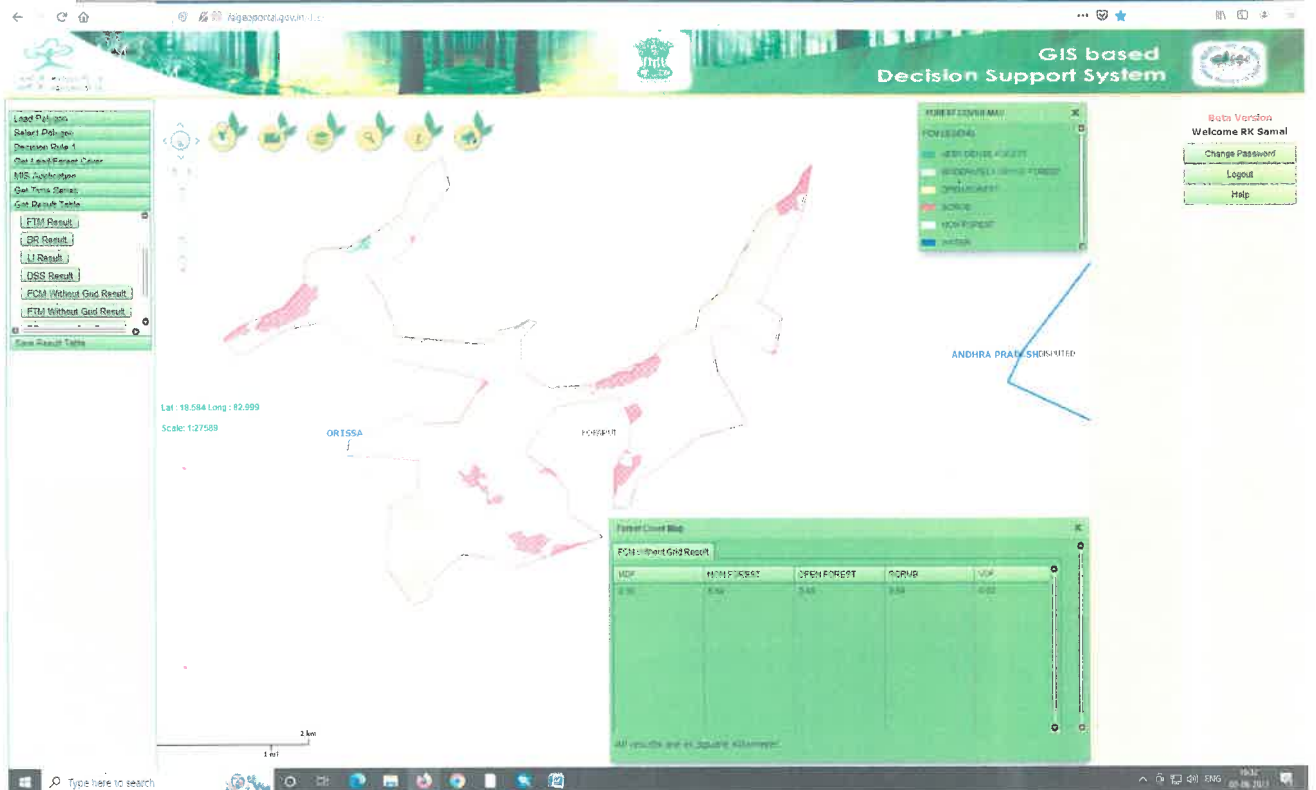


Fig:2 Forest Cover in formation of proposed land

Decision Rule I:

SL No	Layer Info	Details	Result/Remarks
i	Hydrological Info (Major River, Wetland)	NA	NA
ii	VDF > 1 km	NA	NA
iii	Last Remnant FTM	NA	NA
iv	Protected Area Info	NA	NA
v	Wildlife Info	Inviolat	Sloth Bear

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

Decision Rule II:

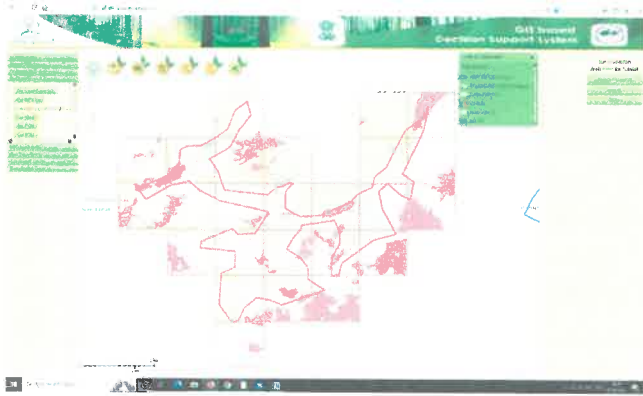


Fig:3 FCM

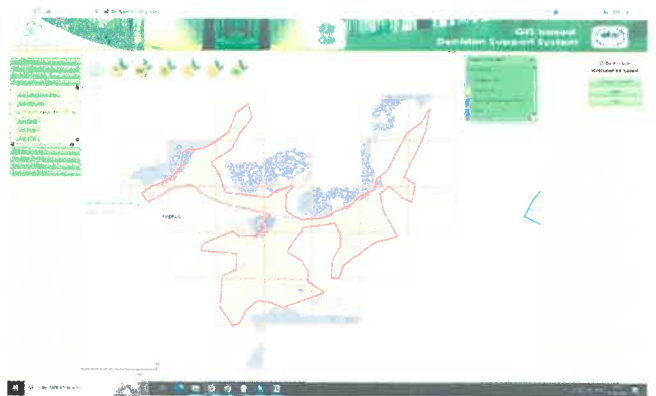


Fig:4 FTM

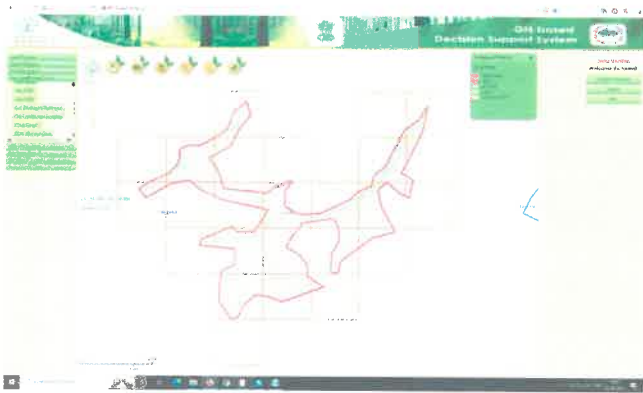


Fig:5 Biological Richness

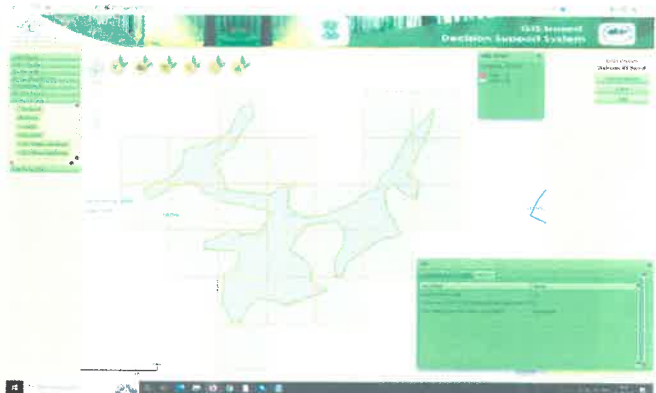


Fig:6 DSS Final Results

❖ DSS Final Result:

DESCRIPTION	RESULT
Total Number of Grids	25
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 Inviolat

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST VDF= VERY DENSE FOREST)

7. GIS- DSS analysis of Compensatory Afforestation land

In terms of standards followed in ISFR 2019 (interpretation of satellite data period 2017-2018) regarding density classes:

Patch:1 (Ampavally RF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Ampavally RF	Semiliguda	90.054	56	25	8	1	-	-
Total			90.054	89			1		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 89 ha.



Fig: 7 Google Earth image of CA land (Date: 25.3.2019)

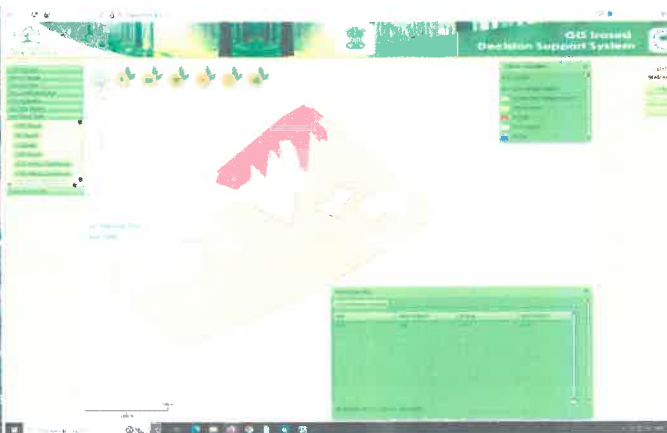


Fig: 8 FCM of proposed CA land

Patch:2(Gadamark PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Gadamark PRF	Laxmipur	123.006	1	52	70	-	-	-
Total			123.006	123					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 123 ha.

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

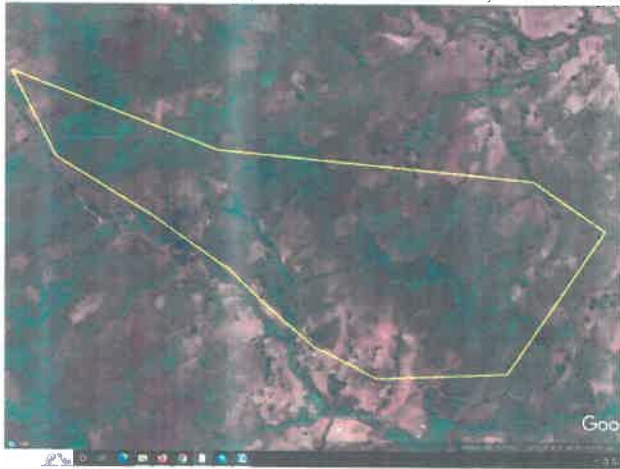


Fig: 9 Google Earth image of CA land (Date: 7.5.2021)

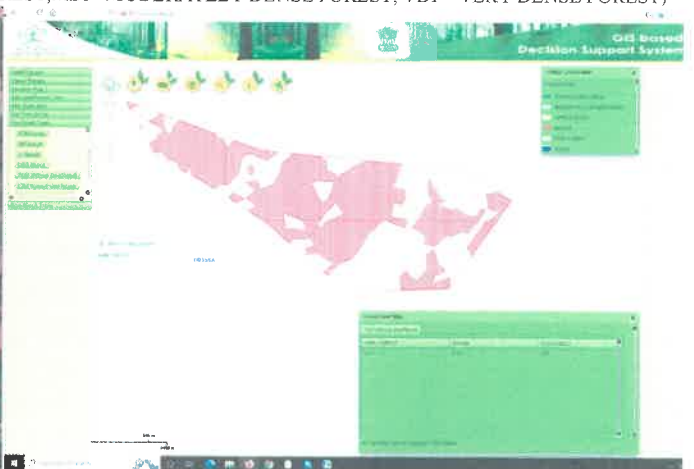


Fig: 10 FCM of proposed CA land

Patch:3 (Godabeda PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Godabeda PRF	Lamtaput	100.312	18	27	56	-	-	-
Total			100.312	101					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 101 ha.



Fig: 11 Google Earth image of CA land (Date: 30.1.2017)

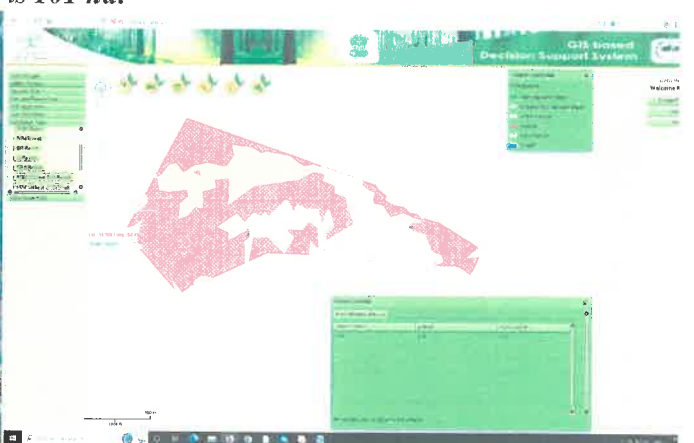


Fig: 12 FCM of proposed CA land

Patch:4 (Gouda ramji DPF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation	Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)	
			Suitable	Not Suitable

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

	Name of CA	Range		(Plantation)			(Plantation)		
				OF	Non-Forest	Scrub	MDF	VDF	Water
1	Gouda ramji DPF	Laxmipur	150.098	50	14	86	-	-	-
Total			150.098	150					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 150 ha.

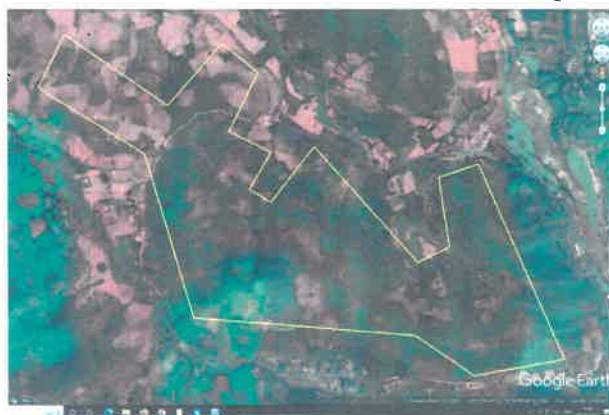


Fig: 13 Google Earth image of CA land (Date: 7.5.2021)



Fig: 14 FCM of proposed CA land

Patch:5 (Hatibari, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Hatibari	Balda	60.001	-	38	22	-	-	-
Total			60.001	60					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 60 ha.

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)



Fig: 15 Google Earth image of CA land (Date: 7.5.2021)

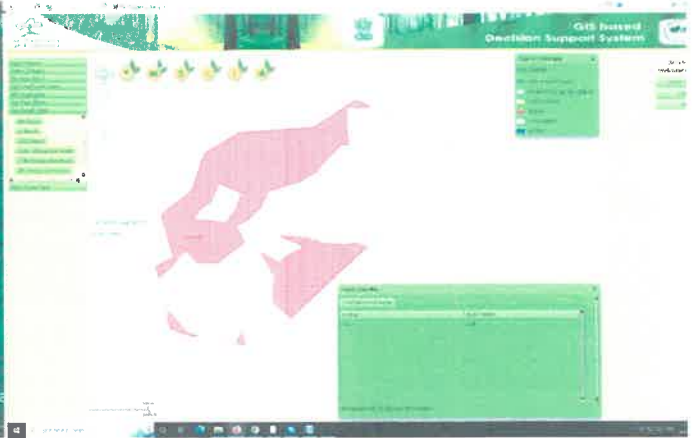


Fig: 16 FCM of proposed CA land

Patch:6 (Hatimali DPF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Hatimali DPF	Laxmipur	100.306	51	6	29	14	-	-
Total			100.306	86			14		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 86 ha.

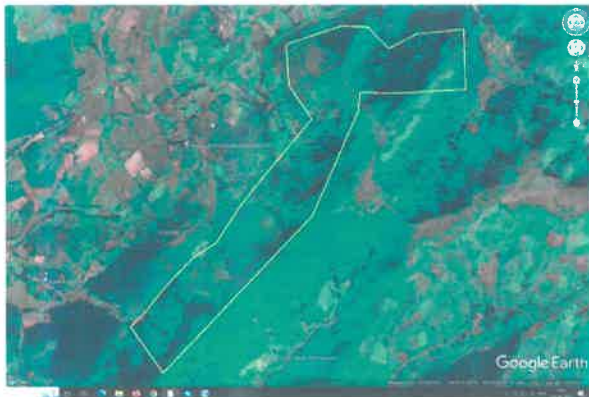


Fig: 17 Google Earth image of CA land (Date: 29.10.2020)

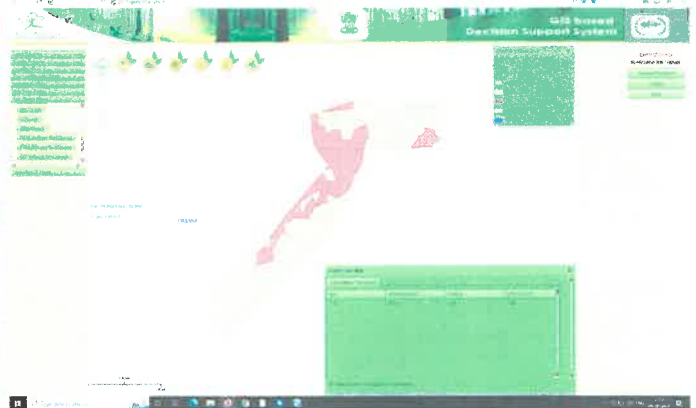


Fig: 18 FCM of proposed CA land

Patch:7 (Jamugurha PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)	
				Suitable	Not Suitable

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

	Name of CA	Range		(Plantation)			(Plantation)		
				OF	Non-Forest	Scrub	MDF	VDF	Water
1	Jamugurha PRF	Narayanapatna	100.084	-	65	35	-	-	-
Total			100.084	100					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 100 ha.

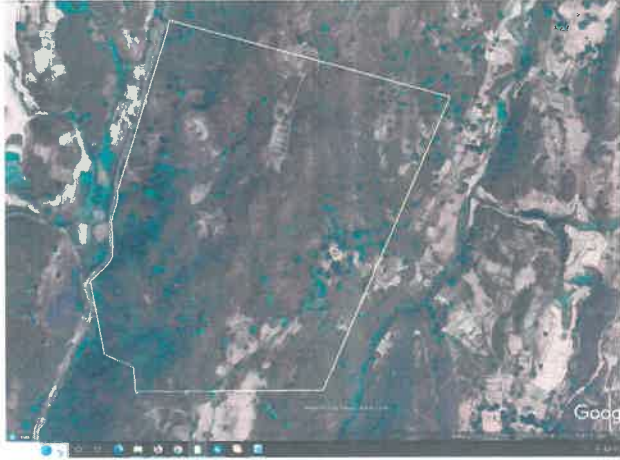


Fig: 19 Google Earth image of CA land (Date: 23.2.2021)

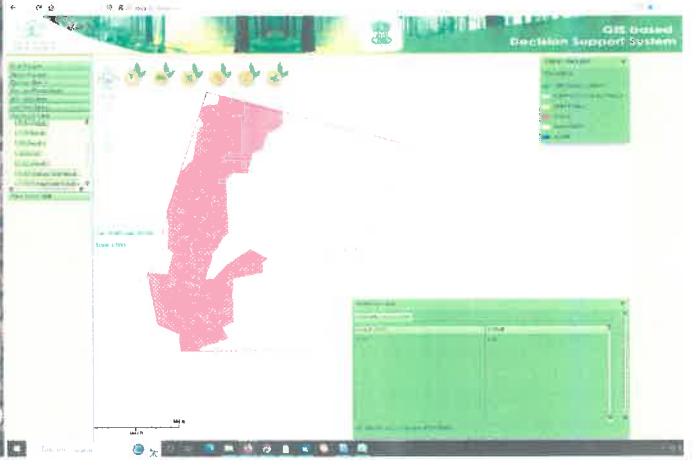


Fig: 20 FCM of proposed CA land

Patch:8 (Janigurha PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Janigurha PRF	Korapur	100.001	70	12	7	11	-	-
Total			100.001	89			11		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 89 ha.

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST,MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

	Name of CA	Range		(Plantation)			(Plantation)		
				OF	Non-Forest	Scrub	MDF	VDF	Water
1	Kasandi PRF	Semiliguda	50.002	37	5	7	-	-	-
Total			50.002	49					

*As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is **49 ha.***

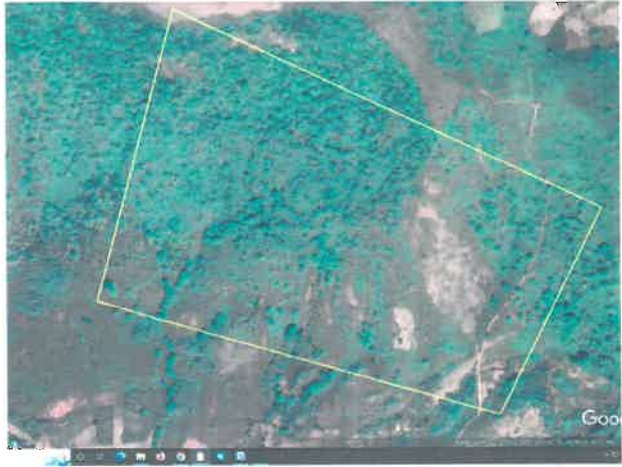


Fig: 25 Google Earth image of CA land (Date: 25.12.2020)

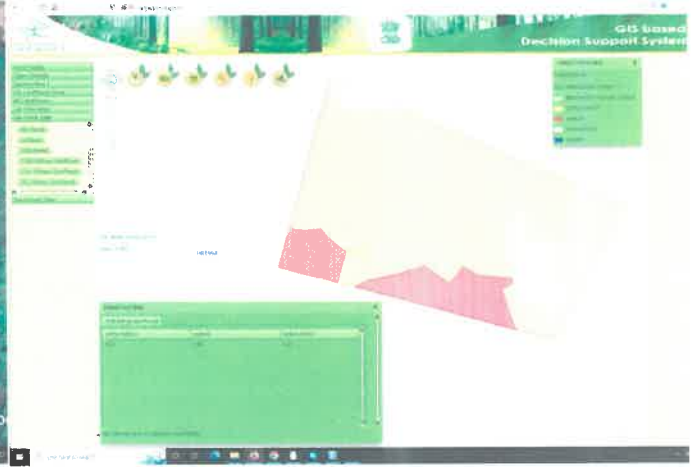


Fig: 26 FCM of proposed CA land

Patch:11 (Malibhimdol RF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Malibhimdol RF	Balda	100.079	24	63	13	-	-	-
Total			100.079	100					

*As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is **100 ha.***

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)



Fig: 21 Google Earth image of CA land (Date: 7.5.2021)

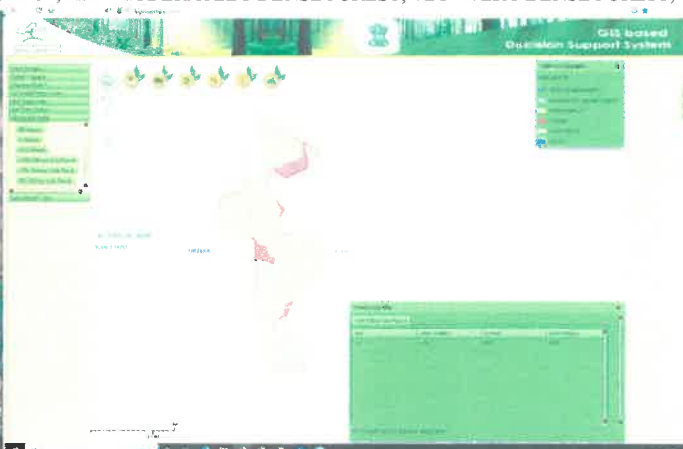


Fig: 22 FCM of proposed CA land

Patch:9 (Kankadabari RF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (in hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Kankadabari RF	Korapur	100	48	4	-	49	-	-
Total			100	52			49		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 52 ha.



Fig: 23 Google Earth image of CA land (Date: 7.5.2021)



Fig: 24 FCM of proposed CA land

Patch:10 (Kasandi PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)	
				Suitable	Not Suitable

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)



Fig: 27 Google Earth image of CA land (Date: 25.12.2020)

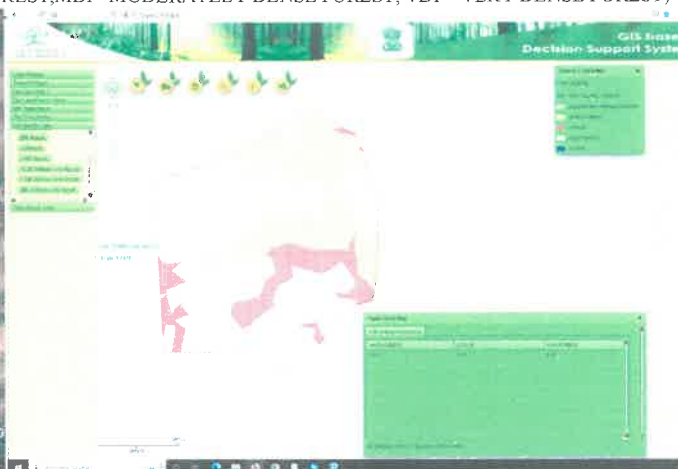


Fig: 28 FCM of proposed CA land

Patch:12 (Malibhimdol RF 2, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Malibhimdol RF 2	Balda	100.075	53	1	2	44	-	-
Total			100.075	56			44		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 56 ha.



Fig: 29 Google Earth image of CA land (Date: 25.12.2020)

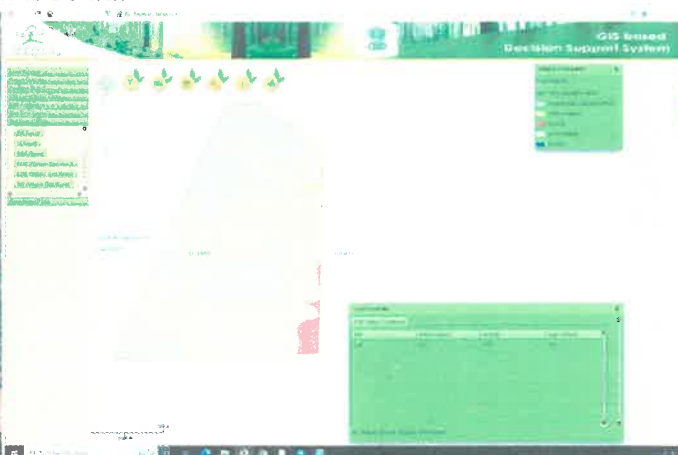


Fig: 30 FCM of proposed CA land

Patch:13(A) (Nandapur Ext. PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)	
				Suitable	Not Suitable

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

	Name of CA	Range		(Plantation)			(Plantation)		
				OF	Non-Forest	Scrub	MDF	VDF	Water
1	Nandapur Ext. PRF	Semiliguda	13.346	0	2	11	-	-	-
Total			13.346	13					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 13 ha.



Fig: 31 Google Earth image of CA land (Date: 7.5.2021)

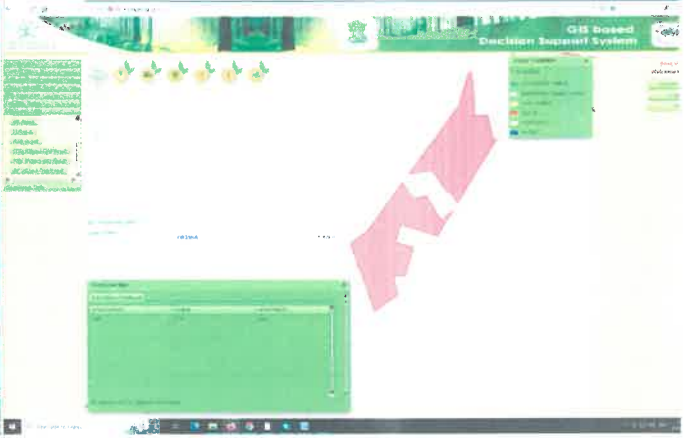


Fig: 32 FCM of proposed CA land

Patch:13(B) (Nandapur Ext. PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Nandapur Ext. PRF	Semiliguda	27.118	13	4	9	1	-	-
Total			27.118	26			1		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 26 ha.

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

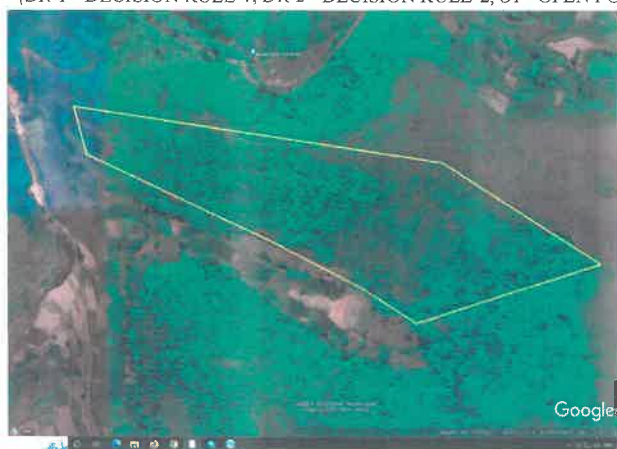


Fig: 33 Google Earth image of CA land (Date: 7.5.2021)

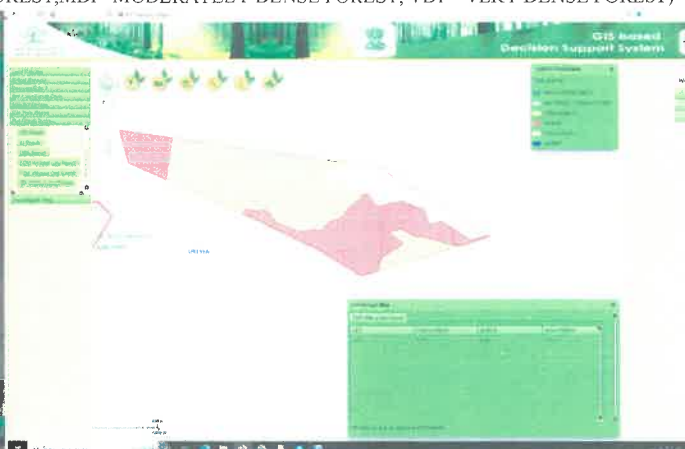


Fig: 34 FCM of proposed CA land

Patch:14 (Raisil, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Raisil	Laxmipur	90.002	38	32	-	19	-	-
Total			90.002	70			19		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 70 ha.



Fig: 35 Google Earth image of CA land (Date: 21.5.2019)

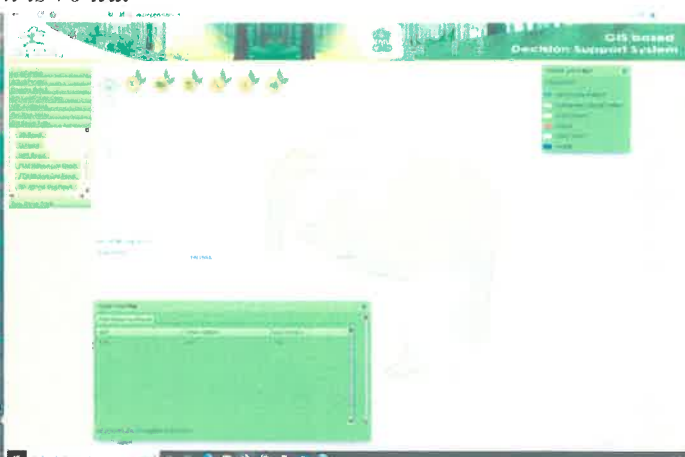


Fig: 36 FCM of proposed CA land

Patch:15 (Totaguda PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation	Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)	
			Suitable	Not Suitable

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

	Name of CA	Range		(Plantation)			(Plantation)		
				OF	Non-Forest	Scrub	MDF	VDF	Water
1	Totaguda PRF	Laxmipur	100.246	-	41	60	-	-	-
Total			100.246	101					

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 101 ha.

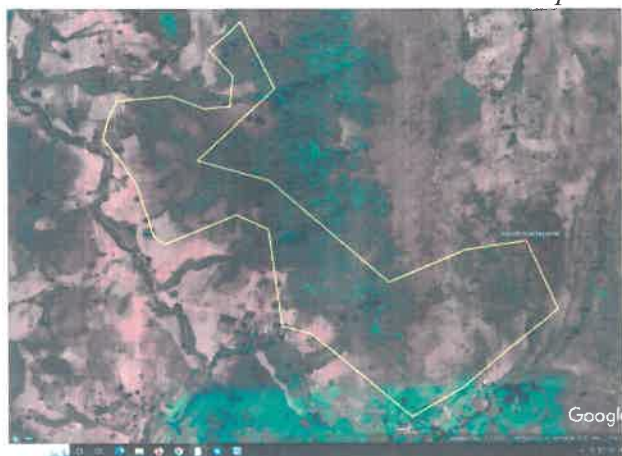


Fig: 37 Google Earth image of CA land (Date: 7.5.2021)

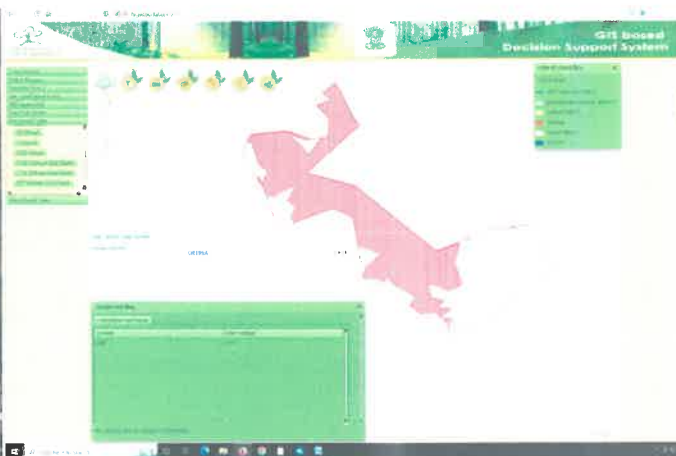


Fig: 38 FCM of proposed CA land

Patch:16 (Godmark PRF, Koraput District, CA Land)

Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Godmark PRF	Semiliguda	144.548	11	38	95	-	-	-
Total			144.548	144			-		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 144 ha.

GIS-DSS ANALYSIS

(DR-1= DECISION RULE-1, DR-2= DECISION RULE-2, OF=OPEN FOREST, MDF=MODERATELY DENSE FOREST, VDF= VERY DENSE FOREST)

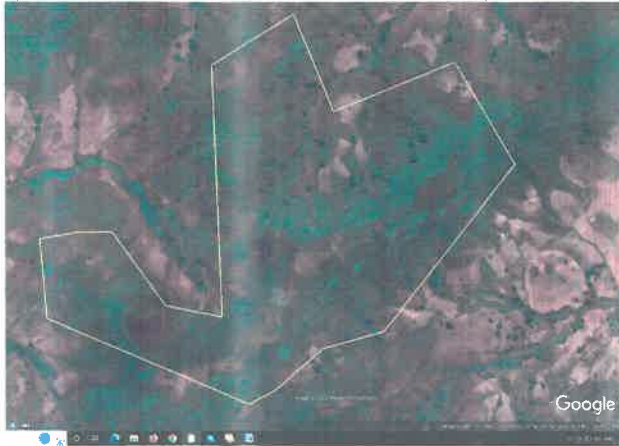


Fig: 39 Google Earth image of CA land (Date: 7.5.2021)

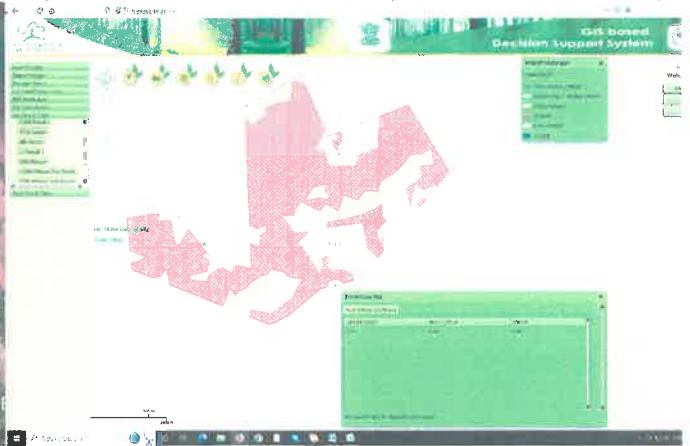


Fig: 40 FCM of proposed CA land

Observations:

- i. Encroachments (**shifting cultivation**) are observed in some parts of CA Patches-1,2,3,4,5,6,7,8,9, 10,11,12,13A,13B,14,15,16(All CA Patches) and CA Patches-2,4,11,13A,15 are highly affected by agricultural encroachments.
- ii. Unmet Road through CA Patch-2 & 4.
- iii. The NET Suitable area for plantation as per GIS-DSS analysis is **1409 ha.**
- iv. The proposed CA land patches fall under **Moderately Dense Forest, Open Forest, Scrub and Non Forest** category under FCM.

FCM Summary of CA Land

SI No.	Forest Cover	Area(ha.)
1	MEDERATELY DENSE FOREST	139
2	OPEN FOREST	470
3	SCRUB	510
4	NON FOREST	429
Total		1548

*VDF- Very Dense Forest (More than 70% Tree Cover)

*MDF- Moderately Dense Forest (40-70 % Tree Cover)

* OF- Open Forest (10-40% Tree Cover)









* SCRUB- Shrub / Bushy (Less than 10% Tree Cover)

* Non Forest- No Forest Cover (0% Tree Cover)








Sr. No.	Compensatory Afforestation		Area as per .kml file (In hectares)	Forest Cover Density Classes as per DSS (Area in hectares)					
				Suitable (Plantation)			Not Suitable (Plantation)		
	Name of CA	Range		OF	Non-Forest	Scrub	MDF	VDF	Water
1	Ampavally RF	Semiliguda	90.054	56	25	8	1	-	-
2	Gadamarrk PRF	Semiliguda	123.006	1	52	70	-	-	-
3	Godabeda PRF	Lamtaput	100.312	18	27	56	-	-	-
4	Goudaramji PF	Semiliguda	150.098	50	14	86	-	-	-
5	Hatibari	Semiliguda	60.001	-	38	22	-	-	-
6	Hatimali DPF	Semiliguda	100.306	51	6	29	14	-	-
7	Jamugurha PRF	Semiliguda	100	-	65	35	-	-	-
8	Janigurha PRF	Semiliguda	100.001	70	12	7	11	-	-
9	Kankadabari RF	Semiliguda	100	48	4	-	49	-	-
10	Kasandi PRF	Semiliguda	50.002	37	5	7	-	-	-
11	Malibhimdo 1 RF	Semiliguda	100.079	24	63	13	-	-	-
12	Malibhimdo 1 RF 2	Semiliguda	100.075	53	1	2	44	-	-
13	Nandapur PRF	Semiliguda	13.346	0	2	11	-	-	-
13	Nandapur PRF	Semiliguda	27.118	13	4	9	1	-	-
14	Raisil	Semiliguda	90.002	38	32	-	19	-	-
15	Totaguda PRF	Semiliguda	100.246	-	41	60	-	-	-
16	Godmark PRF	Semiliguda	144.548	11	38	95	-	-	-
		Total	1549.194	470	429	510	139	0	0

EXISTING LAND USE		Area in Ha
	MINING	0.113*
	ROADS	1.840
	7.5 SAFETY ZONE	23.400
	UNUSED AREA	672.676
TOTAL :		697.979

*Existing MECL & GSI Trial pits and

CURRENT PLAN PERIOD		Area in Ha
	MINING and BACK FILLING	46.113*
	SOIL DUMPING(2.39Ha) WASTE DUMPING(2.84Ha.)	5.230
	STATUTORY BUILDINGS / INFRASTRUCTURES	33.859
	ROAD	16.150
	POWER CORRIDOR WITH APPROACH ROAD	12.400
	PRIMERY CRUSHER & CONVEYOR BELT	10.230
	7.5 SAFETY ZONE	23.400
	UNUSED AREA	550.597
TOTAL :		697.979

* This 46.113 ha. includes 21.33 ha. Back Filling
This 21.33 ha. back filling area includes
18.54 ha. area Plantation

CONCEPTUAL LAND USE	Area in Ha	Post Mining
 MINING and BACK FILLING	354.777	AFFORESTATION
 STATUTORY BUILDINGS / INFRASTRUCTURES	28.326	MONITORING
 POWER CORRIDOR WITH APPROACH ROAD	12.400	AFFORESTATION
 PRIMERY CRUSHER & CONVEYOR BELT	10.230	AFFORESTATION
 ROAD	8.139	AFFORESTATION
 7.5 SAFETY ZONE	23.400	AFFORESTATION
 GREEN BELT	260.707	MAINTENANCE
TOTAL :		697.979

Conceptual Plan as per the Approved Mining Plan

ଆଞ୍ଚଳିକ ମୁଖ୍ୟ ବନ ସଂରକ୍ଷକଙ୍କ କାର୍ଯ୍ୟାଳୟ, କୋରାପୁଟ ମଣ୍ଡଳ, କୋରାପୁଟ

OFFICE OF THE REGIONAL CHIEF CONSERVATOR OF FORESTS, KORAPUT CIRCLE.

ଦୂରଭାଷ:-(06852)(296324) (କାର୍ଯ୍ୟାଳୟ/ ଫାକ୍ସ), 250642(ବାସଗୃହ) ,094370-79696(ମୋବାଇଲ)

E-mail: rccf.koraput@odisha.gov.in

Memo No. 3132 /1F (Project)- 37/2022

Dated 28. 09.2022.

To

The Conservator of Forests (Nodal)
O/O the PCCF, Odisha, Bhubaneswar.

Sub: Proposal for diversion of 697.979 ha of forest land for Pottangi Bauxite Mining Lease in village Pottangi of Koraput Forest Division under Pottangi Tahasil, Koraput District by M/s NALCO Ltd. reg. (Proposal No.FP/OR/MIN/29981/2017).

Ref: Your Memo No. 14993 dt 29.07.2022 of the Conservator of Forests (Nodal) O/o the PCCF, Odisha, Bhubaneswar.

In inviting a reference to your above cited memo on the subject, it is to inform that the DFO, Koraput Forest Division vide her Memo No.4530 dt 26.09.2022 has submitted the point-wise compliance report on observations pointed out by Gol, MoEF & CC (FC Division), New Delhi vide their Letter No. 8-17/2022-FC dt 27.07.2022 to this office. The said compliance is as follows-

Observation No.	Observations / Compliance.
i.(a)	A Kuchha road is observed to be passing through the forest area proposed for Diversion. State Government may comment on the present use of the road and alternate road, if any, required to be provided as the area is proposed to be closed for mining.
Compliance.	The said Roads were constructed by GSI/MECL during exploration stage for preparation of pits & trenches as mentioned in Page No.35, 36 & 48 of the Mining Plan. These roads are not public road as the ML area is situated at an altitude of 1200-1500 Meter above MSL without any habitation. In this regard extract of Mining plan is enclosed as Annexure-I).
(b)	Site suitability certificate has been submitted in respect of 294.70 ha. of degraded forest land only. Complete certificate for the entire forest land of 1400 ha proposed for raising CA needs to be submitted by the State.
Compliance.	The site suitability certificate for the entire land of 1400 ha. Proposed for raising Compensatory Afforestation has already been submitted earlier along with the C.A. Scheme in the Diversion Proposal. The copy of said site suitability / Land suitability certificate is enclosed as Annexure-II . The DFO, Koraput Division commits that, before Plantation if any illegal encroachment/shifting cultivation found in the allotted area for C.A. that that will be removed and Plantation will be undertaken as per the Scheme approved by the office of the P.C.C.F., & HoFF, Govt. of Odisha with the cost to be provided by the user agency.

(c)	CA has been proposed in 16 patches of the total forest area for Compensatory Afforestation, 139 ha land is classified as moderately dense forest, 458 ha as open forest, 414 ha as scrub and 393 ha as non-forest (land without tree cover) in terms of forest classes. The State Government may, therefore, re-confirm the suitability of such area for raising Afforestation and if required alternate sites, suitable for raising CA may be identified and inform the Ministry, Support documents showing details of various attributes such as KML, files, derived from the Differential GPS surveys, CA Scheme suitability certificate etc. should also be furnished.
Compliance.	In lieu of 139 ha Moderately Dense Forest (MDF) an additional area of 140.00 ha. has been identified and allotted in Godmak PRF under Laxmipur Range of Koraput Forest Division. In this regard Topo sheet, DGPS Maps, KML/ shape file in CD, DSS Analysis report of the said area, CA Scheme and Site suitability Certificate for raising compensatory Afforestation is enclosed as Annexure-III.
(iii)	As the schedule-I species have been reported in the area, comments of PCCF (Wildlife) and CWLW Odisha on the likely impact of the project on the movement of wildlife in general and elephant in particular needs to be furnished by the State.
Compliance.	The PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar vide his Memo No.6537 dt 15.07.2022 sought Site Specific Wildlife Conservation Plan from the DFO, Koraput Forest Division. Accordingly the Site Specific Wildlife Conservation Plan has been prepared and the same will be forwarded to the PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar through RCCF, Koraput Circle for its approval. The copy of Memo No.6537 dt 15.07.2022 of the PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar is enclosed as Annexure-IV.
(iv)	As the area has schedule-I and Schedule-II species, comments of PCCF (Wildlife) and CWLW Odisha on the likely impact of the project on the movement of wildlife in general and elephant in particular needs to be furnished by the State.
Compliance.	The PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar vide his Memo No.6537 dt 15.07.2022 sought Site Specific Wildlife Conservation Plan from the DFO, Koraput Forest Division. Accordingly the Site Specific Wildlife Conservation Plan has been prepared and the same will be forwarded to the PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar through RCCF, Koraput Circle for its approval. The copy of Memo No.6537 dt 15.07.2022 of the PCCF (Wildlife) & Chief Wildlife Warden, Odisha, Bhubaneswar is enclosed as Annexure-IV.
(v)	From the purpose wise breakup of forest land, the following may be ascertained:-
(a)	40.077 ha has been reported to be scattered between the mineralized zone. Plans, if any proposed by the user agency for the management and upkeep of these areas during the onset of mining operations may be intimated by the State.
Compliance.	The land use pattern for 40.077 Ha. as given in the FDP, submitted on 13.11.2017 prior to approval of Mining plan was a tentative one. Subsequently Mining plan approved on 27.07.2018 by IBM. Nalco undertake to abide by the Mining plan stipulation. The copy of land use pattern as mentioned in the conceptual plan approved by IBM is enclosed as Annexure-V.

V(b)	An area of 28.326 ha has been proposed for statutory buildings which appears to be exaggerated, therefore, statutory building wise detailed breakup of 28.326 ha of forest land may be informed by the State.
Compliance.	The area of 28.326 ha proposed for the statutory Building is for entire life of the mine (conceptual period). However, mining operations proposed to be taken up in south Block first and for this an area of 5.333 ha. has been demarcated for statutory Buildings. Rest of the area proposed is for other Blocks, which will be used as and when mining is taken up in those blocks in future. This is reflected in the table given in the Conceptual plan Map enclosed as <u>Annexure-V</u> in remarks column. NALCO has given an undertaking to use minimum forest land for infrastructure project. However, in the undertaking they have mentioned the construction of Statutory Building is of temporary in nature. The same will be demolished / wind up and that area will be utilized for mining purpose as mining activity progress from one block to other.
V(c)	Similarly, further details of area proposed for primary crusher and power line corridor may also be provided by the State.
Compliance.	Land for primary crusher and Power corridor has been estimated and approved by IBM as 10.230 ha. and 12.400 ha respectively. This is indicated in the conceptual plan approved by IBM. Copy enclosed as <u>Annexure-V.</u>
V(d)	Details of area proposed for Dumping of overburden is not available in the purpose-wise breakup. Comments in this regard may be provided by the State.
Compliance.	The waste (over burden) is proposed to be back filled into mined out pits. The waste (over burden) generated in the first three years of mining will be dumped temporarily in the portion of the central block adjacent to South Block and used for backfilling of mined out pits in south block in fourth and fifth year and plantation will be taken up. The proposed dumping of over burden is also available in the conceptual plan approved by IBM (over 5.230 ha.) Copy enclosed as <u>Annexure-V.</u>
V(e)	A consolidated KML file clearly showing various components of the proposed Mining Project may be submitted by the State.
Compliance.	The Consolidated KML file showing project area, safety zone etc. has been uploaded and the same has been enclosed as <u>Annexure-VI.</u>
(vi)	Cost benefit Ration has been estimated as 1:258.356 (pg 233/c) which is exorbitantly high. It seems appropriation of cost and benefits components has not been done properly. The analysis may be revised by the user agency by applying appropriate economic tools to accurately estimate the various parameters and detailed analysis thereof may be submitted to the Ministry.
Compliance.	The revised Cost benefit Analysis has been prepared afresh and uploaded on Parivesh portal as per the format given by GoI MoEF & CC., New Delhi after taking into account the cost of Compensatory Afforestation approved by the Nodal Officer attached with the FDP. Now the ratio comes to 1:26.13 . The copy of said Cost Benefit analysis is enclosed as <u>Annexure-VII.</u>

(vii)	Mining Plan stated to be approved by the IBM, Bhubaneswar over an area of 697.979 ha has not uploaded online, rather a receipt of Rs.1,75,000/- addressed to NALCO has been submitted, Processing authorities in the State needs to scrutinize the correctness to the documents uploaded online before submitted the proposal to the Ministry and to ensure that correct and legible detail is uploaded online. The State Government may also confirm that land use proposed in the proposal is in conformity with the land use proposed in the approved Mining Plan.
Compliance.	The approval letter of Mining Plan by IBM vide letter No.MP/FM/13-012/BHU/2018-19 dated 27.07.2018 is enclosed as <u>Annexure-VIII</u> . The hard copy of the Mining Plan is enclosed along with the Diversion Proposal & the same has been uploaded in Part-I of Application Form-A on Parivesh Portal.

In this regard updated hard copy of Part-I and Part-II of Application Form-A is also submitted herewith for information and necessary action.

- Encl:**
1. Compliance report = 2 (Two) sets with Annexures.
 2. C.D. containing KML file in respect of CA land.
 3. C.D. containing KML file of project area, safety zone etc.
 4. Copy of Memo No.4530 dt 26.09.2022 of the DFO, Koraput Forest Division.


Regional Chief Conservator of Forests
Koraput Circle, Koraput


Memo No. 3133 / Dated 28. 09.2022.

Copy forwarded to the Divisional Forest Officer, Koraput Forest Division for information with reference to her Memo No.4530 dated 26.09.2022.


Regional Chief Conservator of Forests
Koraput Circle, Koraput


LAND SUITABILITY CERTIFICATE

This is to certify that 1400 Ha. of degraded forest land in Janiguda PRF-100 Ha, Kankadabari RF- 100 Ha of Koraput Forest Range, Nandapur Ext. PRF-40 Ha, Kasandi PRF-50 Ha, Ampavali RF-90 Ha of Semiliguda Forest Range, Malibhimdol RF-200 Ha, Hatibari RF-60 Ha of Balda Forest Range, Ghodabeda PRF-100 Ha of Lamtaput Forest Range, Jamuguda PRF-100 Ha of Narayanpatna Forest Range and Raisil RF-90 Ha, Totaguda PRF-100 Ha, Hatimali DPF- 100 Ha Godmak PRF-120 Ha and Gouda Ramji DPF-150 Ha of Laxmipur Forest Range in Koraput Forest Division identified for Compensatory Afforestation in lieu of 697.979 ha. of forest land for diversion of Pottangi Bauxite mines by M/s. NALCO is suitable for plantation from management point of view and the degraded Forest land are free from encroachments and encumbrances. No plantation has been carried out in the particular area previously.


Divisional Forest Officer
Koraput Forest Division
Divisional Forest Officer
Koraput Forest Division

LAND SUITABILITY CERTIFICATE

This is to certify that 140 Ha. of degraded forest land in Godmak PRF of Laxmipur Forest Range under Koraput Forest Division identified for Addl. Compensatory Afforestation in lieu of 697.979 ha. of forest land for Diversion of Pottangi Bauxite Mines by M/s. NALCO is suitable for plantation from management point of view and the degraded forest land is free from encroachment and encumbrances. No plantation has been carried out in the particular area previously.


Divisional Forest Officer,
Koraput Forest Division.
Divisional
Koraput Forest Division

