

8-13/2022-FC

764266/2022/MO



भारत सरकार / Government of India  
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय / Ministry of Environment, Forest and Climate Change  
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No.5-ORA524/2022-BHU

15<sup>th</sup> 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 non-forestry use of 42.608 Ha of forest land (16.658 Ha in Keonjhar Division + 25.950 Ha in Bonai Division) within Kalmang (Northern Part) Block for Iron Ore Mines in Keonjhar and Sundargarh District of Odisha, allotted to M/s Tata Steel BSL Limited (Formerly known as Bhusan Steel Ltd.) under Section 2 (ii) of Forest (Conservation) Act, 1980.

Ref: Ministry's letter No.8-13/2022-FC dated 13.07.2022.

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 17.08.2022. The site inspection report along with recommendation of the undersigned is attached for kind information and necessary action.

Encl: As state above.

Yours faithfully,

*(Handwritten signature)*  
 (A.T. Mishra)

Dy. Director General of Forests (C)

**RECOMMENDATION OF DEPUTY DIRECTOR GENERAL OF FORESTS (CENTRAL)**

The proposed site was inspected by Smt. Padma Mahanti, DIGF (C) on 17.08.2022 along with the DFOs of Keonjhar and Bonai Forest Division and representative of M/s Tata Steel BSL Limited.

The instant proposal is for diversion of 42.608 Ha of forest land (16.658 Ha in Keonjhar Forest Division + 25.950 Ha in Bonai Forest Division) within Kalmang West (Northern Part) Iron Ore Block in Keonjhar & Sundargarh District allotted to M/s Tata Steel BSL Limited under Section 2 (ii) of Forest (Conservation) Act, 1980.

The item wise break up of total land involved in this project is as follows:

Sl. No.	Types of land use	Forest land (in Ha)			Non-forest (in Ha)	Total (in Ha)
		Revenue Forest	DLC Forest	Total Forest		
1.	Area under excavation including the backfilled areas	24.383	12.075	36.458	38.919	75.377
2.	Overburden Dump	1.469	0.640	2.109	4.962	7.071
3.	Top Soil Stack	0	0.228	0.228	0.615	0.843
4.	Mineral rejects stack	0.032	0	0.032	1.410	1.442
5.	Green Belt in the south beyond the Ultimate Pit Limit (UPL)	0	1.399	1.399	2.771	4.170
7.	7.5 meter along the inner side of ML boundary (SZ)	1.243	1.139	2.382	1.590	3.972
Total		27.127	15.481	42.608	50.267	92.875

As per the site inspection report of the Dy. Inspector General of Forests (Central):

1. There is sporadic movements of elephants in the proposed area. So a Comprehensive Wildlife Conservation Plan covering both the divisions i.e. Keonjhar and Bonai Forest Division is required.
2. Total 5070 trees in Bonai Division and 512 trees & 1470 poles in Keonjhar Division have been enumerated for felling for this project. Out of 5070 trees of Bonai Division, 3272 trees are in the forest land and 1798 trees are in the non-forest land. Where as in Keonjhar Division all 512 trees and 1470 poles are in the forest land. Trees should be felled when it is absolutely required to be removed. Efforts should be made to transplant trees wherever possible.
3. During site inspection, it was found that land identified for CA is non-forest land and suitable for plantation. In the joint verification report, it has been certified that the land for CA is suitable from plantation and management point of view. The land should be made free from any encumbrances before plantation activity. Local species as per the site suitability may be raised in the identified land.
4. As per report submitted by State Govt. two villages namely Kalamang & Ghodabudhani are coming within the mining lease area. The State Govt. has also reported that at present there is no need for the Rehabilitation and Resettlement. In future Rehabilitation & Rehabilitation will be done as per Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016. The user agency has not submitted any Rehabilitation & Resettlement Plan.

5. The DIGF (C) in her site inspection has mentioned that no violation has been reported. But as per site inspection report of DFO, Keonjhar a Kuchha road is existing over 0.105 ha forest area within the mining lease area and it is being used by the villagers of Kanhusahi and Gandhalpada since 2005. While giving approval for diversion this point needs consideration.

Mining is a site specific activity. So the diversion of 42.608 Ha of forest land may be considered under the provision of FC Act, 1980 with all statutory conditions and the observations made during the field inspection.

  
15/9/22

**Dy. Director General of Forests (Central)**

**SITE INSPECTION REPORT IN RESPECT OF DIVERSION PROPOSAL FOR DIVERSION OF 42.608 HA OF FOREST LAND (16.658 HA IN KEONJHAR FOREST DIVISION AND 25.950 HA IN BONAI FOREST DIVISION) WITHIN KALMANG WEST (NORTHERN PART) BLOCK FOR IRON ORE MINES ALLOTTED TO M/S TATA STEEL BSL LIMITED (FORMERLY KNOWN AS BHUSAN STEEL LTD)**

The site inspection of the above project was carried out by the undersigned on 17.08.2022 along with the Divisional Forest Officer, Keonjhar and Bonai Forest Division and officials of M/s Tata Steel BSL Limited.

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

The legal status of forest land proposed for diversion is 27.127 ha Revenue Forest land and 15.481 ha DLC forest land.

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

The mining lease covers two forest divisions. Out of the mining lease of 92.875 ha, forest land covers 42.608 ha and non forest land covers 50.267 ha in both the divisions. The details are furnished below:

Sl. No.	Name of the division	Revenue Forest land (in ha)	DLC forest land (in ha)	Total forest area (in ha)
1	Keonjhar	16.658	Nil	16.658
2	Bonai	10.469	15.481	25.950
	Total	27.127	15.481	42.608

Purpose wise break up of total land required for the project:

The allotted Kalmang West (Northern part) Iron Ore Block of 92.875 ha involves 42.608 ha of Forest land (Bonai Forest Division 25.950 ha of (Revenue and DLC) Forest land + Keonjhar Forest Division 16.658 ha of Revenue Forest Land) and 50.267 ha of Non Forest Land (Govt. Non-forest land 30.096 ha + Private Non Forest land 20.171 ha) under Bonai Forest Division. The instant proposal is for diversion of entire forest land 42.608 ha including forest area of Safety Zone under Section-2 (ii) Forest (Conservation) Act. 1980.

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

No.

**4. Total cost of the project at present rates:**

20500 lakhs.

**5. Wildlife:**

As reported by the Divisional Forest Officer, Keonjhar Forest Division and Bonai Forest Division, applied forest area in village Gandhalpada under Barbil range is the dwelling habitat for elephant, leopard, bear, barking deer, hyena and porcupine, etc.

In Bonai Division, project area is located in village Kalamang and Ghodabudhani under Koira range. Kora range is an elephant movement area. The other faunal species found in the applied project area are viz. Barking Deer, Palm squirrel, Indian hare, Jungle cat, Hanuman Langur, Giant squirrel, etc.

There is sporadic movement of elephants as informed by the Divisional Forest Officer, Keonjhar and Bonai. *During site inspection, it was observed that adequate measures to protect the elephant habitat need to be ensured in the proposed area and impact zone through comprehensive Wildlife Conservation Plan covering both the divisions i.e. Keonjhar and Bonai Forest Division.*

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

As reported by the DFO, Keonjhar, the proposed site falls under Elephant Zone-2.

**6. Vegetation:**

An average canopy density is about 0.5. The area was visited during inspection. Most of the mining lease area is open forest. However, there are patches moderately dense forest also in the proposed lease area. DSS report enclosed.

**(a) Total number of trees to be felled.**

As per Site Inspection Report of DFO, Bonai Forest Division 3272 number of trees has been enumerated over forest land and 1798 no. of trees have been enumerated over non-forest land.

In the Keonjhar Forest Division, 512 number of trees and 1470 poles have been enumerated.

**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.

**(b) Important species:**

As reported by the DFO, Keonjhar and Bonai Forest Division, species like Gmelina arborea, Pterocarpus marsupium, Adina cordifolia, Shorea robusta, Terminalla tomentosa, Syzgium cumini, Anigeissus latifolia, Bridelia retusa, Diospyrous melanoxylon, Pongamia pinnata, Semecarpus anacardium, chloroxylon swetenia, Fleus racemosa, Lagerstromia parviflora, Magnifera indica and other miscellaneous species are present in the proposed lease area.

**Number of trees of girth below 60 cm.**

The number of trees of girth below 60 cm. is 1850.

**Number of trees of girth above 60 cm**

The number of trees of girth above 60 cm. is 3734.

**7. Background note on the proposal:**

On 18<sup>th</sup> May, 2018, the then Bhusan Steel Limited was acquired by Tata Steel Limited through its wholly owned subsidiary M/s Bannipal Steel Limited (BSL).

In the e-auction process for grant of mining lease for Kalamang west (Northern part) iron ore block, Bhusan Steel Limited became the 'preferred bidder' under Mineral (Action) rules, 2015 and Government of Odisha in Steel and Mines Department recognized vide letter No.4571/SM dated 25.05.2017.

Department of Steel and Mines, Government of Odisha has issued Letter of Intent (LoI) vide Steel and Mines Department letter No.5285/SM dated 24.06.2017 in favour of Bhusan Steel Limited being the highest bidder of the e-auction conducted on 18<sup>th</sup> May, 2017 for grant of Kalamang and Ghodabudani of Sundergarh district and village Gandhalpada of Keonjhar district over an area of 92 ha.

This LoI was again modified by letter No.6287/SM dated 27.07.2017 revising the earlier mentioned area of 92.00 ha to 92.875 ha. The LoI has been transferred from M/s Bhusan Steel Limited to Tata Steel BSL Limited vide Government of Odisha, Steel and Mines Department Oder No.4261/SM dated 27.05.2021. After taking over the project by Tata Steel BSL Limited, fresh forest diversion proposal has been submitted for diversion of forest land of 42.608 ha (Keonjhar Forest Division 16.658 ha + Bonai Forest Division 25.950 ha).

**8. Compensatory afforestation:**

Although the project covers two divisions but the Compensatory Afforestation is proposed to be taken up in Keonjhar Division only. Non forest Government land over 42.608 ha has been identified in village Jaladihi of Bansapal Tahsil in Keonjhar district.

The land schedule of 42.608 ha identified non forest Government land is as follows:

Name of the Tahasil	Name of the village	Khata No.	Plot No.	Kisam	Area proposed for CA (ha)
Bansapal	Jaladihi	70 (A.A.A)	1	Parhbat-I	11.552
			2	Parbat-I	15.136
			3	Parbat-II	11.784
			4 (P)	Parbat-II	4.136
TOTAL					42.608

The CA land site was visited and it was found to be suitable for plantation. It is a hillock and can be afforested with gap plantation as per CA Plan.

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

In the joint verification report, it has been certified that the land for compensatory Afforestation is suitable from plantation and management point of view. During site inspection also, it was found that it is a non forest land and suitable for plantation. *DSS report showed presence of agriculture land in the CA area but it could not be located at site. The State Forest Department has to ensure that the CA land is free from all encumbrances before it is mutated in their favour.*

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

The Tahasildar, Bansapal has given certificate of non encroachment and non-encumbrance in respect of the non forest government land.

**(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 raising compensatory Afforestation has four patches.

**(e) Map with details:**

Submitted.

**(f) Total financial outlay:**

The total financial outlay of the CA scheme is Rs.4.78.41.500.

**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:**

As reported by the DFO, Keonjhar Forest Division & DFO, Bonai Forest Division in the site inspection report, no violation has been committed by the User Agency under FC, Act 1980. But the DFO, Keonjhar Forest Division in his Site Inspection Report has reported that a Kucha road is existing over 0.105 ha forest area within the aforesaid mining lease area and it is being used by the villagers of Kanhusahi and Gandhalpada since 2005. It has been verified by the Revenue officials through Google Image time series analysis. No violation has been reported in case of Bonai Division. During site inspection, the kucha road was inspected, but the aforesaid justification was given by the DFO, Keonjhar.

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

The RCCF, Rourkela has reported that the project does not involve displacement of any human habitation in Keonjhar Division. In case of Bonai Division, it was stated by the user agency in its write up that there are two villages viz. Kalamang and Godabudhani coming within the mining lease of Kalamang West (Northern Part) of iron ore mine. At present there is no need for the Rehabilitation and Resettlement. It was stated by the DFO, Bonai Forest Division during site inspection that in future, Rehabilitation and Resettlement will be done as per the Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Re-settlement Rules, 2016. *This has also been reported in the State Government's report in Page No.10.*

**11. Reclamation plan:**

A scheme of reclamation and Afforestation has been prepared to reclaim and stabilize the mined out undulating areas and saturated dumps by taking up plantation. Provisions to check soil erosion and run off have been included in the plan.

**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:**

Not applicable.

**13. Cost benefit ratio:**

The cost benefit ratio of Keonjhar Forest Division is 1 : 157.53 and ratio of Bonai Forest Division comes to 1 : 119.554.

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

Yes.

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

Enclosed.

**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 generate employment opportunity for the people.

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

Not reported.

**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:**

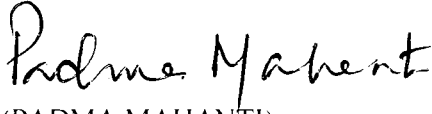
Not reported.

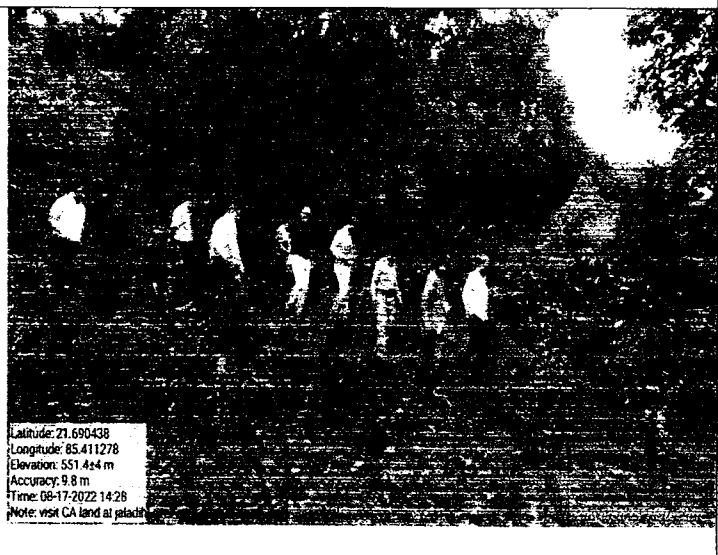
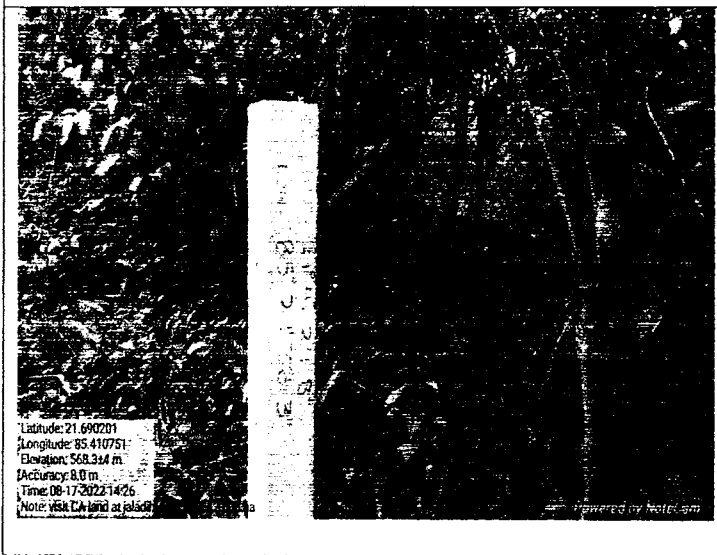
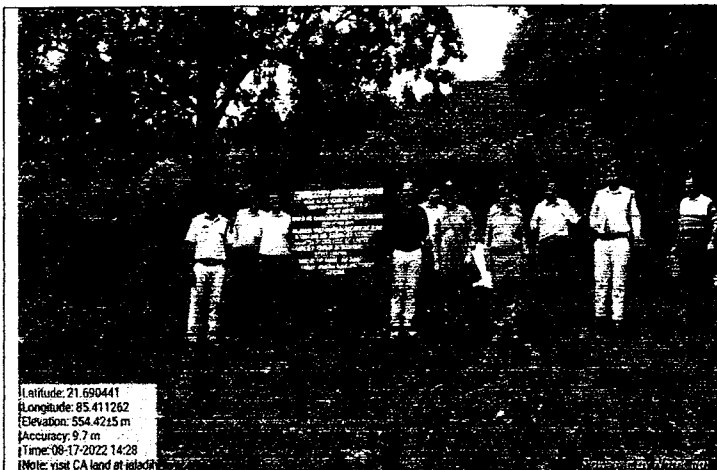
**19. Situation with respect to any Protected Area:**

It was reported by the Divisional Forest Officer that the proposed site for diversion is situated at a distance of about 500 meter from Medhamaruni PRF and is about 2 km distance from Medhamaruni RF.

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

- i. The User Agency shall submit the FRA Certificate under FRA, 2006.
- ii. Trees should be felled when it is absolutely necessary.
- iii. Since the relocation will be required, even at a later date, the user agency needs to submit a relocation and rehabilitation plan.

  
(PADMA MAHANTI)  
DIGF (CENTRAL)



# Distance (81.63 km.) from Simlipal Tiger Reserve Kalamang West (Northern Part) Block Iron Ore Mines, TATA

Browser address bar: fsigeportal.gov.in

Navigation icons: back, home, search, refresh, zoom in, zoom out, full screen, print, help

Logo of the Government of Odisha

Logo of the State Resource Centre

**GIS based Decision Support System**

Logo of the Simlipal Tiger Reserve

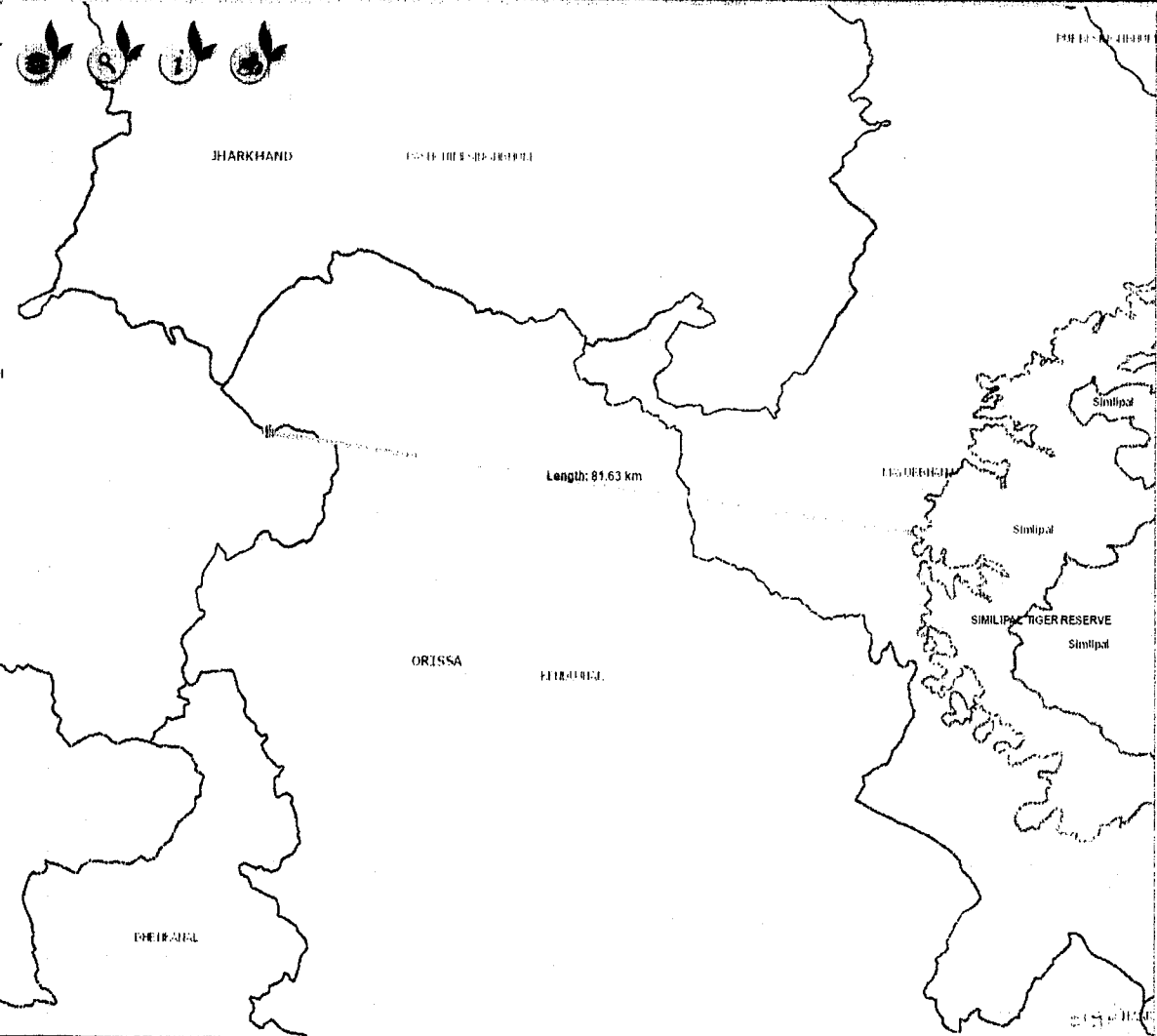
Map navigation controls: pan, zoom, scale bar, north arrow, layer list icon

**Layer List**

- Background
- State Boundary
- Block Boundary
- Block Iron Ore Mines
- Simlipal Tiger Reserve
- Distance

**Draw and Measure**

Tools: Point, Line, Polygon, Circle, Ellipse, Rectangle, Polygonal, Area, Text



Map navigation controls: pan, zoom, scale bar, north arrow, layer list icon

**Welcome RK Simal**

Map navigation icons: home, search, refresh, zoom in, zoom out, full screen, print, help

# 1 km. buffer from Kalamang West (Northern Part) Block Iron Ore Mines, TATA

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GIS based Decision Support System

Welcome RK Samal

JHARKHAND

ORISSA

Area of the selected Polygon is: 92.87 Hectares

Bluebaswar	155707	ORISSA
1. Block Number	2. District	3. Block Name
9945164260.41	SUNDARGARH	ORISSA
855725548.56	KENDUJHAR	ORISSA

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Layer List

Draw and Measure

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## 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/ORR/524/2022 Date: 12<sup>th</sup> August 2022
2. Area- 42.608 ha
3. Name of the Project: Proposal for diversion of 42.608 Ha. forest land Kalamang West (Northern Part) Block Iron Ore Mines by Tata Steel BSL Limited (Tata) in Keonjhar & Bonai Forest Division and Keonjhar & Sundargarh District.
4. Location
  - State: Odisha
  - District: Keonjhar & Sundargarh
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	Keonjhar & Bonai Forest Division	92.87	Not-Inviolate	Not-Inviolate	Not-Inviolate
<b>Total</b>			<b>92.87</b>		
(*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: August 2022)

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): 93 hectare.

Forest Cover Map Statistics of Proposed Land (DSS Calculated)		
SL No	Forest Cover	Area in hectare
1	MODERATELY DENSE FOREST	5
2	OPEN FOREST	37
3	NON FOREST	51
<b>Total</b>		<b>93</b>

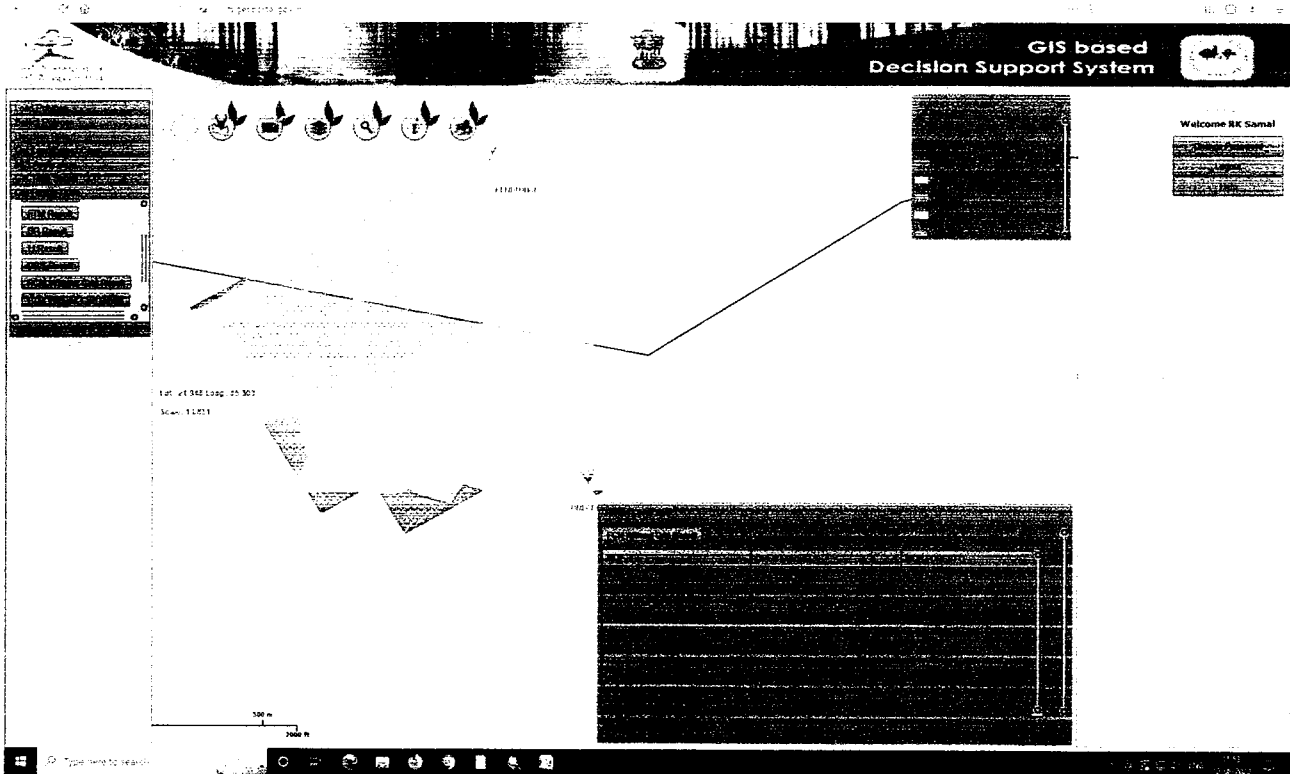


Fig:2 Forest Cover information of proposed land

**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	Inviolate	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:**

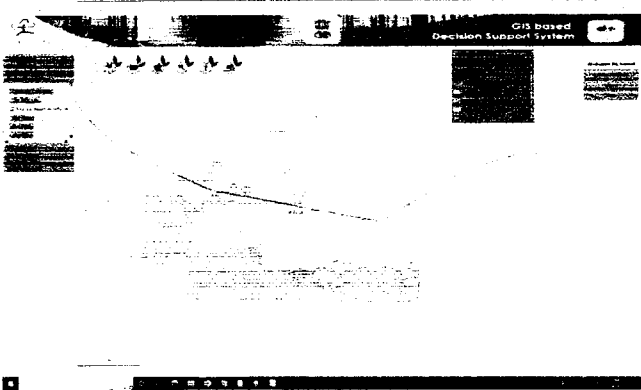


Fig:3 FCM

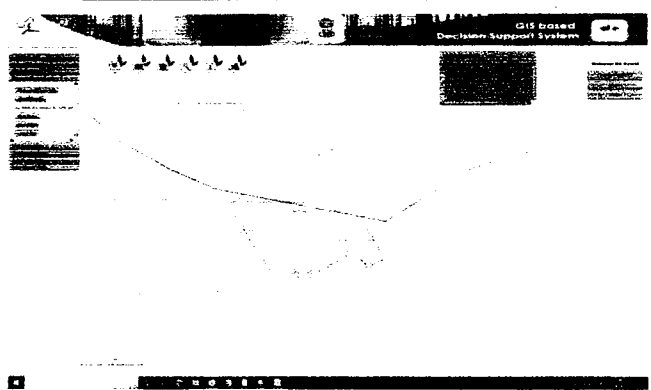


Fig:4 FTM

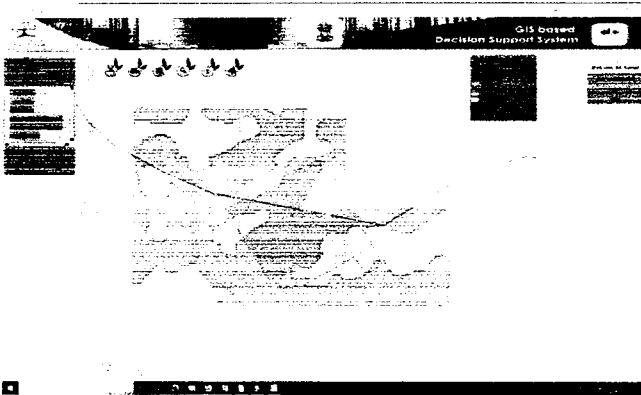


Fig:5 Biological Richness

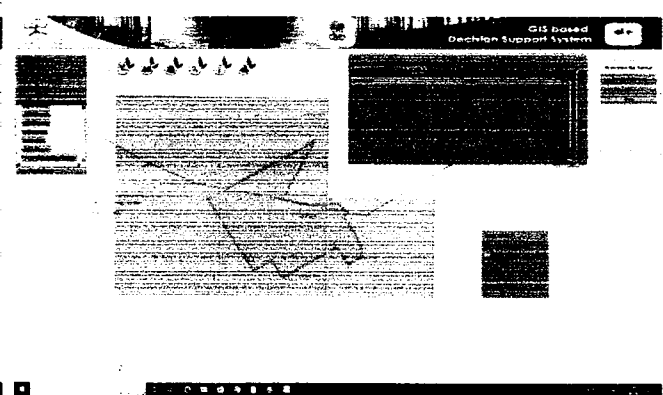


Fig:6 DSS Final Results

❖ **DSS Final Result:**

DESCRIPTION	RESULT
Total Number of Grids	5
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 (Jaladihi, Non Forest 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	Jaladihi Village	Bhuyan & Juanpirh	41.655	40	2	-	-	-	-
<b>Total</b>			<b>41.655</b>	<b>42</b>			<b>-</b>		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 42 ha.

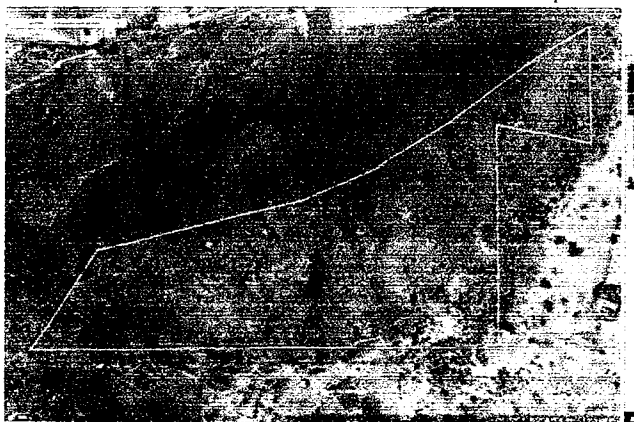


Fig: 7 Google Earth image of CA land (Date: August 2022)

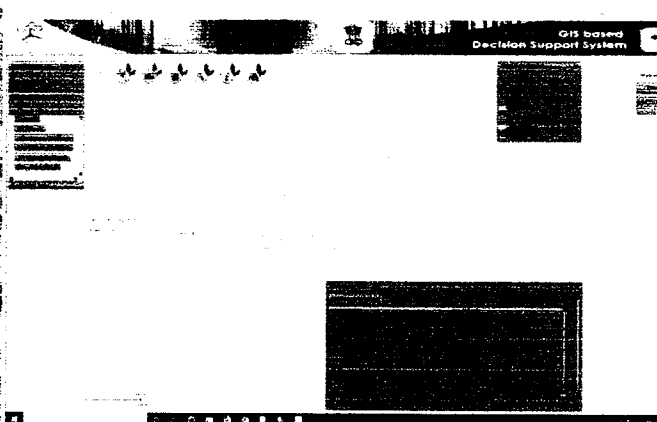


Fig: 8 FCM of proposed CA land

**Patch:2(Balabhadrapur RF, Degraded Forest 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	Balabhadrapur RF	Keonjhar	44.002	23	20	-	1	-	-
<b>Total</b>			<b>44.002</b>	<b>43</b>			<b>1</b>		

As per the GIS-DSS analysis, the net suitable area for plantation in proposed Compensatory afforestation patch is 43 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)

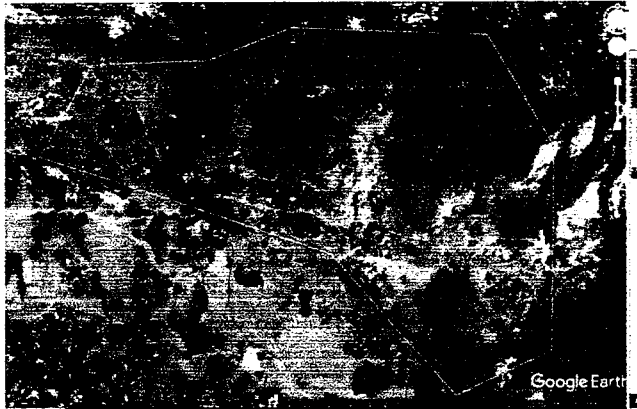


Fig: 9 Google Earth image of CA land (Date: August 2022)

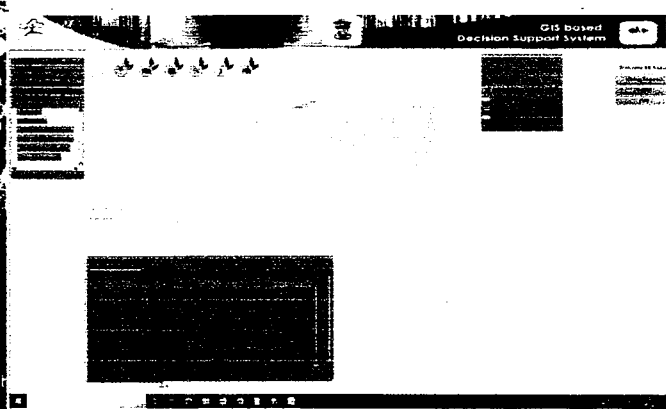


Fig: 10 FCM of proposed CA land

### Observations:

- i. Encroachments (**Agriculture**) are observed in some parts of CA Patche-2 (Balabhadrapur RF)
- iv. The NET Suitable area for plantation as per GIS-DSS analysis is **85 ha.**
- v. The proposed CA land patches fall under **Moderately Dense Forest, Open Forest and Non Forest** category under FCM.

### FCM Summary of CA Land

Sl No.	Forest Cover	Area(ha.)
1	MODERATELY DENSE FOREST	1
2	OPEN FOREST	63
3	NON FOREST	22
<b>Total</b>		<b>86</b>

\*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)