

**Sub: Proposal for diversion of balance forest of 80.826 ha (16.566 ha of forest land and 64.260 ha of non-forest land recorded as forest as on 25.10.1980) including 3.916 ha of forest land in safety zone and 1.129 ha of forest land in green belt in addition to 52.348 ha of forest land already diverted (total forest land of 133.174 ha in ML) within the total mining lease area over 169.00 ha of Tiringpahar Iron & Manganese Mines of M/s. Tata Steel Ltd. in Keonjhar District, Odisha during extended ML period as per MMDR (Amendment) Act, 2015.**

1. The State Government of Odisha vide their letter No. 10F(Cons)-140/2016/378/F&E dated 04.01.2019 submitted the above mentioned proposal seeking prior approval of the Central Government under Section-2 of the Forest (Conservation) Act, 1980.
2. The facts related to the proposal as contained in the State Government's letter dated 04.01.2019 are given below in the form of fact sheet:

**FACT SHEET**

<b>1.</b>	Name of the Proposal	Proposal for diversion of balance forest of 80.826 ha (16.566 ha of forest land and 64.260 ha of non-forest land recorded as forest as on 25.10.1980) including 3.916 ha of forest land in safety zone and 1.129 ha of forest land in green belt in addition to 52.348 ha of forest land already diverted (total forest land of 133.174 ha in ML) within the total mining lease area over 169.00 ha of Tiringpahar Iron & Manganese Mines of M/s. Tata Steel Ltd. in Keonjhar District, Odisha during extended ML period as per MMDR (Amendment) Act, 2015.					
<b>2.</b>	Location (i) State (ii) District	Odisha Keonjhar					
<b>3.</b>	Particulars of Forests: (i) Name of Forest Division and Forest area involved.						
	<b>S. N.</b>	<b>Pattern of Utilization</b>	<b>Broken up Non-Forest land recorded as Forest as on 25.10.1980</b>	<b>Virgin Non-Forest land Recorded as Forest as on 25.10.1980</b>	<b>Total Non-Forest land Recorded as Forest as on 25.10.1980</b>	<b>Total Virgin Forest land</b>	<b>Total Forest Land recorded as Forest as on 25.10.1980</b>
	<b>1.</b>	Mining (quarry, Float ore)	20.382	9.946	30.328	9.014	39.342
	<b>2.</b>	Storing Mineral/ Ore	1.820	8.061	9.881	0	9.881
	<b>3.</b>	Dumping OB	4.408	16.719	21.127	4.475	25.602
	<b>4.</b>	Construction of Building (Incl. Magazine)	0.406	0	0.406	0	0.406
	<b>5.</b>	Road/Conv. Corridor/Power transmission line/water pipe line etc.	0.370	0	0.370	0.180	0.550

	<b>Sub-total</b>	<b>27.386</b>	<b>34.726</b>	<b>62.112</b>	<b>13.669</b>	<b>75.781</b>
6.	Safety Zone	0	1.148	1.148	0.810	1.958
7.	Green Belt	0	1.000	1.000	0.129	1.129
8.	Safety Zone mentioned in the earlier FDP	0	0	0	1.958	1.958
	<b>Grand Total</b>	<b>27.386</b>	<b>36.874</b>	<b>64.260</b>	<b>16.566</b>	<b>80.826</b>
<b>4.</b>	Legal status/Sy. No.	Khesera Forest 7.610 ha DLC Forest 8.956 ha Non-Forest land Recorded as forest on 25.10.1980 64.260 ha <b>Total: 80.826 ha.</b>				
<b>5.</b>	Vulnerability to erosion	Soil erosion is likely to increase following felling of trees in the undulating topography				
<b>6.</b>	(i) Vegetation  (ii) Density  (iii) No. of trees to be felled	Sal, Pia Sala, Gambhari, Kurum, assn, Jamu, Kasi, Dhaura, Mango, Kendu, M. Kendu, Panas etc.  The applied area for diversion is situated nearer to the Baitarani Reserve Forest. Eco Value Class has been treated as “Eco Value Class-I” based on proximity to Baitarani Reserved Forest and the canopy density has been considered at par with the prevailing vegetation depicted as “Open mixed Jungle mainly Sal” on concerned Topo Sheet and kept at 0.3.  1243 nos. of sound trees, 700 nos of unsound trees. In addition, 955 nos. of poles below 30 cm girth also be enumerated.				
<b>7.</b>	Whether forms part of National park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant Corridor, etc. (if so, details of the area and comments of the Chief Wildlife Warden to be annexed)	The applied area does not form part of any National Park/ Wildlife Sanctuary/ Biosphere reserve, Tiger Reserve, Elephant Corridor, etc. <b>Movement of wild Elephants is often witnessed in the applied forest land and nearby RF. The applied site falls under Elephant habitat zone-2 as mentioned by ORSAC, Bhubaneswar</b>				
<b>8.</b>	Whether any RET species of flora and fauna are found in the area. If so details thereof	No rare and endangered species available in the applied are for diversion but movement of wild Elephants is often witnessed in the applied forest land and nearby RF.				
<b>9.</b>	Approximate distance of the proposed site for diversion from boundary of forest.	The proposed site for diversion is nearer to the Baitarani Reserved Forest				
<b>10.</b>	Whether any protected archaeological/ heritage site/defence establishment or any other important monuments is located in the area.	No				
<b>11.</b>	Whether any work of in violation of the Forest (Conservation) Act, 1980 has been carried out (Yes/No). If yes details of the same including period of work done, action taken on erring officials. Whether work in violation is still in progress.	No				
<b>12.</b>	Whether the requirement of forest land as proposed by the user agency in col. 2 of Part-I is unavoidable and barest minimum	The forest land, submitted for approval under FC Act, 1980, is in compliance with the guideline issued vide F. No. 8-78/1996-FC (pt.) dated 10.03.2015 read with F. No. 8-78/1996-FC (pt.) dated				

	for the project, if no recommended area item-wise with details of alternatives examined.	09.03.2016 of MoEF&CC. Thus, the area applied for is a statutory requirement under FC Act, 1980.
13.	Whether clearance under the Environment (protection) Act, 1986 is required?	Yes EC granted in 2005 ( <b>Page-219-223/c</b> )
14.	<b>Compensatory Afforestation</b>	
	(i) Details of non-forest area/degraded forest area identified for CA, its distance from adjoining forest, number of patches, size of each patches.	The Non-forest land, equal to extent the forest land over 80.826 will be met from the identified and allotted non-forest Govt. land over <b>13.798 ha</b> in village Kaliapani, Khata No. 25, Plot No. 238 and 239/294 under Telkoi Tahasil of Keonjhar Forest Division in Keonjhar District and non-forest Govt. land over <b>64.260 ha</b> in village Asanbahali, Khata No. 196, Plot No. 1781, 1782 and 127/2389 under Kankadahad Tahasil of Dhenkanal Division in Dhenkanal District for allotment of 13.798 ha of Govt. Non-forest for Compensatory Afforestation for the balance forest land. Letter no. 11-53/16/1185 dated 20.07.2016 of Deputy Collector, Revenue, Collectorate, Dhenkanal for allotment of 64.260 ha Govt. Non-forest land for Compensatory Afforestation for Sabik Forest. Distance from adjoining forest – 3.00 km Number of Patches – Two Size – 78.058 ha  Further, for the seedling of 39373 that cannot be accommodated in the non-forest Compensatory Afforestation land. Therefore, Compensatory Afforestation over 99.00 ha of degraded forest land identified in Renda PRF under Telkoi Forest Range of Keonjhar Division at the prevailing wage rate @Rs. 224.30 per MD with a maintenance period of ten years ANR with gap model @400 seedlings/ ha has been prepared.
	(ii) Map showing non-forest/degraded forest area identified for CA and adjoining forest boundaries.	Given
	(iii) Detailed CA scheme including species to be planted, implementing agency, time schedule, cost structure, etc.	Detail CA Scheme has been submitted ( <b>pg 312-367/c</b> )
	(iv) Total financial outlay for CA	Rs. 2,82,19,760/-
	(v) Certificate from the competent authority regarding suitability of the area identified for CA and from management point of view.	Given and placed in file at <b>Pg. 332/c and 360/c</b>
15.	Catchment Area Treatment	NA
16.	Rehabilitation of Oustees a) No of families involved b) Category of families c) Details of rehabilitation plan	Nil Nil NA
17.	Compliance of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	<b>Not given.</b>
18.	Total Cost of the Project	5100 (Rs. In Lakhs)

19.	Employment Potential	Yes Permanent employment 200 Temporary Employment 1000
20.	Cost benefit Analysis	1:17.08 (Pg. 256/c)
21.	Specific Recommendation of DFO	Tiringpahar Iron & Manganse Mines of M/s Tata Steel Ltd. granted over 169.00 involves 10.392 ha Revenue Forest, 58.522 ha DLC Forest land, 64.260 ha non-forest land recorded as forest as on 25.10.1980 and 35.826 ha Non-forest land. NPV over entire forest land involved in the mining lease is deposited in Ad-hoc CAMPA as per prevailing rate. Forest land over 52.348 ha has been diverted under Sec 2(ii) of FC Act, 1980. The instant proposal over 80.826 ha involves 7.610 ha Khesara Forest, 8.956 ha DLC Forest & 64.260 ha Non-Forest use, as per the requirement of the lessee, in compliance with the guideline issued vide FNo. 8-78/1996-FC(pt.) dated 30.09.2016 of MoEF&CC, Govt. of India in respect of non-forest land recorded as forest as on 25.10.1980. The said proposal over 80.826 ha, is therefore submitted for necessary approval under Sec 2(ii) of FC Act,1980 taking the aforesaid fact into consideration. (pg-50/c)
22.	Recommendation i. DFO ii. RCCF  iii. PCCF/ Nodal Officer iv State Govt.	Proposal is submitted for necessary approval (pg-50/c) Proposal may be considered for approval on its own merit (pg-51/c) Recommended (pg-91/c) Recommended (pg-92/c)
23.	District Profile (i) Total Geographical area of the district (ii) Total Forest area/Divisional Forest area (iii) Total area diverted since 1980  (iv) Total CA stipulated since 1980 a. Forest land including penal CA b. Non Forest Land (v) Progress of Compensatory Afforestation a. Forest land b. Non Forest land	830300.000 Ha. 336615.6293 Ha. 10319.8016 ha (77 Nos)  C.A. = 1669.6180 Ha. P.C.A. = 4994.8675 Ha. C.A. =7247.7931 Ha.  C.A. = 1152.58 Ha. P.C.A. = 2996.34 Ha. C.A. = 5983.9016 Ha.

3. State Government in their letter dated 04.01.2019 informed the follows:

- i. **Brief description:** A Mining Lease for Iron & Manganese Ore over an area of 2.45 Sq. Mile comprising of 3 block namely Guruda, Joruri and Tiringpahar in Barbil Tahasil of Keonjhar District was originally granted in favour of M/s TISCO Ltd. by the Maharaja of Keonjhar for 30 years with effect from 1.03.1930 to 29.02.1960. The 1<sup>st</sup> Renewal of Mining lease was granted by Govt. of Odisha in Department of Mining and Geology Department vide their letter No. 2976/MG dt. 18.02.1982 had granted 2<sup>nd</sup> Renewal of Mining Lease over an area of 643.71 ha. of land in Favour of M/s TISCO Ltd. for 20 years i.e. from 01.03.1980 to 29.02.2000 spread over 3 Block i.e. Guruda, Joruri and Tiringphar in Barbil Tahasil of Keonjhar District. The lease deed was executed on 16.03.1985 and copy thereof is placed at **page 95-174/c**. The User Agency had applied for 3<sup>rd</sup> Renewal of Mining Lease on 05.01.1999

i.e one year to expire of 2<sup>nd</sup> RML period for Tiringphar Iron & Manganese Mine in Guruda Block only over a reduced area of 169.00 ha for 20 year spread over villages Guruda, Khandbondh, Palasha (Kha) and Jadibahal in Barbil Tahasil of Keonjhar district thereby leaving out two blocks i.e. Joruri and Tiringphar having an area of 474.71 ha. The total ML area of 169 ha. as applied for, was having 68.914 ha. of forest land and 100.086 ha. of non-forest land then. In course of 3<sup>rd</sup> RML period, the lessee had applied for diversion of 52.348 ha. Of non-forest land out of total 68.91 ha. of forest land leaving aside 1.958 ha. of forest land coming within safety zone and 14.608 ha. of forest land kept for future expansion. On the recommendation of the State Forest Department, the MoEF, GoI vide their letter **F.No.8-80/2004-FC dt. 28.03.2007** had accorded Stage-II forest clearance for diversion of 52.348 ha. of forest land in this mining lease. The condition wise compliance of the Stage-II forest clearance order is placed at **page 301-305/c**. The diverted forest land over 52.348 ha involved 11.650 ha of Pre-1980 broken up DLC forest land and 40.698 ha. (KF-2.782 ha & DLC-37.916 ha.) of virgin forest land. As per provision of Section 8(A) of MMDR (Amendment) Act, 2015, compliance of lessee to the stipulations of MoEF&CC guidelines bearing F. No. 11-599/2014-FC dt. 01.04.2015, the State Government in Steel & Mines department vide their letter No. III (A) SM-45/2006 3278/S&M dated 18.04.2015, have extended the validity of ML period of Tiringphar Iron and Manganese Mines over an area of 169 ha. up to 31.03.2030 (Copy of State Government's order is at **page 262-264/c**). Accordingly, the supplementary lease deed for this mining lease has also been executed on 8.05.2015 which may be perused at **page 265-284/c**. The lessee has applied for surrender of relinquished area of 474.710 ha vide their letter No. MPP/L&/845/15 dated 30.11.2015 to the Collector, Keonjhar copy of which is enclosed at **Page 307-308/c**.

Mining Lease of Tiringphar Iron & Manganese mines of M/s Tata Steel Ltd. located within longitude E 85°-23'-00" to 85°-25'-00" and latitude N 21°-54'-00" to 21°-57'-00" is delineated in Survey of India topo sheet No. F45N5 and F45N8. Pursuant to MoEF&CC guidelines bearing No. 8-78/1996-FC(pt.) dt. 10.3.2015/9.3.2016, out of the total non-forest area 100.086 ha. in the ML as per Hal record, 64.260 ha. was found to be of sabik kism forest land as on 25.10.1980 and remaining 35.826 ha. of non-forest land. After identification of Sabik Kism forest land of 64.260 ha, the total forest land in the mining lease is 133.174 ha. comprising of 10.392 ha of Khesra Forest, 58.522 ha. of DLC forest land and 64.260 ha. of sabik kism forest land as on 25.10.1980. The lessee has already obtained forest clearance pertaining to 52.348 ha. of forest land as mentioned in preceding paragraph. Thus there remains 80.826 ha. of forest land in the ML which is yet to be diverted under Forest Conservation Act, 1980. As per MoEF&CC guidelines F. No. 11-599/2014-FC dt. 1.4.2015 requiring diversion of entire forest land of Mining lease and subsequent guidelines No. 8-78/1996-FC(pt.) dt. 10.3.2015/9.3.2016 stipulating for obtaining diversion of sabik kism forest land as on 25.10.1980, the lessee has filed the instant forest diversion proposal for the remaining 80.826 ha. of forest land in its Tiringphar Iron and Manganese ore lease. The applied forest area of 80.826 ha. includes 7.610 ha. of Khesra forest, 8.956 ha. of DLC forest land and 64.260 ha. of sabik kism forest land as on 25.10.1980 which were treated as non-forest land in hal record. Out of 64.260 ha. of sabik kism forest land, 27.386 ha. of land is broken up and remaining 36.874 ha. is virgin land. The broken up sabik forest kism land is under use for various mining activities including Mining with storing of mineral/ ore, Dumping of OB dump, Construction of building/ road. This forest diversion proposal is now processed for obtaining approval of MoEF&CC, Government of India under Section 2(ii) of FC Act, 1980. The Tahasildar, Barbil has furnished certificate pertaining to status of land in the ML as on 25.10.1980 (**Page 226-227/c**). The authenticated land schedule of forest land applied for diversion now is at **page 224-225/c** and boundary description of the area applied for diversion is at **page 184-186/c**.

It has been reported by PCCF, Odisha that this site falls under the physiographic- Joda Barbil plateau extending from Chamakpur to the border of Singhbhum of Jharkhand in North and border of Bonai in the West. This region is an extension southwards of Singhbhum rocks. This group of rocks comprising trap, tuffites, shale, quartzite, phyllite, Banded Haematite Jasper (BHJ) and Banded Haematite Quartzite (BHQ) form high hill ranges with narrow deep valley. This region is characterized by massive deposit of iron and manganese ore associated with B.H.J. and shales. The iron ore precipitates are in the form of oxide, carbonates, silicates and sulphides. The most characteristics feature of the iron ore i.e haematite is its availability in the form of massive beds, pockets and large lensoid soil bodies. Hard massive, Laminated, Lateritoid & Blue dust are the major form of ore located in this physiographic zone. The most characteristic feature of associated manganese ore is its occurrence in form of pocket, lenses in the shales of the iron ore group. It is also seen extensively as residual deposit. Manganese ore deposits are mostly confined to the Singhbhum-Bonai belt of Keonjhar district associated with BIF of Iron



Construction of Building	0.000	0.000	0.000	0.406	0.140	0.546	0.000	0.000	0.000	0.000	4.658	4.658	5.204
Township colony	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mines Road	0.000	1.600	1.600	0.370	1.808	3.778	0.000	0.180	0.180	0.000	0.208	0.388	4.166
<b>Sub-Total</b>	<b>2.782</b>	<b>49.566</b>	<b>52.348</b>	<b>27.386</b>	<b>16.468</b>	<b>96.202</b>	<b>7.068</b>	<b>6.601</b>	<b>13.669</b>	<b>34.726</b>	<b>15.869</b>	<b>64.264</b>	<b>160.466</b>
Green Belt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.129	0.129	1.000	0.502	1.631	1.631
Safety Zone	0.308	1.650	1.958	0.000	2.357	4.315	0.234	0.576	0.810	1.148	0.630	2.588	6.903
<b>Grand Total</b>	<b>3.090</b>	<b>51.216</b>	<b>54.306</b>	<b>27.386</b>	<b>18.825</b>	<b>100.517</b>	<b>7.302</b>	<b>7.306</b>	<b>14.608</b>	<b>36.874</b>	<b>17.001</b>	<b>68.116</b>	<b>169.00</b>

The purpose wise break-up of 80.826 ha of forest land including 64.260 of Non-Forest Land recorded as Forest as on 25.10.1980 now proposed for diversion is indicated below.

S.N.	Pattern of Utilization	KF	DLC	Total Virgin Forest land	Broken up Non-Forest land recorded as Forest as on 25.10.1980	Virgin Non-Forest land Recorded as Forest as on 25.10.1980	Total Non-Forest land Recorded as Forest as on 25.10.1980	Total Forest Land recorded as Forest as on 25.10.1980
1.	Mining (quarry, Float ore)	7.068	1.946	9.014	20.382	9.946	30.328	39.342
2.	Storing Mineral/ Ore	0	0	0	1.820	8.061	9.881	9.881
3.	Dumping OB	0	4.475	4.475	4.408	16.719	21.127	25.602
4.	Storing Tools & Machinery	0	0	0	0	0	0	0
5.	Construction of Building (Incl. Magazine)	0	0	0	0.406	0	0.406	0.406
6.	Township/Colony	0	0	0	0	0	0	0
7.	Road/Conv. Corridor/Power transmission line/water pipe line etc.	0	0.180	0.180	0.370	0	0.370	0.550
	<b>Sub-total</b>	<b>7.068</b>	<b>6.601</b>	<b>13.669</b>	<b>27.386</b>	<b>34.726</b>	<b>62.112</b>	<b>75.781</b>
8.	Safety Zone	0.234	0.576	0.810	0	1.148	1.148	1.958
9.	Green Belt	0	0.129	0.129	0	1.000	1.000	1.129
10.	Safety Zone mentioned in the earlier FDP	0.308	1.650	1.958	0	0	0	1.958
	<b>Grand Total</b>	<b>7.610</b>	<b>8.956</b>	<b>16.566</b>	<b>27.386</b>	<b>36.874</b>	<b>64.260</b>	<b>80.826</b>

- iv. **Flora and Fauna:** Based on information provided by DFO, Keonjhar Division, it has been reported by PCCF, Odisha that the geological formation of this area is quite suitable for growth of Sal. Sal constitutes around 70 to 75% of the top canopy. The middle storey is inconspicuous. The quality of Sal varies from all

India Quality II to IV. Quality II sal is mainly confined to the valleys while Q III occurs on the hill slopes of moderate gradient. Q IV sal is mainly confined to the ridges. Q I sal is completely absent. The forest land applied for diversion is situated in close proximity to Baitarani RF. The near RF come under the group 3C/C2e(iii) Moist Peninsular Valley Sal. The prevailing vegetation constitutes Sal and its associates. The principal associates of Sal includes *Terminalia alata*, *Lagerstroemia perviflora*, *Anogeissus latifolia*, *Terminalia belerica*, *Syzygium cumini*, *Mangifera indica*, *Schleichera oleosa*, *Adina cordifolia*, *Pterocarpus marsupium*, *Bombax ceiba*, *Bridelia retusa*, *Madhuca indica*. The middle story is represented by *Syzygium cumini*, *Ougeinia ougenensis*, *Careya arborea*, *Trema orientalis*, *Emblica officinalis*, *Cassia fistula* etc. The shrubs and undergrowth are characterized by *Indigofera pulchella*, *Ardisia solenacea*, *Flemingia chhappar*, *Helicteres ixora* and *Clerodendron viscosum* etc. The prevailing climbers include *Bauhinia vahlii*, *Combretum decandrum* and *Beutia parviflora*. The grasses over the forest floor include *Chrysopogon aciculatus*, *Imperata cylindrica*, *Dicanthium caricosum*, *Cynodon dactylon* etc. Eco value Class of forest growth of the area can be treated as Eco value class-I and crop density as 0.3 depicted as 'Open mixed jungle mainly Sal' on Toposheet.

The applied forest area & the adjoining Baitarani Reserve Forest is the dwelling habitat of Bear, Barking Deer, Hyena, Porcupine etc. Occasional visit of wild elephants from the neighbouring State of Jharkhand has also been reported. The applied area falls under elephant habitat zone-2 as mentioned by ORSAC, Bhubaneswar. DFO, Keonjhar has also reported that soil erosion is likely to increase in the area as mining activity progresses.

- v. **Wild Life Management:** Although the ML area of Tiringpahar Iron and Manganese ore Mines does not form part of any National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Elephant Corridor/ Tiger Reserve, yet due care is to be taken for conservation of wildlife available in the area. A Site Specific Wildlife Conservation Plan pertaining to this project has been approved by the PCCF, (Wildlife) & CWLW, Odisha with a financial outlay of Rs. 276.17 Lakh (Rs. 35.70 Lakh for the project area to be implemented by User Agency and Rs. 240.47 Lakhs for the project impact area to be implemented by DFO, Keonjhar). The User Agency has deposited Rs. 240.47 lakh in Ad-hoc CAMPA through RTGS vide UTR No SBINR520180390004322 dated 09.03.2018. Besides, the user agency has also deposited Rs. 72,67,000/- towards proportionate contribution of Regional Comprehensive Wildlife Management Plan @ Rs. 43,000/- per ha for entire lease hold area through RTGS in Ad-hoc CAMPA vide UTR No. HDFCR5201507300543690<sup>3</sup> dated 04.08.2015.
- vi. **Tree enumeration:** As reported by the DFO, Keonjhar Division total trees have been enumerated in forest area applied for diversion which includes 1,243 nos. of sound trees, 700 Nos. of unsound trees. In addition to above, 955 nos. of poles below 30 cm girth have also been enumerated from the area proposed for diversion. The species wise and diameter class wise abstract of enumerated trees is enclosed at **Page- 298-299/c**.
- vii. **Compensatory Afforestation:**

I.	Total Mining Lease area	169.000 ha
II	Forest area involved in the ML	133.174 ha
III	Forest area already diverted	52.348 ha
IV	Forest area covered under safety zone	3.916 ha
V	Forest area applied for diversion	80.826 ha
VI	Land Required for Compensatory	76.910 ha

In lieu of 76.910 ha. of forest land proposed for diversion pertaining to this mining project excluding the 3.916 ha. of forest land coming under safety zone, 13.7890 ha. of non-forest Government land has been identified by the district administration of Keonjhar for the purpose of raising compensatory afforestation in village Kaliapani under Telkoi Tahasil of Keonjhar district bearing Khata No. 25(AJA), Plot No. 238 and 239/294 having kisam Parbat-I. The authenticated land schedule of identified non-forest land is at **page 286-287/c**. Similarly, 64.261 ha. of non-forest land has been identified in village Asanbahali of

Kankadahad Tahasil of Dhenkanal district bearing Khata No. 196, Plot No. 1781, 1782 and 127/2389. Authenticated land schedule is at **page 288-289/c**. The compensatory afforestation area has been jointly verified by the Forest and Revenue officials and has been found to be free from encroachment and encumbrances and suitable for plantation. The DFOs of Keonjhar and Dhenkanal Forest Division have prepared the site specific CA schemes pertaining to the suitability of the non-forest area identified/allotted by district administration.

(a) The DFO, Keonjhar Division has prepared a site specific Compensatory Afforestation scheme which has provision for ANR mode of plantation @400 seedlings /ha over **8.798 ha** and ANR without gap plantation over remaining area of **5 ha**. The species selected for planting are Sisygium cumini(jamu), Adina cardifolia(Kuruma), Anogeissus latifolia(Dhaura), Accacia catechu(Khair), Dalbergia Sissoo(Sissoo), Azadirachta indica(Neem), Gmelina arborea(Gambhar), Terminalia belerica(Bahada), Terminalia chebula(Harida), Pongamia pinnata(Karanja), Emblica officinalis(Amla), Shorea robusta(Sal) etc. It also includes provision of barbed wire fencing over 1.974 KM and other soil conservation measures. The scheme has been technically approved by the Addl. PCCF (Forest Diversion) & Nodal Officer, FC Act with a total financial outlay Of Rs.31,08,900/- that also includes maintenance cost for 10 years at the current wage rate of Rs.280/- per Man-day. The total no. of plants to be raised under this scheme comes to 3,519.

(b) The DFO, Dhenkanal Division has prepared a site specific Compensatory Afforestation scheme which has provision for Bald Hill plantation @1600 seedlings /ha over **21.261 ha**. The species selected for planting are Bamboo, Sissoo, Gambhar, Neem, Asana, Simaruba, Mango etc. It also includes provision of barbed wire fencing over 5.63 KM and Elephant Proof Earthen Trench. The scheme has been technically approved by the Addl. PCCF ( Forest Diversion) & Nodal Officer, FC Act with a total financial outlay of Rs.2,00,24,900/- that also includes maintenance cost for 10 years at the current wage rate of Rs.280/- per Manday . The total no. of plants to be raised under this scheme comes to 33,858.

Copy of duly approved Compensatory Afforestation schemes are placed in file at **Page-312-367/c**.

As per MoEF guidelines bearing F.No. 11-423/2011-FC dt. 8.11.2017, 1000 plants are to be planted for every hectare of forest land being diverted under FC act, 1980 for non-forest purpose. The above mentioned two CA scheme will have only 37,377 plants over the non-forest land identified on two locations. In all 76,910 no. of plants are required to be raised against this forest diversion proposal as per prescription of the above guidelines. Thus there is a need to identify degraded forest land as per the approved working plan to accommodate the differential no. of plants to be raised i.e. 39,533. DFO, Keonjhar Division has accordingly identified 99.00 ha degraded forest in Renda P.R.F. under Telkoi Range of Keonjhar division. He has prepared a site specific Compensatory Afforestation scheme which has provision for ANR mode of plantation @400 seedlings /ha over 99 ha. The species selected for planting are Sisygium cumini (jamu), Adina cardifolia (Kuruma), Anogeissus latifolia (Dhaura), Accacia, catechu (Kahair), Dalbergia Sissoo (Sissoo), Azadirachta indica (Neem), Gmelina arborea (Gambhar), Terminalia belerica (Bahada), Terminalia chebula (Harida), Pongamia pinnata (Karanj a), Emblica officinalis (Amla), Shorea robusta (Sal) etc. It also includes provision for soil conservation measures. The scheme has been technically approved by the Addl. PCCF (Forest Diversion) & Nodal Officer, FC Act with a total financial outlay of Rs.1,03,68,100/- that also includes maintenance cost for 10 years at the current wage rate of Rs.280/- per Manday . Copy of duly approved Compensatory Afforestation scheme is enclosed at **Page-345-365/c**. Pillar co-ordinate of degraded forest land in Renda PRF is also appended to CA scheme. The total no. of plants to be raised under this scheme comes to 39,600.

The user agency has furnished undertaking to bear cost of CA schemes .

**viii. Cost benefit analysis:** The Cost Benefit analysis has been reportedly worked out as per the new guidelines of MoEF&CC dated 01.08.2017. The total cost of the project comes to Rs. 1,12,106 cr. whereas the total benefit out of this comes is estimated at Rs. 19,15,253 cr. The Cost Benefit ratio is 1:17.08. Details of CB analysis are placed at **Page 256-260/c**.

**ix. Safety Zone:** As reported, total ML area of 169.00 ha includes 6.903 ha. in safety zone which is having forest land 3.916 ha (K.F. 0.542 ha + DLC forest 2.226 ha + recorded as forest as on

25.10.1980- 1.148 ha) and non-forest land of 2.987 ha. The details of the safety zone of the mining lease is furnished below.

S. N.	Particulars	Forest Land		Non-Forest land recorded as Forest as on 25.10.1980	Total Forest Land	Non-Forest Land	Grand Total
		KF	DLC				
1	Safety Zone included in the proposed forest land	0.234	0.576	1.148	1.958	0.630	2.588
2	Safety Zone mentioned in the earlier FDP	0.308	1.650	0	1.958	2.357	4.315
		<b>0.542</b>	<b>2.226</b>	<b>1.148</b>	<b>3.916</b>	<b>2.987</b>	<b>6.903</b>

The safety zone area will be suitably fenced, planted, protected at project cost. The User Agency shall also bear the cost of afforestation over 1.5 times of forest area of the safety zone in degraded forest area elsewhere.

- x. **Environmental Clearance:** The User Agency has obtained Environmental Clearance for production of 0.85 LTPA of Manganese ore from Govt. of India, MoEF vide their letter No. J-11015/87/20044A11 (M) dt. 17.11.2005. The copy of the approved Environmental Clearance is enclosed at **Page-219-223/c**. The State Pollution Control Board, Odisha has granted Consent to operate vide letter No. 1482/IND-I-CON-190 dated 19.01.2016 with validity up to 31.03.2021 for production of Manganese of 0.085MTY. The Copy of the Consent to Operate Order is enclosed at **Page 174-185/DP**. The RCCF, Rourkela has reported that the lessee is not producing iron ore from this ML area for which no EC/CTE for iron ore is required pertaining to this mine.
- xi. **Concurrent Reclamation Plan:** It has been reported that concurrent Reclamation Plan approved during grant of the Stage-II approval for 52.348 ha. of forest land in this mine didn't provide for reclamation of pit but had proposed for dump reclamation. 15,000 nos. of saplings have been planted over an area of 1.25 ha for the block year 2017-18 to 2021-22. In addition, a phased reclamation plan has been submitted along with this proposal which is enclosed at **Page-189-196/c**. This would be executed at project cost.
- xii. **Mining Plan/ Mining Scheme:** Scheme of mining with Progressive Mines Closure Plan was earlier approved by IBM in letter No. MS/OTFM/34-ORI/BHU/2014-15 dated.29.4.2015 (page 217-218/c) for Tiringpahar Manganese ore Mines over an area of 643.174 ha. which is said to be valid up to 31.3.2020. Subsequently the Modification of Review of Mining Plan of Tiringpahar Iron and Manganese Mines over an area of 169 ha. has been approved by IBM vide its letter No. MSM/FM/1-ORUBHU/2018-19/720 dt. 3.7.2018 which is valid for the period from 2018-19 to 2019-20. It has been reported that Mining Lease contains total mineable reserve of 0.730 million tonnes of Manganese Ore. The annual production capacity is 0.85 LTA manganese ore. The copy of the approved scheme of Mining with PMCP and Modification of Review of Mining Plan mentioned above are enclosed as two separate volumes.
- xiii. **Rehabilitation and Re-settlement:** The project does not involve displacement of any human habitation.
- xiv. **Lease Profile:** The User Agency has furnished the lease profile in the Diversion Proposal (**Page 253-255/c**)
- xv. **Violation:** As reported by the DFO, Keonjhar Division and RCCF, Rourkela in their Site inspection

reports, no violation has been observed in the forest land proposed for diversion under FC Act, 1980 in respect of Tiringpahar Iron & M/s Mines of M/s TATA Steel Ltd.

**xvi. Compliance required under Forest Rights Act Circulars of Government of India, MoEF&CC:** As per GoI, MoEF & CC guidelines dt.03.08.2009 and subsequent guidelines issued thereafter, the user agency has not yet furnished the certificate of Collector, Keonjhar and resolutions of Gram sabhas and minutes of DLC/SDLC pertaining to forest land proposed for diversion. The user agency has, however furnished an undertaking to submit the FRA compliance after obtaining it from the Collector, Keonjhar, which is placed at **Page-188/c**. In this context, it is to state that in course of the meeting of the Forest Advisory Committee held on 26.7.2018 at MoEF&CC, New Delhi which was also attended by Special Secretary, F&E Department, it was discussed that complete compliance to FRA guidelines was a pre-requisite for obtaining Stage-I forest clearance up to the year 2016. After Forest Conservation(Amendment) Rules, 2016 came into force, FRA compliance pertaining to forest land proposed for diversion is required to be submitted prior to Stage-II forest clearance. In view of this discussion, the instant forest diversion proposals has been processed for obtaining Stage-I forest clearance pending compliance of Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 guidelines.

**xvii. DGPS maps:** In compliance to the circular No.F.No-11-9/98-FC dated 08.07.2011 of Ministry of Environment and Forests, Government of India to ensure accurate delineation of the forest area proposed for diversion under Section-2 of Forest (Conservation) Act, 1980, the required digital geo- referenced boundary map showing the forest land proposed for diversion duly verified by ORSAC and authenticated Divisional Forest Officer, Keonjhar Forest Division is enclosed to the DP. The area as per land schedule and that of DGPS map involved in the submitted diversion proposal is produced below-

SI No.	Category of Forest Land	Area applied for (in ha)	Area as per DGPS Map (in ha)	Difference	Remarks
1	Khesera Forest	7.610	7.600	0.010	0.131% 1
2	DLC	8.956	8.608	0.348	3.885% J
3	Non-Forest Land recorded as Forest as on 25.10.1980	64.260	63.589	0.671	1.044% 1
	<b>Total</b>	<b>80.826</b>	<b>79.797</b>	-	-

*NB: - As reported by the DFO, Keonjhar Division, an area of 0.020 Acre (0.008 ha) of plot No6 in Village-Palasa (Kha) has been excluded from the DGPS surveyed area but included in the certified land schedule of the Tahasildar, Barbil*

**xviii. Others:** NPV is applicable to this project. **NPV has been deposited in respect of entire forest land over 133.174 ha included in the mining lease as mentioned below.** Copy of RTGS payment receipt towards NPV for 64.260 ha of non-forest land recorded as forest as on 25.10.1980, involved in this proposal for an amount of Rs. 4,69,09,800/- deposited on 21.06.2016 vide UTR No. SBIN 516173371856 is enclosed as **Annexure-XX( Page-290-292/c )**

S. No.	Forest Area in ha	Eco Value Class	Canopy Density	Rate of NPV in Rs.	NPV deposited in Rs.
1	11.650	I	0.1	580000/-	67,57,000/-
2	40.698	I	0.3	750000/-	30,52,3500/-
3	16.566	I	0.3	730000/-	1,20,93,180/-

4	64.260 Non-Forest land recorded as Forest as on 25.10.1980	I	0.3	730000/-	4,69,09,800/-
	<b>Total- 133.174 ha</b>				<b>9,62,83,480/-</b>

Site Inspection Report of DFO, Keonjhar Division is placed in file at **Page 309-311 /c** and that of RCCF, Rourkela's at **Page- 52-55/c**.

It has been reported by PCCF, Odisha that the lessee has complied with the orders dt. 2.8.2017 in WP (C) No. 114 by depositing an amount of Rs. 35,49,28,268/- towards compensation as demanded by DDM, Joda circle. It has further been reported that mining over broken up sabik kisam forest land is continuing in this ML by virtue of order dt. 22.8.2016 of Hon'ble High Court, Orissa in WP© No. 14118 of 2016.

The State Government requested to convey the approval for instant proposal under Section 2 of the Forest Conservation Act, 1980 subject to the following conditions:

- (i) Forest area earmarked as safety zone around the ML area shall be demarcated by posting of pillars of appropriate length, protected, fenced, afforested at project cost. In no circumstances, the area earmarked as safety zone, shall be utilized for any other purpose.
- (ii) The user agency shall undertake demarcation of the lease area on the ground posting six feet high cement concrete pillars embedded two feet inside the soil and 4 feet above the ground with serial number, forward and backward bearings, and distance from pillar to pillar. The user agency shall also submit the map of lease area showing different kinds of forest land using DGPS survey data and latitude and longitude of each pillar to the Divisional Forest Officer, Keonjhar for his reference before commencement of work on final forest clearance.
- (iii) If applicable, the lessee shall deposit the differential cost towards Comprehensive Wildlife Management Plan at revised rate.
- (iv) User Agency has to execute Phased Reclamation Plan at their cost.
- (v) The user agency will fell the trees in phases strictly as per requirement with prior permission of Divisional Forest Officer after forest clearance is accorded under FC Act, 1980
- (vi) C:B Analysis is required to be re-assessed as per GoI, MoEF&CC guidelines bearing F.No. 7-69/2011-FC (Pt) dt. 1.8.2017.
- (vii) In case land use plan proposed in the earlier/present forest diversion proposal differs from the land use plan reflected in the approved Mining scheme, MoEF&CC, guidelines bearing letter F.No. 11-150/2017-FC dt. 16.10.2017 prescribing procedure for processing/disposing of proposals for change of land use plan within the diverted forest land of a mining lease vis-à-vis the latest land use plan approved by Indian Bureau Mines in the Mining Plan/scheme shall be complied with by the lessee.

**4. Site inspection report:** The site inspection of the instant diversion proposal was conducted by Shri R K Samal, DIG(Central), RO, Bhubaneswar during 8<sup>th</sup> and 9<sup>th</sup> April, 2019 and forwarded vide RO's letter No.8(21)23/2003-FCE dated 23.05.2019 (**Pg.707-729/c**). The SIR is reproduced below.

(i) **Legal status of the forest land proposed for diversion**

Sl. No.	Legal status	Area in Ha.
1.	Khesra forest	7.610
2.	DLC forest	8.956
3.	Non-forest land recorded as forest as on 25.10.1980	64.260
	<b>Total</b>	<b>80.826</b>

(ii) **Item-wise break-up details of the forest land proposed for diversion:**

Sl. No.	Pattern of utilization	KF in Ha.	DLC in Ha.	Total virgin forest land in Ha.	Broken up non-forest land recorded as forest as on 25.10.80 in ha.	Virgin non forest land recorded as forest as on 25.10.80 in ha.	Total non forest land recorded as forest as on 25.10.80 in ha.	Total forest land and non forest land recorded as forest as on 25.10.80 in Ha.
1.	Mining (quarry, Float ore)	7.068	1.946	9.014	20.382	9.946	30.328	39.342
2.	Storing mineral/ore	0	0	0	1.820	8.061	9.881	9.881
3.	Dumping of OB	0	4.475	4.475	4.408	16.719	21.127	25.602
4.	Storing of tools and machinery	0	0	0	0	0	0	0
5.	Construction of building (incl. Magazine)	0	0	0	0.406	0	0.406	0.406
6.	Township/Colony	0	0	0	0	0	0	0
7.	Road/Conv. Corridor/ power transmission line/ water pipeline, etc.	0	0.180	0.180	0.370	0	0.370	0.550
	<b>Sub-total</b>	<b>7.068</b>	<b>6.601</b>	<b>13.669</b>	<b>27.386</b>	<b>34.726</b>	<b>62.112</b>	<b>75.781</b>
8.	Safety zone	0.234	0.576	0.810	0	1.148	1.148	1.958
9.	Greenbelt	0	0.129	0.129	0	1.00	1.00	1.129
10	Safety zone mentioned in the earlier FDP	0.308	1.650	1.958	0	0	0	1.958
	<b>Grand Total</b>	<b>7.61</b>	<b>8.956</b>	<b>16.566</b>	<b>27.386</b>	<b>36.874</b>	<b>64.26</b>	<b>80.826</b>

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

Yes. As proposed it is in the broken up non-forestland recorded as forest as on 25.10.1980.

(iv) **Total cost of the project at present rates:**

Rs.129.139 crore, as stated in the project proposal.

(v) **Wildlife:**

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

The applied forest area and the adjoining Baitarani Reserve Forest is the dwelling habitat of Sloth Bear, Barking Deer, Hyena, Porcupine, etc. The open fields with medium dense forests are pasture and movement area of elephants and other wildlife. Visit of wild elephants from the neighbouring state of Jharkhand has also been reported. The applied area falls under elephant habitat zone-2 as per wildlife zonation map prepared by ORSAC, Bhubaneswar.

The mineral extraction paths on village roads, district roads and forest roads have much more damaging effect on the movement of wildlife of the area as large number of trucks move in the area for evacuation of ores from the mines. Many of them are not either brick soled/bituminous or concretized and are a source of dust pollution. If possible a stipulation may be given for all the mines operating in the area to evacuate the minerals before evening(6 pm) on these interior roads near to the habitation of wild animals. However this Mine is beside Joda- Banspani Road which is concretized up to the Guruda railway siding where the minerals from this mine will be off loaded for further rail transport( at about 13 Km). Therefore the disturbances to wildlife will be less. A copy of the Map showing the road and mine is enclosed.

(vi) **Vegetation:**

Sal is constitutes around 70-75% of the top canopy. The middle storey is inconspicuous. The quality of Sal varies from all India quality II to IV. Quality-II Sal is mainly confined to the valleys while Quality-III occurs on the hill slopes of moderate gradient. Quality-IV Sal is mainly confined to the ridges. Quality-I Sal is completely absent. The forest land applied for diversion is situated in close proximity to Baitarani RF. The near RF comes under the group 3C/C2e(iii) Moist Peninsular Valley Sal. The prevailing vegetation constitutes Sal and its associates. The principal associates of Sal includes *Terminalia alata*, *Lagerstroemia parviflora*, *Anogeissus latifolia*, *Terminalia belerica*, *Syzygium cumini*, *Mangifera indica*, *Schleichera oleosa*, *Adina cordifolia*, *Pterocarpus marsupium*, *Bombax ceiba*, *Bridelia retusa*, *Madhuca indica*.

The middle story is represented by *Syzygium cumini*, *Ougeinia ougenensis*, *Careya arborea*, *Treana orientalis*, *Emblica officinalis*, *Cassia fistula*, etc. The shrubs and undergrowth are characterized by *Indigofera pulchella*, *Ardisia solenacea*, *Flemingia chhapar*, *Helicteres ixora*, *Clerodendron viscosum*, etc. The prevailing climbers include *Bauhinia vahlii*, *Combretum decandrum*, *Beutia parviflora*. The grasses over the forest floor include *Chrysopogon aciculatus*, *Imperata cylindrica*, *Dicanthium caricosum*, *Cynodon dactylon*, etc.

Eco value class of forest growth of the area can be treated as Eco Value class-I and crop density as 0.4 to 0.5 depicted as 'mostly open mixed jungle mainly Sal with medium density in some of the areas' on toposheet.

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

As reported by DFO, Keonjhar trees have been enumerated in forest area applied for diversion which includes 1,243 numbers of sound trees, 700 number of unsound trees. In addition to the above, 955 number of poles below 30 cm girth have also been enumerated from the area proposed for diversion.

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

Felling of such large number of trees if taken at a single point of time will cause severe damage to the environment of the area. Therefore, as far as possible the trees should be cut as and when absolutely required in phased manner.

**(b) Important species:**

The prevailing vegetation constitutes Sal and its associates. The principal associates of Sal includes *Terminalia alata*, *Lagerstroemia perviflora*, *Anogeissus latifolia*, *Terminalia belerica*, *Syzygium cumini*, *Mangifera indica*, *Schleichera oleosa*, *Adina cordifolia*, *Pterocarpus marsupium*, *Bombax ceiba*, *Bridelia retusa*, *Madhuca indica*.

The middle story is represented by *Syzygium cumini*, *Ougeinia ougenensis*, *Careya arborea*, *Treana orientalis*, *Emblica officinalis*, *Cassia fistula*, etc. The shrubs and undergrowth are characterized by *Indigofera pulchella*, *Ardisia solenacea*, *Flemingia chhapar*, *Helicteres ixora*, *Clerodendron viscosum*, etc. The prevailing climbers include *Bauhinia vahlii*, *Combretum decandrum*, *Beutia parviflora*. The grasses over the forest floor include *Chrysopogon aciculatus*, *Imperata cylindrica*, *Dicanthium carricosum*, *Cynodon dactylon*, etc.

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

As per the report of DFO 1,483 number of trees below 60 cm and 955 number of poles below 30 cm.

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

460 number of trees.

**(vii) Background note on the proposal:**

A mining lease for Iron & Manganese ore over an area of 2.45 sq. mile comprising of 3 blocks namely Guruda, Joruri and Tiringpahar in Barbil Tahsil of Keonjhar district was originally granted in favour of M/s TISCO Ltd., by Maharaja of Keonjhar for 30 years with effect from 01.03.1930 to 29.02.1960. The 1<sup>st</sup> renewal of mining lease was granted by Govt. of Odisha in Department of Mining and Geology for a period of 20 years from 01.03.1960 to 29.02.1980. Govt. of Odisha in Mining and Geology Department vide their letter No.2976/MG dated 18.02.1982 had granted 2<sup>nd</sup> renewal mining lease over an area of 643.71 ha of land in favour of M/s TISCO Ltd. for 20 years i.e. from 01.03.1980 to 29.02.2000 spread over 3 blocks i.e. Guruda, Joruri, and Tiringpahar in Barbil Tahasil of Keonjhar district. The lease deed was executed on 16.03.1985. The user agency had applied for 3<sup>rd</sup> renewal of mining lease on 05.01.1999 i.e. one year prior to expiry of 2<sup>nd</sup> RML period for Tiringpahar Iron and Manganese mine in Guruda block only over a reduced area of 169.00 ha for 20 years spread over villages Guruda, Khandbondh, Palasha (Kha) and Jadibahal in Barbil Tahasil of Keonjhar district thereby leaving out two blocks i.e. Joruri and Tiringpahar having an area of 474.71 ha. The total ML area of 169 ha as applied for, was having 68.914 ha

of forest land and 100.086 ha of non forest land then. In course of 3<sup>rd</sup> RML period, the lessee had applied for diversion of 52.348 ha of forest land out of total 68.914 ha of forest land leaving aside 1.958 ha of forest land coming within safety zone and 14.608 ha. of forest land kept for future expansion. On the recommendation of the State Forest Department, the MoEF&CC, Govt. of India vide their letter No. 8-80/2004-I dated 28.03.2007 had accorded Stage-II forest clearance for diversion of 52.348 ha of forest land in this mining lease. The diverted forest land over 52.348 ha involved 11.650 ha of pre-1980 broken up DLC forest land and 40.698 ha (KF-2.782 and DLC-37.916 ha) of virgin forest land. As per provision of Section 8 (A) of MMDR (Amendment) Act, 2015, compliance of lessee to the stipulations of MoEF&CC guidelines bearing F. No. 11-599/2014-FC dated 01.04.2015, the State Govt. in Steel & Mines Department vide their letter No.III(A)SM-45/2006 -3278/S&M dated 18.04.2015 have extended the validity of Mining lease period of Tiringpahar Iron and Manganese Mines over an area of 169.00 ha up to 31.03.2030. Accordingly, the supplementary lease deed for this mining lease has also been executed on 08.05.2015. The lessee has applied for surrender of relinquished area of 474.710 ha vide their letter No.MPP/L&L/845/15 dated 30.11.2015 to the Collector, Keonjhar. This surrendered area will be accepted by the Collector, Keonjhar after it is cleared by IBM on the basis of compliance of conditions of final mine closure plan.

Mining leases of Tiringpahar Iron & Manganese mines of M/s Tata Steel Ltd. is located within longitude E 85° 23' 00" to 85° 25' 00" and latitude N21° 54' 00" to 21° 57' 00" is delineated in Survey of India Toposheet No.F45N5 and F45N8. Pursuant to MoEF&CC guidelines bearing No.8-78/1996-FC (part.) dated 10.03.2015 /09.03.2016, out of the total non-forest area 100.086 ha in the ML as per Hal record, 64.260 ha was found to be Sabik Kissam forest land (recorded as on 25.10.1980) and remaining 35.826 ha of non-forest land. After identification of Sabik Kisam forest land of 64.260 ha., the total forest land in the mining lease is 133.174 ha. comprising of 10.392 ha. Khesra Forest, 58.522 ha of DLC forest and 64.260 ha. of Sabik Kisam forest land. The lessee has already obtained stage II forest clearance pertaining to 52.348 ha of forest land. Thus, there remains 80.826 ha. of forest land in the ML which is yet to be diverted under Forest Conservation Act, 1980. As per MoEF&CC guideline No.11-599/2014-FC dated 01.04.2015 requiring diversion of entire forest land of mining lease and subsequent guideline No.8-78/1996-FC (pt.) dated 10.03.2015/09.03.2016 stipulating for obtaining diversion of Sabik Kisam forest land as on 25.10.1980, the lessee has filed the instant forest diversion proposal for the remaining 80.826 ha of forest land in its Tiringpahar iron and Manganese ore lease.

The applied forest area of 80.826 ha of forest land includes 7.610 ha of Khesra forest, 8.956 ha of DLC forest and 64.260 ha of Sabik kisam forest land which were treated as non forest land in Hal record. As stated by the State Govt. in their reports, out of 64.260 ha. of Sabik Kisam forest land, 27.386 ha. of land is broken up and remaining 36.874 ha. is virgin land. The broken up Sabik forest Kisam land is under use of various mining activities including mining, with storing of mineral/ore, dumping of OB, construction of building/road.

(viii)

**Compensatory afforestation:**

1.	Total mining leases area	169.00 ha.
2.	Forest area involved in the ML	133.174 ha.
3.	Forest area already diverted	52.348 ha
4.	Forest area covered under safety zone	3.916 ha
5.	Forest area applied for diversion	80.826 ha

6.	<b>Land required for compensatory afforestation</b>	<b>76.910 ha.</b>
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13.798 ha. of non-forest Government land has been identified in village Kaliapani under Telkoi Tahasil of Keonjhar district bearing Khata No.25, Plot No.238 and 239/294 having Kisam Parbat-I.

64.261 ha of non forest land has been identified in village Asanbahali of Kankadahad Tahasil of Dhenkanal district bearing Khata No.196, Plot No.1781, 1782 and 127/2389, but it is seen from DSS that 43.00 ha. coming under moderately dense forest. Hence, CA scheme has been prepared for 21.261 ha.

The above mentioned two CA areas will accommodate only 37,377 plants over the non-forest land. In all 76,910 number of plants are required to be raised against this forest diversion proposal as per guideline No. 11-423/2011-FC dated 08.11.2017 (1000 plants/Ha.). DFO Keonjhar accordingly identified 99.00 ha. degraded forest in Renda PRF under Telkoi Range of Keonjhar Division to accommodate 39,533 number of differential number of plants. A site specific compensatory afforestation scheme which has provision for ANR mode of plantation @400 seedlings/ha over 99 ha. It has been proposed that *Sizygium cumini* (Jamu), *Adina cardifolia* (Kuruma), *Anogeissus latifolia* (Dhaura), *Accacia catechu* (Khair), *Dalbergia sissoo* (Sissoo), *Azadirachta indica* (Neem), *Gmelina arborea* (Gambhar), *Terminalia belerica* (Bahada), *Terminalia chebula*(Hariad), *Pongamia pinnata* (Karanja), *Emblica officinalis* (Amla), *Shorea robusta* (Sal), etc will be planted. It also includes provision for soil conservation measures.

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

Yes.

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

Yes.

**(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:**

2 patches. However, these patches contain good forest growth and cannot accommodate planting of 1000 seedlings as per guidelines. Therefore, the State Govt. has identified 99 ha. of degraded forest land to accommodate the balance seedlings. However, from the field verification it is found that the degraded forest land is also having good natural forest growth and regeneration excluding some blank areas with weed growth. In the blank foothills the proposed plantation is possible in ANR mode. The hill tops contain good growth of natural forests and considering the slopes plantation at hill tops is not possible.

- (e) **Map with details:**  
Enclosed in the diversion proposal.
- (f) **Total financial outlay:**  
Keonjhar Division: Rs.31,08,900/- (NFL)  
Keonjhar Division : Rs.1,03,68,100/- (proposed reserve forest)  
Dhenkanal Division: 2,00,24,900/- (NFL)
- (ix) **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.
- (x) **Whether proposal involves rehabilitation of displaced persons. If yes, whether rehabilitation plan has been prepared by the State Government or not :**  
No.
- (xi) **Reclamation plan:**  
Enclosed in the proposal.  
**Details and financial allocation:**  
Rs.2,04,558 per hectare for rehabilitation and afforestation.
- (xii) **Details on catchment and command area under the project:**  
Not applicable.  
**Catchment area treatment plan to prevent siltation of reservoir:**  
Not applicable.
- (xiii) **Cost benefit ratio:**  
1:17.08 as per the project report.
- (xiv) **Recommendations of the Principal Chief Conservator of Forests/State Government:**  
Yes. Recommended.
- (xv) **Recommendations of Addl. Director General (Central),Regional Office, Bhubaneswar along with detailed reasons:**  
The said mining proposal is for diversion of balance forest of 80.826 ha. (16.566 ha. of forest land and 64.260 ha. of non-forest land comprising of 7.610 ha Khesra forest, 8.956 ha DLC and 64.260 ha. Sabik forest within the total mining lease area over 169.00 ha of Tiringpahar Iron & Manganese Mine (Guruda Block) of M/s Tata Steel Ltd. in keonjhar district, Odisha. Considering the facts submitted in DP, site

inspection report by DIGF (Central) and other details, the other major issue of this proposal, that **may need to be brought to the notice for consideration by the FAC and the Ministry**, are the following:

- a. This mine has been worked as Manganese mine only since 1930 till date and has been operating at a very very low scale 8500 TPA. The production reports against EC were also not very regular and actual production were also irregular and lower than EC limit (which from year 2011-12 to 2017-18 were 47.2, 64.0, not submitted 84.9, 18.6 in 6 months, not submitted, 38.5 and 56.8 thousand tonnes respectively, **report attached**). **The user agency has not started the reclamation process yet, but applied for more than double the existing diverted area for fresh mining which appears not very convincing.**
- b. Further, this mine is also **not very far from Karo-Karampada Elephant Corridor** and the entire forest area and its pristine wildlife ecosystem has been badly fragmented by hundreds of mines and their ore extraction paths on both sides of the interstate border, where hardly much forest left for sustenance & existence of Wildlife. But this mine is a semi-mechanized mine and transportation is directly from the mine site up to Joruri railway siding on the Joda-Banspani road with minimal involvement of forest/village roads. Accordingly, this proposal may be considered for diversion, provided that the 46 ha out of the 80.826 ha un-diverted forest land having 0.4 to 0.5 veg. density which is quite substantial compared to the forests around in the heavily disturbed mining zone. It should be maintained as green cover, not depriving the wildlife further, which is also reiterated by DIG (Central) in his Site Inspection Report, till a reasonably comparable area has not reclaimed and vegetated.
- c. Further, while examining the recommendation of the State Govt., it is observed that out of 64.260 ha of Sabik Kisam forest land, 27.386 ha of land is broken up and remaining 36.874 ha is virgin land. The broken up Sabik forest Kisam land is under use of various mining activities including mining with storing of mineral/ ore dumping of OB dumps, construction of building/ road. The user agency was requested by this office to clarify how the mining was continuing over the broken up forest land without obtaining approval under FC Act. The user agency has replied/ clarified that as per Ministry guideline issued vide letter No. 11-78/2016-FC dated 10.03.2015, approval of the forest land is to be obtained within one year which was further extended by Ministry up to 31.12.2016 but the said diversion was not obtained by the user agency. It was also informed that mining is continuing in the broken up Sabik Kisam forest land as per Hon'ble High Court interim order issued in respect of WP (C) no. 14118/2016. Now, the matter is sub-judice in the Hon'ble High Court of Odisha. From the above, it appears that the State Government will submitting the proposal vide letter dated 01.01.2019 perhaps has not taken into consideration the fact that mining was continuing per interim order of Hon'ble High Court of Odisha and information regarding this was not submitted to the Ministry along with the proposal. Further, as per para 2.1 (vi) of the earlier guidelines "The State Govts. are advised not to consider/ process cases, which are pending in various courts or sub-judice, to avoid all sorts of administrative and legal complication.

Considering it an old operating mine and being a semi-mechanized mine with close by railway siding causing comparatively lesser disturbance to the forest & wildlife, is **recommended for consideration of diversion by**

**the FAC/Ministry. However, considering the legal issues and the case is still being sub-judice, the Ministry may take a view on the proposal.**

- (xvi) **DIG of Forests shall give detailed comments on whether there are any alternative routes/alignment for locating the project on the non-forest land:**

It is site specific and it cannot be shifted to any other forest or non-forest land.

- (xvii) **Utility of the project:**

Mining has to be done in forest areas, dumping of overburden linked with mining operation is planned in forest land to be diverted. However, certain essential activities which shall be temporarily required considering its proximity with the mining pits viz., storage of mineral and top soil, mineral separation plant shall require fresh forest land (non-mineralised zone). Accordingly 80.826 ha of forest land is required for diversion to fulfill the supply of manganese ore to lessee's Ferro Manganese Plant at Joda, company's steel plants and other plants.

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

As stated by the project proponent employment generation will be 1050 directly and 500 indirectly.

- (xviii)

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

No.

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

At some of the places open land contains very old trees.

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

It is a Sal bearing area with moderate density. There are many pole size Sal crops along with associated species. The applied area does not form part of any national Park, Wildlife Sanctuary, Biosphere Reserve, Tiger reserve, Elephant Corridor, etc. Movement of wild elephants is often witnessed in the applied forest land and nearby RF. The applied site falls under elephant habitat zone-2 as mentioned by ORSAC, Bhubaneswar.

- (xix) **Situation with respect to any Protected Area:**

The proposed site for diversion is nearer to Baitarani Reserve Forest and elephants have continuity in their movement through this patch of forest. Similipal Tiger and Biosphere reserve is around 71 km and Badarma wildlife sanctuary is around 110 km.

- (xx) **Any other information relating to the project:**

The mine has two quarries. Their Immediate expansion needs more areas for dumping of over burden. The balance areas for mining of the lease has not yet been explored for estimation of the reserves. The user agency may first get the area explored before any damage to the existing forest vegetation. It has about 46 Ha of MDF as per DSS

analysis containing mostly and it's associates. These forests serve as a link to Baitarani RF for movement of elephants. The user agency has submitted the final mine closure plan for the surrendered area 470.710 ha out of 643.710 ha. It is in process of complying the stipulations of Regional Office, IBM, Bhubaneswar vide their letter No. FMCP/OTFM/09-ORI/BHU/2015-16 dated 01.09.2016 (Pg. 720-721/c). After the stipulations are complied the surrendered area will be accepted by the Collector, Keonjhar. The mining operation is going on in the broken up Sabik land of 27.386 ha as per the stay order dated 22.08.2016 of Hon'ble High Court of Odisha in WP No.14118 of 2016 allowing the User agency to continue mining in broken up Sabik land . In the writ petition the User agency has challenged the guidelines issued by MoEF&CC dated 10.03.2015 and 09.03.2016 and the letter issued by DFO, Keonjhar vide his letter dated 30.07.2016 and letter of Dy. Director of Mines, Joda Circle dated 09.08.2016 for stoppage of mining operation on Sabik Kissam forest land without FC. The Matter is *Sub-Judice* as the final judgement has not been delivered.

5. The instant proposal has also been analyzed by the DSS Cell of this division and their report may kindly seen at F/X. The major observations are as under:

**(a) In Case of diversion of forest land:**

- (i) There is no WLS/ PA/ Tiger Reserve or Tiger Corridor is located within 10 Km radius of proposed area for diversion.
- (ii) Proposed area for Diversion classified as Not in High Conservation Value (HCV) Zone or Not-Inviolate based on Decision Rule No. 1 & 2.
- (iii) It is mention in the SIR that the applied area falls under elephant habitat zone-2 as per wildlife zonation map prepared by ORSAC, Bhubaneshwar (page no.710).
- (iv) **Forest Cover:** Out of total forest area proposed for diversion, 16 ha of land is characterized with Very Dense Forest, 11 ha of land is having Moderately Dense Forest, 12 ha. of land as Open forest, 11 ha. of land as Scrub and 45 ha. of land as Non Forest in terms of forest classes (as per the ISFR 2015) based on the interpretation of satellite data period 2013-2014.
- (v) **Forest Types details:** 3C/2e (iii) Moist peninsular Valley Sal forest: 37 ha. and Non-Forest: 43 ha.

**(b) In Case of diversion of forest land:**

- (i) Two CA patches having area 13.798 ha. & 64.261 ha. has been proposed over non-forest land.
- (ii) As per DSS analysis 43 ha. is falling in moderately dense vegetation (analysis done at RO, Bhuvneshwar). Therefore, 21.261 ha. out of 64.261 ha. is found suitable for plantation.
- (iii) Total suitable area for plantation out of two proposed CA patches is 39.059 ha.( 13.798 ha + 21.261 ha). DFO Keonjhar has accordingly identified 99.00 ha. degraded forest in Renda PRF under Telkoi Range of Keonjhar Division for planting balance seedlings.
- (iv) Calculated area of the KML file/ shape files of CA land :

S.No.	CA Patch	Legal Status	Given Area in Ha.	Calculated Area in Ha.
1.	Patch-1	Non-Forest	13.798	13.851
2.	Patch-2	Non-Forest	64.261	62.869
3.	Patch-3	Degraded Forest	99.000	98.995
<b>Total</b>			<b>177.059</b>	<b>175.715</b>

- (v) Proposed CA patches are partially covered with Moderately dense vegetation (canopy density 40-70%) as seen through high resolution Google Earth Imagery.
- (vi) Out of total proposed CA area, 52 ha. of land having the canopy density of Moderately dense forest that with 100 ha. of land classified under Open Forest Category and 24 ha of land as Non-Forest land in terms of forest classes (as per the ISFR 2015) based on the interpretation of satellite data period 2013-2014.
- (vii) Patch-wise details of proposed CA patches w.r.t density classes (based on interpretation of satellite data period 2013-14) as per ISFR 2015, are as follows:

S. No.	Patch	Very Dense Forest	Moderately dense Forest	Open Forest	Scrub	Non-Forest land	Remarks
1.	Patch-I	0	5	2	0	7	No encroachment is visible.
2.	Patch-II	0	43	20	0	0	Partially covered by Moderately Dense Vegetation and small portion of rocky land is also present.
3.	Patch-III (CA on degraded forest land)	0	4	78	0	17	Partially covered by Moderately Dense Vegetation.
<b>Total</b>		<b>0</b>	<b>52</b>	<b>100</b>	<b>0</b>	<b>24</b>	

- i. Legal status of CA land (13.798 ha. & 64.261 ha.) cannot be ascertained through DSS due to unavailability of RFA boundary over DSS portal.
- ii. CA land (area: 13.798 ha.) is adjacent to identified 99.00 ha. degraded forest land.

The facts related to the above proposal may be placed before FAC in its forthcoming meeting scheduled to be held in the month of June, 2019 for their examination and appropriate recommendation.

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