Sub: Compliance status of "In-principle/ Stage-I" approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favor of M/s Hindustan Copper Limited in Singhbhum district, Jharkhand – reg.

Point-wise compliance status of "In-principle/ Stage-I" approval for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favor of M/s HCL in Singhbhum district, Jharkhand is as below:

S. No.	Compliance condition	Status of Compliance	
1.	Legal status of the diverted forest land shall remain unchanged;	Legal status of the diverted forest land would be kept unchanged. In this regard, an undertaking is being enclosed herewith.(**Annexure-1)**	अपयोजित वन भूमि की वैधानिक स्थिति अपरिवर्तित रखी जाएगी। तत्संबंधी वचनबद्धता प्रमाण-पत्र संलग्न की जा रही है **(अनुलग्नक-1)**
2.	The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal in accordance with the guidelines in the matter;	Vide letter no. 643 dated 24.03.2022 of DFO, Jamshedpur, a demand of Rs. 52,61,256.00 was raised on account of NPV against diversion of 65.52 ha of forest land for underground mining in Surda Mining Lease. Subsequently, the User Agency has deposited the said amount in CAMPA account vide UTR No. SBINR52022032975102374 dated 29.03.2022. (**Annexure-2A**). Vide letter no. 3140, dated 16.12.2024 of DFO, Jamshedpur demanded a differential amount of NPV, amounting to Rs. 27,88,466.00 Which was deposited in the CAMPA fund account vide UTR No. SBIN4243566198902 dated 21.12.2024	24.03.2022 द्वारा सुरदा खनन लीज के तहत् भूमिगत खनन हेतु 65.52 हे० वन भूमि के अपयोजन हेतु NPV मद में कुल 52,61,256.00 रू० की माँग की गई थी। तत्पश्चात् प्रयोक्ता अभिकरण द्वारा UTR No. SBINR52022032975102374 दिनांक 29.03.2022 के माध्यम से उक्त राशिकैंपा अकाउंट में जमा दिया गया है। **(अनुलग्नक-2A)**. 16.12.2024 द्वारा NPV की 27,88,466.00 रुपये की राशि की मांग की गई, जिसे UTR No. SBIN**4243566198902** दिनांक **21.12.2024** के माध्यम से कैंपा फंड खाते में जमा कर दिया गया है। **(अनुलग्नक-2B)**.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
ढाक-मऊभण्डार-832102
झारखण्ड

		(Annexure-2B).	
3.	At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;	User Agency undertakes to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India. An undertaking in this regard is being enclosed herewith. **(Annexure-3)**	माननीय सर्वोच्च न्यायालय के अंतिम आदेशानुसार NPV मद अभिकरण उक्त राशि जमा करने हेतु राज़ी हैं। तत्संबंधी वचनबद्धता प्रमाण-पत्र संलग्न की जा रही है। (अनुलग्नक-3)
4.	The Integrated Wildlife Management Plan approved by the PCCF(Wildlife)/CWLW shall be implemented at the cost of the user agency.	The Integrated Wildlife Management Plan for Surda Mining Lease prepared by the User Agency has been approved by PCCF, Wildlife/CWLW, Jharkhand vide office order no. 14 dated 24.01.2022 (**Annexure-4**). The said Plan is already under implementation at the cost of the User Agency.	सुरदा खनन लीज के लिये प्रयोक्ता अभिकरण द्वारा सूत्रित एकीकृत वन्यप्राणी प्रबंधन योजना की स्वीकृति प्रधान मुख्य के कार्यालय आदेश सं०14 दिनांक 24.01.2022 (अनुलग्नक-4)द्वारा प्रदान की गई है। उक्त योजना का कार्यान्वयन अभिकरण के खर्च पर पहले से ही किया जा रहा है।
5.	The State of Jharkhand shall reconcile the penal CA amount deposited by the user agency with the state of Bihar. The steps for completion of penal CA shall be taken in case the same has not yet been done by the State of Bihar. A detailed report in this regard shall be submitted;	Vide Letter No. 8-64/93-FC dated 15.05.1998, MoEF granted renewal of erstwhile Mosabani Mining Lease over 189.74 ha (47.49 for surface use; already broken up, and 142.25 ha for underground mining) of forest land subject to payment of cost for penal CA over 94.98 ha. In compliance of this condition, the User Agency, vide Letter No. HCL/ICC/ED/GOVT dated 11.04.1998 (**Annexure-5**) has already deposited Rs. 15,19,680/- towards the cost of the said penal CA. Since the amount has been deposited before the year 2000 i.e., before the State of erstwhile Bihar was	पर्यावरण एवं वन मंत्रालय के पत्रांक 8-64/93-FC दिनांक 15.05.1998 द्वारा पूर्ववर्ती मोसाबनी खनन क्षेत्र के तहत 189.74 हे० वन भूमि(सतह इस्तेमाल हेतु पूर्व से खंडित 47.49 47.49 हे० तथा 142.25 हे०, भूमिगत खनन हेतु) के लिएइस शर्त कि प्रयोक्ता अभिकरण द्वारा 94.98 हे०भूमि पर दंडात्मक CA हेतु राशि जमा की जाएगी। इस शर्त के अनुपालन के क्रम में प्रयोक्ता अभिकरण के पत्रांक HCL/ICC/ED/GOVT दिनांक 11.04.1998 (अनुलग्नक-5)द्वारा कुल रू०15,19,680/- की राशि जमा कर दी गई है। चूँकि यह राशि वर्ष 2000 के पूर्व, अर्थात् अतः झारखंड राज्य द्वारा उक्त राशि के reconciliation हेतु आवश्यक कदम उठाये जा सकते हैं।

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

		bifurcated into Bihar and Jharkhand, the State of Jharkhand may take appropriate steps to reconcile the payment of the aforesaid amount.	
6.	The State Government shall upload the KML files of the area under diversion in the e-Green watch portal of FSI, before handling over forest land to the user agency;	KML files of the area under diversion have been submitted along with Form A (Part 1) application as well as while replying to the queries raised through EDS during scrutiny at different levels. Further action in this regard may kindly be undertaken by the State Forest Deptt.	परEDS के माध्यम से पृक्छा-अनुपालन हेतु उपलब्ध कराया गया है। इस संदर्भ में राज्य वन विभाग के स्तर पर आगे की कार्रवाई की जा सकती है।
7.	All the funds received from the user agency under the project shall be transferred/deposited in CAMPA account only through e-portal (https://parivesh.nic.in/); Amount deposited through other mode will not be accepted as compliance of the Stage-I clearance;	All the funds for this proposal have been deposited by the user agency in the CAMPA account only as per demand note raised by the Divisional Forest Officer, Jamshedpur.	प्रयोक्ता अभिकरण द्वारा इस प्रस्ताव के विरुद्ध वन प्रमंडल कुल राशि कैंपा अकाउंट में जमा की गई है।
8.	The user agency will protect and demarcate the diverted forest land on surface, in consultation with State Forest Department by construction of a stone wall/trench/barbed wire fencing with angle iron and will maintain the fencing during entire period of life of the mine.	A Rehabilitation-cum-Enrichment Plan of all the forest land located within the lease area as well as its buffer (100m) has been formulated by the User Agency (Enclosed as **Annexure-6**). This plan includes demarcation and protection of forest land within the lease area as well as its 100m buffer, by construction of appropriate fencing and its maintenance. The User Agency undertakes to ensure this task as per direction of the State Forest	सभी वन भूमि का पुनर्वास-सह-संवर्धन योजना, जो पट्टा क्षेत्र के क्षेत्र के भीतर और इसके बफर (100 मीटर) के भीतर स्थित है, प्रयोक्ता अभिकरण द्वारा तैयार की गई है (संलग्न 6)। इस योजना में पट्टा क्षेत्र के भीतर और इसके 100 मीटर मीटर बफर के भीतर वन भूमि का सीमांकन और संरक्षण शामिल है, जिसमें उपयुक्त बाड़ेबंदी का निर्माण और उसकी देखभाल भी की जाएगी। प्रयोक्ता अभिकरण यह कार्य राज्य वन विभाग के निर्देशों के अनुसार सुनिश्चित करने का वचन देती है। तत्संबंधी वचनबद्धता प्रमाण पत्र परिशिष्ट-7 के रूप में संलग्न की जा रही है।

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

		Department. An Undertaking to this effect is being enclosed as **Annexure-7**.	
9.	User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance;	The Rehabilitation-cum-Enrichment Plan referred under Para 8 above also includes the measures to be undertaken towards restocking and rejuvenating the degraded open forests (having crown density less than 0.4) by gap planting and soil & moisture conservation over the lease area and its 100m buffer. The plan is enclosed as **Annexure-8.**	उपर्युक्त पारा 8 के तहत उल्लिखित पुनर्वास-सह-संवर्धन योजना में पट्टा क्षेत्र और इसके 100 मीटर बफर क्षेत्र में गैप प्लांटिंग और मृदा एवं जल संरक्षण के माध्यम से अवकृष्ट खुले वन (जिनका क्राउन घनत्व 0.4 से कम है) को पुनर्जीवित पुनर्जीवित करने के लिए किए जाने वालेउपाय भी शमिल हैं। यह योजना परिशिष्ट-8 के रूप में संलग्न की गई है।
10.	The surface area of diverted land for underground mining shall be rehabilitated and enriched by using indigenous species with participation of local people at the project cost. The user agency shall prepare the plan for the purpose in consultation with state forest Dept.	The Plan referred to above complies with this condition. An undertaking in this is being enclosed as **Annexure-9.**	ऊपर उल्लिखित योजना इस शर्त के अनुपालन में है। तत्संबंधी वचनबद्धता प्रमाण-पत्र अनुलग्नक-9 के रूप में संलग्न किया जा रहा है।
11.	The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to	The de-siltation plan of all the ponds located within 5 km radius of the lease boundary has been prepared in consultation with the State Forest Department. The plan is being attached herewith as **Annexure-10** The User Agency undertakes to de-silt these ponds regularly. An undertaking in this regard is being enclosed as **Annexure-11.**	लीज सीमा के 5 किमी रेंज में स्थित सभी तालाबों की डी-सिल्टेशन योजना राज्य वन विभाग के साथ परामर्श करके तैयार की गई है। यह योजना परिशिष्ट-10के रूप में संलग्न की जा रही है। प्रयोक्ता अभिकरण इन तालाबों को नियमित रूप से डिसिल्ट करने का वचन देती है। इस संदर्भ में एक वचनबद्धता प्रमाण पत्र परिशिष्ट-11के रूप में संलग्न की जा रही है।

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

	mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF& CC before Stage-II approval;		
12.	The State Government and user agency shall monitor the mining induced subsidence and take appropriate mitigative measures to ensure that it remains within the permissible limit;	In relation to monitoring of mining induced subsidence, the User Agency has conducted surface strain study by 3D subsidence prediction model through IIT-ISM, Dhanbad for Surda Mining Lease and it has been found that subsidence shall be negligible. The report has been uploaded in Form A (Part 1). However, as advised by State Forest Deptt, real time monitoring of subsidence has already been undertaken through IIT-ISM, Dhanbad. Copy of work order is enclosed as **Annexure-12.**	**खनन-प्रेरित** subsidence **के अनुश्रवण के संदर्भ में प्रयोक्ता है एवं उक्त अध्ययन में** subsidence **नगण्य पाया गया है। संबंधित प्रतिवेदन** Form A (Part-1) **में अपलोड किया गया है। है। वर्क ऑर्डर की प्रति अनुलग्नक-12के रूप में संलग्न की जा रही है।**
13.	Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval:		
i.	Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three year with effect from the issue of Stage II clearance in accordance with the approved Plan in consultation with the State Forest Department.	The Rehabilitation-cum-Enrichment Plan referred above, with respect to the Lease Area and its 100m Buffer, has been prepared in consultation with the State Forest Department. The mitigative measures to minimize soil erosion and choking of streams on the principle of drainage line treatment have been proposed under the said plan.	**ऊपर उल्लिखित पुनर्वास-सह-संवर्धन योजना, पट्टा क्षेत्र और इसके** 100 **मीटर बफर के संदर्भ में, राज्य वन विभाग के साथ परामर्श करके तैयार की गई है। उक्त योजना के तहत मृदा अपरदन को कम करने और जलधाराओं के अवरुद्ध होने को रोकने के लिए जलनिकासी रेखा उपचार के सिद्धांत पर आधारित उपाय प्रस्तावित हैं।**

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

ii.	Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;	The Rehabilitation-cum-Enrichment Plan referred above includes plantation of appropriate species in the mining lease area.	उपर्युक्त पुनर्वास-सह-संवर्धन योजना में खनन पट्टा क्षेत्र में उपयुक्त प्रजातियों का पौधारोपण शामिल है।
iii.	Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;	Construction of check dams and other soil and moisture conservation structures in the mining lease area have been proposed under the Rehabilitation-cum-Enrichment Plan.	पुनर्वास-सह-संवर्धन योजना के तहत खनन पट्टा क्षेत्र में चेक डैम्स और अन्य मृदा और जल संरक्षण संरचनाओं का निर्माण प्रस्तावित किया गया है।
iv	Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 280; and	Surda being an underground copper mine, the problem of overburden dump is minimal here. Most of the waste rocks etc. are used for underground back-filling. As of now, two very small dumps (Area: 0.39 ha & 0.19 ha) are located in the lease area which are quite old and therefore, dead. Plants and bushes have come over these dump areas and these do not need stabilization as such.	सुरदा एक भूमिगत तांबा खदान होने के कारण, यहाँ पर ओवरबर्डन डंप की समस्या न्यूनतम है। अधिकांश अपशिष्ट चट्टानें आदि भूमिगत बैक-फिलिंग के लिए उपयोग की जाती हैं। हैं। वर्तमान में, पट्टा क्षेत्र में दो बहुत छोटे डंप (क्षेत्र: 0.39 हेक्टेयर और 0.19 हेक्टेयर) स्थित हैं, जो काफी पुराने हैं और इसलिए, मृत हो चुके हैं। इन डंप क्षेत्रों पर पौधे और झाड़ियाँ उग चुकी हैं और इन्हें स्थिरीकरण की आवश्यकता नहीं है।
15.	No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.	As the project is totally underground mining project, no damage to top soil is envisaged due to mining activity at any stage. In this regard, an undertaking is being enclosed as **Annexure-13.**	कार्यों के कारण टॉप soil के क्षति की कोई संभावना नहीं है। तत्संबंधी वचनबद्धता प्रमाण-पत्र अनुलग्नक-13के रूप में संलग्न किया जा रहा है।
16.	The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan	This project is an underground mining project. Mining operations will be undertaken with due care for reclamation of the underground mined-out area as per the provisions of IBM approved Mining Plan.	किया जाएगा। यहाँ यह उल्लेखनीय है कि खदान गतिविधि में भूमिगत mined-

एस० एस० चौधरी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर [illegible]
(भारत सरकार का [illegible])
इन्डियन कॉपर [illegible]
डाक-मऊभण्डार-832103
झारखण्ड

	shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concerned Regional Office may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;	It is pertinent to mention here that reclamation of the underground mined out area is a continuous and inseparable part of mining activity for this project, which shall be done through filling of mill tailings. Annual Report on its implementation shall be submitted to State Forest Deptt and concerned Regional Office, MoEF& CC, GoI on or before 30th April every year for the preceding financial year. An undertaking in this regard is being enclosed as **Annexure-14.**	mined-out क्षेत्र का reclamation एक सतत् एवं अविच्छेद्य हिस्सा है तथा इसे mill tailings को भर कर किया जाता है। खनन योजना के कार्यान्वयन का वार्षिक प्रतिवेदन राज्य वन सरकार को हर वर्ष 30 अप्रैल के पूर्व समर्पित किया जाएगा। तत्संबंधी वचनबद्धता प्रमाण-पत्र अनुलग्नक-14के रूप में संलग्न किया जा रहा है।
17.	Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;	In compliance of this condition, an undertaking is being enclosed as **Annexure-15.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-15के रूप में संलग्न किया जा रहा है।
18.	The surface area over the mine shall not be allowed to be used for construction of residential buildings or labor camps;	In compliance of this condition, an undertaking is being enclosed as **Annexure-16.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-16के रूप में संलग्न किया जा रहा है।
19.	The State Government shall ensure that green cover on the ground over the underground part of mine shall be	In compliance of this condition, an undertaking is being enclosed as **Annexure-17.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-17के रूप में संलग्न किया जा रहा है।

एस० एस० सेनी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

	maintained as forest and supplemented by plantations in gaps at the cost of user agency;		
20.	The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;	Environmental Clearance for Surda Mining Lease, as per the provisions of the Environmental (Protection) Act, 1986, has been granted by MoEF & CC, GoI vide letter dated 30.05.2022 over an area of 323.16 ha and copy of the same is enclosed as **Annexure-18.** The amended EC letter for Surda Mining Lease over the Lease area of 388. 68 ha has been issued vide letter dated 25.07.2024 and copy of the amendment letter is enclosed as **Annexure-19**.	द्वारा पर्यावरणीय क्लीयरेंस प्राप्त है। उक्त पत्र की प्रति अनुलग्नक-18 के रूप में संलग्न की जा रही है। 388.68 हेक्टेयर के पट्टा क्षेत्र पर सुरदा खनन पट्टे के लिए संशोधित EC पत्र दिनांक 25.07.2024 के पत्र द्वारा प्रदान किया गया है और संशोधन पत्र की प्रति अनुलग्नक-19 के रूप में संलग्न है।
21.	No labor camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the laborers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;	In compliance of this condition, an undertaking is being enclosed as **Annexure-20.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-20के रूप में संलग्न किया जा रहा है।
22.	The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;	The boundary of the diverted forest land and mining lease area, duly demarcated on ground at the project cost with standard size pillars on the site as prescribed with details (Sl. No, distance from pillar to pillar and GPS co-ordinates) inscribed on each pillar have been put in place. The details are being enclosed as **Annexure-21.** For an underground mining lease,	अपयोजित वन भूमि तथा खनन लीज क्षेत्र का सीमांकन प्रोजेक्ट कॉस्ट पर स्टैण्डर्ड साइज के पिलर्स द्वारा किया गया है तथा पिलर्स पर सीरियल नंबर अंकित कर दिया गया है। इसकी विवरणी अनुलग्नक-21पर द्रष्टव्य है। निर्गत Consolidated Guidelines दिनांक 29.12.2023 के कंडिका7.9 में विहित प्रावधानों के तहत् भूमिगत खदानों के

एस० एस० सेनी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

		demarcation of safety zone is not required as per the provisions laid down under clause 7.9 (i) of the consolidated guidelines and clarifications on Van (Sanrakshanevam Samvardhan) Adhiniyam, 1980, Van (Sanrakshanevam Samvardhan) Rules, 2023, issued by MoEF& CC dated 29.12.2023.	मामलों में safety zone के सीमांकन की आवश्यकता नहीं है।
23.	The layout plan of the mining plan/ proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal;	In compliance of this condition, an undertaking is being enclosed as **Annexure-22**.	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-22के रूप में संलग्न किया जा रहा है।
24.	The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;	In compliance of this condition, an undertaking is being enclosed as **Annexure-23.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-23के रूप में संलग्न किया जा रहा है।
25.	No damage to the flora and fauna of the adjoining area shall be caused;	In compliance of this condition, an undertaking is being enclosed as **Annexure-24**.	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-24 के रूप में संलग्न किया जा रहा है।
26.	The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project;	In compliance of this condition, an undertaking is being enclosed as **Annexure-25.**	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-25 के रूप में संलग्न किया जा रहा है।
27.	The User Agency shall submit the annual self -compliance report in respect of the above stated conditions	In compliance of this condition, an undertaking is being enclosed as **Annexure-26**.	इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-26के रूप में संलग्न किया जा रहा है।

एस० एस० सेनी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊमण्डार-832103

	to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;		
28.	Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife shall be carried with by the State Government and user agency; and	In compliance of this condition, an undertaking is being enclosed as **Annexure-27.**	**इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-27के रूप में संलग्न किया जा रहा है।**
29.	Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as issued by this Ministry on dated 29.12.2023.	In compliance of this condition, an undertaking is being enclosed as **Annexure-28.**	**इस शर्त के अनुपालन में वचनबद्धता प्रमाण-पत्र अनुलग्नक-28के रूप में संलग्न किया जा रहा है।**

As per the guideline under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, NoC Certificate has been issued for total forest area of 65.52 ha in favour of Surda Mining Lease, M/s. Hindustan Copper Limited vide Memo no. 507, dated 06.03.2025, the copy of same is attached as **Annexure-29.**

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एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph: (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 1

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that the legal status of the diverted forest land of 65.52 ha within Surda Mining Lease would be kept unchanged.

This undertaking is being submitted towards compliance of condition no 1 as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Date: 22.07.2024
Place: Moubhandar

कार्यालयः वन प्रमण्डल पदाधिकारी, जमशेदपुर वन प्रमण्डल, जमशेदपुर।

(सी० एच० एरिया रोड नं० 1, जमशेदपुर–831001)
दूरभाष संख्या– 0657–2231017, फैक्स–0657–2231017, ई–मेल– dfo-jamshedpur@gov.in

पत्रांक: 643 /जमशेदपुर दिनांक: 24/03/2022

प्रेषक,

वन प्रमंडल पदाधिकारी,
जमशेदपुर वन प्रमंडल,
जमशेदपुर।

सेवा में,

श्री एस० डे,
कार्यकारी निदेशक एवं यूनिट हेड,
हिन्दुस्तान कॉपर लिमिटेड,
मउभण्डार, घाटशिला।

विषय :– Application for revised demand of 50% NPV for remaining forest area in respect of /Rakha Mining Lease (785.091ha), Kendadih Mining Lease (1139.60ha) and Surda Mining Lease (388.68 ha) held by M/s Hindustan Copper Limited.

प्रसंग :–

1. भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र संख्या F.No. 11-51/2015-FC दिनांक 01.04.2015, पत्र सख्या F.No. 11-599/2014-FC दिनांक 01.04.2015, पत्र सख्या F.No. 11-85/2016-FC दिनांक 31.03.2016 एवं पत्र सख्या F.No. 5-2/2017-FC दिनांक 28.03.2019

2. प्रधान मुख्य वन संरक्षक–सह–कार्यकारी निदेशक, बंजर भूमि विकास, बोर्ड, झारखण्ड, राँची का ज्ञापांक 360 दिनांक 23.02.2021, ज्ञापांक 620 दिनांक 19.05.2021 एवं पत्रांक 1203 दिनांक 29.09.2021

3. मेसर्स हिन्दुस्तान कॉपर लिमिटेड का पत्रांक HCL/ICC/DGM/Surda/FC/2021 दिनांक 13.03.2021, पत्रांक HCL/ICC/DGM/ICC/FC/ICC/2021 दिनांक 16.07.2021, पत्रांक HCL/ICC/DGM/ICC/FC/2021 दिनांक 11.11.2021, एवं पत्रांक HCL/ICC/ED/Surda/FC /2022 दिनांक 17.02.2022

4. क्षेत्रीय मुख्य वन संरक्षक, सिंहभूम, जमशेदपुर का ज्ञापांक 3266 दिनांक 30.12.2020, ज्ञापांक 304 दिनांक 04.02.2021, पत्रांक 1878 दिनांक 09.10.2021 एवं पत्रांक 518 दिनांक 16.03.2022

5. इस कार्यालय का पत्रांक 554 दिनांक 03.03.2021, पत्रांक 797 दिनांक 19.03.2021 एवं पत्रांक 1524 दिनांक 17.07.2021

महाशय,

उपरोक्त विषयक प्रसांगिक पत्रों के संदर्भ में सूचित करना है कि वन पर्यावरण एवं जलवायु परिवर्तन विभाग, झारखण्ड सरकार के पत्र संख्या वनभूमि–09/2010–2440 व०प०, राँची दिनांक 25.08.2021 तद्नुसार प्रधान मुख्य वन संरक्षक–सह–कार्यकारी निदेशक, बंजर भूमि विकास, बोर्ड, झारखण्ड, राँची का पत्रांक 1203 दिनांक 29.09.2021 एवं भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र संख्या F.No. 5-2/2017-FC दिनांक 28.03.2019 में निहित मार्गनिदेशिका (Comprehensive Guideline) की कंडिका 3.4 एवं कंडिका 3.5 के आलोक में आपके द्वारा सुरदा माईनिंग लीज क्षेत्र हेतु 3D-Subsidence Prediction Model पद्धति द्वारा Surface Strain Prediction

खान एवं अभियांत्रिकी विभाग, भारतीय प्रौद्योगिकी संस्थान (इंडियन स्कूल ऑफ माईन्स) धनबाद द्वारा करवाया गया।

विदित हो कि दिनांक 15.02.2022 को प्रो० यू० के० सिंह एवं प्रो० धीरज कुमार खान एवं अभियांत्रिकी विभाग, भारतीय प्रौद्योगिकी संस्थान (इंडियन स्कूल ऑफ माईन्स) धनबाद द्वारा दिये गये प्रस्तुतिकरण के आलोक में 3D-Subsidence Modelling for prediction of surface subsidence, Strain and subsidence slope due to stoping (mining) at Surda Mining, HCL से संबंधित रिपोट समर्पित की गयी है।

रिपोर्ट के अवलोकन से यह ज्ञात होता है कि इसमें Numerical modeling approach का प्रयोग किया गया है। विदित हो कि Numerical modeling approach is not the true representation of the physical model.

संबंधित रिपोर्ट के पृष्ठ संख्या में यह वर्णित किया गया है कि Maximum surface tensile strain of magnitude 2.2mm/m will occur after stage – 4 i.e. 18 Level stopping compared to the virgin state. रिपोर्ट के अन्त में दी गई अनुशंसा में चिन्हित subsidence monitoring stations के 3-D Co-ordinates की Periodic Monitoring की अनुशंसा की गई है।

अतः रिपोर्ट में वर्णित सभी Strain यथा 3.3mm/m, 4.3mm/m, 5.5mm/m, 3.9mm/m, 2.4mm/m, 6.7mm/m, 2.76mm/m, 2.14mm/m के परिपेक्ष्य में एवं भारत सरकार के मार्ग निर्देशिका के आलोक में सुरदा माईनिंग क्षेत्र के लिये भूमिगत खनन (under ground mining) के Surface strain predicted by 3-D subsidence prediction model को 5mm/m to 10mm/m मानते हुए 10% of normal rates of NPV पर निर्धारित किया जाता है।

NPV की राशि निम्नवत है :–

क्रम संख्या	विवरणी	श्रेणी	वनभूमि का क्षेत्रफल (हे० में)	दर प्रति हेक्टर	कुल एन०पी०वी० राशि	भुगतेय एन०पी०वी० राशि (10% of normal NPV)
1	एन०पी०वी०	Eco Class III	65.52	803000.00	52612560.00	5261256.00

अतः अनुरोध है कि एन०पी०वी० की राशि 52,61,256.00 (बावन लाख एकसठ हजार दो सौ छप्पन रूपया) मात्र CAMPA Fund में e-portal (https://parivesh.nic.in के माध्यम से स्थान्तरित/जमा कर अभिलेख के साथ इस कार्यालय में प्रतिवेदन समर्पित करने की कृपा करें।

विश्वासभाजन,

24/03/2022

वन प्रमंडल पदाधिकारी
जमशेदपुर वन प्रमंडल
जमशेदपुर।

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. घाटशिला - 832303
जिला-पूर्वी सिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
(A Govt. Of India enterprise)
INDIAN COPPER COMPLEX
P.O .GHATS ILA - 832303
Ph: (06585) 225878 (Unit Head),
Website : www.hindustancopper.com

CIN: L27201WB1967GOI028825

Ref: HCL/ICC/ED/ICC/Surda Lease/2022 Date: 29.03.2022

To,
The Divisional Forest Officer,
Jamshedpur Forest Division,
Jamshedpur.

Sub: Payment of NPV for remaining forest area (65.52Ha) in respect of Surda Mining lease of M/s Hindustan Copper Limited

Ref: Your letter No. 643/Jamshedpur Dated 24.03.2022- NPV demand note. (Annexure –I)

Madam,

This has reference to the subject matter cited above. In this regard kindly be informed that NPV amounting of Rs. 52,61,256.00 (Rupees Fifty Two Lakh Sixty One Thousand Two Hundred Fifty Six only) has been deposited by us in CAMPA fund through E-portal (https://parivesh.nic.in) vide UTR no.SBINR52022032975102374 dated 29.03.2022 (Annexure-II) for remaining forest area (65.52 Ha) within Surda mining lease.

We shall be grateful if you kindly do the further needful in this regard.

Thanking You,

Yours faithfully,

(S. Dey)
Executive Director & Unit Head
Indian Copper Complex, Ghatsila

Encl: As stated above

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ओ. घाटशिला - 832303
जिला - पूर्वी सिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
INDIAN COPPER COMPLEX
P.O .G H A T S I L A - 832303
Ph : (06585) 225878 (G .M.)
225492 (DGM-W), 225938(DGM-ES)
225870 (G M – H R) 225862 (Finance)
225869(Purchase), Fax : (06585)225806
Email:hclicc@sify.com/hclicemat@sify.com
Website : www.hindustancopper.com

Date : 29 MAR 2022

To,
The Chief Manager,
State Bank of India,
Moubhandar Branch,
Moubhandar.

Sub: RTGS / NEFT payment to Jharkhand Campa.

Dear Sir,

Please debit Rs. 52,61,256.00 (Rupees fifty two lakhs sixty one thousand two hundred fifty six only) to our Cash Credit A/c. No. 11524102778 with you and credit **A/c. No. 150725841841449** of **Jharkhand Campa.** Bank details of beneficiary is shown below details of which is attached herewith.

BANK NAME	:	UNION BANK OF INDIA
BRANCH NAME & ADDRESS	:	LODHI COMPLEX BRANCH, BLOCK 11, CGO COMPLEX, PHASE 1, LODHI ROAD, NEW DELHI-110003.
IFSC CODE OF BENEFICIARY BRANCH	:	UBIN0903710
BANK ACCOUNT NUMBER	:	**150725841841449**

Bank charges if any may please be debited to our account.

Thanking you,

Yours faithfully,

For, HINDUSTAN COPPER LIMITED.
INDIAN COPPER COMPLEX

Authorised Signatory Authorised Signatory

29/3/2022

SBI/HRS/2022032905/02394

AGENCY COPY

यूनियन बैंक Union Bank of India

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 29-03-2022

Agency Name.	Hindustan Copper Limited
Application No.	5841841449
MoEF/SG File No.	NA
Location.	JHARKHAND
Address.	Tamra Bhawan, 1, Ashutosh Chowdhury AvenueKolkata
Amount(in Rs)	5261256/-

Amount in Words :Fifty-Two Lakh Sixty-One Thousand Two Hundred and Fifty-Six Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	JHARKHAND CAMPA
IFSC Code:	UBIN0903710
Pay to Account No.	150725841841449 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India Lodhi Complex Branch, Block 11,CGO Complex, Phase I, Lodhi Road, New Delhi -110003

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

BANK COPY

यूनियन बैंक Union Bank of India

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 29-03-2022

Agency Name.	Hindustan Copper Limited
Application No.	5841841449
MoEF/SG File No.	NA
Location.	JHARKHAND
Address.	Tamra Bhawan, 1, Ashutosh Chowdhury Avenue Kolkata
Amount(in Rs)	5261256/-

Amount in Words :Fifty-Two Lakh Sixty-One Thousand Two Hundred and Fifty-Six Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	JHARKHAND CAMPA
IFSC Code:	UBIN0903710
Pay to Account No.	150725841841449 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India Lodhi Complex Branch, Block 11,CGO Complex, Phase I, Lodhi Road, New Delhi -110003

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

After making successful payment, User Agencies may send a line of confirmation through Email: helpdeskcampa@corpbank.co.in

Note:After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date to Email: cb0371@unionbankofindia.com

For, HINDUSTAN COPPER LIMITED
INDIAN COPPER COMPLEX

Authorised Signatory Authorised Signatory

Annexure-2B

न प्रमण्डल पदाधिकारी, जमशेदपुर वन प्रमण्डल, जमशेदपुर।

(सी० एच० एरिया रोड नं० 1, जमषेदपुर–831001)
दूरभाष संख्या– 0657–2231017, फैक्स–0657–2231017, ई–मेल– dfo-jamshedpur@gov.in

पत्रांक: 3140 /जमशेदपुर

दिनांक: 16-12-2024

प्रेषक,

वन प्रमंडल पदाधिकारी,
जमशेदपुर वन प्रमंडल,
जमशेदपुर।

सेवा में,

कार्यकारी निदेशक एवं यूनिट हेड,
हिन्दुस्तान कॉपर लिमिटेड,
मउभण्डार, घाटशिला,
पूर्वी सिंहभूम।

विषय :– Shifting of NPV amount from Proposal No. FP/JH/MIN/41841/1992 to FP/JH/MIN/44787/2020 in respect of Surda Mining Lease of HCL (Formerly Known as Musabani Mining Lease of HCL)-reg.

प्रसंग :– प्रधान मुख्य वन संरक्षक–सह–कार्यकारी निदेशक बंजर भूमि विकास, बोर्ड झारखण्ड, राँची का ज्ञापांक 1055 दिनांक 03.12.2024

महाशय,

उपरोक्त विषयक प्रासंगिक पत्र के संदर्भ में सूचित करना है कि विषयान्तर्गत निर्देशानुसार वर्तमान में भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र दिनांक 29.12.2023 द्वारा निर्गत वन (संरक्षण एवं संवर्धन) अधिनियम 1980 एवं 2023 मार्ग निर्देशिका के Chapter-3 के अनुसार संशोधित एन०पी०वी० गणना विवरणी निम्नवत है –

क्रम संख्या	विवरणी	श्रेणी	वनभूमि का क्षेत्रफल हे० में	दर प्रति हे०	कुल एन०पी०वी० राशि	भुगतेय एन०पी०वी० राशि (10% of Normal NPV)
1	एन०पी०वी०	Eco Class - III	65.52	1228590.00	80497217.00	8049722.00
				पूर्व में भुगतान की गई एन०पी०वी० की राशि (–)		5261256.00
				अवशेष भुगतेय एन०पी०वी० की राशि		**2788466.00**

अतः अनुरोध है कि अवशेष एन०पी०वी० की राशि 2788466.00 (सताईस लाख अठ्ठासी हजार चार सौ छियासठ) रूपया मात्र मात्र CAMPA Fund में e-portal (https://parivesh.nic.in के माध्यम से स्थान्तरित/जमा कर अभिलेख के साथ इस कार्यालय में प्रतिवेदन समर्पित करने की कृपा करें।

विश्वासभाजन,

वन प्रमंडल पदाधिकारी
जमशेदपुर वन प्रमंडल
जमशेदपुर।

E:\Sale-Section2\Application_2011-13\Revised demand of 50% surda rltd to CF 16.12.2024.doc

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. घाटशिला - 832303
जिला - पूर्वी सिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
INDIAN COPPER COMPLEX
P.O .G H A T SILA - 832303
Ph : (06585) 225878 (G .M.)
225492(DGM-W),225938(DGM-ES)
225870 (G M – H R) 225862 (Finance)
225869(Purchase),Fax : (06585)225806
Email:hclicc@sify.com/hcliccmat@sify.com
Website : www.hindustancopper.com

UTRNO: SBIN4243561 98902

Date : 21 DEC 2024

To,
The Branch Manager,
State Bank of India,
Moubhandar Branch,
Moubhandar.

Sub: RTGS / NEFT payment to Jharkhand Campa.

Dear Madam,

Please debit Rs. 27,88,466.00 (Rupees twenty seven lakhs eighty eight thousand four hundred sixty six only) to our Cash Credit A/c. No. 11524102778 with you and credit A/c. No. ***150725844787049*** of **Jharkhand Campa.** Bank details of beneficiary is shown below details of which is attached herewith.

BANK NAME	:	UNION BANK OF INDIA
BRANCH NAME & ADDRESS	:	FCS CENTRE, 21/1, III FLOOR, JELITTA TOWERS, MISSION ROAD, BENGALURU-560027
IFSC CODE OF BENEFICIARY BRANCH	:	UBIN0996335
BANK ACCOUNT NUMBER	:	**150725844787049**

Bank charges if any may please be debited to our account.

Thanking you,

Yours faithfully,

For, HINDUSTAN COPPER LIMITED.
INDIAN COPPER COMPLEX

Authorised Signatory Authorised Signatory

UTRNO:

AGENCY COPY

यूनियन बैंक ऑफ इंडिया Union Bank of India

आंध्रा Andhra | मार्केटिंग कॉर्पोरेशन Corporation

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 20-12-2024

Agency Name.	**Hindustan Copper Limited**
Application No.	**5844787049**
MoEF/SG File No.	**8-64/1993-FC VOL.**
Location.	**JHARKHAND**
Address.	**Tamra Bhawan, 1, Ashutosh Chowdhury AvenueKolkata**
Amount(in Rs)	**2788466/-**

Amount in Words :Twenty-Seven Lakh Eighty-Eight Thousand Four Hundred and Sixty-Six Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	**JHARKHAND CAMPA**
IFSC Code:	**UBIN0996335**
Pay to Account No.	**150725844787049** **Valid only for this challan amount.**
Bank Name & Address:	**Union Bank Of India FCS Centre,21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027**

- **This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only**

BANK COPY

यूनियन बैंक ऑफ इंडिया Union Bank of India

आंध्रा Andhra | मार्केटिंग कॉर्पोरेशन Corporation

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 20-12-2024

Agency Name.	**Hindustan Copper Limited**
Application No.	**5844787049**
MoEF/SG File No.	**8-64/1993-FC VOL.**
Location.	**JHARKHAND**
Address:	**Tamra Bhawan, 1, Ashutosh Chowdhury Avenue Kolkata**
Amount(in Rs)	**2788466/-**

Amount in Words :Twenty-Seven Lakh Eighty-Eight Thousand Four Hundred and Sixty-Six Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	**JHARKHAND CAMPA**
IFSC Code:	**UBIN0996335**
Pay to Account No.	**150725844787049** **Valid only for this challan amount.**
Bank Name & Address:	**Union Bank Of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027**

- **This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only**

Note:After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: fcsblr@unionbankofindia.bank , epurse@unionbankofindia.bank, ubin0903710@unionbankofindia.bank

Annexure- II

PROFORMA TO BE FURNISHED FOR REMITTANCE OF FUND IN AD-HOC CAMP

Sl. No.	Particulars	
1	Name of the Regional Office	Jamshedpur /Ranchi
2	State/District/Forest Division to which the proposal is related	Jharkhand/East Singhbhum/ Jamshedpur Forest Division
3	Name of the User agency. Nature of the proposal	Hindustan Copper Limited. Proposal for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project.
4	Extent of the forest area involved	65.52 Ha
5	Whether original or extension	Original
6	If extension of lease, please clarify if proposal involves additional forest areas, and if so, specify	Not Applicable
7	Date of 1ST stage clearance	15.06.2024 MoEF & CC File no: 8-64/1993-FC(Vol.)
8	Extent of CAMPA charges, head wise	
	a. Compensatory Afforestation	Not Applicable as the proposal is for U/G diversion
	b. Additional CA	Not Applicable as the proposal is for U/G diversion
	c. Penal CA	Not Applicable
	d. Catchment Area Treatment	No
	e. Wildlife Management Plan	No
	f. Additional Charges for diversion area falling under notified/Protected area	No
	g. Net Present Value	**Rs 52,61,256 /- (previously deposited)** **Rs 27,88,466/-** **Total: 80,49,722/-**
	h. Any other Charges/Levies (PL. Specify)	No
	i. Lease transfer fee	No
9.	Details of Bank Draft (Bank Draft No, date, and amount), head wise against items indicated in paragraph 8 above	
10	Whether deposited by RTGS, if so, the particulars and date of remittance.	Yes. For Rs 52,61,256 /- UTR No. SBINR52022032975102374 dated 29.03.2022 For Rs 27,88,466/- UTR No. SBIN424356198902 dated 21.12.2024
11	Bank (Corporation Bank, Lodhi Complex/Union Bank of India, Sunder Nagar) in which Deposited, with Deposit,with date of Deposition	For Rs 52,61,256 /- Union Bank of India Lodhi Complex Branch, Block 11, CGO Complex, Phase I, Lodhi Road, New Delhi-110003 For Rs 27,88,466/- Union Bank of India, FCS Centre, 21/1, II Floor, Jelitta Towers, Mission Road, Bengaluru- 560027
12.	Any other remarks	Transaction receipt obtained from State Bank of India, Moubhandar Branch enclosed

S.S. Sethi
Executive Director
&
Unit Head
Hindustan Copper Limited
(A. Govt. of India Enterprise)
Indian Copper Complex

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. आँ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph: (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 3

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India.

This undertaking is being submitted towards compliance of condition no. 3, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

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कार्यकारी निदेशक
एवं
[illegible] प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure-4

Office of the Principal Chief Conservator of Forests, Wildlife & Chief Wildlife Warden,Jharkhand.
Van Bhawan, Doranda, Ranchi-834002
Email:pccf-wildlife@gov.in; Phone No. 0651-2481744

Office Order No. ...14..... Dated...24/01/2022.....

Sanction Order of the Integrated Site-Specific Wildlife Conservation Plan prepared in compliance of the Conditions/Terms of Reference laid by the MoEF&CC towards Environmental Clearance to Rakha, Kendadih and Surda copper mining leases of M/s. Hindustan Copper Ltd. in East Singhbhum district of Jharkhand

The instant Integrated Site-Specific Wildlife Conservation Plan (referred to as "the Plan" hereinafter) has been prepared by Gems Projects Pvt. Ltd. on behalf of M/s. Hindustan Copper Ltd. (referred to as "the Project Proponent" or "HCL" hereinafter) in pursuance of the following conditions/ Terms of Reference laid by MoEF&CC towards grant of Environmental Clearance in respect of three contiguous mining leases held by the Project Proponent in East Singhbhum district of Jharkhand:

(a) **Renewal of Rakha mining lease and enhancement of production capacity of copper ore from 0.3 MTPA to 3.0 MTPA** – Vide letter no. J-11015/269/2011-IA.II(M) dated 01st August, 2014, the MoEF&CC has accorded the Environmental Clearance to the proposal of the Project Proponent for renewal of Rakha mining lease and enhancement of production capacity of copper ore subject to the following specific condition:

"A.(xxiii)The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar".

(b) **Renewal of Kendadih mining lease and enhancement of production capacity of copper ore from 0.21 MTPA to 0.45 MTPA** – Vide letter no. J-11015/280/2011-IA.II (M) dated 20th January, 2015, the MoEF&CC has accorded the Environmental Clearance to the proposal of the Project Proponent for renewal of

एस० एस० सेठी
कार्यकारी निदेशक

Kendadih mining lease and enhancement of production capacity of Surda mine subject to the following specific condition:

"A.(xxx) The Project Proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the Wildlife Conservation Pan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment, Forests and Climate Change its Regional Office, Bhubaneswar".

(c) Capacity Expansion of Surda copper mine from 0.39 MTPA to 0.9 MTPA – Vide letter no. J-11015/80/2012-IA.II (M) dated 21st February, 2020, the MoEF&CC has recommended the proposal of the Project Proponent for expansion of production capacity of Surda mine for issuing the following Term of Reference:

"C.Standard ToR (Mining) – "20) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery pf the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any Schedule-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost".

In the above stated background, the Regional Chief Conservator of Forests, Sighbhum, Jamshedpur (RCCF, Jamshedpur) vide his letter no. 131 dated 20.01.2022 has submitted the Plan to the office of the undersigned for its due sanction.

While considering the plan for its approval, an online presentation was arranged by the undersigned on 22.01.2022 through Google meet in which the User Agency made a power point presentation detailing the components of the prescriptions under the Plan. The meet was attended by concerned forest officials including the RCCF, Jamshedpur and DFO, Jamshedpur as well as the officials from the Project Proponent company.

24/01

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कार्यकारी निदेशक
एवं

The Plan contains year-wise detailed description of activities and corresponding cost estimates. The work components to be carried out by the Project Proponent has been designated as Part-A where as Part-B constitutes of the work components to be carried out by the Forest Department.

The break-up of the financial outlay with respect to the aforesaid implementing agencies is as under:

Designation	Implementing Agency	Budget (Rs. In lakh)
Part A	M/s. Hindustan Copper Ltd. (The Project Proponent)	253.10
Part B	Forest Department through DFO, Jamshedpur	1700.28
Total		1953.38

The summary of the proposed interventions (componentwise) under the Plan with the objective of conservation of forest and wildlife resources is as follows:

Sl. No.	Work components	PART A Cost Estimates (Rs. in lakh) – To be implemented by the Project Proponent	Part B Cost Estimates (Rs. in lakh) – To be implemented by the Forest Department through DFO, Jamshedpur	Total (Rs. In lakh)
1.	Habitat Management (a) Management of Food (b) Management of Water (c) Management of Shelter	-	248.72 255.00 112.08	248.72 255.00 112.08
2.	Wildlife Conservation Activity	-	56.70	56.70
3.	Research & Monitoring	-	151.50	151.50
4.	Eco-development works	-	170.00	170.00
5.	Strengthening of Infrastructure for wildlife conservation	180.60	165.40	346.00
6.	Awareness & Training Programme	35.00	135.00	170.00
7.	Miscellaneous activity	37.50	122.50	160.00
8.	Sub-total	253.10	1416.90	1670.00
9.	Cost escalation @ 20%	-	283.38	283.38
10.	**Grand Total**	253.10	**1700.28**	**1953.38**

24/01

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कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मंऊभण्डार-832103
झारखण्ड

The Plan with a total financial outlay of Rs. 1953.38 Lakh extends over a period of 10 years (Year 2021-22 to 2030-31; tentatively) out of which Rs. 253.10 lakh shall be utilized by the Project Proponent and Rs. 1700.28 lakh shall be utilized by the Forest Department through the DFO, Jamshedpur in accordance with the Plan prescriptions.

Considering the proposals under the plan, sanction is hereby accorded to the instant Plan subject to the following conditions:

(i) That the Project Proponent shall ensure that its officials/contractors and the work force engaged into mining and allied operations under the Project shall not commit or abet any forest/wildlife offence in their area of operation. They will also promptly report any forest/wildlife offence in the area to the nearest forest office/official. Further, they will extend their full cooperation to the forest officials in control/mitigation of any incident, natural or man made, detrimental to forest and wildlife in their area of operation.

(ii) That the total amount of Rs.1953.38 lakh involved in the instant Plan consists of two parts – Part A and Part B. **Part A constitutes of a sum of Rs. 253.10 lakh which shall be utilized by the Project Proponent towards the activities mentioned in the Plan as and when, and in the manner as directed by the DFO, Jamshedpur. Part B constitutes of a sum of Rs. 1700.28 lakh which shall be deposited by the Project Proponent into the Government Treasury, Jamshedpur in favour of "Divisional Forest Officer, Jamshedpur Forest Division" under the head "Van Preshan Lok Lekha (Praptiyan) Head 8782". DFO, Jamshedpur shall withdraw money from the Treasury for implementation of the activities mentioned in the duly sanctioned Annual Plans of Operation, as described in the following paras, from "8782 Remittance Head" and maintain accounts under "Lok Lekha Head 8443". DFO, Jamshedpur shall submit monthly account to the Accountant General, Jharkhand as per prevailing norms of the Forest Department.**

(iii) That as regards the funds earmarked against activities to be undertaken by the State Forest Department, the DFO, Jamshedpur shall prepare detailed Annual Plan of Operations (APO) at the beginning of every Financial Year in accordance with the activities mentioned under the Plan following all the rules, regulations, Schedule of Rates etc. issued from time to time by the State Government/ Forest Department. Regional Chief Conservator of Forests, Jamshedpur (RCCF, Jamshedpur) shall accord

24/01

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कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इण्डियन कॉपर कॉम्पलेक्स
डाक-मऊभण्डार-832103

sanction to the said APO following due process and he/she will closely monitor the implementation/progress of the activities undertaken by the Implementing Agencies as per directions issued by the Forest Department from time to time.

(iv) That the Conservator of Forests, Jamshedpur Circle (CF, Jamshedpur) shall supervise all the activities as per directions issued by the Forest Department from time to time.

(v) That the DFO, Jamshedpur shall carry out the activities under the Planstrictly as per the duly sanctioned APOs.

(vi) That the DFO, Jamshedpur shall ensure that no violation of duly sanctioned Working Plan of Jamshedpur Forest Division takes place during implementation of any of the activities involved in this plan over notified and demarcated forest land.

(vii) That at least one year before the expiry of the instant Plan, the Project Proponent shall formulate and submit to the Forest Department another plan in continuation of the instant plan. The impact of implementation of this Plan shall be evaluated by the competent authority.

(viii) That the instant Plan is dynamic and may be revisited after every 2 years and a revised plan may be formulated as per need of the impact (buffer) area and convenience of the implementing agencies. The revised plan, if any, shall be put up before the Principal Chief Conservator of Forests, Wildlife & Chief Wildlife Warden, Jharkhand for its approval.

(ix) That though provisions have been made towards cost escalation in the plan, yet the Project Proponent shall submit an Undertaking to the DFO, Jamshedpurto the effect that they will deposit extra cost of the Plan beyond the cost escalation provision owing to increase in wage rate, cost of materials etc. in due course of time as well as consequent upon revision of the plan, if any, as and when given effect to by the competent authority.

Sd/-
Principal Chief Conservator of Forests,
Wildlife & Chief Wildlife Warden,
Jharkhand, Ranchi.

Memo No. **Dated:**

Copy forwarded to Deputy Director General of Forests (Central), Ministry of Environment, Forests and Climate Change, Integrated Regional Office, Ranchi, Bungalow no. A-2, Shyamali Colony, Ranchi-834002 [E-mail: ro.ranchi-mef@gov.in] for information and necessary action.

24/01

Sd/-
Principal Chief Conservator of Forests,
Wildlife & Chief Wildlife Warden,
Jharkhand, Ranchi.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इण्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Memo No. **Dated:**

Copy forwarded to Additional Chief Secretary, Department of Forests, Environment and Climate Change, Govt. of Jharkhand, Ranchi/ Principal Chief Conservator of Forests, Jharkhand, Ranchi for information.

Sd/-
Principal Chief Conservator of Forests,
Wildlife & Chief Wildlife Warden,
Jharkhand, Ranchi.

Memo No. **Dated:**

Copy forwarded to Regional Chief Conservator of Forests, Jamshedpur/Conservator of Forests, Jamshedpur Circle/ Divisional Forest Officer, Jamshedpur Forest Division for information and necessary action.

Sd/-
Principal Chief Conservator of Forests,
Wildlife & Chief Wildlife Warden,
Jharkhand, Ranchi.

Memo No. 72 **Dated:** 24/01/2022

Copy forwarded to Sh. S. Dey, Executive Director & Unit Head, M/s. Hindustan Copper Ltd., Indian Copper Complex, P.O. Moubhandar, East Singhbhum – 832103 [E-mail: *dey_s@hindustancopper.com*] for information and necessary action.

24/01

Principal Chief Conservator of Forests,
Wildlife & Chief Wildlife Warden,
Jharkhand, Ranchi.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
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इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure -4

कार्यालय प्रधान मुख्य वन संरक्षक वन्यप्राणी एवं
मुख्य वन्यप्राणी प्रतिपालक झारखण्ड
वन भवन डोरण्डा रांची-834002
Email: pcf-wildlife@gov.in Phone No. 0651-2481744

पत्रांक रांची दिनांक

सेवा में

अपर मुख्य सचिव,
वन पर्यावरण एवं जलवायु परिवर्तन विभाग,
झारखण्ड सरकार, राँची।

विषयः— मेसर्स हिन्दुस्तान कॉपर लिमिटेड का सुरदा खनन पट्टा क्षेत्र अंतर्गत भूमिगत खनन हेतु अतिरिक्त (Remaining) 65.52 हे0 वनभूमि अपयोजन का प्रस्ताव के संबंध में।

प्रसंगः— प्रधान मुख्य वन संरक्षक–सह–कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची का ज्ञापांक 390 दिनांक 12.04.2023

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संबंध में सूचित करना है कि मेसर्स हिन्दुस्तान कॉपर लिमिटेड के पत्र में सुरदा केन्दाडीह तथा राखा भूमिगत खनन लीज क्रमशः 388.68 हे0, 1139.60 हे0 तथा 785.091 हे0 प्रदत्त है। उक्त भूमिगत खनन लीजों के विरूद्ध भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय के पत्रांक क्रमशः J-11015/80/2012-IA-II(M) दिनांक 21.02.2021, J-11015/280/2011-IA-II(M) दिनांक 20.01.2015 तथा J-11015/269/2011-IA-II(M) दिनांक 01.08.2014 द्वारा पर्यावरणीय क्लीयरेंस प्रदान किया गया है।

उपर्युक्त वर्णित पर्यावरणीय क्लीयरेंस संबंधी निर्गत आदेशों में ToR के रूप में वन्यप्राणी संरक्षण योजना का सूत्रण एवं मुख्य वन्यप्राणी प्रतिपालक द्वारा उक्त योजनाओं की स्वीकृति अपेक्षित है। चूँकि उक्त तीनों लीज क्षेत्र आस–पास है। अतः प्रोजेक्ट प्रोपोनेंट द्वारा Integrated Site Specific Wildlife Conservation Plan सूत्रित किया गया है, जिसकी स्वीकृति प्रधान मुख्य वन संरक्षक, वन्यप्राणी एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, राँची के कार्यालय आदेश संख्या 14 दिनांक 24.01.2022 द्वारा प्रदान की गई है।

उपरोक्त वर्णित परिस्थितियों में वर्तमान वनभूमि अपयोजन प्रस्ताव जो खनन लीज सुरदा 388.68 हे0 के अंतर्गत ही है, के विरूद्ध अलग से वन्यप्राणी संरक्षण योजना का सूत्रण आवश्यक प्रतीत नहीं हो रहा है।

विश्वासभाजन

ह0/–

प्रधान मुख्य वन संरक्षक वन्यप्राणी
एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड

ज्ञापांक 646 दिनांक 23/05/2023

प्रतिलिपिः— प्रधान मुख्य वन संरक्षक–सह–कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रधान मुख्य वन संरक्षक वन्यप्राणी
एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure-5

टेलेक्स : ०६२६-२८७ एच सी एल-इन
तार : हिन्दकॉपर, घाटशिला
Telex : 0626-287 HCL-IN
Telegrams : HINDCOPPER, GHATSILA
: 06585-5620
Fax : 06585-5606

हिन्दुस्तान कॉपर लिमिटेड
HINDUSTAN COPPER LIMITED

भारत सरकार का उद्यम
A Govt of India Enterprise

इंडियन कॉपर कोमप्लेक्स
पो०ओ० घाटशिला-८३२३०३
जिला-सिंहभूम (बिहार)
INDIAN COPPER COMPLEX
P.O. GHATSILA-832303
Dist. SINGHBHUM (BIHAR)

HCL/ICC/ED/GOVT/ 11 APRIL 1998

The Divisional Forest,
Dhalbhum Forest Division,
Deptt of Forests & Environment,
Govt of Bihar, Circuit House Area,
JAMSHEDPUR.831001.

Dear Sir,

Sub: Permission under FC Act 80 for 47.49 hectares of forest land falling within Co.'s Mosaboni mining lease and payment of cost towards penal afforestation imposed by Ministry of Environment & Forests, Govt of India.

Ref: i) Letter No.8-64/93-FC(1) dt 11.4.97 from AIG Forest, New Delhi.
ii) Letter no.1779 dt.2.12.97 from CCF (Dev-cum-Nodal Officer), Ranchi to RCCF Singhbhum with cost estimate for penal compensatory afforestation cost over double the area of 47.49 hec. at Rs 15,19,680/-.

As advised by above memorandum, we enclose herewith an account payee Demand Draft bearing No. 617124 dated 11.4.98 for a sum of Rs 15,19,680/- (Rupees fifteen lakhs nineteen thousand six hundred eighty) only being the penal compensatory afforestation cost over an area of 47.49 hectares.

Kindly acknowledge receipt of the same.

Thanking you,

Yours faithfully,

(KAMAL CHATTERJEE)
EXECUTIVE DIRECTOR

Encl: a.a.
cc: 1) IG(Forest), MOEF, New Delhi.
: 2) CCF(Central), Bhubaneswar,
: 3) PCCF, Ranchi 4) CCF(Dev-cum-Nodal Officer), Ranchi.
5) Secretary, Deptt of F&E, Govt of Bihar, Patna.
: 6) RCCF, Singhbhum, JSR. 7) CF, Southern Circle, Chaibassa.
8) Range Officer, MSB Forest Range. This may be treated as reply to letter No.6B0 dated 7.4.98 from DFO, Dhalbhum, Jamshedpur of Barg

एस० एस० सेठी
कार्यकारी निदेशक
एवं

REHABILITATION-CUM-ENRICHMENT PLAN – AREA UNDER SURDA MINING LEASE AND WITHIN 100M PERIPHERY THEREOF

Prepared in compliance of conditions bearing **Sl. Nos. 8, 9, 10, 13 (i), 13 (ii), 13 (iii) & 13 (iv)** laid by MoEF&CC, Govt. of India while granting Stage-I approval under Section 2 of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide F. No. 8-64/1993-FC (Vol.) dated 15th June, 2024 **for diversion of 65.52 ha of Forest land** in East Singhbhum district of Jharkhand for expansion of **Surda Copper Underground Mine Project** in favour of M/s Hindustan Copper Limited.

Submitted by:

M/s Hindustan Copper Ltd.

Prepared by:

Rajiv Ranjan, IFS (Retd.)

Former Principal Chief Conservator of Forests,
Govt. of Jharkhand.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

EXECUTIVE SUMMARY

Hindustan Copper Limited (HCL), a Miniratna Category-I, Government of India (GoI) Enterprise under the administrative control of the Ministry of Mines, holds all the operating mining leases of copper in India. In the state of Jharkhand, HCL has three operative Mining Leases namely Surda Mining Lease (388.68 Hectares), Kendadih Mining Lease (1139.60 Hectares) and Rakha Mining Lease (785.091 Hectares). All the three mines are located in Singhbhum East district of Jharkhand near Ghatsila.

Surda Copper Mine is an underground mine operating since 1956. The present capacity of the mine is 0.31 million tonnes per year (MTPA). The ore produced is crushed underground, hoisted to the surface in skips and cages and dispatched by tipper trucks to the ore concentrator plant located at Mosabani at an aerial distance of about 3.5 km from the mine. The ore is beneficiated through froth floatation process. The concentrate is trucked to HCL's copper smelter at Moubhandar on the outskirts of Ghatsila for smelting and refining. The concentrator plant at Mosabani has the capacity to process 0.612 MTPA of ore, but is underutilized for want of feedstock. The proposed expansion project envisages augmenting the production capacity from 0.31 MTPA to 0.9 MTPA without any change in lease area or land acquisition.

The Ministry of Environment, Forest & Climate Change, vide F. No. J-11015/80/2012-IA-II(M) dated 25th July, 2024, has granted **Environmental Clearance (EC)** to Surda Underground Copper Mining Project over the mine lease area of 388.68 ha for its capacity expansion to 0.9 MTPA.

The Regional Controller of Mines, Indian Bureau of Mines, Ranchi, vide Letter No. RAN/ESB/Cu/MP-34/2021-22 dated 27.04.2022, has granted approval of **Mining Plan** against the total lease area of 388.68 ha for the plan period 2022-23 to 2024-25. For the next plan period i.e., 2025-26 to 2029-30, the company has submitted the proposal for review of the Mining Plan over lease area of 388.68 ha to IBM which is under final stage of approval.

Surda Mining Lease (388.68 ha) has been extended till 31.03.2020 in accordance with provisions under MMDR (Amendment) Act, 2015. On 06.09.2024, Govt. of Jharkhand has extended the lease over 388.68 ha till 31.03.2040 as per MCR-2016.

Out of 388.68 ha under Surda ML, 149.03 hectares is forest land, and the remaining 239.65 hectares is non-forest land. Vide Letter No. 8-64/93-FC dated 15.05.1998, the Central Government had granted **Forest Clearance** (final approval) under Section 2 of the Forest (Conservation) Act, 1980

एस० एस० सेनी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

for diversion of 83.51 ha of forest land under Surda ML. Out of this already diverted forest land of 83.51 ha, 31.07 ha was for surface use and the rest 52.44 ha was for underground mining. Thus, balance forest land under Surda ML bearing an area of 65.52 ha remained yet to be diverted.

Vide F. No. 8-64/1993-FC (Vol.) dated 15.06.2024, the Central Government has accorded In-principle/Stage-I approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for capacity expansion of Surda Copper Underground Mine Project in favour of M/s HCL, subject to fulfilment of certain conditions, some of which are subject matters of the instant Plan.

The conditions laid under the aforesaid approval order which are relevant for preparation of the instant Plan are being reproduced hereunder for ready reference:

> *"8. The user agency will protect and demarcate the diverted forest land on surface, in consultation with State Forest Department by construction of a stone wall/trench/barbed wire fencing with angle iron and will maintain the fencing during entire period of life of the mine".*
>
> *"9. User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the **degraded open forests (having crown density less than 0.40)**, if any, located in the area **within 100 meter** from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance".*
>
> *"10. The surface area of **diverted land** for underground mining shall be **Rehabilitated and enriched** by using indigenous species with participation of local people at the project cost. The user agency shall prepare the plan for the purpose in consultation with state forest Dept".*
>
> *"13. Following activities, as per approved plan / schemes, shall be undertaken in the **lease area** by the User Agency under the supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval:*
> *i. Mitigative measures **to minimize soil erosion and choking of stream** shall be implemented within a period of three year with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department;*
> *ii. **Planting** of adequate drought hardy plant species and sowing of seeds, in the appropriate area **within the mining lease** to arrest soil erosion in accordance with the approved scheme;*
> *iii. Construction of **check dams**, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;*

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
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इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

iv. Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°;"

The plan objectives to comply with the conditions mentioned under the preceding para may be summarized into the following heads:

(A) Demarcation of diverted forest land by construction of a stone wall/trench/barbed wire fencing with angle iron;

(B) Rehabilitation-cum-enrichment of Mining Lease area through appropriate Soil & Moisture Conservation measures;

(C) Restocking and rejuvenation of degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease; and

(D) Stabilization of the overburden dumps so as to ensure that angles of repose at any given place is less than 28°.

Thus, the Target Area to be focussed upon towards compliance of all the above conditions may easily be stipulated to be the Mining Lease Area as well as the area enclaved between the ML boundary and 100m periphery around the ML area.

In order to assess the crown/canopy cover of the forest land located in the Target Area, two separate methods have been resorted to – (a) Using **Crown Densiometer**; and (b) **Normalized Difference Vegetation Index (NDVI) Analysis**. These two independent methods have been utilised to validate the results in a scientific manner. The methodology used has been discussed in detail under Chapter-5 of the Plan. The two methods employed independently have led to similar conclusion. The canopy cover-wise area of the forest land located within the **Target Area** may be summarized as follows:

- Total Area of Forest land within ML: 149.03 ha
- Area of Forest land within ML with canopy density < 0.4: 148.58 ha
- Area of Forest land within ML with canopy density > 0.4: 0.45 ha
- Area of Forest land outside ML (100m periphery) with canopy density < 0.4: 38.74 ha
- Area of Forest land outside ML (100m periphery) with canopy density > 0.4: 0.62 ha
- **Total Treatable Area under canopy density < 0.4: 148.58 + 38.74 = 187.32 ha**

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
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डाक-मऊभण्डार-832[illegible]
झारखण्ड

However, the total treatable area includes an area of 31.07 ha of forest land under mining lease which stands diverted in favour of the user agency for surface use. Hence, the treatable area under this Plan comes out to be (187.32 – 31.07) ha i.e., 156.25 ha. Since the crown density of the treatable area is just a whisker short of the limit (0.4), it is being proposed to take up this area for silvicultural operations and gap plantation with local and indigenous species as per standard protocol of the Forest Department. These operations at a particular site extend up to a period of four years from the initiation year as per protocol fixed by the Forest Department.

As for the demarcation of diverted forest land by construction of a stone wall/trench/barbed wire fencing with angle iron, it is being stated that the treatment of diverted forest land with silvicultural and gap planting operations includes the requisite fencing. Digging trenches or putting up stone walls at appropriate locations around the diverted forest land under treatment would be the best possible option. Barbed wire fencing may not be appropriate as the area is frequented by wild animals. Further, since the mining lease area consists of approach roads and many parcels of agricultural fields, due care may be taken while construction of trenches/stone walls so as to ensure that the area under treatment is secure as also the area being utilised by the user agency for surface use for mining operations remains accessible. It is pertinent to mention here that unless the area under treatment is under protection for sufficient time period it would be difficult to rehabilitate the degraded open forests over the Target Area.

Chapter 6 of the Plan identifies the appropriate **Soil & Moisture Conservation measures within the Target Area. It primarily consists of creation of stop dams, Loose Boulder Structures, Gully Plugging, Earthen Check Dams, de-siltation of existing ponds and stop dams within the Target Area. The Plan proposes to implement all activities dedicated to Soil & Moisture Conservation in the first year of the Plan period.**

As for stabilization of overburden dumps, it is being stated that **Surda being an underground copper mine, the problem of overburden dump is minimal here.** Most of the waste rocks etc. are used for underground back-filling. **As of now, two small dumps are located in the lease area which are quite old and therefore, dead. Plants and bushes have already come over these dump areas and hence these do not need stabilization as such.**

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832
झारखण्ड

Chapter 6 of the Plan contains Site-Specific proposals towards restocking and rejuvenation of degraded open forests having crown density less than 0.4 and Soil & Moisture Conservation measures. Chapter 7 of the Plan deals with year-wise Site-Specific physical and financial proposals.

The total cost to the User Agency towards implementation of this Plan is Rs. **344.631 Lakh** spread over 5 years (2026-27 to 2030-31). The proposed year-wise financial projection under the Plan may be summarized as follows.

Activity Head	Financial Forecast (Rs. in Lakh)					Total (Rs. in Lakh)
	Year-1	Year-2	Year-3	Year-4	Year-5	
Soil & Moisture Conservation Measures in the Target Area (Lease Area + 100m Buffer)	140.411	-	-	-	-	140.411
Restocking & Rejuvenation of Degraded Open Forests having Crown Density Less than 0.4 (156.25 ha)	34.944	80.980	16.938	8.285	5.634	146.781
Total	175.355	80.980	16.938	8.285	5.634	287.192
Cost Escalation Provision @20%	35.071	16.196	3.388	1.657	1.127	57.439
Grand Total	**210.426**	**97.176**	**20.326**	**9.942**	**6.761**	**344.631**

Cost to the User Agency towards implementation of the Plan = Rs. 344.631 Lakh

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ACKNOWLEDGEMENT

The instant Plan could not have seen light of the day without the committed collaboration of Mr. Shaba Alam Ansari, IFS, Divisional Forest Officer, Jamshedpur Forest Division and the frontline forest staff of Jamshedpur forest division. Also, the interaction with Ms. Smitha Pankaj, Regional Chief Conservator of Forests, Jamshedpur Region played a vital role in shaping this Plan particularly in terms of its effective implementation in future.

I am grateful to Mr. Kislay Kumar (M/s Ecos Offset Ltd.) and his team members who carried out an intensive survey of the Target Area in question. Without their active support and sincere efforts, this plan could not have been prepared.

I owe special thanks to the officials of M/s Hindustan Copper Ltd., who took utmost care to ensure all logistic support while undertaking field surveys.

Rajiv Ranjan, IFS (Retd.)

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डाक-मऊभण्डार-832103
झारखण्ड

TABLE OF CONTENTS

LIST OF MAPS

LIST OF TABLES

LIST OF ANNEXURES

1. INTRODUCTION

1.1. ABOUT THE PROJECT

1.1.1. The Project Proponent – M/s Hindustan Copper Limited

Hindustan Copper Limited (HCL), a Miniratna Category-I, Government of India (GoI) Enterprise under the administrative control of the Ministry of Mines, was incorporated on 9th November 1967 under the Companies Act., 1956. It was established as a Govt. of India Enterprise to take over all plants, projects, schemes and studies pertaining to the exploration and exploitation of copper deposits from National Mineral Development Corporation Ltd. HCL is Country's only vertically integrated producer of refined copper from indigenous sources. It is the only company in India engaged in mining of copper ore and owns all the operating mining leases of Copper ore. Major activities of HCL include mining, ore beneficiation and converting of refined copper metal into Continuous Cast Rod (CCR) as downstream product. HCL has five units – one each in the states of Rajasthan, Jharkhand, Madhya Pradesh, Gujarat and Maharashtra. It is a listed company on BSE and NSE, with 66.14 % equity owned by the Government of India.

In the state of Jharkhand, Hindustan Copper Limited has three operative Mining Leases namely Surda Mining Lease (388.68 Hectares), Kendadih Mining Lease (1139.60 Hectares) and Rakha Mining Lease (785.091 Hectares). In the state of MP, it has Malanjkhand Mining Lease over an area of 479.9 Hectares. The company has three Mining Leases in the state of Rajasthan namely Khetri Mining Lease (Lease Area 395.07 ha), Kolihan Mining Lease (Lease Area 163.23 ha) and Chandmari Mining Lease (Lease Area 148.45 ha).

1.1.2. Jharkhand Operations of the Project Proponent

Indian Copper Complex of HCL, located in Singhbhum (East) district of Jharkhand near Ghatsila, has three adjacent mining blocks, namely Surda, Kendadih and Rakha mines. Kendadih mines has two blocks Kendadih and Siddheswar while Rakha mines has three blocks, namely Chapri, Rakha and Tamapahar. The ore produced in this group of mines is beneficiated at Mosabani concentrator plant near Surda mines. Indian Copper Complex, Ghatsila houses a Smelter and Refinery plant where copper concentrates from the said mines are also processed to produce copper cathode.

1.1.3. Location of the Project – Surda Mine

Surda Mine is located in Mosabani tehsil of East Singhbhum district of Jharkhand State. The mine lease lies at an aerial distance of about 3 km south-south-west of Ghatsila town and about 3.5 km north-north-east of Mosabani town. The deposit is covered under Survey of India toposheet no. 73 J/6 bounded between 22^0 32' 43.119" N and 22^0 34' 18.848" N latitudes and 86^0 25' 31.849" E

and 86^0 26' 22.197" E longitudes. The mining lease area falls within Surda, Sohada, Pathargora and Benashole villages and Forest Block No. 1098.

The ML area of 388.68 ha is quadrilateral in shape. The four corner coordinates of the ML are as follows:

- 22^0 34' 18.848" N, 86^0 25' 31.849" E.
- 22^0 32' 43.119" N, 86^0 25' 58.633" E
- 22^0 32' 56.241" N, 86^0 26' 45.097"E
- 22^0 34' 17.401" N, 86^0 26' 22.197"E

The mine can be approached from the all-weather road linking Jamshedpur with Mosabani via Jaduguda. About 2 km north of Surda, a road branches off from the Jamshedpur-Mosabani Road leading to Ghatsila. At present the road is adequate to handle the traffic. The nearest National Highway is NH-33, which is at an aerial distance of 6.5 km from the mine and can be approached via Ghatsila.

The nearest railway station is Ghatsila (Howrah-Mumbai Main line; SE Railway), which is located at an aerial distance of about 4 km east-northeast of the mine lease.

There is an abandoned airstrip (2 concrete runways, some of the taxiways and hardstands still existing) at Dhalbhumgarh about 12 km SE of the mine. The nearest functional airport is Sonari at Jamshedpur which is about 40 km NW of the mine.

1.1.4. Project Proposal in Brief

Surda Mine is an underground mine operating since 1956. The present capacity of the mine is 0.31 million tonnes per year (MTPA). The ore produced is crushed underground, hoisted to the surface in skips and cages and dispatched by tipper trucks to the ore concentrator plant located at Mosabani at an aerial distance of about 3.5 km. The ore is beneficiated through froth floatation process. The concentrate is trucked to HCL's copper smelter at Moubhandar on the outskirts of Ghatsila for smelting and refining. The concentrator plant at Mosabani has the capacity to process 0.612 MTPA of ore, but is underutilized for want of feedstock. The increased production from Surda mine will enable full utilization of this concentrator plant.

Strike extension of Surda Mining Lease is about 4.5 Km. Presently Surda Mine is being operated in Surda Mining Lease. The mine has been developed over a strike length of 2.2 km. and to a depth of 474m. i.e. 13th level.

Chalcopyrite is the most pre-dominant sulphide mineral, followed in order of abundance by pyrite and pyrrhotite. Important amongst oxide minerals are apatite, magnetite and uranium mineral. Gold and silver occurs in minor quantities. The sulphides occur commonly as massive, veins, stringers along foliation and fracture planes, as disseminations and as minor replacement patches and veins. Depth exploration drilling has been completed by surface exploratory drilling of about 7500 meters corresponding to about 750 meter vertical depth. Three holes have intersected ore body corresponding to 20th level i.e. about 750 meters vertical depth at about 20500 N (RRA Co-ordinate). Surface exploration drilling activity may be undertaken up to the extent of the present mining limit Area between 19000 N to 19750 N and between 23000 N to 23500 N, area may be taken up to establish the continuity/existence of the mineralized zone through geophysical/ geochemical exploration methods.

The proposed expansion project envisages augmenting the production from 0.31 MTPA to 0.9 MTPA without any change in lease area or land acquisition. To achieve this objective the company intends to create new infrastructure in the mines. Among other things, this would involve hoisting from deeper sections by sinking a new vertical shaft to hoist ore and to connect it with working levels of the mines. The new vertical shaft would serve the purposes of increased hoisting capacity, improving mines ventilation and serve as main entry to the mines.

1.2. SURDA MINING LEASE

Surda Mining Lease (388.68 ha) was extended by the State Government till 31.03.2020 in accordance with provisions under MMDR (Amendment) Act, 2015. On 06.09.2024, the State Government has extended the lease over 388.68 ha till 31.03.2040 as per MCR-2016.

1.3. RELEVANT STATUTORY CLEARANCES

1.3.1. Environmental Clearance

Vide F. No. J-11015/80/2012-IA-II(M) dated 25th July, 2024, the MoEF&CC has granted Environmental Clearance to Surda Copper Mine Project for its capacity expansion to 0.9 MTPA with reference to the total mine lease area of 388.68 ha.

1.3.2. Forest Clearance

Vide Letter No. 8-64/1993-FC (Vol.) dated 15th June, 2024, the MoEF&CC has granted In-principle/Stage-I approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favour of M/s Hindustan Copper Limited.

1.3.3. Mine Plan Approval

The mining plan for the lease area of 388.68 ha was approved by the Indian Bureau of Mines, Ranchi vide letter No. RAN/ESB/Cu/MP-21 12018-19 dated 16.04.2019 which was valid till 31.03.2020. Regional Controller of Mines, Indian Bureau of Mines, Ranchi granted further Provisional Approval of Mining Plan vide Letter no. RAN/ESB/Cu/MP-36/2019-20 dated 02 April, 2020. Subsequently, vide Letter No. RAN/ESB/Cu/MP-34/2021-22 dated 27.04.2022 of the office of Regional Controller of Mines, Indian Bureau of Mines, the modification and review of the approved Mine Plan & Progressive Mine Closure Plan was duly approved against the total lease area of 388.68 ha for the period 2022-23 to 2024-25. For the plan period 2025-26 to 2029-30, the company has submitted a proposal to IBM for review of the Mining Plan for the lease area of 388.68 ha which is under final stage of approval.

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2. REQUIREMENT FOR PREPARATION OF REHABILITATION-CUM-ENRICHMENT PLAN

2.1. BACKGROUND

As mentioned in Para 2.3.2. herein, Stage-I approval has been accorded by the Central Government for diversion of 65.52 ha of forest land for capacity expansion of Surda Copper Mine subject to certain conditions. The conditions laid under this approval order which are relevant for preparation of the instant Plan are being reproduced hereunder for ready reference:

> "*8. The user agency will protect and demarcate the diverted forest land on surface, in consultation with State Forest Department by construction of a stone wall/trench/barbed wire fencing with angle iron and will maintain the fencing during entire period of life of the mine*".
>
> "*9. User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the* ***degraded open forests (having crown density less than 0.40)****, if any, located in the area* ***within 100 meter*** *from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance*".
>
> "*10. The surface area of* ***diverted land*** *for underground mining shall be* ***Rehabilitated and enriched*** *by using indigenous species with participation of local people at the project cost. The user agency shall prepare the plan for the purpose in consultation with state forest Dept*".
>
> "*13. Following activities, as per approved plan / schemes, shall be undertaken in the* ***lease area*** *by the User Agency under the supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval:*
> *i. Mitigative measures* ***to minimize soil erosion and choking of stream*** *shall be implemented within a period of three year with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department;*
> *ii.* ***Planting*** *of adequate drought hardy plant species and sowing of seeds, in the appropriate area* ***within the mining lease*** *to arrest soil erosion in accordance with the approved scheme;*
> *iii. Construction of* ***check dams****, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;*
> *iv. Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than* 28^0*;*"

2.2. OBJECTIVES OF THE PLAN

The plan objectives to comply with the conditions mentioned under the preceding para may be summarized into the following heads:

(A) Demarcation of diverted forest land by construction of a stone wall/trench/barbed wire fencing with angle iron;

(B) Rehabilitation-cum-enrichment of Mining Lease area through appropriate Soil & Moisture Conservation measures;

(C) Restocking and rejuvenation of degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease; and

(D) Stabilization of the overburden dumps so as to ensure that angles of repose at any given place is less than 28^0.

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3. ABOUT THE TARGET AREA

3.1. IDENTIFICATION OF THE TARGET AREA

The identified objectives under the Plan clearly mandate the **Target Area** to be **the area encircling 100m periphery of Surda ML**. In order to comply with the conditions laid under Stage-I Forest Clearance granted to the Project, the Target Area could be divided into following two parts:

(i) Mining Lease Area; and
(ii) The area located between the ML boundary and 100m periphery around the ML area.

For formulation of the instant Plan, the present status of the Target Area particularly, the crown density of forests and the drainage pattern of the area have been studied in great detail so as to enable the selection of prescriptions towards the rehabilitation and enrichment of the Target Area.

3.2. LAND SCHEDULE OF SURDA MINING LEASE

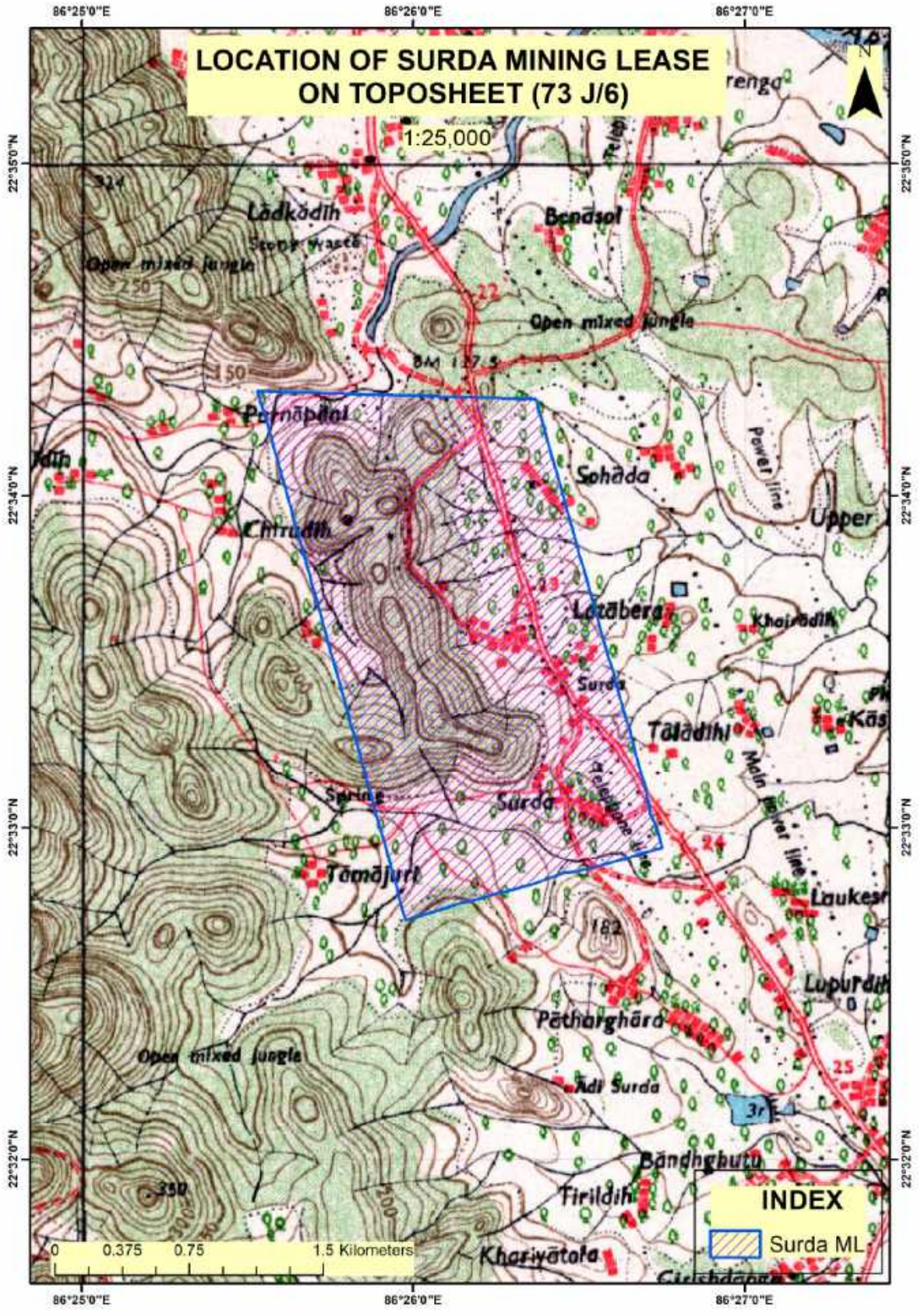
The Land Schedule as mentioned in the Mining Lease granted by the State Government is as follows.

Table 1: Surda Mining Lease – Land Schedule

Sl. No.	Village	Thana No.	Raiyati Land (acres)	Anabad Bihar Sarkar (acres)	Anabad Sarva-Sadharan (acres)	Distt. Board (acres)	Forest Land (acres)	Total Area (acres)	Total Area (ha.)
1.	**Benashol**	100	3.80	1.25	-	-	3.91	8.96	**3.63**
2.	**Sohada**	101	122.29	184.43	4.69	5.62	134.61	451.64	**182.77**
3.	**Surda**	102	144.80	47.02	11.12	2.45	82.92	288.31	**116.68**
4.	**Pathargora**	160	8.24	8.97	-	0.65	8.13	25.99	**10.52**
5.	**Forest Block**	1098	21.80	25.02	-	-	138.72	185.54	**75.08**
Total			**300.93**	**266.69**	**15.81**	**8.72**	**368.29**	**960.44**	**388.68**

The location of Surda Mining Lease on Toposheet is as follows.

Map 1: Location of Surda Mining Lease on Toposheet



3.2.1. Village-wise Forest Land Details of Surda Mining Lease

The break-up of forest land and non-forest land under Surda Mining Lease is as under.

Table 2: Surda Mining Lease – Forest Land Details

Sl. No.	Village	Thana No.	Forest Land (ha)	Non-Forest Land (ha)	Total Area (ha)
1.	**Benashol**	100	1.58	2.05	**3.63**
2.	**Sohada**	101	54.46	128.31	**182.77**
3.	**Surda**	102	33.56	83.12	**116.68**
4.	**Pathargora**	160	3.29	7.23	**10.52**
5.	**Forest Block**	1098	56.14	18.94	**75.08**
Total			**149.03**	**239.65**	**388.68**

3.3. VILLAGES ENCLAVED WITHIN THE TARGET AREA AND CORRESPONDING ADMINISTRATIVE UNITS OF FOREST DEPARTMENT

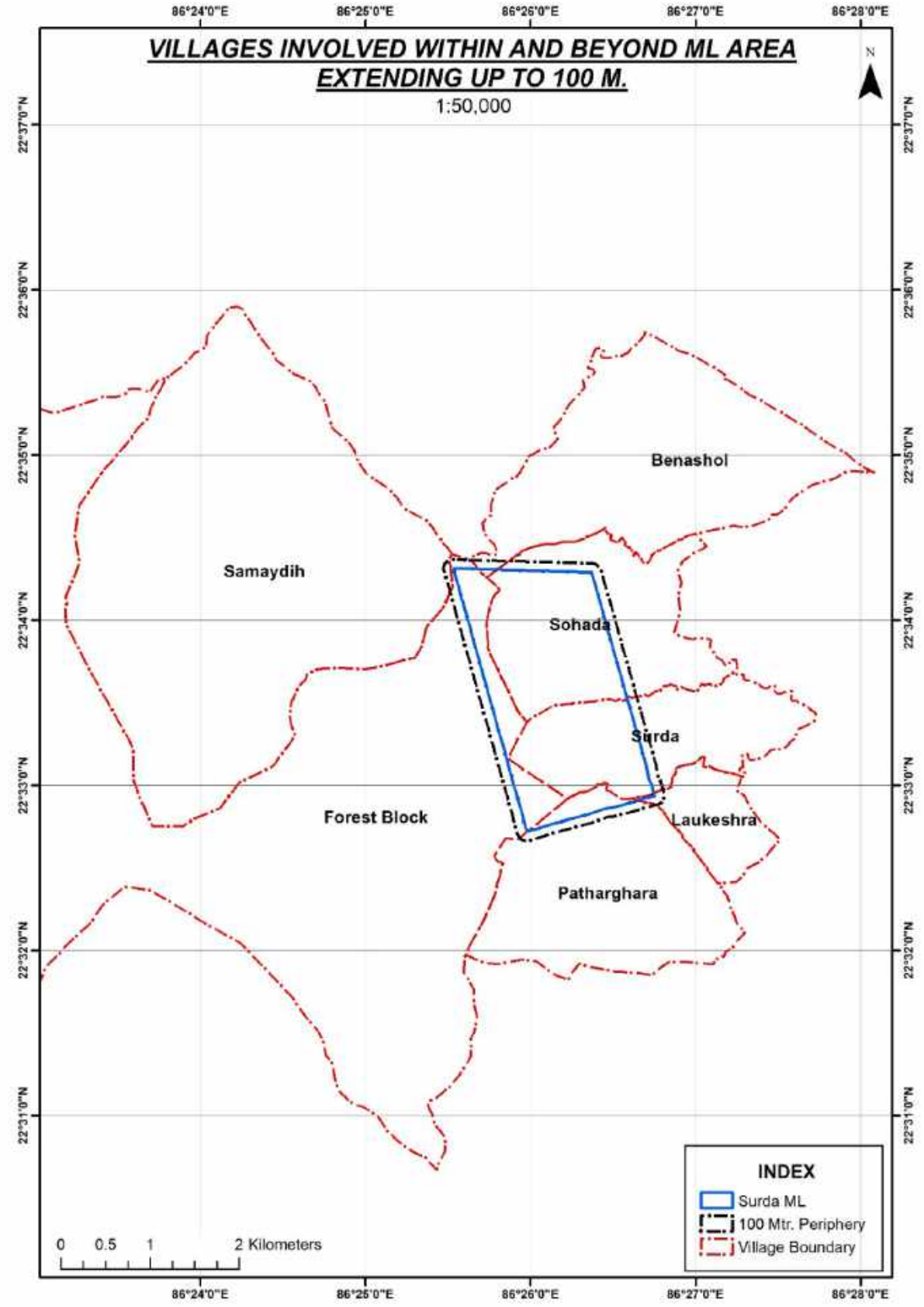
The Target Area inclusive of 100m periphery of Surda ML area consists of a total of 6 villages and a forest block. The names of the villages are being tabulated hereunder in accordance with the sub-units of forest administration, namely Forest Range, Beat and Sub-Beat.

Table 3: Target Area Villages and Corresponding Forest Administrative Units

Range	Beat	Sub-Beat	Sl. No.	Village	Thana/Thana No.	Total Forest land (ha)	Forest Land under Lease (ha)
Musabani	Musabani	Benashol	1.	Benashol	Ghatsila-100	182.72	1.58
			2.	Sohada	Ghatsila-101	56.22	54.46
		Surda	3.	Surda	Ghatsila-102	49.10	33.56
			4.	Pathargarha	Ghatsila-160	111.20	3.29
			5.	Laukeshra	Ghatsila-159	3.61	-
Rakha Mines	Royam	Kendadih	6.	Forest Block	Ghatsila-1098	980.57	56.14
			7.	Samaydih	Ghatsila-97	219.36	-

The villages involved within and beyond Surda ML area extending up to 100m are being shown in the following map.

Map 2: Villages Involved Within and Beyond Surda ML Extending up to 100m



3.3.1. Description of Notified Forest Land within the Target Area and Corresponding Prescriptions under the Working Plan

The prescriptions laid under the approved Working Plan of Jamshedpur Forest Division with respect to the notified forest land located within the Target Area villages are being tabulated hereunder.

Table 4: Working Plan Prescriptions with respect to Notified Forest Land in Target Area Villages

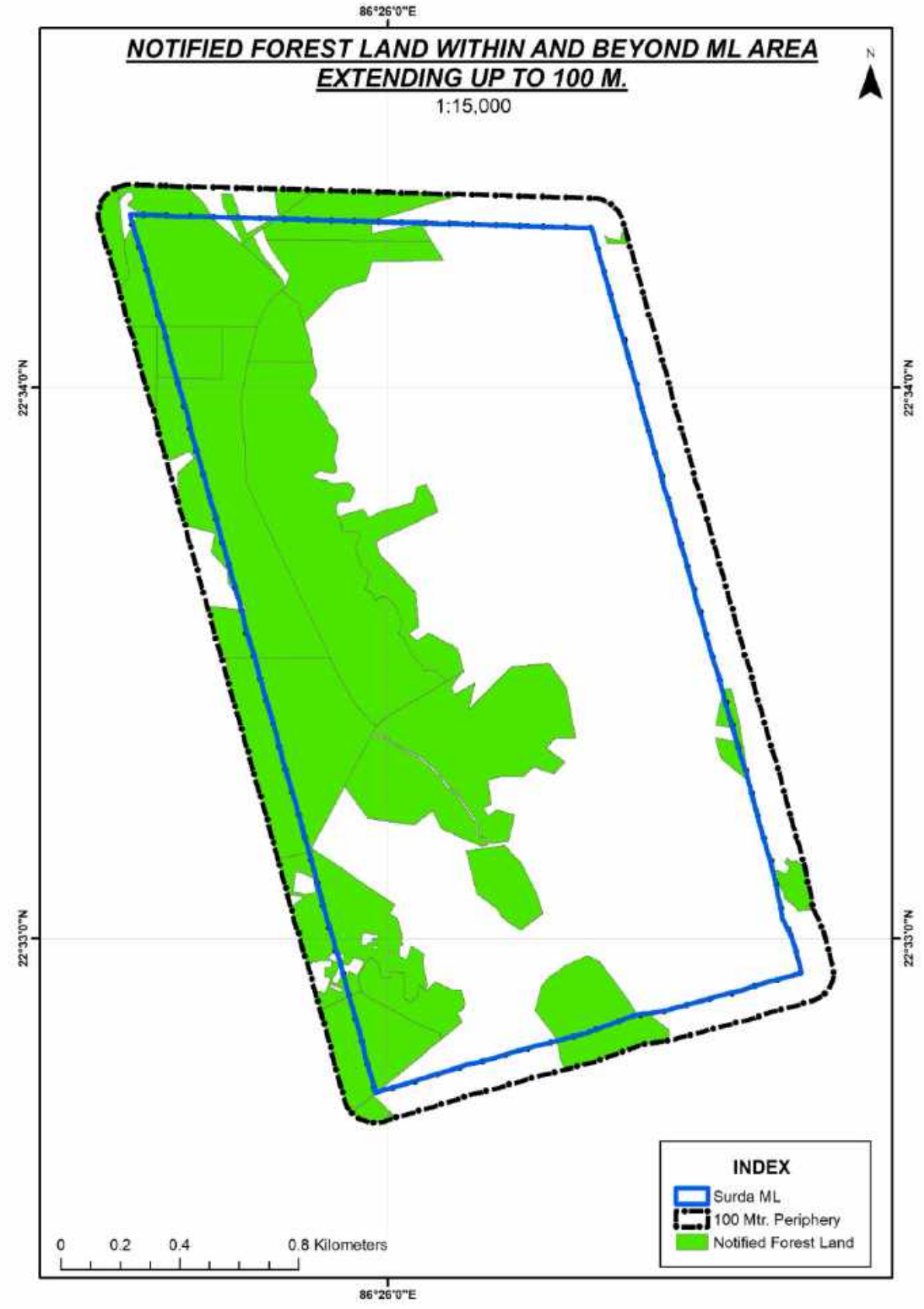
Range/Beat/ Sub-Beat	Village	Thana/Thana No.	Forest Land (ha)	CWSWC*	RSMCWC*	PWC*
Musabani/ Musabani/ Benashol	Benashol	Ghatsila-100	182.72	-	34.78	147.94
	Sohada	Ghatsila-101	56.22	23.56	22.56	10.10
Musabani/ Musabani/ Surda	Surda	Ghatsila-102	49.10	-	-	49.10
	Pathargarha	Ghatsila-160	111.20	-	-	111.20
	Laukesra	Ghatsila-159	3.61	-	-	3.61
Rakha Mines/ Royam/ Kendadih	Forest Block	Ghatsila-1098	980.57	134.78	668.76	177.03
	Samaydih	Ghatsila-97	219.36	98.56	105.87	14.93

*CWSWC – Coppice with Standard Working Circle.
*RSMCWC – Rehabilitation-cum-Soil and Moisture Conservation Working Circle.
*PWC – Plantation Working Circle.

3.4. NOTIFIED/DEMARCATED FOREST BOUNDARIES AND FOREST COVER WITHIN THE TARGET AREA

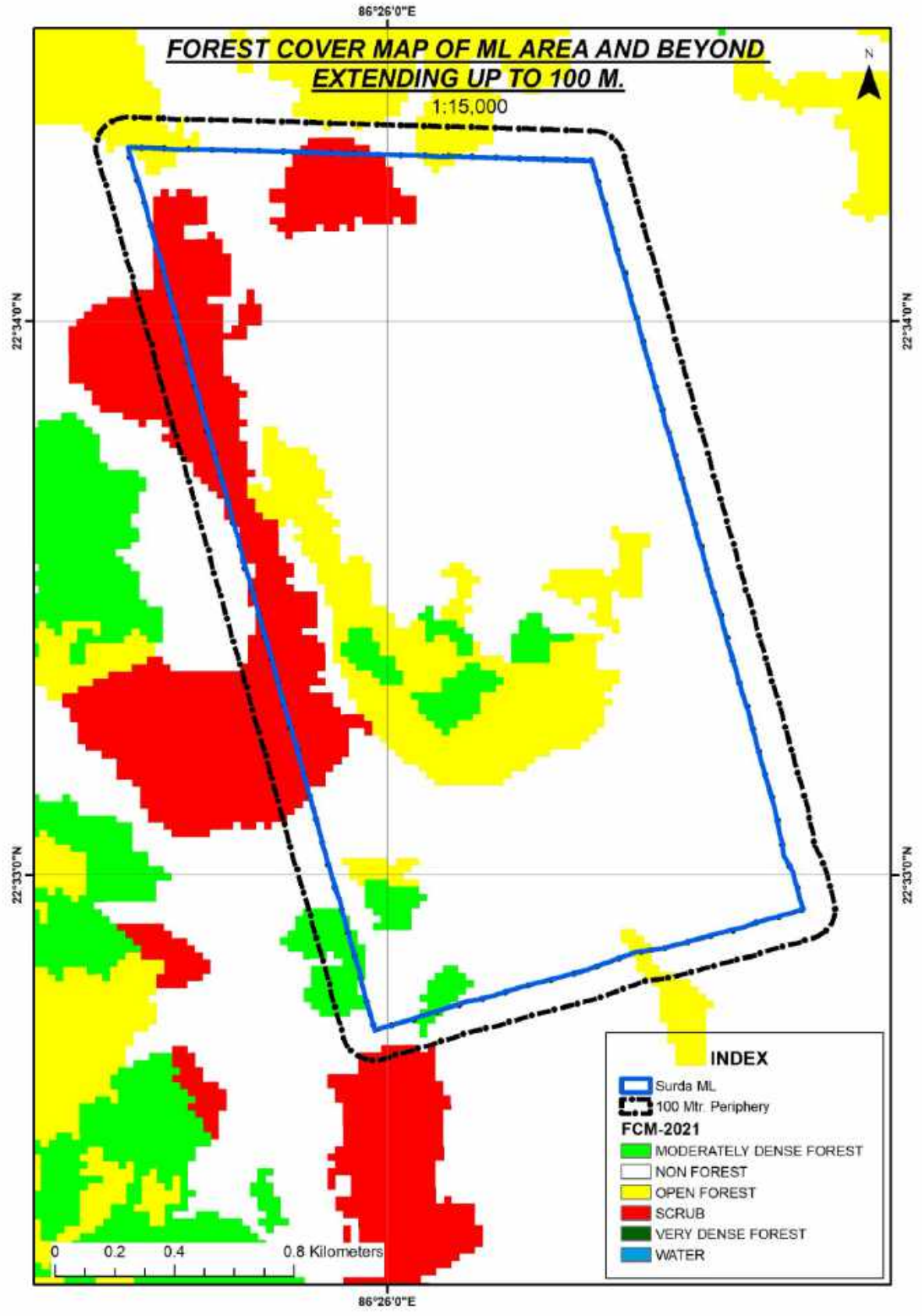
The Notified/Demarcated Forest land boundaries are being shown in the following map:

Map 3: Notified Forest Land Boundaries within the Target Area



The Forest Cover Map (FSI, 2021) of the Target Area is as follows.

Map 4: Forest Cover Map of the Target Area (FSI, 2021)



According to the aforementioned forest cover map of the Target Area, the area under different tree canopy density classes are as under:

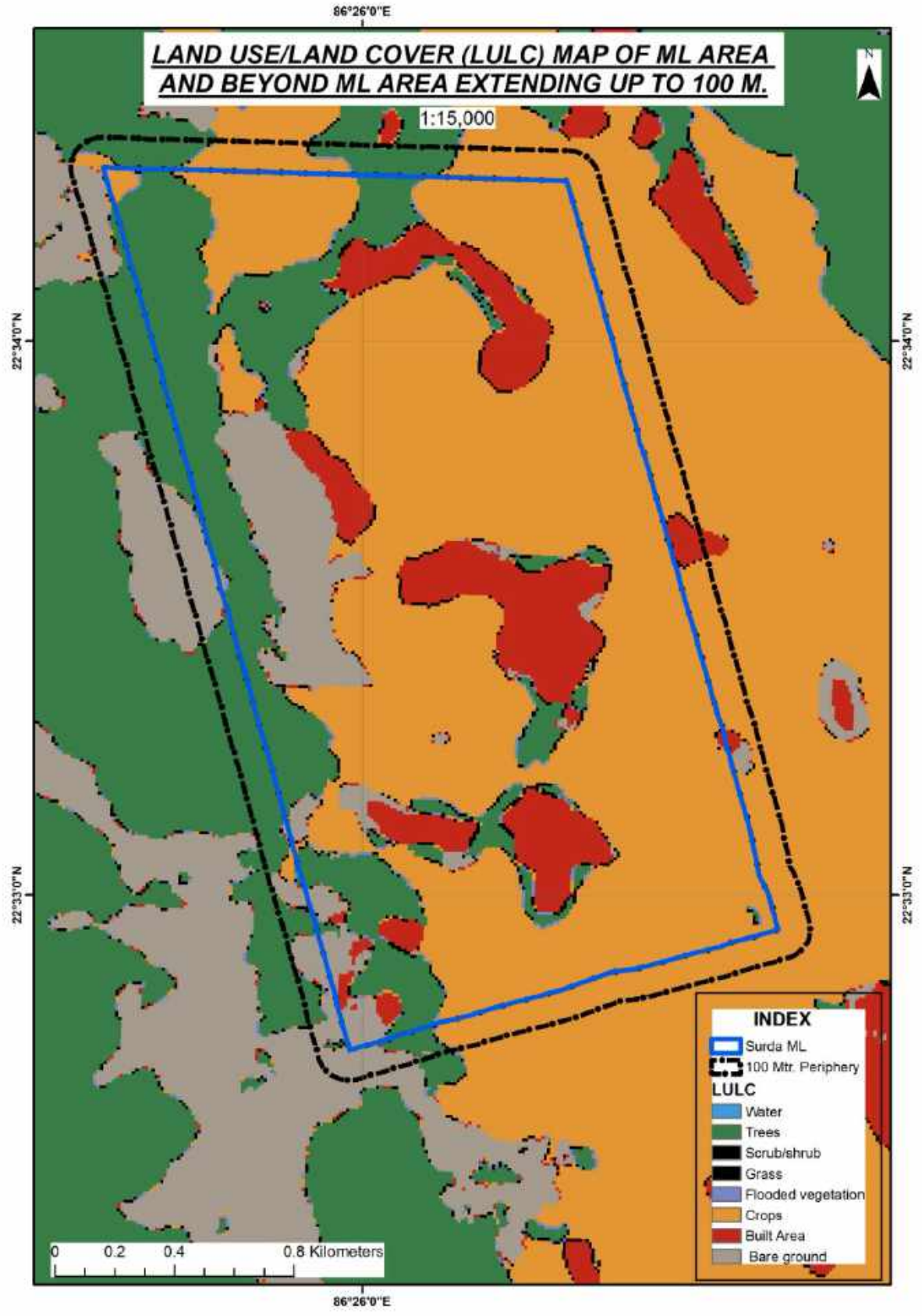
Table 5: Target Area Under Different Tree Canopy Density Classes

Sl. No.	Forest Density Classes	Tree Canopy Density	Area (ha)
1.	Very Dense Forest	≥ 70%	-
2.	Moderately Dense Forest	< 70%; ≥ 40%	16.1528
3.	Open Forest	< 40%; ≥ 10%	52.0833
4.	Scrub Forest	< 10%	52.5444
5.	Non-Forest	-	354.2550
Total area			**475.0355**

3.5. LAND USE AND LAND COVER OF THE TARGET AREA

The Land Use and Land Cover map of the Target Area may be appreciated through the following map:

Map 5: Land Use/ Land Cover of the Target Area



The corresponding areas against different kinds of land use/land cover in the Target Area are being tabulated as follows.

Table 6: Area Details under different Land Use/Land Cover in the Target Area

Sl. No.	Land Use Class	Area (ha)	Percentage
1.	Bare Ground	43.4811	9.16
2.	Built Area	48.2353	10.16
3.	Crops	274.6940	57.86
4.	Flooded Vegetation	4.3763	0.92
5.	Grass	4.5603	0.96
6.	Scrub/Shrub	4.5911	0.97
7.	Trees	94.8291	19.97
Total		474.7672	100.00

The LULC data mentioned above shows that the Target Area is predominantly covered by crops and only about 20% of the area has some kind of vegetation over it.

3.6. PHYSIOGRAPHY OF THE TARGET AREA

The Target Area is situated at the edge of the Chhotanagpur Plateau which is characterized by gentle to moderately steep or steep slopes. The Target Area is on the eastern fringes of the Chhotanagpur Plateau. The western half of the area is covered by a prominent escarpment extending in the northwest–southeast axis whereas the eastern half comprises of the valley of Subarnarekha River which flows at a distance of about 2.5 km east of Surda Mine Lease.. The escarpment comprises of a series of hills rising to maximum height of 531 m AMSL. This escarpment is covered with Sal forests.

It is precisely located at the bottom of escarpment extending in the north-south direction. Consequently the western part of the lease area rises steeply to a height of about 260 m above mean sea level (AMSL) from a base slightly more than 100 m AMSL. The central and eastern part of the lease area slopes gently towards the east. The lower most part of the lease is at 104 m AMSL located on the eastern boundary of the lease. The ground slopes gently eastwards towards the Subarnarekha River, which flows at a distance of about 2.5 km east of Surda Mine Lease.

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4. METHODOLOGY ADOPTED IN FORMULATION OF REHABILITATION-CUM-ENRICHMENT PLAN

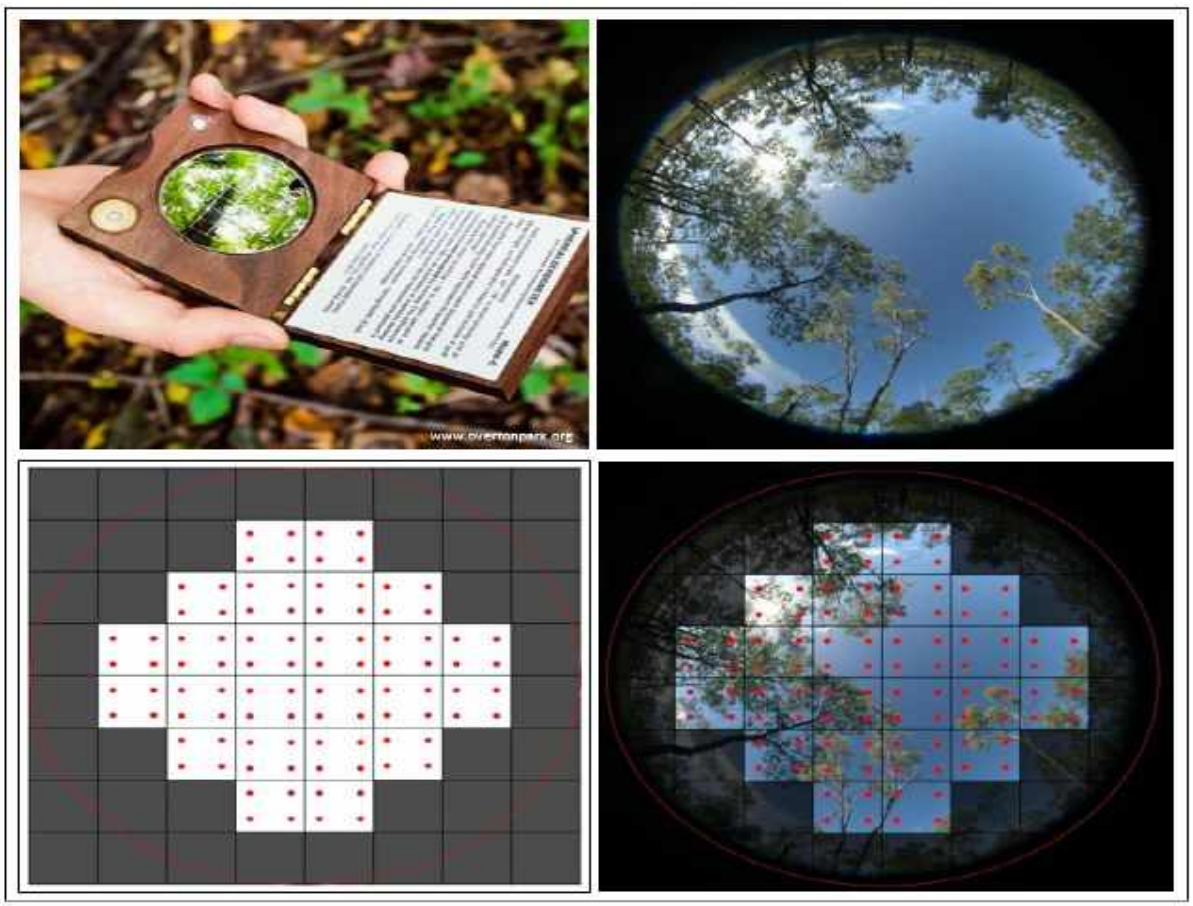
4.1. ASSESSMENT OF CANOPY COVER OVER FOREST LAND IN THE TARGET AREA

In order to assess the crown/canopy cover of the Target Area, two separate methods have been resorted to – (a) Using Crown Densiometer; and (b) Normalized Difference Vegetation Index Analysis. Two independent methods have been used to validate the results in a scientific manner.

4.1.1. Using Crown Densiometer

4.1.1.1. Crown Densiometer – A Brief Description

A Crown/spherical Densiometer is a pocket-sized instrument used for estimating forest overstory density. It consists of a highly polished convex or concave chrome mirror with a spherical curvature, allowing a wide overhead reflection. A grid system, either scratched on the mirror surface or placed above it, is used to estimate canopy cover. The grid contains quarter-inch squares with assumed dots to help in counting open spaces, and the percentage of canopy cover is derived by subtracting the counted open dots from the total.

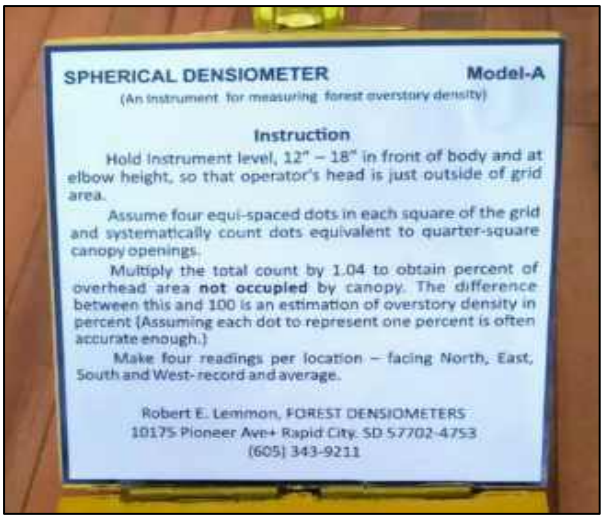


The densiometer is mounted in a compact wooden box with a spirit level for accurate positioning.

Operators hold the instrument level at chest height and take readings at different forest locations. Consistency in measurement requires training and experience, especially in differentiating between dense and thinly spread canopies. Seasonal variations, particularly in deciduous forests, must be considered. The instrument has been tested in multiple forests, showing high reliability with variations within ±5% when classifying overstory density. The method is simple, portable, and does not require tripods, making it useful for foresters, ecologists, and conservationists. Repeated sampling across sites helps in obtaining an accurate average canopy cover estimate for a given forest area.

4.1.1.2. Working of Crown Densiometer

As stated earlier, the Spherical Densiometer consists of either a convex mirror or a concave mirror with twnty-four 1/4 inches squares engraved on the surface. The design is such that the operator views the same degree of arc overhead regardless of the user being in a low lying canopy area or a mature stand of high canopy forest. The Spherical Crown Densiometer comes housed in a 3" x 3" Hardwood case with a built in leveling bubble and instructions included.



Each square of the grid on the Densiometer is then equally subdivided mentally into 4 smaller squares (1/8" X 1/8") and represented by an imaginary dot in the centre of each of the smaller squares. Thus, a total of 96 dots representing smaller square areas can then be counted within the grid. Once the representative forest site has been selected for measurement, the user holds the Instrument at about 12"-18" distance in front of body and at elbow height, so that operator's head is just outside of grid area. The operator can then count the number of dots representing the smaller (1/8" X 1/8") square areas of CANOPY OPENINGS, up to a total of 96. The number determined is then multiplied by 1.04 (1/96 x 100) to obtain the percent of overhead NOT

OCCUPIED by canopy. The difference between this percentage and 100% is the estimated overstory density in percent.

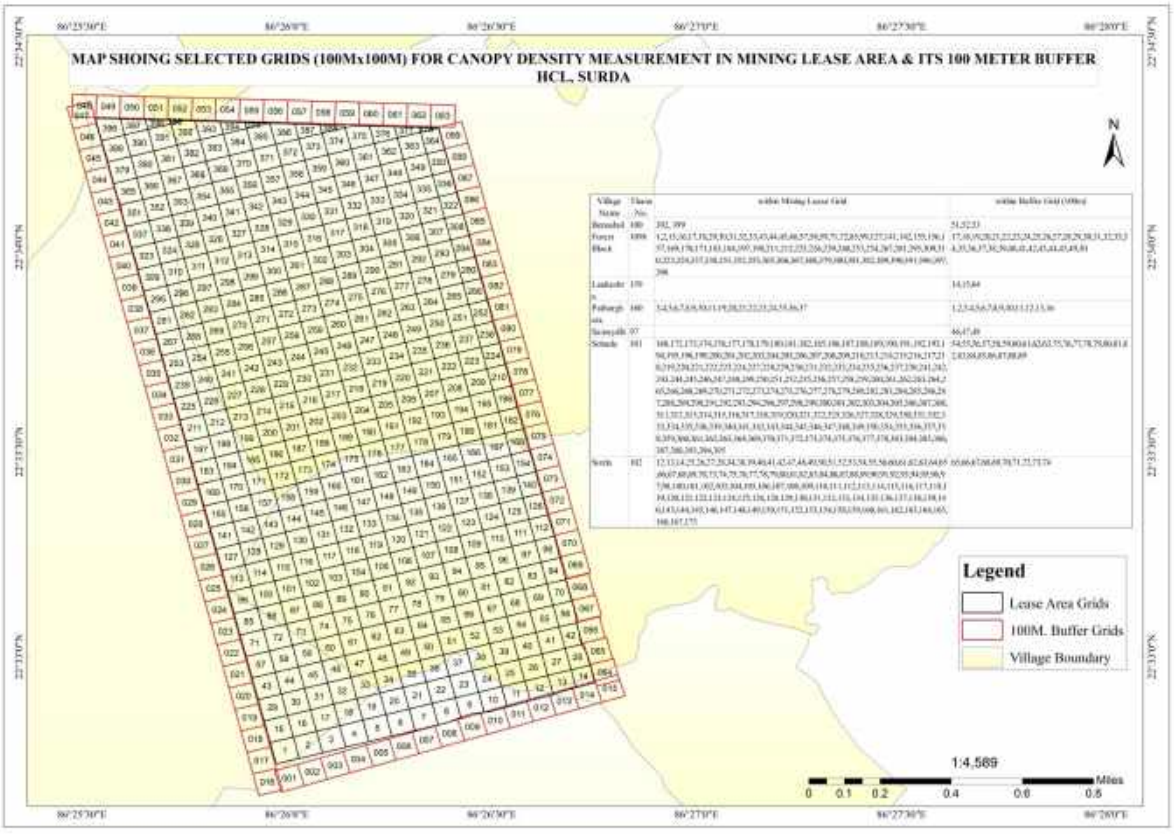
The statistical accuracy and repeatability of the instrument is based on taking four readings, using up to 96 dots representing the smaller (1/8" X 1/8") squares for up to a total of 384 smaller squares per site (96 X 4), and then averaging all four readings at the different orientations about the reference tree. Obviously, in a forest environment, one shall be counting considerably less than 96 dots representing the smaller squares, so the exercise is a lot less laborious than it might first appear. The denser the overstory canopy, the fewer dots one shall have to count since the 1/8" X 1/8" areas are to be counted in which one can see sky in the major portion of each of the smaller squares.

4.1.1.3. Methodology Adopted to Assess the Canopy Cover Over Forest Land in the Target Area Using Crown Densiometer

The assessment of canopy cover over the forest land involved in the Target Area is our prime objective. The Target Area obviously constitutes of the area under Surda ML as well as the area enclaved within 100m periphery of the lease area. **The methodology adopted to achieve the aforesaid objective consisted of dividing the whole target area into grids measuring 100m x 100m (1 ha). Selection of grids for study were made through random sampling and densiometer data was collected at the four corners of the selected grids so as to capture variations in canopy cover. The canopy cover assessment was carried out in two key zones: the mining lease area, which includes forest land directly above the underground mining operations, and the 100-meter buffer zone.**

The delineated grids are being shown in the following map:

Map 6: Grid Map of the Target Area



The Village-wise grid nos. are being tabulated as follows.

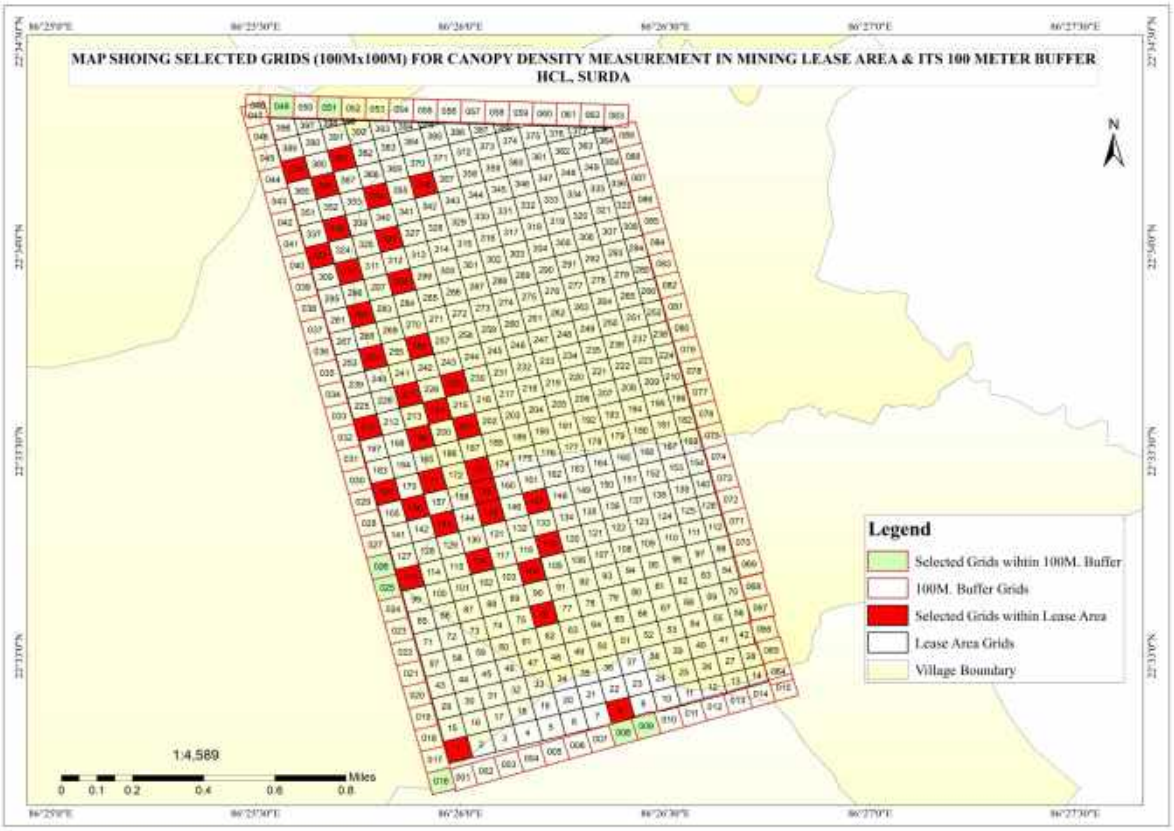
Table 7: Village-wise Grid Nos. of 100m x 100m size

Sl. No.	Village	Grid Nos. within ML	Grid Nos. outside ML (100m buffer)
1.	Benashol	392, 399	51, 52, 53
2.	Sohada	168, 172, 173, 174, 176, 177, 178, 179, 180, 181, 182, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 383, 384, 385, 386, 387, 388, 393, 394, 395	54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89
3.	Surda	12, 13, 14, 25, 26, 27, 28, 34, 38, 39, 40, 41, 42, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119,	65, 66, 67, 68, 69, 70, 71, 72, 73, 74

		120, 121, 122, 123, 124, 125, 126, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 175	
4.	Pathargarha	3, 4, 5, 6, 7, 8, 9, 10, 11, 19, 20, 21, 22, 23, 24, 35, 36, 37	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16
5.	Laukeshra	-	14, 15, 64
6.	Forest Block	1, 2, 15, 16, 17, 18, 29, 30, 31, 32, 33, 43, 44, 45, 46, 57, 58, 59, 71, 72, 85, 99, 127, 141, 142, 155, 156, 157, 169, 170, 171, 183, 184, 197, 198, 211, 212, 225, 226, 239, 240, 253, 254, 267, 281, 295, 309, 310, 323, 324, 337, 338, 351, 352, 353, 365, 366, 367, 368, 379, 380, 381, 382, 389, 390, 391, 396, 397, 398	17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 49, 50
7.	Samaydih	-	46, 47, 48

Canopy cover has been assessed using densiometer at the four corners of the grids selected randomly. The selected grids are being shown in the following map.

Map 7: Grids Selected for Densiometer Data Collection



4.1.1.4. Densiometer Data with respect to Selected Grids

Densiometer data has been collected at the four corners (named as A, B, C &D) of the selected grids. The data is being presented in the following table.

Table 8: Village-wise Densiometer Results in the Selected Grids

Grid No.	Village	Four Corners	No. of Blank squares	No. of Blank Densiometer Dots*	Canopy Blank (%)**	Canopy Cover (%)***	Average Canopy Cover (%)
WITHIN ML AREA							
001	**Forest Block**	A	24	96	99.84	0.16	16.80
		B	16	64	66.56	33.44	
		C	22	88	91.52	8.48	
		D	18	72	74.88	25.12	
076	**Surda**	A	18	72	74.88	25.12	14.72
		B	24	96	99.84	0.16	
		C	16	64	66.56	33.44	
		D	24	96	99.84	0.16	
104	**Surda**	A	19	76	79.04	20.96	5.36
		B	24	96	99.84	0.16	
		C	24	96	99.84	0.16	
		D	24	96	99.84	0.16	
116	**Surda**	A	14	56	58.24	41.76	27.20
		B	22	88	91.52	8.48	
		C	20	80	83.20	16.80	
		D	14	56	58.24	41.76	
113	**Surda**	A	13	52	54.08	45.92	37.60
		B	24	96	99.84	0.16	
		C	16	64	66.56	33.44	
		D	7	28	29.12	70.88	
201	**Sohada**	A	20	80	83.20	16.80	12.64
		B	20	80	83.20	16.80	
		C	24	96	99.84	0.16	
		D	20	80	83.20	16.80	
229	**Sohada**	A	21	82	85.28	14.72	19.40
		B	18	72	74.88	25.12	
		C	17	68	70.72	29.28	
		D	22	88	91.52	8.48	
214	**Sohada**	A	9	36	37.44	62.56	36.56
		B	11	44	45.76	54.24	
		C	21	84	87.36	12.64	
		D	20	80	83.20	16.80	
256	**Sohada**	A	18	72	74.88	25.12	43.84
		B	20	80	83.20	16.80	
		C	6	24	24.96	75.04	
		D	10	40	41.60	58.40	
298	**Sohada**	A	5	20	20.80	79.20	37.60
		B	21	84	87.36	12.64	
		C	16	64	66.56	33.44	
		D	18	72	74.88	25.12	
356	**Sohada**	A	8	32	33.28	66.72	31.36
		B	14	56	58.24	41.76	
		C	20	80	83.20	16.80	
		D	24	96	99.84	0.16	
354	**Sohada**	A	24	96	99.84	0.16	41.76
		B	12	48	49.92	50.08	
		C	4	16	16.64	83.36	

		D	16	64	66.56	33.44	
366	**Forest Block**	A	10	40	41.60	58.40	62.56
		B	12	48	49.92	50.08	
		C	4	16	16.64	83.36	
		D	10	40	41.60	58.40	
379	**Forest Block**	A	4	16	16.64	83.36	63.60
		B	11	44	45.76	54.24	
		C	8	32	33.28	66.72	
		D	12	48	49.92	50.08	
381	**Forest Block**	A	12	48	49.92	50.08	41.76
		B	20	80	83.20	16.80	
		C	16	64	66.56	33.44	
		D	8	32	33.28	66.72	
169	**Forest Block**	A	2	8	8.32	91.68	88.56
		B	3	12	12.48	87.52	
		C	4	16	16.64	83.36	
		D	2	8	8.32	91.68	
211	**Forest Block**	A	8	32	33.28	66.72	56.32
		B	4	16	16.64	83.36	
		C	8	32	33.28	66.72	
		D	22	88	91.52	8.48	
173	**Sohada**	A	22	88	91.52	8.48	20.96
		B	18	72	74.88	25.12	
		C	16	64	66.56	33.44	
		D	20	80	83.20	16.80	
159	**Surda**	A	18	72	74.88	25.12	16.80
		B	16	64	66.56	33.44	
		C	24	96	99.84	0.16	
		D	22	88	91.52	8.48	
145	**Surda**	A	24	96	99.84	0.16	12.64
		B	22	88	91.52	8.48	
		C	20	80	83.20	16.80	
		D	18	72	74.88	25.12	
008	**Pathargarha**	A	16	64	66.56	33.44	30.32
		B	18	72	74.88	25.12	
		C	20	80	83.20	16.80	
		D	13	52	54.08	45.92	
119	**Surda**	A	24	96	99.84	0.16	12.64
		B	18	72	74.88	25.12	
		C	20	80	83.20	16.80	
		D	22	88	91.52	8.48	
147	**Surda**	A	22	88	91.52	8.48	10.56
		B	20	80	83.20	16.80	
		C	24	96	99.84	0.16	
		D	20	80	83.20	16.80	
143	**Surda**	A	3	12	12.48	87.52	49.04
		B	12	48	49.92	50.08	
		C	10	40	41.60	58.40	
		D	24	96	99.84	0.16	
156	**Forest Block**	A	24	96	99.84	0.16	53.20
		B	3	12	12.48	87.52	
		C	4	16	16.64	83.36	
		D	14	56	58.24	41.76	
171	**Forest Block**	A	14	56	58.24	41.76	57.36
		B	3	12	12.48	87.52	
		C	4	16	16.64	83.36	
		D	20	80	83.20	16.80	
199	**Sohada**	A	14	56	58.24	41.76	44.88
		B	4	16	16.64	83.36	

		C	11	44	45.76	54.24	
		D	24	96	99.84	0.16	
227	**Sohada**	A	24	96	99.84	0.16	26.16
		B	9	36	37.44	62.56	
		C	14	56	58.24	41.76	
		D	24	96	99.84	0.16	
254	**Forest Block**	A	6	24	24.96	75.04	54.24
		B	12	48	49.92	50.08	
		C	6	24	24.96	75.04	
		D	20	80	83.20	16.80	
282	**Sohada**	A	4	16	16.64	83.36	37.60
		B	24	96	99.84	0.16	
		C	20	80	83.20	16.80	
		D	12	48	49.92	50.08	
310	**Forest Block**	A	2	8	8.32	91.68	35.52
		B	24	96	99.84	0.16	
		C	24	96	99.84	0.16	
		D	12	48	49.92	50.08	
323	**Forest Block**	A	8	32	33.28	66.72	81.28
		B	2	8	8.32	91.68	
		C	3	12	12.48	87.52	
		D	5	20	20.80	79.20	
326	**Sohada**	A	15	60	62.40	37.60	55.28
		B	14	56	58.24	41.76	
		C	12	48	49.92	50.08	
		D	2	8	8.32	91.68	
338	**Forest Block**	A	2	8	8.32	91.68	65.68
		B	16	64	66.56	33.44	
		C	10	40	41.6	58.4	
		D	5	20	20.80	79.20	
Average Canopy Cover Density within ML area = 0.38							
OUTSIDE ML AREA (100M PERIPHERY)							
051	**Benashol**	A	10	40	41.60	58.40	29.28
		B	24	96	99.84	0.16	
		C	22	88	91.52	8.48	
		D	12	48	49.92	50.08	
049	**Forest Block**	A	4	16	16.64	83.36	35.52
		B	10	40	41.60	58.40	
		C	24	96	99.84	0.16	
		D	24	96	99.84	0.16	
016	**Pathargarha**	A	24	96	99.84	0.16	23.04
		B	22	88	91.52	8.48	
		C	20	80	83.20	16.80	
		D	8	32	33.28	66.72	
009	**Pathargarha**	A	24	96	99.84	0.16	25.12
		B	10	40	41.60	58.40	
		C	22	88	91.52	8.48	
		D	16	64	66.56	33.44	
008	**Pathargarha**	A	16	64	66.56	33.44	27.20
		B	22	88	91.52	8.48	
		C	18	72	74.88	25.12	
		D	14	56	58.24	41.76	
025	**Forest Block**	A	8	32	33.28	66.72	63.60
		B	12	48	49.92	50.08	
		C	9	36	37.44	62.56	
		D	6	24	24.96	75.04	
026	**Forest Block**	A	9	36	37.44	62.56	74.00
		B	6	24	24.96	75.04	
		C	4	16	16.64	83.36	

		D	6	24	24.96	75.04	
Average Canopy Cover Density outside ML area (100m Periphery) = 0.39							

***** No. of Blank Densiometer Dots = (No. of Blank Squares) x 4

******Canopy Blank (%) = (No. of Blank Densiometer Dots) x 1.04

******* Canopy Cover (%) = 100 – (Canopy Blank Percentage)

From the above observations made by crown densiometer, we may conclude that **the crown density within ML area as well as within 100m periphery of the ML area, is less than 0.4.**

4.1.2. Normalized Difference Vegetation Index Analysis

The other method utilised for assessing the canopy cover within the Target Area is Normalized Difference Vegetation Analysis. The steps undertaken towards this were as follows.

(a) Preparation of a map of the target area i.e., the ML area including the area enclosed within a periphery of 100m from the lease boundary with village boundaries.
(b) Procuring satellite imagery of the target area (Sentinel-2 satellite imagery;
(c) Data processing through QGIS software;
(d) Assessment of vegetation through Normalized Difference Vegetation Index (NDVI) analysis; and
(e) Identification of degraded open forest with crown density less than 0.4.

4.1.2.1. Normalized Difference Vegetation Index (NDVI) – A Brief Introduction

The use of satellite remote sensing to assess vegetation characteristics has gained significant attention in recent years, particularly in monitoring forest health, canopy structure, and vegetation dynamics. The Normalized Difference Vegetation Index (NDVI) is a robust and widely used remote sensing tool to evaluate vegetation cover, density, and health. Remote sensing provides tools to gather data from a distance, using satellites, drones, or aircraft equipped with sensors that capture information about the Earth's surface. This data is often used for vegetation and land-cover analysis. In particular, forest management and land use change require accurate measurements of vegetation characteristics, such as crown density, to monitor ecosystem health and forest cover.

Crown density refers to the amount of ground covered by the crowns (or canopies) of trees, usually expressed as a percentage of the total area. Understanding crown density is crucial for assessing forest health, structure, and biodiversity.

NDVI is a widely used vegetation index in remote sensing, based on the difference between the near-infrared (NIR) and red light reflectance. It provides a simple yet effective way to distinguish between different types of land cover, with specific utility in determining vegetation health and density.

4.1.2.2. Theoretical Principles of NDVI vis-à-vis Crown Density

As a matter of fact healthy vegetation absorbs a significant amount of red light due to the chlorophyll in leaves, which is essential for photosynthesis. When plants are healthy, the absorption is high, and reflectance in the red band is low. In contrast, healthy vegetation reflects a large portion of NIR light. This is because the leaf structure, including internal cell layers and air pockets, reflects NIR light rather than absorbing it. The more robust the leaf structure and chlorophyll content, the more NIR light is reflected. The NDVI formula compares the difference between NIR reflectance (which is high in healthy plants) and red reflectance (which is low in healthy plants). Therefore, healthy vegetation will have a high NDVI value (close to +1), whereas stressed or dead vegetation, which reflects more red light and less NIR, will have a low NDVI value (closer to 0 or even negative).

By analysing the difference between near-infrared and red-light reflectance, NDVI helps identify stressed or unhealthy trees, allowing for early detection of issues such as water stress, nutrient deficiencies, or pest infestations.

NDVI is calculated using the formula: $NDVI = (NIR – RED)/(NIR + RED)$

Where NIR refers to the Near-Infrared band, which is sensitive to vegetation reflectance and RED refers to the Red band, where chlorophyll in plants absorbs most of the light

The value ranges from -1 to 1, where high values (>0.6) correspond to healthy, dense vegetation, and low values (approaching 0) reflect sparse or no vegetation. Values close to -1 are usually found in non-vegetated surfaces, such as water bodies, snow, or barren land.

NDVI can be directly related to vegetation density, as it highlights the amount of green, photosynthetically active vegetation. In forest ecosystems, higher NDVI values often correlate with greater crown cover, canopy height, and forest biomass. However, it is important to consider that NDVI can be influenced by environmental factors such as soil background, topography, and seasonal variations.

Crown density is a key parameter in understanding forest structure and dynamics. NDVI is not directly a measurement of crown density, but it can be used as a proxy. Areas with higher NDVI values often correspond to regions with denser canopy cover, which is an indicator of high crown density. By analysing NDVI patterns, one can make inferences about canopy structure and estimate crown density.

4.1.2.3. Methodology: NDVI Analysis for Crown Density Assessment

Remote sensing platforms such as Landsat, Sentinel, and MODIS provide regularly updated imagery at varying resolutions. Landsat 8, for example, provides both red and NIR bands that are commonly used for NDVI calculations. Also, Drones equipped with high-resolution multispectral sensors can capture NDVI data with more localized precision, which is beneficial for assessing crown density in smaller forested areas.

NDVI is calculated pixel by pixel from satellite or aerial imagery. The first step in the process is to select images that capture the area of interest and ensure that they cover both the red and NIR bands. Once the NDVI is computed, the values are mapped across the landscape, with each pixel representing a vegetation density level.

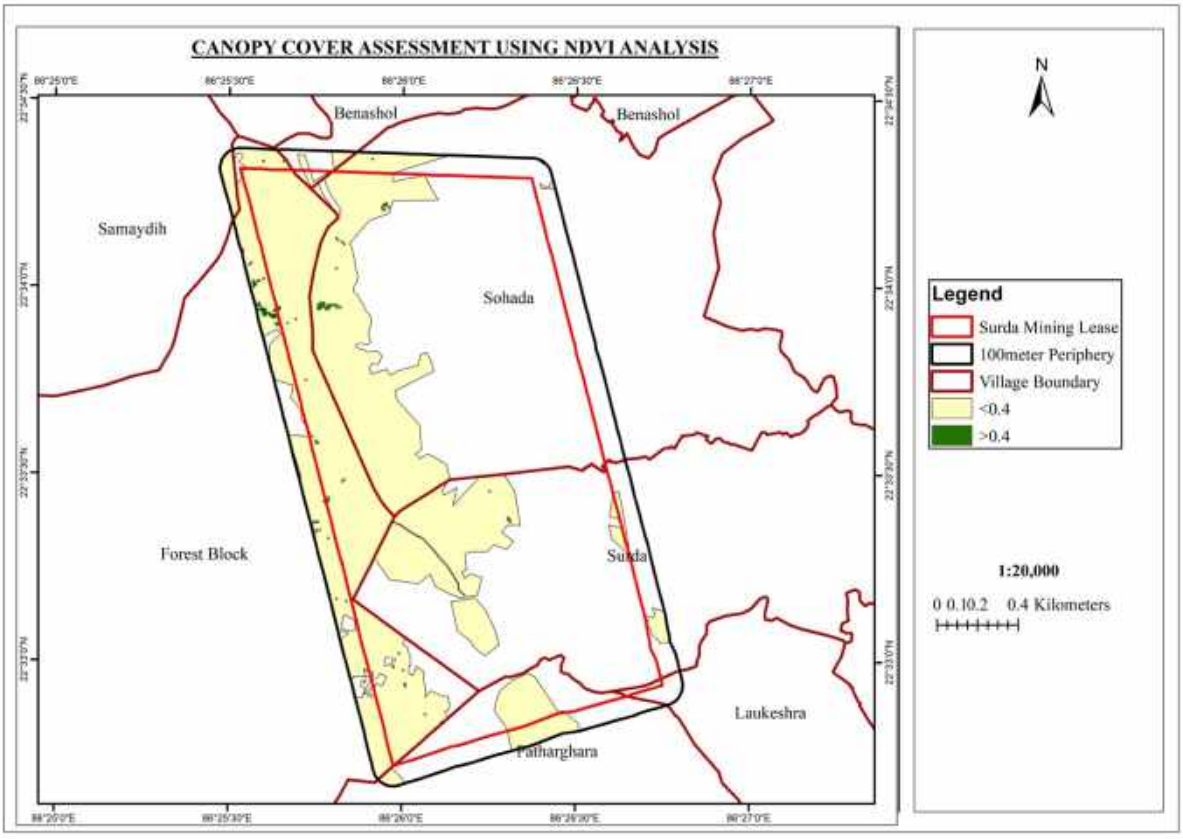
NDVI values can be used to define vegetation types and estimate crown density using thresholding techniques. By setting an NDVI threshold, areas above this value can be classified as "vegetated" or "forested", while those below can be classified as "non-vegetated". Higher NDVI values are indicative of dense forest cover with higher crown density. A typical threshold value might be 0.4, where areas with NDVI greater than 0.4 are considered as covered by healthy vegetation.

Statistical analyses such as regression models or machine learning techniques can be used to correlate NDVI values with actual field measurements of crown density (e.g., measured using LiDAR or field surveys). These models can be trained to predict crown density in different regions based on NDVI data. Finally, ground truthing of the data obtained after NDVI analysis is generally used for validation.

4.1.2.4. NDVI Analysis of the Target Area

Satellite imagery data of the target area, when processed through QGIS software for NDVI analysis, also validated through ground truthing, yields a clear picture of the canopy cover in the Target Area. The map of the forest land within the Target Area obtained from NDVI analysis, depicting the two classes, one having crown density less than 0.4 and the other more than 0.4 is as follows.

Map 8: Canopy Cover in the Target Area as per NDVI Analysis



4.1.2.5. Village-wise Canopy Cover within the Notified Forest Land in the Target Area (NDVI Analysis)

Village-wise canopy cover area is being mentioned under the following table.

Table 9: Village-wise Forest Land Area and Canopy Cover as per NDVI Analysis

Village	Forest Land under Lease (ha)	Canopy Cover < 0.4 (ha)		Canopy Cover > 0.4 (ha)	
		Within ML	Outside ML (100m Periphery)	Within ML	Outside ML (100m Periphery)
Benashol	1.58	1.58	0.87	-	-
Sohada	54.46	54.06	3.85	0.4041	0.0099
Surda	33.56	33.51	1.80	0.0497	-
Pathargarha	3.29	3.29	3.97	-	-
Laukeshra	-	-	-	-	-
Forest Block	56.14	56.14	26.54	0.0026	0.6135
Samaydih	-	-	1.71	-	-
Total Area	**149.03**	**148.58**	**38.74**	**0.4564**	**0.6234**

4.2. CONCLUSION AS TO THE CANOPY COVER OF THE TARGET AREA

The preceding para details the results obtained through two different and independent methods regarding canopy cover in the Target Area. The two methods have produced similar results. The consolidated area of forest land within the Target Area may be summarized as follows.

- Total Area of Forest land within ML: 149.03 ha
- Area of Forest land within ML with canopy density < 0.4: 148.58 ha
- Area of Forest land within ML with canopy density > 0.4: 0.45 ha
- Area of Forest land outside ML (100m periphery) with canopy density < 0.4: 38.74 ha
- Area of Forest land outside ML (100m periphery) with canopy density > 0.4: 0.62 ha
- **Total Treatable Area under canopy density < 0.4: 148.58 + 38.74 = 187.32 ha**

4.3. SOIL AND MOISTURE CONSERVATION PLAN WITHIN THE TARGET AREA

The Soil and Moisture Conservation Plan broadly means a management plan for treatment of erosion prone area of the catchment through agronomic, biological and mechanical measures. The development of area-specific SMC plan essentially comprises the prioritization of erosion prone areas, selection of suitable conservation measures, implementation and impact assessment.

4.3.1. Drainage Network of the Target Area

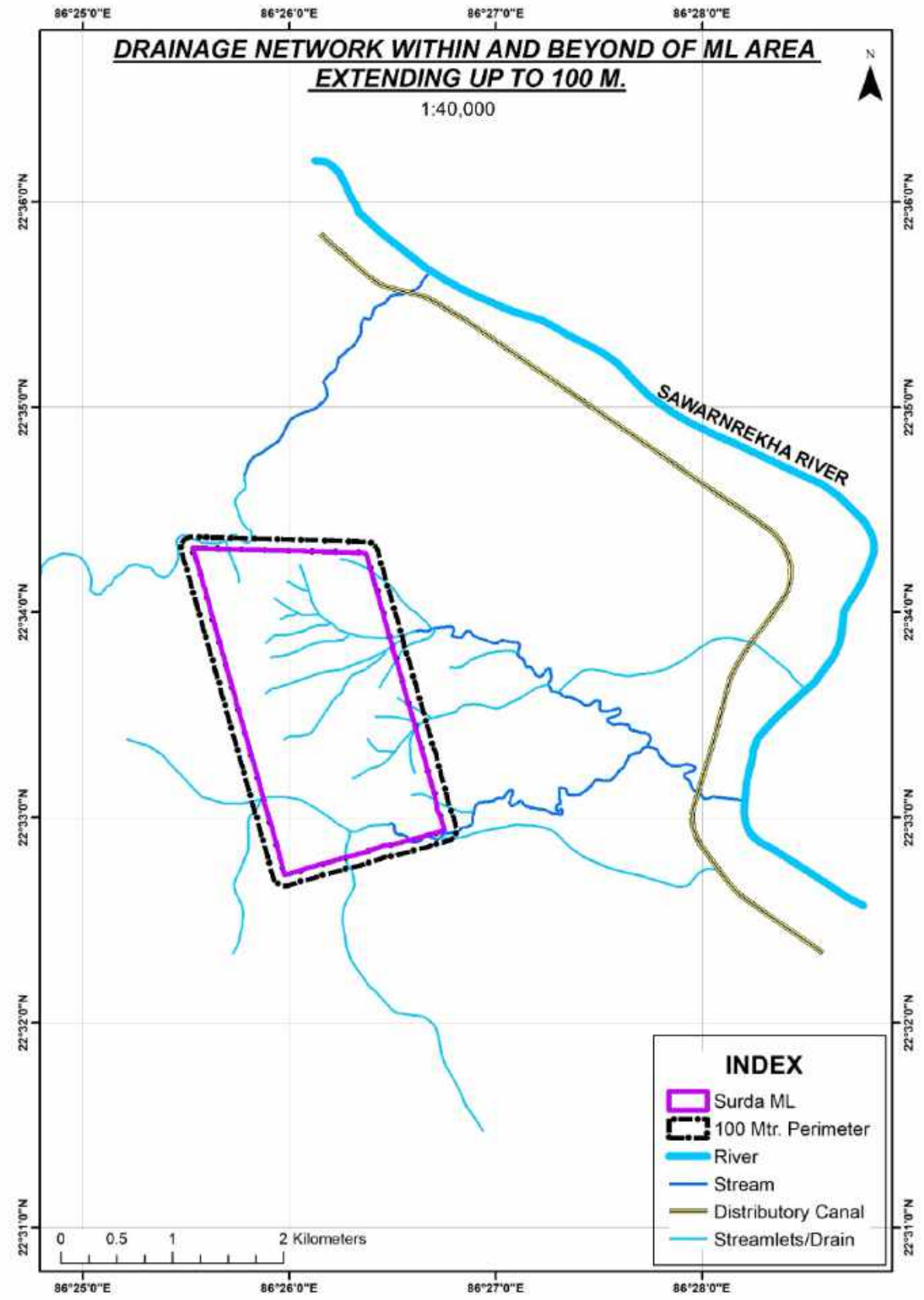
The Target Area is part of the Subarnarekha Basin. The Subarnarekha River is a major perennial river which drains a large part of south-eastern Jharkhand, western part of West Midnapur District of West Bengal and north-eastern parts of Odisha adjoining West Bengal before flowing into the Bay of Bengal. In the target area, the Subarnarekha flows from northwest towards the south-east through a wide valley about 2 – 3 km east of Surda Mine Lease.

Surda Mine Lease is drained by mainly by two streams. The northern and central parts are drained by seasonal drainage channels originating from springs in ML which form the Gharaduba Nala. The southern part of the ML is drained by the Surda Nala. These perennial streams flow towards the south-east/east to meet each other about 2 km east of the lease's south-eastern corner before draining into the Subarnarekha River about 0.5 km further east. Another perennial stream, the Kankuram Nala , flows from the south-west towards the north-east just beyond the lease's northern boundary to join the Subarnarekha River about 2.5 km north-north-east of Surda Mine Lease. A small area in the north-western corner of the lease drains into the Kankuram nala.

Major part of the area has dendritic drainage pattern. The drainage of the area is controlled through a network of small seasonal and perennial streams which drain into the Subarnarekha river. The

Subarnarekha river flows from the north east towards the south-east about 2.5 km east of the lease area. The general groundwater table of the lease hold area is located 12 – 16 m below the ground level. The drainage network of the target area is being depicted through the following map:

Map 9: Drainage Network of the Target Area



4.3.2. Methodology Adopted in Formulation of Soil and Moisture Conservation Plan

Based on the field survey of the Target Area and the feeder streams and drains, location and dimension etc. of soil and moisture conservation activities viz. Gully Plugging, Loose Boulder Structures, Stop Dams, De-siltation of ponds and existing stop dams have been determined under the instant Plan. The details are mentioned in the next chapter of the Plan.

4.4. STABILIZATION OF OVERBURDEN DUMPS

Overburden refers to the soil, rock, and other materials that lie above the mineral deposit. These materials are removed to expose the ore for extraction. Once the overburden is removed, it is typically stored in dumps near the mining site. These overburden dumps contain non-ore materials, and in the case of copper mines, it is typically waste rock, soil, and materials that do not contain significant amounts of copper.

Surda being an underground copper mine, the problem of overburden dump is minimal here. Most of the waste rocks etc. are used for underground back-filling. As of now, two dumps are located in the lease area which are quite old and therefore, dead. Plants and bushes have come over these dump areas and these do not need stabilization as such. The location of these dumps are being mentioned in the following table.

Table 10: Location of Overburden Dumps

Dump Id	Dump Status	Type of Dump	Area (ha)	Latitude		Longitude	
				From	To	From	To
Dump 1	Dead	Mineral Reject	0.39	22:33:42.86 22.561906	22:33:40.59 22.561275	86:25:57.40 86.432611	86:25:59.18 86.433106
Dump 2	Dead	Mineral Reject	0.10	22:33:10.43 22.552897	22:33:09.32 22.552589	86:25:57.71 86.432697	86:25:58.83 86.433008

Following are the representative pictures of the abovementioned dumps:


GPS Map Camera
Sohada, Jharkhand, In...
Hc6m+qh7, Sohada, Jharkhand 832103, India
Lat 22.561589° Long 86.431855°
28/03/2025 05:46 PM GMT +05:30
Google


GPS Map Camera
Sohada, Jharkhand, In...
Hc6m+qh7, Sohada, Jharkhand 832103, India
Lat 22.561102° Long 86.432305°
28/03/2025 05:45 PM GMT +05:30
Google

4.5. DEMARCATION OF DIVERTED FOREST LAND

The diverted forest land is recommended to be demarcated after survey, and trenches/stone wall are proposed to be constructed leaving the area diverted to the user agency for surface use (31.07 ha). The construction of stone wall/trenches shall be a part of the silvicultural & gap planting operations to be taken up with the objective of restocking and rejuvenation of degraded open forests having crown density less than 0.40.

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5. SITE-SPECIFIC PRPOSALS UNDER THE PLAN

5.1. RESTOCKING & REJUVENATION OF DEGRADED OPEN FORESTS HAVING CROWN DENSITY LESS THAN 0.4

As explained in Chapter 5, the area of forest land within the Mining Lease as well as the area within a periphery of 100m around the Mining Lease having crown density less than 0.4, happens to be 187.32 ha. This includes an area of 31.07 ha of forest land under mining lease which stands diverted in favour of the user agency for surface use. Hence, treatable area under this Plan comes out to be (187.32 – 31.07) ha i.e., **156.25 ha**. As the crown density of this area is very close to 0.4, it is being proposed to take up this area for silvicultural operations and gap plantation with local and indigenous species as per standard protocol of the Forest Department. The operations shall extend up to a period of four years in accordance with the Department protocol. The activities involved in silvicultural operation and gap plantation, as prescribed by the Forest Department are as follows.

- Survey and Demarcation;
- Cut-back/coppicing/climber cutting/stump dressing/debris removal;
- Trench/Stone wall/Bush fencing;
- Pit digging;
- Soil & Moisture Conservation activities;
- Raising/procurement of plants of suitable species;
- Plantation;
- Weeding-hoeing;
- Protection etc.

It is to be noted here that Soil & Moisture conservation measures taking the whole Target Area as one unit are prescribed separately under this chapter. The funds earmarked under the estimate of silvicultural operations and gap plantation within the forest land located in the Target Area must be utilised in such manner that there should be no duplication.

The proposed area of treatment is being tabulated hereunder for ready reference.

Table 11: Villages in which Silvicultural and Gap Planting Operations are to be Undertaken

Range	Beat	Sub-Beat	Village	Thana/Thana No.	Total forest area to be treated
Musabani	Musabani	Benashol	Benashol	Ghatsila-100	**156.25 ha**
			Sohada	Ghatsila-101	
		Surda	Surda	Ghatsila-102	
			Pathargarha	Ghatsila-160	
			Laukeshra	Ghatsila-159	
Rakha Mines	Royam	Kendadih	Forest Block	Ghatsila-1098	
			Samaydih	Ghatsila-97	

5.2. DEMARCATION OF DIVERTED FOREST LAND

The treatment of diverted forest land with silvicultural and gap planting operations includes its requisite fencing. Digging trenches or putting up stone wall at appropriate locations would be the best possible option. Barbed wire fencing may not be appropriate as the area is frequented by wild animals. Further, since the mining lease area consists of approach roads and many parcels of agricultural fields, due care may be taken while construction of trenches/stone wall so as to ensure that the area under treatment is secure as well as the area being utilised by the user agency for surface use for mining operations remains accessible. It is pertinent to mention that unless the area under treatment is not under protection for sufficient time period it would be difficult to rehabilitate the degraded open forests.

5.3. SOIL AND MOISTURE CONSERVATION MEASURES

The proposed Soil & Moisture Conservation activities within the Target Area (Lease Area + Area enclaved within 100m periphery of the Lease Area) including the location and dimension etc. are being tabulated as follows.

Table 12: Site-Specific Soil & Moisture Activities Proposals within the Target Area

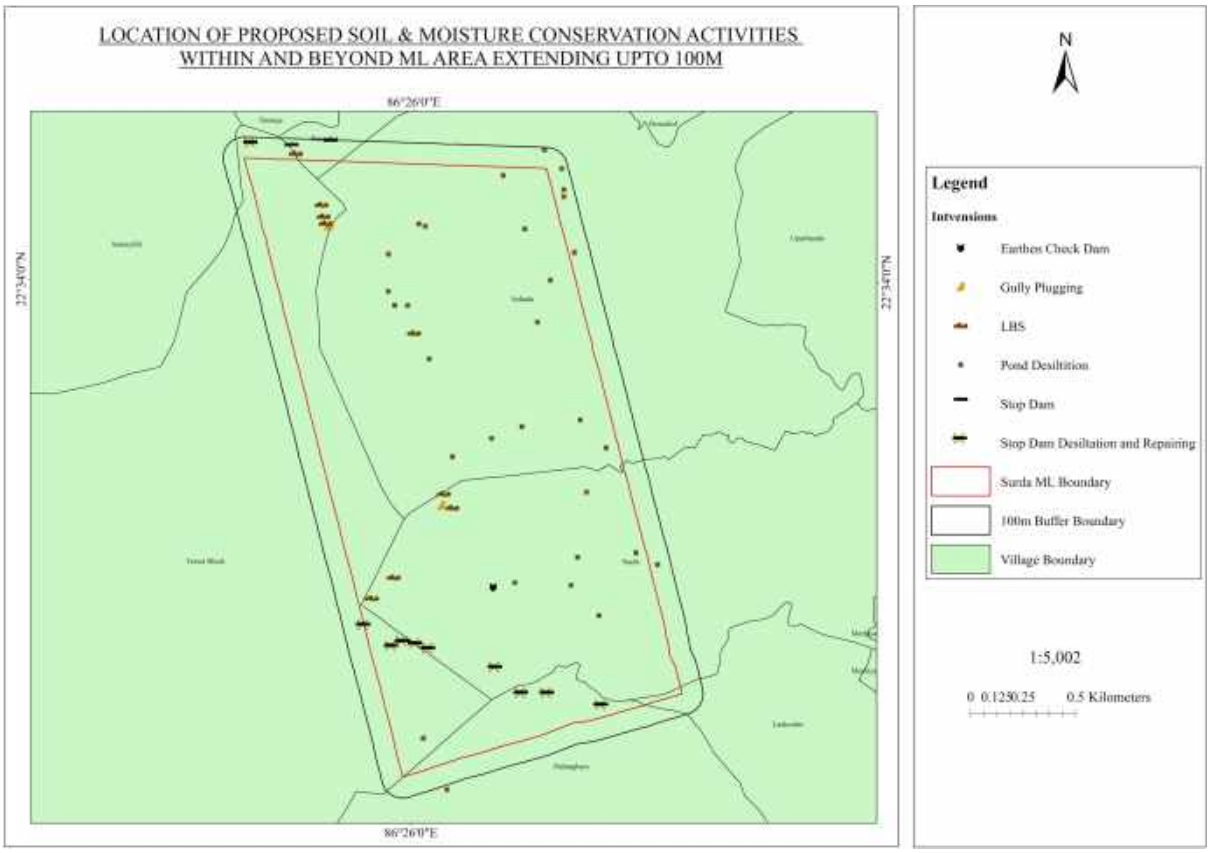
Village	Structure/Activity	Latitude	Longitude	Dimension
Benashol	Stop Dam	22.5725	86.4295	20m L x 3m H
	LBS	22.5721	86.4279	6m L x 2m H
Forest Block	Gully Plugging	22.569	86.4294	3m L x 1m H
	Gully Plugging	22.569	86.4295	3m L x 1m H
	LBS*	22.5691	86.4293	12m L x 2m H
	LBS	22.5694	86.4292	8m L x 2m H
	LBS	22.5699	86.4291	12m L x 2m H
	Stop Dam (De-siltation)	22.5517	86.4311	25m L x 3m H
	Stop Dam (De-siltation)	22.5508	86.4324	18m L x 3m H
	Stop Dam (De-siltation)	22.5509	86.4335	15m L x 3m H
	Stop Dam (De-siltation)	22.551	86.4329	15m L x 3m H

	Pond (De-siltation)	22.547	86.4339	30m x 30m
	Stop Dam (De-siltation)	22.5724	86.4258	30m L x 3m H
	Stop Dam	22.5723	86.4277	20m L x 3m H
Sohada	Pond (De-siltation)	22.5679	86.4408	20m x 20m
	Pond (De-siltation)	22.5703	86.4403	20m x 20m
	Pond (De-siltation)	22.5706	86.4403	25m x 25m
	Pond (De-siltation)	22.5715	86.4402	20m x 20m
	Pond (De-siltation)	22.5723	86.4394	20m x 20m
	Pond (De-siltation)	22.5649	86.4391	40m x 40m
	Pond (De-siltation)	22.5656	86.4325	30m x 30m
	Pond (De-siltation)	22.5656	86.4331	20m x 20m
	Pond (De-siltation)	22.5662	86.4322	30m x 30m
	Pond (De-siltation)	22.5667	86.4397	35m x 35m
	Pond (De-siltation)	22.5678	86.4322	20m x 20m
	Pond (De-siltation)	22.5689	86.4385	60m x 60m
	Pond (De-siltation)	22.569	86.4339	15m x 15m
	Pond (De-siltation)	22.5691	86.4336	25m x 20m
	Pond (De-siltation)	22.5712	86.4375	20m x 20m
	LBS	22.5644	86.4334	8m L x 2m H
	Pond (De-siltation)	22.5591	86.4352	30m x 25m
	Pond (De-siltation)	22.5595	86.4423	20m x 20m
	Pond (De-siltation)	22.5599	86.437	30m x 30m
	Pond (De-siltation)	22.5604	86.4384	40m x 35m
	Pond (De-siltation)	22.5607	86.4411	80m x 50m
	Pond (De-siltation)	22.5633	86.4341	25m x 25m
Surda	Stop Dam (De-siltation)	22.5507	86.4341	15m L x 3m H
	Earthen Check Dam	22.5535	86.4371	25m L x 3m H
	Gully Plugging	22.557	86.4347	3m L x 1m H
	LBS	22.553	86.4315	8m L x 2m H
	LBS	22.5539	86.4325	6m L x 2m H
	LBS	22.5569	86.4352	6m L x 2m H
	LBS	22.5575	86.4348	10m L x 2m H
	Pond (De-siltation)	22.5545	86.4447	20m x 20m
	Pond (De-siltation)	22.5523	86.442	25m x 25m
	Pond (De-siltation)	22.5536	86.4407	30m x 30m
	Pond (De-siltation)	22.5537	86.4381	50m x 40m
	Pond (De-siltation)	22.5548	86.441	20m x 20m
	Pond (De-siltation)	22.5576	86.4414	40m x 35m
	Stop Dam (De-siltation)	22.5499	86.4372	10m L x 3m H
	Pond (De-siltation)	22.555	86.4437	20m x 20m
Pathargarha	Stop Dam (De-siltation)	22.5488	86.4384	22m L x 3m H
	Pond (De-siltation)	22.5448	86.435	40m x 15m
	Stop Dam (De-siltation)	22.5483	86.4421	10m L x 3m H
	Stop Dam (De-siltation)	22.5488	86.4396	10m L x 3m H

***LBS – Loose Boulder Structure**

The aforementioned Soil & Moisture Conservation activities/structures are being shown in the following map:

Map 10: Location Map of Soil & Moisture Conservation Measures in the Target Area



5.4. STABILIZATION OF OVERBURDEN DUMPS

As mentioned in Para 5.4. herein, the two overburden dumps are located in the lease area which are quite old and therefore, dead. Plants and bushes have come over these dump areas and these do not need stabilization as such.

5.5. FIELD SURVEY EXERCISE

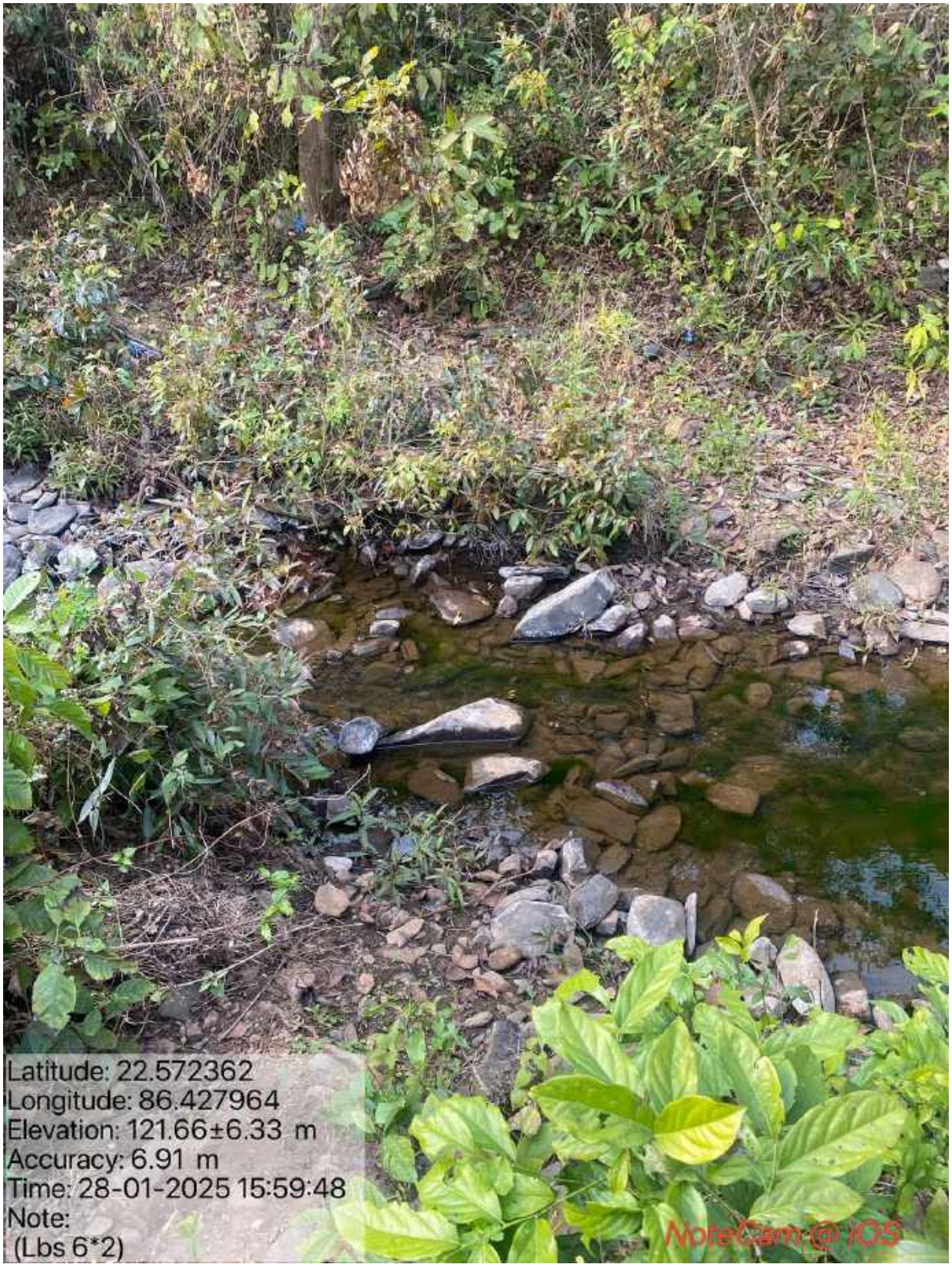
The physical field survey of the whole Target Area has been carried out by a team consisting of the following members:

Table 13: Educational Qualification and Experience of the Survey Team

Sl. No.	Name	Qualification	Experience
1.	Kislay Kumar	M. Sc. Ecology	10 years
2.	Anzar Anis	M. Tech. Geoinformatics	4 years
3.	Vicky Mahto	M. Sc. Botany	3 years
4.	Lamboder Mahto	B. Sc. Zoology (Hons.)	2 years
5.	Vikas Kumar Sen	B. A.	2 years
6.	Biswa Darshi Behera	M. Sc. Geoinformatics	Fresher

7.	Sugandha Ganguli	M. Sc. Geoinformatics	Fresher
8.	Sujata Nath	M. Sc. Geoinformatics	Fresher

5.6. SNAPSHOTS OF FIELD EXERCISE


Latitude: 22.572362
Longitude: 86.427964
Elevation: 121.66±6.33 m
Accuracy: 6.91 m
Time: 28-01-2025 15:59:48
Note:
(Lbs 6*2)
NoteCam @ iOS


Latitude: 22569449
Longitude: 86.42722
Elevation: 136.617 m
Accuracy: 9.8 m
Time: 28-01-2025 15:25
Note: 8x2yl6s


Latitude: 22569449
Longitude: 86.42722
Elevation: 136.617 m
Accuracy: 9.8 m
Time: 28-01-2025 15:25
Note: 8x2yl6s


Latitude: 22.552254
Longitude: 86.430838
Elevation: 146.46±6.66 m
Accuracy: 6.31 m
Time: 30-01-2025 12:07:00
Note: 100 m buffer moderate forest
NoteCam @ iOS

6. SITE-SPECIFIC PHYSICAL AND FINANCIAL PROPOSALS UNDER THE PLAN

6.1. SITE-SPECIFIC PROPOSALS FOR YEAR-1 UNDER THE PLAN

Table 14: Site-Specific Physical and Financial Proposals under the Plan for Year-1

Village	Structure/Activity	Latitude	Longitude	Dimension	Estimated Cost (Rs.)
Soil & Moisture Conservation Measures in the Target Area					
Benashol	Stop Dam	22.5725	86.4295	20m L x 3m H	2060818
	LBS	22.5721	86.4279	6m L x 2m H	109476
Forest Block	Gully Plugging	22.569	86.4294	3m L x 1m H	20608
	Gully Plugging	22.569	86.4295	3m L x 1m H	20608
	LBS	22.5691	86.4293	12m L x 2m H	217726
	LBS	22.5694	86.4292	8m L x 2m H	145560
	LBS	22.5699	86.4291	12m L x 2m H	217726
	Stop Dam (De-siltation)*	22.5517	86.4311	25m L x 3m H	150000
	Stop Dam (De-siltation)	22.5508	86.4324	18m L x 3m H	100000
	Stop Dam (De-siltation)	22.5509	86.4335	15m L x 3m H	100000
	Stop Dam (De-siltation)	22.551	86.4329	15m L x 3m H	100000
	Pond (De-siltation)	22.547	86.4339	30m x 30m	224200
	Stop Dam (De-siltation)	22.5724	86.4258	30m L x 3m H	150000
	Stop Dam	22.5723	86.4277	20m L x 3m H	2060818
Sohada	Pond (De-siltation)	22.5679	86.4408	20m x 20m	114900
	Pond (De-siltation)	22.5703	86.4403	20m x 20m	114900
	Pond (De-siltation)	22.5706	86.4403	25m x 25m	164200
	Pond (De-siltation)	22.5715	86.4402	20m x 20m	114900
	Pond (De-siltation)	22.5723	86.4394	20m x 20m	114900
	Pond (De-siltation)	22.5649	86.4391	40m x 40m	376400
	Pond (De-siltation)	22.5656	86.4325	30m x 30m	224200
	Pond (De-siltation)	22.5656	86.4331	20m x 20m	114900
	Pond (De-siltation)	22.5662	86.4322	30m x 30m	224200
	Pond (De-siltation)	22.5667	86.4397	35m x 35m	295000
	Pond (De-siltation)	22.5678	86.4322	20m x 20m	114900
	Pond (De-siltation)	22.5689	86.4385	60m x 60m	809600
	Pond (De-siltation)	22.569	86.4339	15m x 15m	76400
	Pond (De-siltation)	22.5691	86.4336	25m x 20m	137400
	Pond (De-siltation)	22.5712	86.4375	20m x 20m	114900
	LBS	22.5644	86.4334	8m L x 2m H	145560
	Pond (De-siltation)	22.5591	86.4352	30m x 25m	192000
	Pond (De-siltation)	22.5595	86.4423	20m x 20m	114900
	Pond (De-siltation)	22.5599	86.437	30m x 30m	224200
	Pond (De-siltation)	22.5604	86.4384	40m x 35m	333500
	Pond (De-siltation)	22.5607	86.4411	80m x 50m	899500
	Pond (De-siltation)	22.5633	86.4341	25m x 25m	164200
Surda	Stop Dam (De-siltation)	22.5507	86.4341	15m L x 3m H	100000
	Earthen Check Dam	22.5535	86.4371	25m L x 3m H	368428
	Gully Plugging	22.557	86.4347	3m L x 1m H	20608
	LBS	22.553	86.4315	8m L x 2m H	145560
	LBS	22.5539	86.4325	6m L x 2m H	109476
	LBS	22.5569	86.4352	6m L x 2m H	109476

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एवं
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(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832102

	LBS	22.5575	86.4348	10m L x 2m H	181643
	Pond (De-siltation)	22.5545	86.4447	20m x 20m	114900
	Pond (De-siltation)	22.5523	86.442	25m x 25m	164200
	Pond (De-siltation)	22.5536	86.4407	30m x 30m	224200
	Pond (De-siltation)	22.5537	86.4381	50m x 40m	464300
	Pond (De-siltation)	22.5548	86.441	20m x 20m	114900
	Pond (De-siltation)	22.5576	86.4414	40m x 35m	333500
	Stop Dam (De-siltation)	22.5499	86.4372	10m L x 3m H	100000
	Pond (De-siltation)	22.555	86.4437	20m x 20m	114900
Pathargarha	Stop Dam (De-siltation)	22.5488	86.4384	22m L x 3m H	150000
	Pond (De-siltation)	22.5448	86.435	40m x 15m	161900
	Stop Dam (De-silration)	22.5483	86.4421	10m L x 3m H	100000
	Stop Dam (De-silration)	22.5488	86.4396	10m L x 3m H	100000
Total (SMC Works)					**1,40,41,091.00**
Restocking & Rejuvenation of Degraded Open Forests having Crown Density Less than 0.4					
Benashol, Sohada, Surda, Pathargarha, Laukeshra, Forest Block & Samaydih	Silvicultural Operations with Gap Plantation (50 ha); **Advance Work**				**34,94,447.00**
Total (Year-1)					**1,75,35,538.00**

*The lump sum cost for de-siltation of stop dams has been provisioned.

6.2. Site-Specific Proposals for Year-2 under the Plan

Table 15: Site-Specific Physical and Financial Proposals under the Plan for Year-2

Village	Activity	Estimated Cost (Rs.)
Benashol, Sohada, Surda, Pathargarha, Laukeshra, Forest Block & Samaydih	Silvicultural Operations with Gap Plantation (50 ha); **Completion Work**	672339
	Silvicultural Operations with Gap Plantation (106.25 ha); **Advance Work**	7425700
	Total (Year-2)	**80,98,039.00**

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(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

6.3. SITE-SPECIFIC PROPOSALS FOR YEAR-3 UNDER THE PLAN

Table 16: Site-Specific Physical and Financial Proposals under the Plan for Year-3

Village	Activity	Estimated Cost (Rs.)
Benashol, Sohada, Surda, Pathargarha, Laukeshra, Forest Block & Samaydih	Silvicultural Operations with Gap Plantation (50 ha); **Maintenance 1st Year**	265113
	Silvicultural Operations with Gap Plantation (106.25 ha); **Completion Work**	1428719
	Total (Year-3)	**16,93,832.00**

6.4. SITE-SPECIFIC PROPOSALS FOR YEAR-4 UNDER THE PLAN

Table 17: Site-Specific Physical and Financial Proposals under the Plan for Year-4

Village	Activity	Estimated Cost (Rs.)
Benashol, Sohada, Surda, Pathargarha, Laukeshra, Forest Block & Samaydih	Silvicultural Operations with Gap Plantation (50 ha); **Maintenance 2nd Year**	265113
	Silvicultural Operations with Gap Plantation (106.25 ha); **Maintenance 1st Year**	563365
	Total (Year-3)	**8,28,478.00**

6.5. SITE-SPECIFIC PROPOSALS FOR YEAR-5 UNDER THE PLAN

Table 18: Site-Specific Physical and Financial Proposals under the Plan for Year-5

Village	Activity	Estimated Cost (Rs.)
Benashol, Sohada, Surda, Pathargarha, Laukeshra, Forest Block & Samaydih	Silvicultural Operations with Gap Plantation (106.25 ha); **Maintenance 2nd Year**	563365
	Total (Year-3)	**5,63,365.00**

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इन्दियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

6.6. Abstract of Expenditures under the Plan

Table 19: Year-wise Financial Forecast of the Plan

Activity Head	Financial Forecast (Rs. in Lakh)					Total (Rs. in Lakh)
	Year-1	Year-2	Year-3	Year-4	Year-5	
Soil & Moisture Conservation Measures in the Target Area	140.411	-	-	-	-	140.411
Restocking & Rejuvenation of Degraded Open Forests having Crown Density Less than 0.4; 156.25 ha (50 ha initiated in Year-1; 106.25 ha initiated in Year-2)	34.944	80.980	16.938	8.285	5.634	146.781
Total	175.355	80.980	16.938	8.285	5.634	287.192
Cost Escalation Provision @20%	35.071	16.196	3.388	1.657	1.127	57.439
Grand Total	**210.426**	**97.176**	**20.326**	**9.942**	**6.761**	**344.631**

Cost to the User Agency towards implementation of the Plan = Rs. 344.631 Lakh

6.7. Notable Points Regarding Implementation of the Plan

Following points are worth noting while implementing the Plan:

- The coordinates of the structures have been provided after gross survey of the area. However, during implementation of the Plan, a situation may arise where the implementing agency may take a view to change the location and specification of a particular structure as per need and convenience of the implementing agency. This may be allowed by the authorities with due care and diligence.
- Provision of a flat rate of 20% has been made towards cost escalation in the Plan viz. increase in wage rate/material cost etc.
- The Plan has been formulated taking into consideration the available Schedule of Rates, copies of which are being annexed with the Plan. Since the Plan is expected to begin its journey not any time before the next financial year i.e., 2026-27, cost escalation of 20% has been provided for even against the estimates for Year-1.
- The Plan should not be taken as the last word. The DFO may be given sufficient amplitude to change the locations, specifications and numbers of the structural interventions. The Divisional Forest administration may devise a framework in consultation with superior authorities so as to facilitate the implementation of the Plan considering all the site-specific technical as well as community demands.
- While estimating the cost of various activities under the Plan, departmental schedule of rates has been followed. However, these are based on some broad assumptions. The

implementing agency is expected to prepare site-specific estimates considering the rates approved by the Department against specific items required for a specific activity.

- For successful implementation of the Plan, it would be desirable that a comprehensive APO is prepared before implementation of the Plan in a particular year.

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एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उद्यम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

ANNEXURES

Annexure 1: MoEF & CC Letter granting Forest Clearance (Stage-I)

File No. 8-64/1993-FC(Vol.)
Government of India
Ministry of Environment, Forest & Climate Change
(Forest Conservation Division)
****

Indira Paryavaran Bhawan,
Aliganj, Jor Bag Road,
New Delhi - 110003.
Dated: As per e-Sign

To

The Principal Secretary (Forests),
Government of Jharkhand,
Ranchi.

Subject: Proposal for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favour of M/s Hindustan Copper Limited in Singhbhum district, Jharkhand – regarding.

Madam/Sir,

I am directed to refer to the Government of Jharkhand's letter No. Van Bhumi-15/2023-3696-A/V.P. dated 29.09.2023 on the above subject seeking prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and to say that the proposal has been examined by the Advisory Committee constituted by the Central Government under Section-3 of the aforesaid Act.

After careful examination of the proposal of the State Government and on the basis of the recommendations of the Advisory Committee, and with due approval of the competent authority, the Central Government hereby accords *"In-principle/Stage-I"* approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favour of M/s Hindustan Copper Limited in Singhbhum district, Jharkhand subject to fulfillment of the following conditions:

1. Legal status of the diverted forest land shall remain unchanged;
2. The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal in accordance with the guidelines in the matter;
3. At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
4. *The Integrated Wildlife Management Plan approved by the PCCF(Wildlife)/CWLW shall be implemented at the cost of the user agency.*
5. *The State of Jharkhand shall reconcile the penal CA amount deposited by*

the user agency with the state of Bihar. The steps for completion of penal CA shall be taken in case the same has not yet been done by the State of Bihar. A detailed report in this regard shall be submitted;

6. The State Government shall upload the KML files of the area under diversion in the e-Green watch portal of FSI, before handling over forest land to the user agency;
7. All the funds received from the user agency under the project shall be transferred/deposited in CAMPA account only through **e-portal** (https://parivesh.nic.in/); Amount depsoted through other mode will not be accepted as compliance of the Stage-I clearance;
8. The user agency will protect and demarcate the diverted forest land on surface, in consultation with State Forest Department by construction of a stone wall/trench/barbed wire fencing with angle iron and will maintain the fencing during entire period of life of the mine
9. User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance;
10. The surface area of diverted land for underground mining shall be Rehabilitated and enriched by using indigenous species with participation of local people at the project cost. The user agency shall prepare the plan for the purpose in consultation with state forest Dept.
11. The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF& CC before Stage-II approval;
12. The State Government and user agency shall monitor the mining induced subsidence and take appropriate mitigative measures to ensure that it remains within the permissible limit;
13. Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval:

i. Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three year with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department.
ii. Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;
iii. Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved

scheme;

iv. Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 280; and

15. No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.
16. The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concerned Regional Office may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;
17. Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;
18. The surface area over the mine shall not be allowed to be used for construction of residential buildings or labour camps;
19. The State Government shall ensure that green cover on the ground over the underground part of mine shall be maintained as forest and supplemented by plantations in gaps at the cost of user agency;
20. The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
21. No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
22. The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;
23. The layout plan of the mining plan/ proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal;
24. The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
25. No damage to the flora and fauna of the adjoining area shall be caused;
26. The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project;
27. The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional

Office and to this Ministry by the end of March every year regularly;

28. Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife shall be carried with by the State Government and user agency; and
29. Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as issued by this Ministry on dated 29.12.2023.

After receipt of compliance report on fulfillment of the conditions mentioned above, the proposal shall be considered for final approval under Section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Transfer of forest land shall not be affected till final approval is granted by the Central Government in this regard.

Signed by Suneet Bhardwaj
Date: 15-06-2024 10:41:15

Yours faithfully

Sd/-

(Suneet Bhardwaj)
Assistant Inspector General of Forests

Copy to:

1. The PCCF (HoFF), Department of Forest, Government of Jharkhand, Ranchi;
2. The Dy. DGF (Central), Regional Office, Ranchi;
3. The Nodal Officer (FCA), Department of Forest, Government of Jharkhand, Ranchi;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi for uploading on PARIVESH portal.

Annexure 2: Estimate – Silvicultural Operations & Gap Plantation

कार्यालय : अपर प्रधान मुख्य वन संरक्षक, विकास,

झारखण्ड, राँची।

वन भवन, डोरण्डा, राँची

e-mail : pccf-development@gov.in   - 0651-2481813/ 9304727852

कार्यालय आदेश

संख्या–01 / यो0व0–30 / 2020   10   दिनांक 26/04/2023

वन एवं पर्यावरण विभाग के अधिसूचना संख्या सं0सं0–4 / यो0वजट–42 / 2010–2371 व0प0, दिनांक 05.05.2015 द्वारा वृक्षारोपण एवं पौधशाला कार्य हेतु दर निर्धारण के लिए राज्य स्तर पर एक स्थायी समिति का गठन किया गया।

अपर प्रधान मुख्य वन संरक्षक, विकास, झारखण्ड, राँची के अध्यक्षता में राज्य स्तरीय दर निर्धारण समिति की बैठक दिनांक 15.09.2022 को आयोजित की गई।

समिति द्वारा समीक्षोपरान्त सिल्विकल्चरल ऑपरेशन योजना का अनुसूचित कार्यदर की अनुशंसा की गई। समिति की अनुशंसा पर प्रधान मुख्य वन संरक्षक, झारखण्ड, राँची का अनुमोदन प्राप्त है। यह दर तत्काल प्रभाव से वित्तीय वर्ष 2023–24 के लिए लागू होगी एवं अगले पुनरीक्षण तक प्रभावी रहेगी।

योजना का नाम : सिल्विकल्चरल ऑपरेशन योजना का दर निर्धारण

(औसतन 10%-25% वृक्ष / रूट स्टॉक विहीन खुले वन क्षेत्र हेतु)

मजदूरी प्रति मानव दिवस (रू0 में) : 346.01   कार्य दर प्रति हे0

क्र0 सं0	कार्य का विवरणी	इकाई	मानव दिवस	मजदूरी (रू0 में)	सामग्री (रू0 में)	कुल व्यय (रू0 में)	अभियुक्ति
i	ii	iii	iv	v	vi	vii	viii
(A)	अग्रिम कार्य (प्रथम वर्ष)						
1	सर्वेक्षण एवं सीमांकन	हे0	3	1038.03	50.00	1088.03	
2	कटबैक / कॉपिसिंग, क्लाइम्बर कटिंग, स्टम्प ड्रेसिंग, along with debris removal आदि (All live stumps should be touched)	हे0	30	10380.30	0.00	10380.30	इन कार्यों को करने के क्रम में कदापि किसी भी वृक्ष का पातन नहीं किया जायेगा। उपरोक्त कार्यों को करने से पूर्व एवं कार्य संपादित करने के पश्चात् सम्पूर्ण स्थल की विडियोग्राफी / फोटोग्राफी अवश्य कराई जाय।

एस0 एस0 सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्पलेक्स
डाक-मऊभण्डार-832103
झारखण्ड

3	न्यूनतम आवश्यकता अनुसार स्वीकृत विभागीय दर पर वन संरक्षक के अनुमोदन से मशीन द्वारा ट्रेंच खेसन अथवा पत्थर घेसन किया जायेगा (i) ट्रेंच घेसन– ऊपर की चौड़ाई 1.83 मी0, नीचे की चौड़ाई 1.22 मी0, गहराई 1.22 मी0, ट्रेंसिंग सहित (ii) पत्थर घेसन– ऊपर की चौड़ाई 0.30 मी0, नीचे की चौड़ाई 1.25 मी, ऊँचाई 1.00 मी0 (iii) झाड़ी घेसन	घेन	12	4152.12	15942.90	20095.02	प्रति हे0 ट्रेंच खेसन प्रति घेन का प्रावधान है किन्तु वास्तविक स्थल पर भूपरिदान वास्तविक कार्य संपादन के अनुसार किया जायेगा। उपर्युक्त ट्रेंच बर्म पर स्थानीय प्रजाति के बीजों का बुवाईरोपण किया जाएगा, ताकि Live Hedge/Fence तैयार हो सके।
4	गृढा कार्य (0.45 मी. X 0.45 मी. X 0.45 मी.) 0.091 क्यू0 मी0 अधिकतम 200 पीट प्रति हे0 (सरेखण एवं मृदा प्रोफाईल पिट सहित)	हे0	20	6920.20	0.00	6920.20	औसतन 200 पौधे प्रति हे0 रोपण के लिए। वन्य जीव क्षेत्रों में पूर्णतः वन्य जीवों के पर्यावास के विकास के अनुकूल प्रजाति के।
5	मृदा एवं जल संरक्षण कार्य – कंटूर ट्रेंच – 98. कंटूर साईज 6 मी. x 0.30 मी. x 0.30 मी. का खोदा जाना जिसके बीच की दूरी कम से कम 2 मीटर ढलान के कोण के अनुसार हो तथा इसकी मिट्टी का नीचे ढ़ाल पर 0.15 मीटर हट कर 0.30 मीटर की चौड़ाई में 0.15 मी. गहरा कोडनी कर रखा जाना।		45	15570.45	625.00	16195.45	आवश्यकतानुसार ढलान पर ही कंटूर ट्रेंच का निर्माण किया जायेगा। कंटूर ट्रेन्च के बर्म पर स्थानीय प्रजाति के बीजो को भी बोया जाएगा।
6	गली प्लगिंग	हे0	10	3460.10	0.00	3460.10	नोट देखें
7	सिल्ट डिटेन्शन डेम, चेक डेम, रिटेनिंग एवं बेरट वाल टो वाल, स्पर एवं टॉरेण्ट नियंत्रण कार्य आदि	हे0	25	8650.25		8650.25	नोट देखें
8	स्थाई पौधशालाओ में उपलब्ध (10% अतिरिक्त) 80% Root-Shoot को 6"x12" आकार की ट्यूब में Pre-sprout कराकर पौधा तैयार करना।		2	692.02	1200.00	1892.02	स्थायी पौधशाला से क्रय किये गये Tube Plants/ Root-Shoot के क्रय के लिए रू 5.00 की दर से राशि जमा कराई जाएगी। स्थानीय एवं फलदार प्रजाति के बड़े पौधे को प्राथमिकता दी जायेगी
9	वनों की सुरक्षा		2.00	692.02	0.00	692.02	
10	लेबर सेस मजदूरी का 1 प्रतिशत				515.55	515.55	
	योग–		149.00	51555.49	18333.45	69888.94	

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

(B)	सम्पोषण कार्य (द्वितीय वर्ष)						
1	Presprouted Root-Shoot एवं Poly Tube Seedling स्थाई पौधशाला (न्यूनतम 40 प्रतिशत)	220	5	1730.05	800.00	2530.05	स्थायी पौधशाला से क्रय किये गये Tube Plants/ Root-Shoot के क्रय के लिए रू 5.00 की दर से राशि जमा कराई जाएगी
2	वृक्षारोपण		6.40	2214.46	0.00	2214.46	
3	दो कोड़नी निकौनी	हे0	7	2422.07	0.00	2422.07	
4	खाद (उर्वरक, कम्पोस्ट खाद)	हे0	0	0.00	625.00	625.00	
5	सिंगलिंग कार्य		5	1730.05	0.00	1730.05	
6	पौधों की सुरक्षा (26 हे0 तक के लिए पशुरक्षक)		11.00	3806.11	0.00	3806.11	ट्रेन्च घेराव की मरम्मति
7	लेबर सेस मजदूरी का 1 प्रतिशत				119.03	119.03	
	योग–		**34.40**	**11902.74**	**1544.03**	**13446.77**	
(C)	संपोषण कार्य (तृतीय वर्ष)						
1	सुरक्षा एवं संपोषण		14.60	5051.75	200.00	5251.75	घेराव, कटूर ट्रेंच की मरम्मति, मृत पौधों का प्रतिस्थापन, रोपित पौधे की निकौनी/ कॉपिस/ कटबैक/ सिंगलिंग
2	लेबर सेस मजदूरी का 1 प्रतिशत				50.52	50.52	
	योग–		**14.60**	**5051.75**	**250.52**	**5302.26**	
(D)	संपोषण कार्य (चतुर्थ वर्ष)						
1	सुरक्षा एवं संपोषण		14.60	5051.75	200.00	5251.75	घेराव, कटूर ट्रेंच की मरम्मति, मृत पौधों का प्रतिस्थापन, रोपित पौधे की निकौनी/ कॉपिस/ कटबैक/ सिंगलिंग
2	लेबर सेस मजदूरी का 1 प्रतिशत				50.52	50.52	
	योग–		**14.60**	**5051.75**	**250.52**	**5302.26**	
	सकल योग –		**212.60**	**73561.73**	**20378.52**	**93940.24**	

नोट:–

1. प्रत्येक वनरोपण स्थल पर स्थल आवश्यकतानुसार प्रस्तावित कार्यों का प्राक्कलन तैयार कर सक्षम स्तर से तकनीकी स्वीकृति पश्चात् कार्य संपादित किए जायेंगे।

2. इन कार्यों मे करने के क्रम में कदापि किसी भी वृक्ष का पातन नही किया जाएगा।

अपर प्रधान मुख्य वन संरक्षक, विकास
झारखण्ड, राँची

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

ज्ञापांक–01/यो0व0–30/2020– 282 दिनांक– 26/04/2025

प्रतिलिपि :

1. सभी प्रधान मुख्य वन संरक्षक।
2. सभी अपर प्रधान मुख्य वन संरक्षक।
3. सभी क्षेत्रीय मुख्य वन संरक्षक।
4. सभी मुख्य वन संरक्षक।
5. सभी वन संरक्षक।
6. सभी उप वन संरक्षक।
7. सभी वन प्रमण्डल पदाधिकारी।

को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

अपर प्रधान मुख्य वन संरक्षक, विकास
झारखण्ड, राँची

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8

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure 3: Estimate – Loose Boulder Structure (6m Length x 2m Height)

LOOSE BOULDER STRUCTURE 6m L x 2m H										
BASED ON S.O.R. W.R.D.GOVT. OF JHARKHAND EFFECTIVE FROM 28/07/2022/DSR-2021/NS										
		Length of Structure	6	Mt.			Wage Rate			₹ 401.00
		Height of Structure	2	Mt.						
		Top Width of Structure	1.5	Mt.						
		Bottam Width of Structure	5.50	Mt.						
		Side Slope	1:01							
Sl.no.	Code no.	Item of Works	Length in Mt.	Top width in Mt.	Bottom width in Mt.	Height (Avr.) in Mt.	Volume of Boulder	Rate	Unit	Amount
1		Survey & Lay out					3	401	M.D.	₹ 1,203.00
2	5.1.3.2 (W.R.D)	Jungle clearance including weeding out shrubs and small trees upto 150mm dia and their removal as per specification and direction of E/I.	6.6		6.05		39.93	9.74	Sq. Mt.	₹ 388.72
3	5.6.4 (W.R.D.)	Supplying laying boulder in rock toe, heel tenches of the dam as per design, drawing including the cost of materials royalty and all taxes etc. but excluding the cost of carriage all complete as per specification and direction of E/I.	6	1.50	5.50	2.00	42.00	1640.17	Cu.Mt.	₹ 68,886.97
		Sub Total								**70478.69**
		Less Total of MR /Analysis								-70089.97
		Sub Total of SOR (A)								388.72
		Less-CP @ 9.09% of (A)						388.72	9.09%	-35.33
		Sub Total(B)								353.38
		Total of MR /Analysis								70089.97
4		**Carriage of Materials with loading & unloading:-**								
		Boulder (15Km)					42.00	878.25	Cu.Mt.	₹ 36,886.54
		Sub Total(C)								**107329.90**
		Add due to increase in wage rate from 401.00/- to ...../- @ .....%								
		Sub Total(D)								₹ **1,07,329.90**
		Add contengency & consultancy @ 2%								₹ **2,146.60**
		Grand Total								₹ **1,09,476.50**
		Say								₹ **1,09,476.00**

एस० एस० सेठी
कार्यकारी निदेशक
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Annexure 4: Estimate – Loose Boulder Structure (8m Length x 2m Height)

LOOSE BOULDER STRUCTURE 8m L x 2m H										
BASED ON S.O.R. W.R.D.GOVT. OF JHARKHAND EFFECTIVE FROM 28/07/2022/DSR-2021/NS										
		Length of Structure	8	Mt.			Wage Rate			₹ 401.00
		Height of Structure	2	Mt.						
		Top Width of Structure	1.5	Mt.						
		Bottam Width of Structure	5.50	Mt.						
		Side Slope	1:01							
Sl.no.	Code no.	Item of Works	Length in Mt.	Top width in Mt.	Bottom width in Mt.	Height (Avr.) in Mt.	Volume of Boulder	Rate	Unit	Amount
1		Survey & Lay out					3	401	M.D.	₹ 1,203.00
2	5.1.3.2 (W.R.D)	Jungle clearance including weeding out shrubs and small trees upto 150mm dia and their removal as per specification and direction of E/I.	8.8		6.05		53.24	9.74	Sq. Mt.	₹ 518.29
3	5.6.4 (W.R.D.)	Supplying laying boulder in rock toe, heel tenches of the dam as per design, drawing including the cost of materials royalty and all taxes etc. but excluding the cost of carriage all complete as per specification and direction of E/I.	8	1.50	5.50	2.00	56.00	1640.17	Cu.Mt.	₹ 91,849.30
		Sub Total								**93570.59**
		Less Total of MR /Analysis								-93052.30
		Sub Total of SOR (A)								518.29
		Less-CP @ 9.09% of (A)						518.29	9.09%	-47.11
		Sub Total(B)								471.18
		Total of MR /Analysis								93052.30
4		**Carriage of Materials with loading & unloading:-**								
		Boulder (15Km)					56.00	878.25	Cu.Mt.	₹ 49,182.06
		Sub Total(C)								**142705.53**
		Add due to increase in wage rate from 401.00/- to ...../- @ .....%								
		Sub Total(D)								₹ 1,42,705.53
		Add contengency & consultancy @ 2%								₹ 2,854.11
		Grand Total								₹ 1,45,559.64
		Say								₹ 1,45,560.00

एस० एस० सेठी
कार्यकारी निदेशक
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डाक-मऊभण्डार-832103
झारखण्ड

Annexure 5: Estimate – Loose Boulder Structure (10m Length x 2m Height)

LOOSE BOULDER STRUCTURE 10m L x 2m H										
BASED ON S.O.R. W.R.D.GOVT. OF JHARKHAND EFFECTIVE FROM 28/07/2022/DSR-2021/NS										
		Length of Structure	10	Mt.			Wage Rate			₹ 401.00
		Height of Structure	2	Mt.						
		Top Width of Structure	1.5	Mt.						
		Bottam Width of Structure	5.50	Mt.						
		Side Slope	1:01							
Sl.no.	Code no.	Item of Works	Length in Mt.	Top width in Mt.	Bottom width in Mt.	Height (Avr.) in Mt.	Volume of Boulder	Rate	Unit	Amount
1		Survey & Lay out					3	401	M.D.	₹ 1,203.00
2	5.1.3.2 (W.R.D)	Jungle clearance including weeding out shrubs and small trees upto 150mm dia and their removal as per specification and direction of E/I.	11		6.05		66.55	9.74	Sq. Mt.	₹ 647.86
3	5.6.4 (W.R.D.)	Supplying laying boulder in rock toe, heel tenches of the dam as per design, drawing including the cost of materials royalty and all taxes etc. but excluding the cost of carriage all complete as per specification and direction of E/I.	10	1.50	5.50	2.00	70.00	1640.17	Cu.Mt.	₹ 1,14,811.62
		Sub Total								**116662.48**
		Less Total of MR /Analysis								-116014.62
		Sub Total of SOR (A)								647.86
		Less-CP @ 9.09% of (A)						647.86	9.09%	-58.89
		Sub Total(B)								588.97
		Total of MR /Analysis								116014.62
4		**Carriage of Materials with loading & unloading:-**								
		Boulder (15Km)					70.00	878.25	Cu.Mt.	₹ 61,477.57
		Sub Total(C)								**178081.16**
		Add due to increase in wage rate from 401.00/- to ...../- @ .....%								
		Sub Total(D)								₹ **1,78,081.16**
		Add contengency & consultancy @ 2%								₹ **3,561.62**
		Grand Total								₹ **1,81,642.79**
		Say								₹ **1,81,643.00**

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure 6: Estimate – Gully Plugging (3m Length x 1m Height)

GULLY PLUGGING 3m L x 1m H

BASED ON S.O.R. W.R.D.GOVT. OF JHARKHAND EFFECTIVE FROM 28/07/2022/DSR-2021/NS

Length of Structure	3	Mt.		Wage Rate		₹ 401.00
Height of Structure	1	Mt.				
Top Width of Structure	1.5	Mt.				
Bottom Width of Structure	3.50	Mt.				
Side Slope	1:01					

Sl.no.	Code no.	Item of Works	Length in Mt.	Top width in Mt.	Bottom width in Mt.	Height (Avr.) in Mt.	Volume of Boulder	Rate	Unit	Amount
1		Survey & Lay out					3	401	M.D.	₹ 1,203.00
2	5.1.3.2 (W.R.D)	Jungle clearance including weeding out shrubs and small trees upto 150mm dia and their removal as per specification and direction of E/I.	3.3		3.85		12.705	9.74	Sq. Mt.	₹ 123.68
3	5.6.4 (W.R.D.)	Supplying laying boulder in rock toe, heel trenches of the dam as per design, drawing including the cost of materials royalty and all taxes etc. but excluding the cost of carriage all complete as per specification and direction of E/I.	3	1.50	3.50	1.00	7.50	1640.17	Cu.Mt.	₹ 12,301.25
		Sub Total								**13627.93**
		Less Total of MR /Analysis								-13504.25
		Sub Total of SOR (A)								123.68
		Less-CP @ 9.09% of (A)						123.68	9.09%	-11.24
		Sub Total(B)								112.44
		Total of MR /Analysis								13504.25
4		**Carriage of Materials with loading & unloading:-**								
		Boulder (15Km)					7.50	878.25	Cu.Mt.	₹ 6,586.88
		Sub Total(C)								**20203.57**
		Add due to increase in wage rate from 401.00/- to ...../- @ .....%								
		Sub Total(D)								₹ 20,203.57
		Add contengency & consultancy @ 2%								₹ 404.07
		Grand Total								₹ 20,607.64
		Say								₹ 20,608.00

एस० एस० सेठी
कार्यकारी निदेशक
एवं
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झारखण्ड

Annexure 7: Estimate – Stop Dam (20m Length x 3m Height)

STOP DAM 20m L x 3m H

BASED ON S.O.R. W.R.D., B.C.D. & R.C.D. GOVT. OF Jharkhand EFFECTIVE FROM 28/07/2022

		Nala Width / Head Wall Length	20	Mt.	Wall Column Width (foundati			0.6	Mt.		
		Nala Depth / Height of Weir	3	Mt.	Wall Foundation Depth			1.5	Mt.		
		Length of Appron (Avr.)	7.5	Mt.	AppronFoundationDepth			1.2	Mt.		
		Length of Toe wall	20	Mt.	FoundationLowerP.C.C.			0.15	Mt.		
		Height of Toe wall	0.45	Mt.	FoundationRubbleMasonary			0.9	Mt.		
		Length of Side wall	7.5	Mt.	Foundation(upper)P.C.C.			0.3	Mt.		
		Head Wall Extention Length	2	Mt.	Head Wall Extention Height			4.5	Mt.		Wage Rate
		Wing wall Length	2	Mt.	Free Board			1.5	Mt.	₹	401.00
		Weir Slope	1:01		Top Width of Weir			0.45	Mt.		
		No. of Column	14	Pc.							

Sl. No.	Code no.	Item of Works	no.	L Mt.	W Mt.	H Mt.	Quantity	Unit	Rate	Amount
1		Survey & Layout	10					M.D.	401	4010.00
2	5.1.3.2 (W.R.D)	Jungle clearance including weeding out shrubs and small trees upto 150mm dia and their removal as per specification and direction of E/I.	1	40	15		600	Sq.Mt.	9.74	5841
3	5.1.8 (W.R.D.)	E/W in excavation of foundation trenches as per designed section in all kinds of soil, including moorum soil, soil mixed with kankar, pebbles and boulders upto 300mm size and disposal of the same (beyond 50m away from the toe of dam in the country side) within initial lead of 150M and initial lift of 1.5M all lifts as per specification and direction of E/I.						Cu.Mt.	203.58	
	7.1.10 (W.R.D)	Extra for earth work in hard soil (vide classification of soil item-B) all complete as per specification and direction of E/I.						Cu.Mt.	15.38	
		Weir /Head wall	1	20.00	0.60	1.50	18.00			
		Head Extention wall	2	2.00	0.60	1.50	3.60			
		Side wall	2	7.50	0.60	1.50	13.50			
		Wing wall	2	2.00	0.60	1.50	3.60			
		Toe wall	1	20.00	0.60	1.20	14.40			
		Appron	1	7.50	7.50	1.20	67.50			
		Total					120.60	Cum	240.86	29047.23

एस० एस० सेठी
कार्यकारी निदेशक
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डाक-मऊभण्डार-832103
झारखण्ड

4	5.3.6 (W.R.D) Refer RCD 13.05 (A)	Providing and laying P.C.C or R.C.C.M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality of 20mm graded coarse aggregate of required grade(as per design) and approved quality of sand of requisite F.M (2.5 to 3.0) washed and screened including necessary tools and plants, vibrating, curing royalty and all taxes etc. excluding cost of form work as well reinforcement, its outting bending, binding and placing complete job as per specification and direction of E/I.								
		For PCC of Wall/ Tie Beam								
		Weir /Head wall	4	20.00	0.60	0.15	7.20			
		Head Extention wall	2	2.00	0.60	0.15	0.36			
		Side wall	4	7.50	0.60	0.15	2.70			
		Wing wall	2	2.00	0.60	0.15	0.36			
		Toe wall	1	20.00	0.60	0.15	1.80			
		Appron	1	7.50	7.50	0.30	16.88			
		Total					**29.30**	**Cum**	**4120.82**	**120719.42**
		RCC Works								
		For Footing RCC	14	0.60	0.60	0.45	2.27			
		For Tie Band								
		Weir /Head wall	4	20.00	0.60	0.30	14.40			
		Head Extention wall	2	2.00	0.60	0.30	0.72			
		Side wall	4	7.50	0.60	0.30	5.40			
		Wing wall	2	2.00	0.60	0.30	0.72			
		Toe wall	1	20.00	0.60	0.30	3.60			
		Columns	14	0.60	0.60	5.40	27.22			
		Total					**54.32**	**Cum**	**4120.82**	**223859.43**
5	5.3.17 (W.R.D.)	Providing shuttering including strutting proping etc. and its removal after use in foundation as per speification and direction of E/I.								
		For Footing RCC	56	0.60		0.45	15.12			
		For Tie Band								
		Weir /Head wall	8	20.00		0.30	48.00			
		Head Extention wall	4	2.00		0.30	2.40			
		Side wall	8	7.50		0.30	18.00			
		Wing wall	4	2.00		0.30	2.40			
		Toe wall	2	20.00		0.30	12.00			
		For Columns, Pillars, Piers, Abutments, Posts and Struts.								
		Columns	56	0.60		5.40	181.44			
		Total					**279.36**	**Sqm**	**459.83**	**128458.95**

एस० एस० सैनी
कार्यकारी निदेशक
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झारखण्ड

6	5.5.4 (B.C.D.)	Providing Tor steel reinforcement of 8mm dia rods as per approved design and drawing excluding carriage of M.S bars to work site, cutting, bending, and binding with annealed wire with cost of wire, removal of rust, placing the rods in position all complete as per building specification and direction of E/I.								
		Calculation of reinf.								
		For Footing RCC	KG	2.27	90.00	204.12				
		For Tie Band	KG	24.84	140.00	3477.60				
		Columns	KG	27.22	160.00	4354.56				
						8036.28				
		8mm dia TMT Fe 500					**2410.88**	**Kg.**	**91.65**	**220946.48**
	5.5.5 (B.C.D.)	Providing Tor steel reinforcement of 10mm, 12mm & 16mm dia bars as per approved design and drawing excluding carriage of M.S bars to work site, cutting, bending, and binding with annealed wire with cost of wire, removal of rust, placing the rods in position all complete as per building specification and direction of E/								
	(ii)	10mm dia TMT Fe 501					**1205.44**	**Kg.**	**90.31**	**108858.88**
	(iii)	12mm dia TMT Fe 502					**4419.95**	**Kg.**	**88.97**	**393229.95**
7	5.2.28 (W.R.D) Part A	Providing random rubble stone masonry in C.M (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 M^3 in volume and clean coarse sand of F.M 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete as per building specification and direction of E/I.								
		Weir/Cut off Wall/ Anti seeepage wall	1	20.00	1.50	3.00	90.00			
		Head Extention wall	2	2.00	0.60	4.50	10.80			
		Side wall	2	7.50	0.60	4.50	40.50			
		Wing wall	2	2.00	0.60	2.48	5.94			
		Toe wall/Cut off wall/Anti seepage wall	1	20.00	0.45	0.45	4.05			
		Total					**151.29**	**Cum**	**3013.65**	**455934.81**

एस० एस० सेठी
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हिन्दुस्तान कॉपर लिमिटेड
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हिन्दुस्तान कॉपर लिमिटेड
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पो. ऑ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph: (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 7

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes to make demarcation of diverted forest land on surface by making trench/stone wall at its own cost in consultation with State Forest Deptt and to be maintained during entire period of life of the mine.

This undertaking is being submitted towards compliance of condition no. 8, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
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पो. ऑ. मऊभंडार- ८३२१०३
जिला - पूर्वी सिंहभूम (झारखण्ड)

CIN : L27201WB1967GOI028825

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
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P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph : (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website : www.hindustancopper.com

Annexure -9

Undertaking for rehabilitating & enriching the surface area of diverted land for underground mining by using indigenous species

M/s. Hindustan Copper ltd, a Govt. of India Enterprises, hereby undertakes that the surface area of diverted land for underground mining shall be rehabilitated and enriched by using indigenous species with participation of local people at the project cost.

This undertaking is being submitted towards compliance of condition no. 10 as stipulated in stage-1 clearance vide file no. 8-64/1993-Fc (vol.) dated 15.06.2024 of MoEF&CC.

(Authorized Signatory)

एस० एस० सेठी
कार्यकारी निदेशक
एवं
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इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Date:05.04.2025

Place: Ghatsila

POND DE-SILTATION PLAN

Prepared in compliance of the condition bearing **Sl. No. 11** laid by MoEF&CC, Govt. of India while granting Stage-I approval under Section 2 of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide F. No. 8-64/1993-FC (Vol.) dated 15th June, 2024 **for diversion of 65.52 ha of Forest land** in East Singhbhum district of Jharkhand for expansion of **Surda Copper Underground Mine Project** in favour of M/s Hindustan Copper Limited.

Submitted by:
M/s Hindustan Copper Limited

Prepared by:
Rajiv Ranjan, IFS (Retd.)
Former Principal Chief Conservator of Forests,
Govt. of Jharkhand.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
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EXECUTIVE SUMMARY

The instant Pond/Tank De-siltation Plan has been formulated in compliance of one of the conditions laid by the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC) while according approval to diversion of forest land involved in Surda Underground Copper Mining Project of M/s. Hindustan Copper Limited (HCL/User Agency) in East Singhbhum district of Jharkhand.

HCL holds all the operating mining leases of copper in India. In the state of Jharkhand, Hindustan Copper Limited has three operative Mining Leases namely Surda Mining Lease (388.68 Hectares), Kendadih Mining Lease (1139.60 Hectares) and Rakha Mining Lease (785.091 Hectares). In the state of MP, it has Malanjkhand Mining Lease over an area of 479.9 Hectares. The company has three Mining Leases in the state of Rajasthan namely Khetri Mining Lease (Lease Area 395.07 ha), Kolihan Mining Lease (Lease Area 163.23 ha) and Chandmari Mining Lease (Lease Area 148.45 ha).

The mining lease area of Surda mines is spread over 388.68 hectares of land, out of which only 149.03 hectares is forest land, and the remaining 239.65 hectares is non-forest land. Vide Letter No. 8-64/93-FC dated 15.05.1998, the Central Government has granted final approval under Section 2 of the Forest (Conservation) Act, 1980 for diversion of 83.51 ha of forest land. In due course of time the User Agency felt the need for diversion of rest of the forest land (65.52 ha) under the lease while planning for expansion of Surda Copper Mining Project and accordingly application was made for the said diversion.

The Central Government vide F. No. 8-64/1993-FC (Vol.) dated 15.06.2024 has granted In-principle/Stage-I approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mining Project in favour of M/s. HCL in East Singhbhum District of Jharkhand subject to fulfilment of a number of conditions. The condition, in fulfilment of which the instant Plan is being formulated, states the following:

> *"The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water*

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bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF&CC before Stage-II approval;"

For small ponds, sediment deposition is a serious problem as the rate of siltation is much higher compared to larger water bodies and this reduces the useful life of the pond. Apart from geomorphological processes, soil erosion is largely governed by anthropogenic modifications in the catchment such as concrete drainage networks, deforestation, agriculture intensification, road construction, and uncontrolled grazing. High rate of topsoil erosion in India threatens the ecological dynamics of the receiving water bodies including ponds.

De-siltation of village ponds is the process of removing accumulated sediments (silt, mud, sand, and organic matter) from the pond bed to restore its depth, improve water quality, and ensure its ecological health. Sediment accumulation in ponds is a natural process, but excessive siltation can lead to a reduction in water holding capacity, loss of biodiversity, and poor water quality. The primary aim of de-siltation is to restore the pond's functionality for local communities, agriculture, wildlife, and biodiversity.

There are various methods and processes to de-silt village ponds, ranging from traditional manual techniques to modern mechanical and biological methods. These methods vary in terms of cost, scale, and environmental impact.

Often, a combination different methods is used to achieve the most effective de-siltation results. For example, manual excavation followed by biological methods like planting vegetation to control ongoing siltation; dredging or excavation combined with sediment traps to prevent further sediment buildup; hydraulic dredging followed by natural filtration to restore ecological balance in the pond.

Thus, the choice of de-siltation method for village ponds depends on factors like pond size, sediment load, available resources, and ecological considerations. While mechanical methods like dredging and excavation can be more efficient for large ponds, manual and biological techniques are often more sustainable and community-friendly for smaller, rural ponds. Regular maintenance, combined with preventive measures such as sediment traps or vegetation restoration, can help maintain the health of village ponds and prevent excessive siltation in the future.

The gross budget estimation towards de-siltation under the Plan has been made with the presumption that the manual method is adopted for the purpose. The de-siltation process (depth: 1.20m) of all the 212 ponds located within 5 km periphery of the lease area has been proposed to

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be spread over first five years of the Plan. Next five years shall involve de-siltation of ponds by a depth of 0.40m. In other words, ponds de-silted by 1.20m depth in Year-1 shall be subjected again to de-siltation by a depth of 0.40m in Year-6 and so on, till the ponds de-silted by 1.20m in Year-5 are taken up again for de-siltation in Year-10, the final year of this Plan.

The total cost to the User Agency towards implementation of this Plan is Rs. **1538.60 Lakh** spread over 10 years (2026-27 to 2035-36). The proposed Year-wise financial projection under the Plan may be summarized as follows.

Activity	Estimated Cost (Rs. in Lakh)										Total (Rs. in Lakh)
	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9	Yr. 10	
De-siltation (1.20m)	185.96	182.46	175.34	190.02	162.66	-	-	-	-	-	896.44
De-siltation (0.40m)	-	-	-	-	-	71.79	72.10	68.14	68.95	64.75	345.73
Capacity Building	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	15.00
Awareness Development	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	15.00
Miscellaneous Expenses	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00
Total	190.96	187.46	180.34	195.02	167.66	74.79	75.10	71.14	71.95	67.75	1282.17
Cost Escalation @ 20%	38.19	37.49	36.07	39.00	33.53	14.96	15.02	14.23	14.39	13.55	256.43
Grand Total	**229.15**	**224.95**	**216.41**	**234.02**	**201.19**	**89.75**	**90.12**	**85.37**	**86.34**	**81.30**	**1538.60**

Cost to the User Agency towards implementation of the Pond De-siltation Plan = Rs. 1538.60 Lakh.

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ACKNOWLEDGEMENT

This Pond De-siltation Plan could not have been prepared without the committed collaboration of Mr. Shaba Alam Ansari, IFS, Divisional Forest Officer, Jamshedpur Forest Division and the frontline forest staff of Jamshedpur forest division. Also, the interaction with Ms. Smitha Pankaj, Regional Chief Conservator of Forests, Jamshedpur Region played a vital role in shaping this Plan particularly in terms of its effective implementation in future.

I am grateful to Mr. Kislay Kumar (M/s Ecos Offset Ltd.) and his team members who carried out an intensive survey of the Target Area in question. Without their active support and sincere efforts this Plan could not have seen light of the day.

I owe special thanks to the officials of M/s Hindustan Copper Ltd., who took utmost care to ensure all logistic support while undertaking field surveys.

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डाक-मऊभण्डार-832103
झारखण्ड

TABLE OF CONTENTS

LIST OF MAPS

LIST OF TABLES

1. INTRODUCTION

1.1. ABOUT THE PROJECT

Hindustan Copper Limited (HCL), a Miniratna Category-I, Government of India (GoI) Enterprise under the administrative control of the Ministry of Mines, was incorporated on 9th November 1967 under the Companies Act., 1956. It was established as a Govt. of India Enterprise to take over all plants, projects, schemes and studies pertaining to the exploration and exploitation of copper deposits from National Mineral Development Corporation Ltd. HCL is Country's only vertically integrated producer of refined copper from indigenous sources. It is the only company in India engaged in mining of copper ore and owns all the operating mining lease of Copper ore. Major activities of HCL include mining, ore beneficiation and converting of refined copper metal into Continuous Cast Rod (CCR) as downstream product. HCL have five units – one each in the states of Rajasthan, Jharkhand, Madhya Pradesh, Gujarat and Maharashtra. HCL is a listed company on BSE and NSE, with 66.14 % equity owned by the Government of India.

HCL holds all the operating mining leases of copper in India. In the state of Jharkhand, Hindustan Copper Limited has three operative Mining Leases namely Surda Mining Lease (388.68 Hectares), Kendadih Mining Lease (1139.60 Hectares) and Rakha Mining Lease (785.091 Hectares). In the state of MP, it has Malanjkhand Mining Lease over an area of 479.9 Hectares. The company has three Mining Leases in the state of Rajasthan namely Khetri Mining Lease (Lease Area 395.07 ha), Kolihan Mining Lease (Lease Area 163.23 ha) and Chandmari Mining Lease (Lease Area 148.45 ha).

Indian Copper Complex located in Singhbhum (East) district of Jharkhand near Ghatsila has three adjacent mining blocks, namely Surda, Kendadih and Rakha mines. Kendadih mines has two blocks Kendadih and Siddheswar while Rakha mines has three blocks, namely Chapri, Rakha and Tamapahar. The ore produced in this group of mines is beneficiated at Mosabani concentrator plant near Surda mines. Indian Copper Complex, Ghatsila houses a Smelter and Refinery plant where copper concentrates from Ghatsila mines are also processed to produce copper cathode.

1.2. LOCATION OF THE PROJECT

Surda Mine is located in Mosabani tehsil of East Singhbhum district of Jharkhand State. The mine lease lies at an aerial distance of about 3 km south-south-west of Ghatsila town and about 3.5 km north-north-east of Mosabani town. The deposit is covered under Survey of India toposheet no. 73 J/6 bounded between latitudes 22^0 32' 43.119" N and 22^0 34' 18.848" N and longitudes 86^0 25'

31.849" E and 86^0 26' 22.197" E. The mining lease area falls within Surda, Sohada, Pathargora and Benashole villages and Forest Block No. 1098.

The ML area of 388.68 ha is quadrilateral in shape. The four corner coordinates of the ML are as follows:

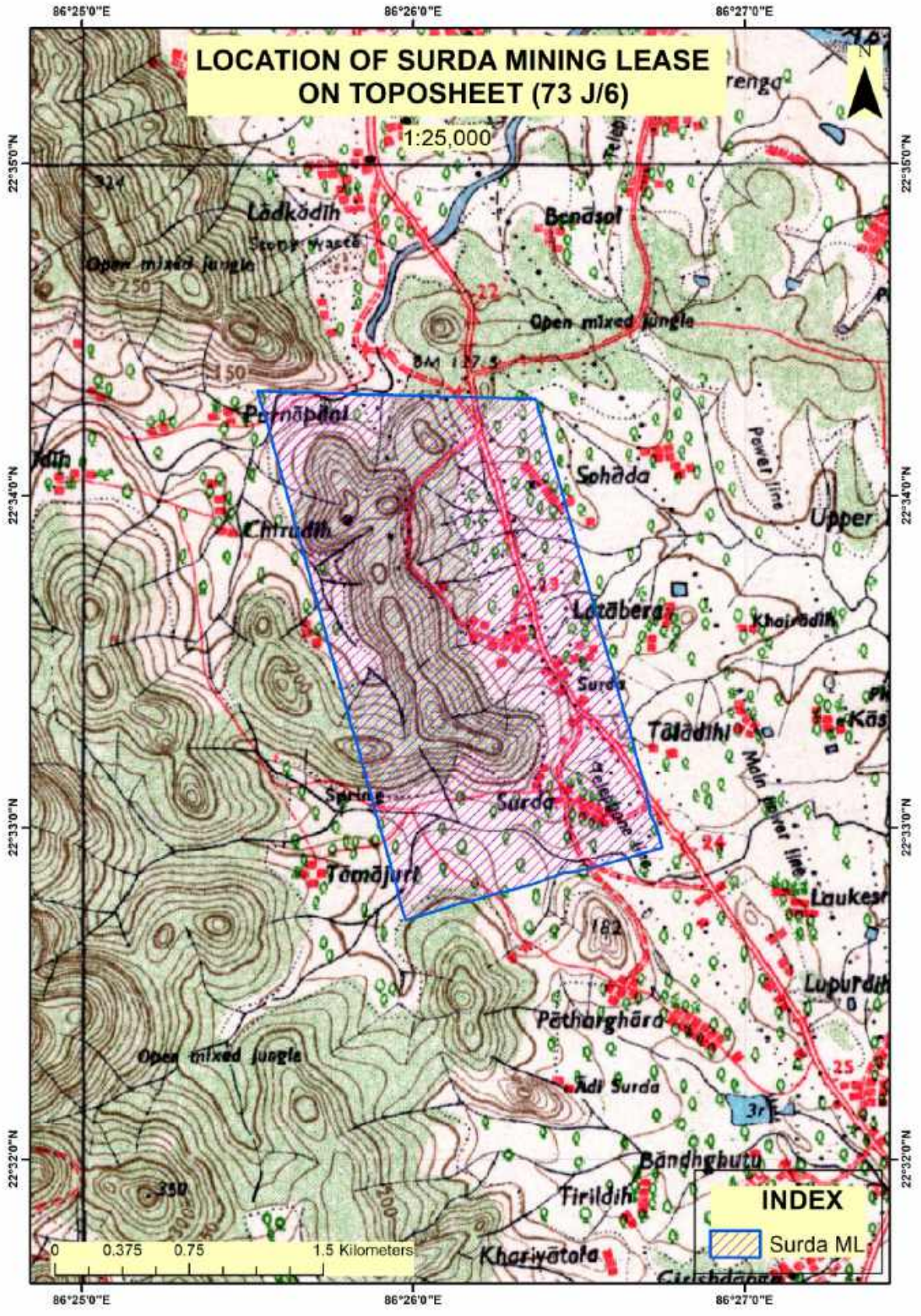
- 22^0 34' 18.848" N, 86^0 25' 31.849" E.
- 22^0 32' 43.119" N, 86^0 25' 58.633" E
- 22^0 32' 56.241" N, 86^0 26' 45.097"E
- 22^0 34' 17.401" N, 86^0 26' 22.197"E

The mine can be approached from the all-weather road linking Jamshedpur with Mosabani via Jaduguda. About 2 km north of Surda, a road branches off from the Jamshedpur-Mosabani Road leading to Ghatsila. At present the road is adequate to handle the traffic. The nearest National Highway is NH-33, which is at an aerial distance of 6.5 km from the mine and can be approached via Ghatsila.

The nearest railway station is Ghatsila (Howrah-Mumbai Main line; SE Railway), which is located at an aerial distance of about 4 km east-northeast of the mine lease.

The location of Surda Mining Lease on Toposheet is being shown in the following map.

Map 1: Location of Surda Mining Lease



1.3. FORMULATION OF POND DE-SILTATION PLAN – BACKGROUND

The Central Government vide F. No. 8-64/1993-FC (Vol.) dated 15.06.2024 has granted In-principle/Stage-I approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mining Project in favour of M/s. HCL in East Singhbhum District of Jharkhand subject to fulfilment of a number of conditions. The condition, in fulfilment of which the instant Plan is being formulated, states the following:

> "*The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF&CC before Stage-II approval;"*

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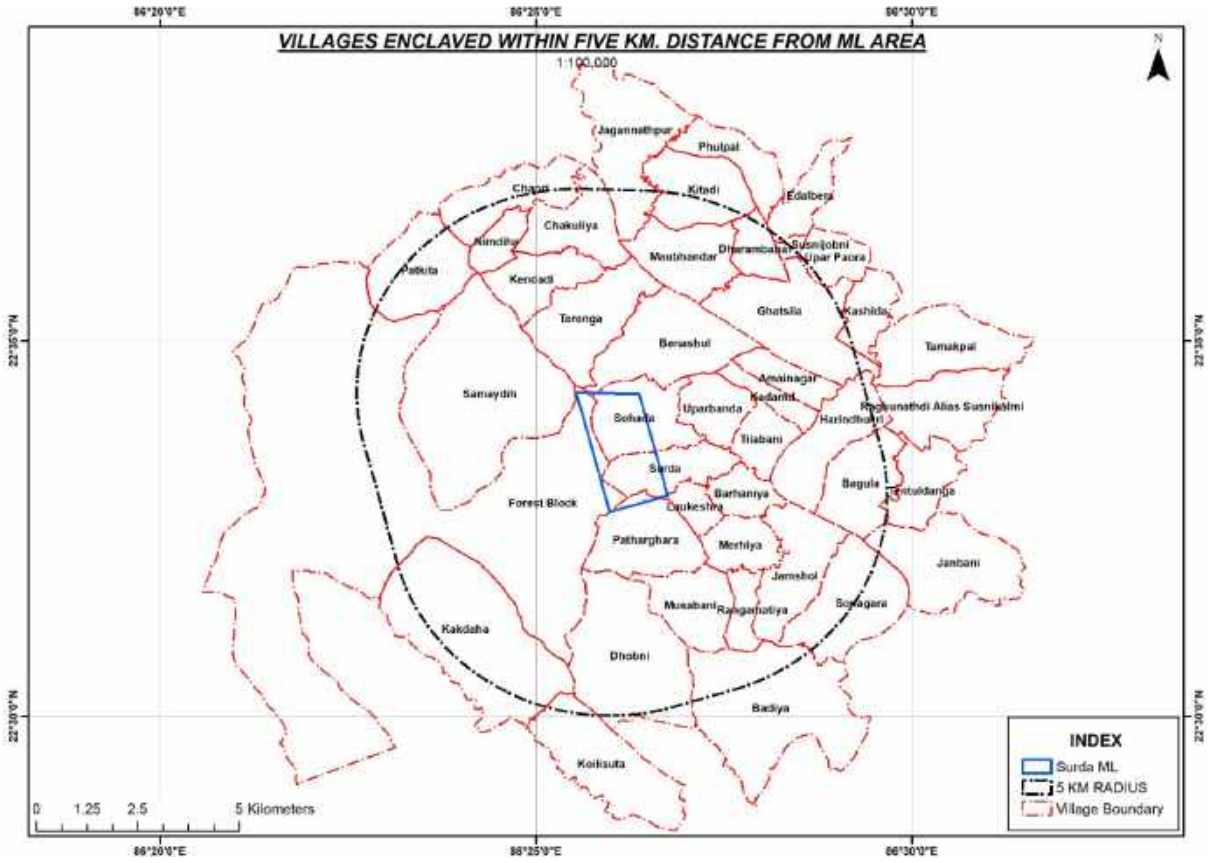
2. TARGET AREA FOR FORMULATION OF POND DE-SILTATION PLAN

As suggested under the condition laid by the Central Government, the Target Area for the instant Plan has been fixed to be the area encompassed within 5 km radius of the mining lease area.

2.1. VILLAGES ENCLAVED WITHIN THE TARGET AREA AND CORRESPONDING FOREST ADMINISTRATIVE UNITS

The Target Area along with the enclaved villages is being shown in the following map.

Map 2: Villages Enclaved within the Target Area (5 km radius)



A total of 36 villages are located within 5 km periphery of Surda Mining Lease. The Target Area villages and the corresponding forest administrative units are being tabulated hereunder.

Table 1: Target Area Villages and Corresponding Forest Administrative Units

Range	Beat	Sub-Beat	Sl. No.	Village	Thana/ Thana No.
Musabani	**Musabani**	**Benashol**	1.	Amainagar	Ghatshila-
			2.	Benashol	Ghatshila-100
			3.	Chakulia	Ghatshila-87
			4.	Kadamdih	Ghatshila-105
			5.	Kendadih	Ghatshila-98

			6.	Nimdiha	Ghatshila-88
			7.	Sohada	Ghatshila-101
			8.	Terenga	Ghatshila-99
			9.	Tilabani	Ghatshila-104
			10.	Uparbandha	Ghatshila-103
		Musabani	11.	Badiya	Ghatshila-166
			12.	Jamshol	Ghatshila-164
			13.	Koilisuta	Ghatshila-1094
			14.	Musabani	Ghatshila-162
			15.	Rangamatia	Ghatshila-163
			16.	Sonagara	Ghatshila-165
		Surda	17.	Barhania	Ghatshila-
			18.	Laukeshra	Ghatshila-159
			19.	Merhia	Ghatshila-161
			20.	Patharghara	Ghatshila-160
			21.	Surda	Ghatshila-102
Ghatshila	**Galudih**	**Kalajhor**	22.	Jagannathpur	Ghatshila-
	Ghatshila	**Kashida**	23.	Bagula	Ghatshila-157
			24.	Ghatshila	Ghatshila-
			25.	Harindhukri	Ghatshila-106
		Bankati	26.	Dharambahal	Ghatshila-114
			27.	Kitadih	Ghatshila-85
			28.	Maubhandar	Ghatshila-86
			29.	Susnijobni	Ghatshila-115
Rakhamines	**Royam**	**Kumirmuri**	30.	Chapri	Ghatshila-89
			31.	Patkita	Ghatshila-96
		Bankai	32.	Dhobni	Ghatshila-1096
		Kendadih	33.	Forest Block	Ghatshila-1098
			34.	Kakdaha	Ghatshila-1097
			35.	Samaydih	Ghatshila-97
Chakulia	**Narsinghgarh**	**Narsinghgarh South**	36.	Janbani	Ghatshila-

3. POND ECOSYSTEM

3.1. General Account of Pond Ecosystem

Ponds are the biodiversity hotspots that collectively support far more species, including rare and threatened species than other freshwater habitats. These also provide food security to the developing nations. Despite the ecological and social benefits, the ponds were largely excluded from several international and national legislations and commitments targeting freshwater ecosystem protection and conservation. Restoration and management efforts are primarily directed towards the larger water bodies and the wetlands of national importance, or are part of a national protected area network. The increasing number of scientific studies on ponds in recent decades indicates the growing concern of the global community. A large number of studies have focused on the physicochemical characteristics, specific species-based biodiversity conservation and enhancing targeted ecosystem services of ponds. However, the narrow utilitarian use-based conservation (i.e., conservation of specific species and ecosystem resources to avoid possible shortages in the future with harmful economic and social consequences) fails to recognize the multiple anthropogenic pressures and provides narrow solutions which are inefficient to regenerate the degraded pond ecosystem.

Ponds are the centuries-old traditional water harvesting structures central to the settlement pattern of India. In 2017–2018, Space Application Centre mapped 2,31,195 water bodies and wetlands in the country covering 15.98 Million hectares of area which accounts for 4.86% of the total geographical area of India (i.e., 328.7 Million hectares). The distribution of ponds and tanks indicate two-third (i.e., 65.67%; 151,815 ponds/tanks) of the total water bodies and wetlands mapped in the country and contribute 11.4% of the total mapped area. Aquaculture ponds occupy 2.7% of the total mapped area. The wetlands of size < 2.25 ha were excluded from wetland classification and identified only as point features. It is relevant to mention here that the surface area of majority of small ponds in India is < 1 ha. According to the 5th census of minor irrigation scheme (2013–2014), the contribution of the ponds/tanks towards irrigation is 41%, which is the largest in the surface flow minor irrigation scheme of India.

A large number of ponds are located in the plateau and desert region of the country compared to the Himalayan and Indo-Gangetic plains, indicating their significance as the water-storage structure in the water-scarce regions of the country. Large number of ponds and tanks (including aqua-culture ponds) are located in southern-India. Majority of ponds and tanks are in Andhra Pradesh followed by Tamil Nadu, Maharashtra, Karnataka, and Telangana. Pond-like structures are also called tanks in the southern states of India.

Historically, ponds were the livelihood source and economic base for the communities. They were mainly managed by the local community which ensured the equitable share and distribution of water to the people. In the eighteenth century, many villages in India contributed ~ 5% of their gross produce to the maintenance of the ponds. With the advent of large-scale irrigation projects, the significance of community-managed ponds was neglected. The perverse incentives and government policies encouraged the over-extraction of groundwater and surface water resource disregarding water conservation and deserting the pond ecosystem.

3.2. POND REHABILITATION

3.2.1. Rationale

The rationale for pond restoration is valid not only from the equity and stability points of view but also from the economic angle. Thus, future food security is critically linked to protecting and strengthening these structures.

Pond restoration has another important benefit in terms of groundwater replenishment. Recharging of groundwater appears to be one of most pressing reasons for pond restoration given the fact that groundwater is the single largest source of irrigation in most parts of India. It is observed that in the absence of replenishing mechanisms like ponds or canals, water supply available from wells is much limited. In most regions open wells have dried up and water levels go down rapidly in the deep borewells in the absence of well managed tanks/ponds in the vicinity, especially during the low rainfall years. And whenever canals/tanks do not get adequate supply, the wells located in the vicinity get poor recharge and the independent wells get almost negligible recharge due to low rainfall. This not only emphasises the rationale for the revival of ponds but also points to the need for conjunctive use of surface and groundwater resources.

Therefore, restoring these systems will go a long way in addressing the issues of food security, regional imbalances, ecological balance, etc. While there is urgent need for policy intervention in this regard, the need for managing these resources in a sustainable manner is equally important. As these systems fall under Common Property Resources, collective action is a prerequisite for their management. Traditionally, local people through institutional arrangements managed these systems. These traditional systems of resource management have degenerated over time due to the state interventions and due to the social, political and economic dynamics at the village level. Loss of capacity of the ponds is not only the loss of pond irrigation but also loss of groundwater recharge in the pond dominant regions, which are relatively dry and drought-prone and dependent on wells as much.

3.2.2. Sedimentation and Soil Erosion – A Major Issue

For small ponds, sediment deposition is a serious problem as the rate of siltation is much higher compared to large water bodies and this reduces the useful life of the pond. Apart from geomorphological processes, soil erosion is largely governed by anthropogenic modifications in the catchment such as concrete drainage networks, deforestation, agriculture intensification, road construction, and uncontrolled grazing. High rate of topsoil erosion in India threatens the ecological dynamics of the receiving water bodies including ponds. In India, scientists have estimated the average rate of soil erosion as 16.35 ton/ha/year, of which 10% are deposits in the reservoirs and ponds leading to the reduction of storage capacity by 1 to 2% annually. Reduction in the water retention capacity of ponds affects the agricultural productivity and livestock in the developing region. It has been found that ponds are the major sediment sink compared to the large dams. Soil erosion and sediment transport not only are responsible for sediment load but also deliver sediment-associated nutrients, organic matter, heavy metals, and other emerging contaminants to the ponds. According to Ramsar Convention on Wetlands (2018), the erosion of nutrient-rich topsoil leads to increased nitrogen and phosphorus transport globally. It has also been reported that the partitioning of heavy metals in the pond sediment is in the order of Pb > Cr > Cd. In India, a large number of ponds are surrounded by habitation and residential area. The landlocked ponds in the country with narrow or no outlet are highly susceptible to sediment deposition and accumulation of contaminants.

3.2.3. Pond Acidification

Freshwater acidification is harmful to various aquatic organisms. Climate warming and changes in water chemistry profoundly affect the pond's pH. The rise in atmospheric carbon dioxide lowers the pH in ponds. Human-induced acidification can be due to atmospheric deposition of carbon dioxide and other inorganic acids or by natural processes and organic acids. The emission of gaseous pollutants such as nitrogen dioxide and Sulphur leads to acid precipitation and subsequent acidification of the ponds. The biodiversity of ponds decreases with an increase in acidification, as the species sensitive to low pH cannot survive in the acidifying ponds. Acidity in ponds alters the solubility of metals in water and increases their toxicity as the metals in dissolved state are more toxic in soft water. In a study of the heavy metal accumulation (mainly Zinc and Copper) with increased acidification in the ponds of East Kolkata wetlands, it has been found that a negative relation between pH and dissolved Zn and Cu in the ponds indicating that the acidification accelerates the dissolution of heavy metals in the ponds affecting the floating food chain such as planktons, and fishes through bioaccumulation.

3.2.4. Climate Change and Pond Rehabilitation

The major impacts of climate change are likely to occur through water. Climate change predictions of the Intergovernmental Panel on Climate Change (IPCC) for South Asia (Indian Region) indicated 0.5^0C-1.2^0 C increase in temperature by 2020 (IPCC, 2007). Rainfall pattern is also likely to change in terms of distribution and intensity. While agriculture as a whole is expected to be mostly negatively impacted rain-fed agriculture, where pond irrigation is concentrated, in particular is expected to be impacted differently under the climate change (IPCC, 2007). Rain-fed agriculture may have unexpected changes in its crop compositions and crop calendar as the pattern and structure of climatic variables may change. These unexpected changes could sometimes be beneficial when they are internalised. But mostly these impacts become cascading due to the various socio-economic changes taking place in these regions. Increasing commercialization, changes in gender and age composition of working farmers and lack of educated farmers in agriculture, increasing labour costs and declining labour productivity are some of the changes that complicate the situation on the ground. The cascading impact of all these changes accentuated by the climate variability seems to be driving the fortunes of the rain-fed farmers. More importantly the farming communities and institutions are unable to foresee these impacts and adequately prepare themselves to face the challenges.

3.3. EFFECT OF MINING PROJECT ON PONDS LOCATED IN ITS BUFFER AREA

Mining, especially open cast mining, involves removing large amounts of soil and rock to access mineral deposits beneath the surface. This process can have a significant impact on the surrounding environment, including ponds in buffer areas near mining projects. Buffer areas are typically designated to protect sensitive ecosystems and water bodies from the effects of mining activities. However, these areas can still be negatively impacted by various factors related to mining operations. Some key ways in which ponds in buffer areas can be affected by open-cast mining projects are described in the following paras.

3.3.1. Water Quality Degradation

- Sediment Runoff: During mining, large quantities of soil and waste material (overburden) are removed, which can lead to increased sediment runoff. If this runoff reaches nearby ponds, it can lead to siltation, clouding the water, reducing light penetration, and harming aquatic life.
- Chemical Contaminants: Mining operations often involve the use of chemicals like cyanide or sulfuric acid, which can leach into water bodies. Heavy metals, such as mercury, arsenic,

and lead, may also be present in mine waste. These contaminants can accumulate in ponds, affecting water quality and harming aquatic organisms.

- Acid Mine Drainage: This occurs when sulphide minerals exposed during mining react with water and oxygen to form sulfuric acid. The resulting acidic water can drain into nearby water bodies, lowering the pH and making the water toxic to aquatic organisms.

3.3.2. Changes in Hydrology

- Altered Water Flow: Open-cast mining can significantly alter the local hydrology by changing natural water flow patterns. Excavating large areas can disrupt groundwater flow and surface runoff, which may reduce the inflow to ponds or lead to flooding in buffer areas. This can affect the availability of water for aquatic ecosystems.
- Water Table Lowering: Mining can lower the water table in the surrounding area, potentially reducing the water levels in nearby ponds. This can affect aquatic plants, fish, and other organisms that rely on stable water levels.

3.3.3. Habitat Destruction

- Loss of Vegetation: Mining activities often involve clearing vegetation even in the buffer zones, which can lead to the destruction of habitats for terrestrial and aquatic species. Vegetation loss also means less filtration of pollutants from runoff before they reach ponds, increasing the likelihood of contamination.
- Disruption of Ecosystem Services: Ponds in buffer zones may provide important ecosystem services, such as water filtration, habitat for wildlife, and a source of water for nearby communities. Mining activities can degrade these services, affecting biodiversity and local communities.

3.3.4. Dust and Air Pollution

- Airborne Dust: Open-cast mining operations generate significant amounts of dust, which can settle on water bodies, altering water chemistry and temperature. Dust can reduce the oxygen content in ponds, affecting fish and other aquatic life.
- Temperature Changes: Dust accumulation on ponds can also affect their thermal properties, possibly leading to changes in water temperature that may harm sensitive species of aquatic life.

3.3.5. Fragmentation of Ecosystems

- Isolation of Habitats: The development of mining projects often leads to fragmentation of habitats, which can isolate populations of species in buffer areas and ponds. Fragmentation can reduce genetic diversity and the ability of species to migrate, find food, or reproduce.
- Increased Human Activity: Increased human activity in mining areas, including transportation and infrastructure development, can lead to further disturbance in buffer areas, potentially causing long-term degradation of ecosystems.

3.3.6. Cumulative Impacts

- Compounding Effects Over Time: The long-term and cumulative impacts of mining, especially open-cast mining, can intensify over time. Repeated sedimentation, contamination, and habitat loss can lead to the gradual degradation of ponds in buffer zones, reducing their ability to support diverse ecosystems and perform key ecological functions.

Thus, ponds in buffer areas of mining projects are at risk of degradation due to factors such as water quality contamination, changes in hydrology, habitat destruction, and dust pollution. Effective mitigation measures, such as sediment control, water treatment, and habitat restoration, can help reduce these impacts and protect the ecological integrity of these critical water bodies.

3.4. LEGAL AND OTHER CHALLENGES

India is a signatory of the Ramsar Convention on Wetlands (1971). The Wetland (Conservation and Management) Rules, 2017 of India under the provision of the Environment Protection Act, 1986 prioritizes wetland conservation and strictly prohibits encroachment, solid waste dumping, disposal of untreated waste, industrial expansion, conversion, and poaching within the wetland area. However, wetland rules are mainly applicable to the natural water bodies having inundation area >5 ha, thus ignoring the small ponds under the wetland rule. In view of the degradation and disuse of existing water bodies causing loss of irrigation potential, the Government of India under Ministry of Jal Shakti launched a Repair, Renovation, and Restoration (RRR) scheme, 2005, later merged with Prime Minister Krishi Sinchayee Yojana, 2015. Despite the ambitious RRR scheme (restoring 3,341 water bodies), ponds were largely excluded from restoration as the scheme centers on water bodies of size >5 ha for rural water bodies and between 2 ha and 10 ha for urban water bodies (RRR-MoJS 2017). As per new 2022 guidelines, water bodies of size >2 ha (rural water body) and >1 ha (urban water body) are eligible for the RRR scheme (RRR-MoJS 2022). In general small ponds are of size <1ha, specifically in rural India. Since water is a state subject every state in

India has its classification system for water bodies. The nonexistence of a unique water body classification system throughout the country contributes to the deterioration of ponds/tanks. Although no specific policy and legislative frameworks for ponds/tanks exist in India, their conservation and management are indirectly influenced by several other policies for instance, National Water Policy-2012, National Environment Policy-2006, National Plan for Conservation of Aquatic Ecosystem-2013, National Action Plan on Climate Change-2008, Atal Mission for Rejuvenation and Urban Transformation, and The Mahatama Gandhi National Rural Employment Guarantee Act-2005. The number of policies and programs running under various ministries further complicates pond conservation restoration and management.

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4. DE-SILTATION METHODS/PROCESSES

De-siltation of village ponds is the process of removing accumulated sediments (silt, mud, sand, and organic matter) from the pond bed to restore its depth, improve water quality, and ensure its ecological health. Sediment accumulation in ponds is a natural process, but excessive siltation can lead to a reduction in water holding capacity, loss of biodiversity, and poor water quality. The primary aim of de-siltation is to restore the pond's functionality for local communities, agriculture, wildlife, and biodiversity.

There are various methods and processes to de-silt village ponds, ranging from traditional manual techniques to modern mechanical methods. These methods vary in terms of cost, scale, and environmental impact. Different de-siltation methods are being described in the following paras.

4.1. MANUAL DE-SILTATION METHODS

Manual de-siltation methods are simple, cost-effective, and environmentally friendly techniques used to remove sediment from village ponds. These methods are especially useful in small-scale or community-managed ponds where access to heavy machinery or mechanical equipment is limited. Manual de-siltation is often labour-intensive but can be an effective way to restore water capacity sustainably, improve water quality, and support biodiversity. It also involves local labourers or community members, which fosters a sense of ownership and responsibility for pond health. Some common manual de-siltation methods for village ponds are as follows.

4.1.1. Hand Excavation

This involves using basic tools like shovels, spades, and hoes to manually dig up silt and sediment from the bottom of the pond. Labourers typically stand in shallow water or use ropes to access deeper areas, scraping the silt into containers (like baskets or sacks) and hauling it out. The pond is typically drained or partially lowered to expose sediment. Manual labourers scoop out the silt from the pond bed and transfer it to the shore for disposal or reuse. The sediment can be used as compost for agriculture or disposed of in a nearby location.

The advantages of this method is its low cost and it does not require machinery or fuel, making it suitable for rural settings. It can be done in smaller ponds or ponds with irregular shapes where machinery cannot reach.

The disadvantages of this method are: Labor-intensive and time-consuming; limited to shallow or moderately deep ponds. Also, it may take longer to complete the de-siltation process for larger areas.

4.1.2. Use of Traditional Tools (Rakes, Nets and Scoops)

Villagers often use traditional hand tools like large rakes, scoops, or nets to collect silt and organic debris from the pond. These tools are often dragged through the water to loosen sediment, which is then scooped into baskets or containers for removal. Rakes or scoops are used to gather loose silt from the surface or from shallow areas of the pond. Sediment is collected in small quantities and placed in baskets or large sacks for removal. Sometimes, nets are used to collect floating debris and fine sediment.

The advantages of this method is that it involves simple tools that are easy to use and inexpensive. There is no need for machinery, making it accessible to rural communities. Also, there is less disruption to aquatic ecosystems compared to mechanical methods.

The disadvantages are the limited effectiveness for large-scale de-siltation. The process can be slow if the pond is deep or if the silt is compacted. Thus, this method works best for shallow ponds or surface sediments.

4.1.3. Silt Scooping Using Wooden or Metal Scoops

A scoop (often a large, flat, shallow container made of wood or metal) is used to scrape the sediment from the pond bed. This method is similar to using a shovel but is more efficient in some situations, especially for areas with a buildup of fine sediment. Workers use the scoop to scoop up sediment from the bottom of the pond, starting from the edges and moving inward. The sediment is then transferred to containers or directly to the shore. After the scoop has collected enough sediment, it is emptied, and the process is repeated.

This process is efficient for removing shallow layers of silt and mud. It works well in smaller ponds with limited water depths. However, it requires manual effort and may be ineffective for deeper ponds. And the process is limited to soft, loose sediment (compacted or hard sediments may be difficult to scoop).

4.1.4. Basin Digging (Excavating Small Sections at a Time)

In this method, the pond is divided into smaller sections or "basins", and sediment is removed incrementally, starting from one basin. This can help manage the workload, allowing labourers to tackle one section at a time. The pond is typically sectioned off into smaller areas, and one area is de-silted at a time. Labourers manually excavate the sediment from each basin, removing it and transporting it to the shore. This method allows for controlled de-siltation, especially when the pond is large.

The advantage of this method is that it allows for systematic and gradual sediment removal. Also, it reduces the risk of overwhelming the pond ecosystem with sudden disturbances. However, the process is time-consuming and labour-intensive and it may not be suitable for ponds with irregular shapes.

4.1.5. Manual Silt Removal Using Sludge Pumps (Small-Scale Manual Pumps)

Some manual pumps (like hand-powered sludge or diaphragm pumps) can be used to suck up silt and water from the bottom of the pond. These pumps can be operated by hand or with a small motor to pump out both water and silt. Typically, a manual pump is lowered into the pond, and the sediment-laden water is pumped out to the shore. The sediment is then separated from the water using sieves or settling tanks. The sediment is then removed for disposal or repurposing.

This process is more efficient than manual scooping or raking. It can work for deeper or more compacted sediment layers. However, this involves purchase of a manual pump. Further, it is labor-intensive to operate, especially in large ponds.

4.2. MECHANICAL DE-SILTATION METHODS

Mechanical de-siltation is a more efficient and faster method of removing accumulated silt, mud, and sediment from village ponds compared to manual techniques. It involves the use of machinery or specialized equipment to remove sediments, which can significantly improve the pond's water storage capacity, water quality, and biodiversity. This method is often employed for larger ponds or ponds with deep silt buildup that cannot be easily managed through manual labour alone. Some common mechanical de-siltation methods for village ponds are being described in the following paras.

4.2.1. Excavators and Backhoe Loaders

Excavators or backhoe loaders are heavy machines equipped with buckets or scoops to remove silt and sediment from the bottom of the pond. These machines scoop up sediment, which is then transferred to dump trucks or piles at the pond's edge for disposal or reuse. The pond is either partially drained or the water level is lowered to allow access to the sediment. The excavator's bucket or backhoe scoops up the silt from the pond bed, and it is either deposited on-site or hauled away. Excavators can also be used to reshape or deepen the pond if necessary.

This method is efficient for large-scale de-siltation of larger or deeper ponds. It can remove large volumes of sediment quickly and is suitable for ponds with significant silt buildup or where sediments are compacted. However, it is expensive to hire or purchase machinery and operators.

Also, it may cause environmental damage (e.g., erosion, disturbance of aquatic habitats) if not done carefully. Further, it is not ideal for very shallow ponds or those with irregular shapes that machinery can't easily reach.

4.2.2. Dredging (Hydraulic or Mechanical)

Dredging involves using specialized equipment to scoop or pump up silt and sediment from the pond bottom. There are two primary types of dredging: hydraulic and mechanical.

- Hydraulic Dredging: Uses suction or a high-pressure water jet to loosen the sediment, which is then sucked up through a pipe and transported to a disposal area.
- Mechanical Dredging: Uses mechanical scoops, buckets, or grabs to physically remove sediment, which is then deposited into barges, trucks, or on the shore for disposal.

A dredger is lowered into the pond to remove sediment using either hydraulic pumps or mechanical grabs. The sediment is sucked up or scooped into containers for removal. The pond's shape can be maintained or modified if needed during the process.

The advantages of this method is that it is very effective for deep ponds or ponds with thick layers of sediment. It can handle larger volumes of silt and sediment more efficiently than manual methods and is suitable for large-scale de-siltation projects. Nevertheless, it requires specialized equipment, which can be costly to rent or operate. It may disturb the pond's ecosystem if not managed properly. The disposal of the dredged material also requires additional planning to ensure environmental safety.

4.2.3. Hydraulic Suction Pumps

This process involves use of hydraulic suction pumps or vacuum pumps which are used to remove silt from the bottom of the pond. These pumps use suction to lift sediment and water and discharge the slurry to an appropriate disposal site. A suction pipe is lowered into the pond, and sediment-laden water is sucked up by the pump. The slurry (water and silt mixture) is discharged through pipes to a designated location for dewatering or further disposal. Depending on the system, the silt may be separated from the water using filtration or sedimentation tanks.

This method is less invasive than dredging and causes minimal disruption to the water surface. It is effective for removing fine silt and organic matter and it is typically suited for deep ponds and ponds with hard-to-reach areas. The disadvantages are that it requires the purchase or rental of suction pumps, which can be expensive. Further, it is suitable only for removing silt and fine

sediments; large debris may clog the system. Disposal of the slurry properly can be challenging, especially in environmentally sensitive areas.

4.2.4. Mechanical Dredgers with Buckets/Clamshells

Mechanical dredgers use large buckets or clamshell-type scoops attached to a crane or dredging rig. The scoop is lowered to the pond bottom, where it picks up sediment and lifts it to the surface for disposal. The mechanical dredger is positioned over the pond, and the bucket or clamshell scoop is lowered to scoop up the sediment. The sediment is lifted and deposited into a nearby truck or pile for removal. This method is particularly useful for areas with thicker, more compacted sediment.

This method is ideal for ponds with heavy sediment buildup. It is efficient and quick in removing large amounts of sediment. It can work in relatively deep ponds. However, equipment is costly to purchase or rent. The process may disturb the pond ecosystem, including aquatic plants and animals. It may not work well for very shallow ponds or irregularly shaped ponds.

4.2.5. Dragline Dredging

This involves a large crane with a dragline bucket attached, which is used to drag across the pond bed and remove sediment. The dragline bucket scoops up sediment, which is then lifted and transferred to a nearby disposal site. The dragline is positioned at the pond's edge, and the bucket is dragged across the bottom of the pond to scoop up silt. The sediment is lifted to the surface and deposited for further transport or use.

The process is effective for removing large amounts of sediment from deeper ponds as it can handle dense, heavy sediments. Hence, it is suitable for deep ponds where other methods may be ineffective. The obvious disadvantages of the method are that dragline dredgers are expensive to hire and operate, requiring specialized operators. Environmental impact (disturbance to aquatic life) needs to be managed.

4.2.6. Water Jetting (High Pressure Water Jets)

High-pressure water jets or hoses are used to dislodge compacted silt and sediment from the bottom of the pond. The jets break up the sediment, which is then collected and removed using other mechanical equipment. High-pressure water is directed at the sediment on the pond bed to break it up. The loosened sediment is then removed using scoops, vacuum pumps, or dredgers.

The advantages are that this process is effective for breaking up compacted or hard layers of silt. It can be used in combination with other methods for improved results. However, it requires water

sources with sufficient pressure, which may not always be available. Also, it can cause a temporary increase in water turbidity, affecting water quality. Potentially this method is more expensive than other methods.

Thus, mechanical de-siltation methods are best suited for larger village ponds, ponds with significant sediment accumulation, or ponds where manual methods would be inefficient or impossible. While these methods offer speed and efficiency, they come with higher costs and potential environmental impacts. In many cases, a combination of mechanical and manual techniques may be used to optimize de-siltation and minimize disruption to the pond's ecosystem. Proper planning and careful management are crucial to ensure the ecological health of the pond during and after the de-siltation process.

4.3. BIOLOGICAL OR NATURAL DE-SILTATION METHODS

These methods focus on promoting natural processes to reduce sedimentation or prevent further buildup of silt in ponds. While they are not direct methods of de-siltation, they can help manage and control silt accumulation over time. Some of the biological or natural de-siltation techniques that can be used in village ponds are being described in the following paras.

4.3.1. Aquatic Plants and Vegetation

Aquatic plants are known to play a crucial role in controlling siltation by stabilizing the pond bed, absorbing excess nutrients, and improving water quality.

- Floating Plants: Plants like Water Hyacinth (Eichhornia crassipes) or Duckweed (Lemna spp.) can help reduce the amount of sunlight reaching the pond bed, thus reducing the growth of algae that might contribute to siltation.
- Submerged Plants: Plants like Vallisneria, Elodea, or Hornwort (Ceratophyllum demersum) help in stabilizing the sediment and preventing erosion of the pond bed.
- Emergent Plants: Plants such as Cattails (Typha spp.) and Bulrushes (Schoenoplectus spp.) absorb nutrients from the water and improve water quality while helping bind soil particles together.

4.3.2. Bioremediation Using Microorganisms

Certain microorganisms can be introduced to a pond to break down organic matter and reduce silt accumulation. These microbes digest organic sediments, converting them into non-toxic substances that can be easily absorbed by plants or dissolved in the water.

- Bacteria: Special strains of bacteria, such as Pseudomonas or Bacillus, can break down organic matter and promote the flocculation of fine particles, making them easier for plants to absorb.
- Fungi: Myco-remediation, or the use of fungi to decompose organic material, can also help in the breakdown of accumulated organic matter in the pond.

4.3.3. Fish and Aquatic Fauna

- Fish Species: Certain species of fish like Grass Carp (Ctenopharyngodon idella) can help control aquatic weeds and prevent the excessive buildup of organic material in the pond. Some fish species like Tilapia (Oreochromis spp.) and Catfish (Clarias spp.) feed on detritus, algae, and organic material, helping to break down sediments naturally.
- Snails and Crustaceans: Species like Apple Snails (Pomacea spp.), freshwater mollusks, or Shrimp can help control the accumulation of algae and organic matter by consuming detritus and contributing to the breakdown of sediment.

4.3.4. Mudskipper and Earthworm Activity

In ponds with shallow waters, mudskippers or earthworms (if present) can help aerate the soil and organic materials. Their burrowing and feeding behaviour help to decompose organic matter and mix silt with the surrounding environment.

4.3.5. Bio-flocculation

This is a process where naturally occurring microbes and algae bind to fine silt particles, making them larger and heavier. The flocculated particles sink to the bottom of the pond, reducing the suspended sediment and helping to clear the water. Adding certain biocontrol agents or biofertilizers can enhance this process by stimulating the growth of microorganisms that cause bio-flocculation.

4.3.6. Composting of Organic Waste

Pond areas can be managed by composting organic waste such as fallen leaves, algae, and weeds around the pond's perimeter. The compost can help improve soil quality and provide nutrients to plants that can stabilize the pond's edges and reduce the deposition of excess organic matter.

4.3.7. Integrated Aquaculture

Integrating fish farming (aquaculture) with the pond ecosystem can contribute to the natural de-siltation process. The fish can help feed on the detritus, algae, and aquatic plants, reducing the

organic load in the pond. Additionally, proper management of aquaculture waste can help maintain the ecological balance.

4.3.8. Silt Traps and Filtration Systems

Though not strictly biological, designing ponds with natural filtration systems (such as wetland areas) or silt traps along the inflow and outflow can significantly reduce silt accumulation. These areas can be planted with vegetation that filters water as it flows, reducing the amount of sediment entering the pond.

4.3.9. Improved Catchment Management

Managing the watershed or catchment area that drains into the pond can help reduce the amount of sediment entering the pond. Natural vegetation cover in the catchment area can reduce soil erosion, while agroforestry and sustainable farming practices can reduce silt runoff into the pond.

4.3.10. Sediment Management with a Holistic Approach

A combination of the above methods, along with regular monitoring, is often the most effective. For example, periodic harvesting of aquatic plants, careful management of fish populations, and supporting natural processes like microbial degradation of organic matter can ensure long-term sustainability.

The benefits of aforementioned Biological/ Natural De-siltation Methods are that these are cost-effective and sustainable, maintaining and improving the ecological balance of the pond. They improve water quality by preventing excessive nutrient buildup and reducing algal blooms. Encouraging biodiversity by creating a habitat for various aquatic organisms is another plus point. Further, the local communities can play a role in maintaining the pond, enhancing their involvement in sustainable water management.

However, the challenges are also there when these methods are adopted. Biological methods take longer to show results compared to mechanical de-siltation. Invasive species like Water Hyacinth can become problematic if not managed carefully. The whole process requires knowledge of ecosystem management, including the right balance of plant species, fish populations, and microorganisms.

Thus, biological and natural de-siltation methods can be highly effective and sustainable ways to manage sedimentation in village ponds. By employing a mix of aquatic plants, microorganisms, fauna, and careful pond management, it is possible to maintain the ecological health and water quality of village ponds over the long term.

4.4. GRAVITATIONAL OR DRAINAGE TECHNIQUES

Gravitational or drainage techniques for de-siltation of village ponds involve using the natural forces of gravity and water flow to remove accumulated silt and debris. These methods are often more sustainable and cost-effective than mechanical dredging, as they make use of natural processes to enhance the pond's self-cleaning abilities. Various gravitational and drainage techniques that can be applied to village ponds for de-siltation are as follows.

4.4.1. Controlled Drainage and Sediment Removal

One of the simplest gravitational methods is to control the drainage of the pond in a way that helps remove silt and sediments naturally. This can be done by:

- Seasonal Drainage: In areas where water levels fluctuate, draining the pond during the dry season can help remove accumulated silt. The pond is allowed to fill up with water again in the wet season. The accumulated sediment can be allowed to settle or can be manually scooped out after draining.
- Draining with Silt Extraction: A controlled release of pond water can help flush out lighter sediments, leaving behind denser silt particles that settle at the pond bed. This can be combined with strategic inlet and outlet management, allowing for silt-laden water to be drained from the pond through lower outlets.

4.4.2. Sediment Traps and Silt Sumps

Creating sediment traps or silt sumps at the inflow and outflow points of the pond is a highly effective gravitational technique. These traps work by directing the incoming water through a shallow, low-lying area where silt can settle out before the water enters the main body of the pond. Key components include the following:

- Catchment Area Modification: Channels or ditches leading to the pond can be designed to slow down the water flow, allowing suspended sediments to settle before reaching the pond.
- Inflow Modifications: A silt trap is constructed at the inflow, allowing water to enter the pond at a controlled speed, causing particles to settle. These traps can be periodically cleaned out to prevent them from becoming clogged.
- Silt Sumps: These are deeper, localized areas near the inlet or outlet where heavier silt accumulates. When the water level of the pond is lowered, the silt from these sumps can be manually or mechanically removed.

4.4.3. Use of Perforated Pipes for Sediment Transport

A more advanced method involves using perforated pipes installed at the bottom of the pond or at its sediment-heavy areas. These pipes allow water to flow out through small holes or perforations, dragging along lighter silt particles with it. The process is essentially a form of subsurface drainage.

Perforated pipes are laid across the pond bed, usually in the deeper areas where sediment accumulation is most significant. The water flowing through the pipes is drained away from the pond, carrying suspended sediments along with it. The system can be controlled to ensure that only sediment-laden water is removed without losing too much water from the pond.

4.4.4. Pond Outlet Design (Weir and Settling Basin)

A weir or settling basin at the pond outlet can be a highly effective gravitational technique for silt management. The design of the outlet determines the rate of flow and helps manage the sediment load.

A weir can be placed at the outlet to regulate water flow, ensuring that excess water (and silt) is allowed to drain slowly and in a controlled manner. It helps maintain water levels while preventing sudden flushes that could disturb the sediments. Before water is released from the pond, it can be routed through a settling basin. The basin is designed to slow down the water, allowing suspended particles to settle out before water is drained or used for irrigation.

4.4.5. Gravitational De-siltation Through Pond Deepening

In cases where silt accumulation is severe, gravitational de-siltation can be achieved by deepening the pond. This technique involves:

- Excavation of the Pond Bed: The pond bed is lowered strategically to remove sediment layers that have accumulated over time. This allows the pond to regain its original depth and water holding capacity.
- Gravity-Assisted Silt Movement: After deepening, the pond is left to fill with water during the rainy season, allowing natural flow dynamics to help redistribute and settle fine silt particles. Over time, water flow through the pond may help wash away lighter sediments toward the outlet, where they can be drained off.

4.4.6. Check Dams and Catchment Drainage

Building small check dams or pond embankments in the catchment area can help slow the flow of water into the pond, allowing silt to settle before reaching the pond. This can be done in combination with improved drainage channels that direct water toward silt traps or natural filters:

- Check Dams: These small dams or embankments help slow down the water flow, creating a controlled environment where sediment can settle naturally.
- Catchment Area Water Management: In addition to check dams, the entire watershed area can be managed to slow down surface runoff and reduce soil erosion. Vegetative cover, terraces, and retention ponds can prevent silt from entering the village pond in the first place.

4.4.7. Natural Filtration and Erosion Control

Natural drainage techniques can be enhanced by preventing soil erosion in the pond's catchment area. This involves the creation of natural filtration systems such as:

- Vegetated Buffers: Planting grasses, shrubs, and trees around the pond's edges and within the catchment area helps reduce erosion and filter out sediment before it reaches the pond.
- Terracing and Erosion Barriers: Terracing of hillsides and the use of erosion control measures (e.g., stone walls, live fences) can slow down water flow and reduce silt transport into the pond.

4.4.8. Utilizing Water Flow for Silt Removal

For ponds with inflow channels or streams, controlled flow management can be used to create a "scouring" effect that removes accumulated silt:

- Inflow Control: During periods of high water flow, the direction of inflow can be altered to create turbulent currents that help dislodge silt from the pond bed. These particles can then be carried out through designated outlet channels.
- Outlet Control: Similarly, the outflow of water can be adjusted to flush out sediments from the deeper parts of the pond. This requires managing the outlet in such a way that sediment-rich water is removed while maintaining the pond's water level.

The advantages of Gravitational or Drainage Techniques are:

- Low Cost: These methods are relatively inexpensive compared to mechanical de-siltation (e.g., dredging).

- Sustainability: These techniques make use of natural processes and minimize environmental disruption.
- Minimal Maintenance: Once implemented, gravitational and drainage techniques require less active management and maintenance.
- Eco-friendly: These methods work in harmony with the local ecosystem and reduce the need for chemical interventions or machinery.

The challenges involved are:

- Time-Consuming: Natural de-siltation methods take longer to show results compared to mechanical dredging.
- Sediment Redistribution: There is a risk of sediment being redistributed elsewhere in the pond or surrounding areas, which may cause new accumulation problems.
- Seasonal Limitations: Some techniques (like seasonal drainage) are dependent on local weather patterns and might not be applicable in areas with irregular rainfall.

Thus, gravitational and drainage techniques for de-siltation can be highly effective for maintaining the health of village ponds. These methods rely on natural water flow dynamics, sediment management, and landscape design to reduce silt accumulation in an environmentally sustainable manner. Combining these techniques with other management practices can ensure long-term sustainability for the pond ecosystem.

4.5. COMBINATION OF DIFFERENT METHODS

Often, a combination of the methods listed above is used to achieve the most effective de-siltation results. For example, manual excavation followed by biological methods like planting vegetation to control ongoing siltation; dredging or excavation combined with sediment traps to prevent further sediment buildup; hydraulic dredging followed by natural filtration to restore ecological balance in the pond.

Thus, we may conclude that the choice of de-siltation method for village ponds depends on factors like pond size, sediment load, available resources, and ecological considerations. While mechanical methods like dredging and excavation can be more efficient for large ponds, manual and biological techniques are often more sustainable and community-friendly for smaller, rural ponds. Regular maintenance, combined with preventive measures such as sediment traps or vegetation restoration, can help maintain the health of village ponds and prevent excessive siltation in the future.

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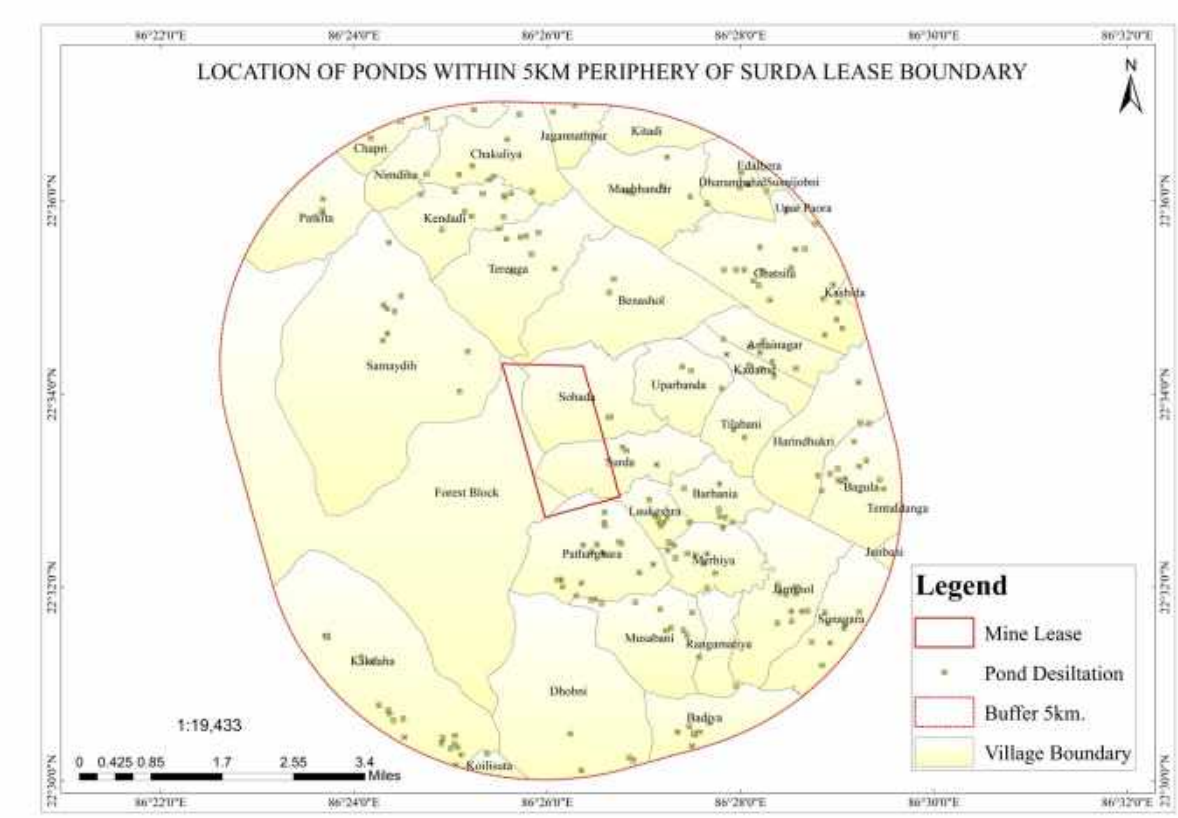
5. LOCATION AND DESCRIPTION OF THE PONDS WITHIN THE TARGET AREA

5.1. LOCATION AND DESCRIPTION OF PONDS

The location map of ponds within the Target Area is as follows.

Map 3: Location Map of Ponds within the Target Area



The dimensions and actual locations (latitude & longitude) of ponds in 5 km buffer of Surda Mining Lease are being tabulated hereunder.

Table 2: Location and Approximate Dimension of Ponds in the Target Area

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude
Musabani/Musabani/ Benashol	**Amainagar**	1.	20m x 20m	22.5711	86.4762
		2.	20m x 20m	22.5748	86.4683
		3.	30m x 30m	22.5738	86.4700
		4.	30m x 30m	22.5722	86.4721
		5.	100m x 40m	22.5758	86.4706
	Benashol	6.	25m x 20m	22.5842	86.4440
		7.	20m x 20m	22.5865	86.4448
	Chakulia	8.	30m x 30m	22.6149	86.4285

		9.	20m x 20m	22.6106	86.4264
		10.	30m x 30m	22.6016	86.4307
		11.	60m x 50m	22.6046	86.4125
		12.	50m x 50m	22.6045	86.4181
		13.	60m x 60m	22.606	86.4204
	Kadamdih	14.	10m x 10m	22.5698	86.4724
		15.	20m x 20m	22.5735	86.4643
		16.	30m x 30m	22.5716	86.4681
		17.	30m x 30m	22.5710	86.4702
		18.	30m x 30m	22.5761	86.4637
	Kendadih	19.	50m x 40m	22.5952	86.4249
		20.	30m x 30m	22.5973	86.4203
		21.	30m x 30m	22.5981	86.4191
		22.	30m x 30m	22.5950	86.4152
		23.	30m x 20m	22.6016	86.4174
		24.	90m x 70m	22.5972	86.4258
		25.	25m x 25m	22.6036	86.4234
		26.	20m x 20m	22.6042	86.4241
		27.	40m x 30m	22.6013	86.4271
		28.	10m x 10m	22.6009	86.4259
		29.	10m x 10m	22.6006	86.4260
		30.	30m x 20m	22.6011	86.4116
		31.	200m x 260m	22.6012	86.4222
	Sohada	32.	60m x 60m	22.5627	86.4442
		33.	20m x 20m	22.5627	86.4439
	Terenga	34.	20m x 20m	22.5934	86.4263
		35.	20m x 20m	22.5937	86.4287
		36.	30m x 30m	22.5939	86.4297
		37.	20m x 20m	22.5945	86.4318
		38.	40m x 40m	22.5908	86.4306
		39.	115m x 110m	22.5877	86.4273
		40.	30m x 30m	22.5883	86.4346
	Tilabani	41.	20m x 20m	22.5605	86.4655
		42.	20m x 20m	22.5592	86.4673
	Uparbandha	43.	90m x 90m	22.5676	86.4634
		44.	80m x 60m	22.5707	86.4581
		45.	30m x 30m	22.5714	86.4566
Musabani/Musabani/ Musabani	**Badiya**	46.	30m x 20m	22.5082	86.4586
		47.	60m x 20m	22.5060	86.4583
		48.	30m x 20m	22.5094	86.4578
		49.	30m x 30m	22.5100	86.4612
		50.	40m x 40m	22.5084	86.4596
		51.	60m x 40m	22.5079	86.4588
		52.	300m x 250m	22.5084	86.4558
	Jamshol	53.	30m x 30m	22.5272	86.4730
		54.	30m x 30m	22.5275	86.4755
		55.	50m x 30m	22.5292	86.4772
		56.	20m x 20m	22.5293	86.4782
		57.	20m x 20m	22.5334	86.4760
		58.	20m x 20m	22.5338	86.4731
		59.	20m x 20m	22.5321	86.4745
		60.	30m x 30m	22.5324	86.4734
		61.	20m x 20m	22.5322	86.4762

		62.	30m x 30m	22.5292	86.4754
	Koilisuta	63.	30m x 25m	22.5047	86.4230
	Musabani	64.	60m x 60m	22.5259	86.4538
		65.	100m x 80m	22.5264	86.4547
		66.	50m x 50m	22.5260	86.4568
		67.	40m x 40m	22.5251	86.4574
		68.	30m x 30m	22.5290	86.4583
		69.	40m x 30m	22.5296	86.4528
		70.	20m x 20m	22.5308	86.4485
		71.	30m x 30m	22.5319	86.4383
		72.	40m x 30m	22.5312	86.4409
		73.	30m x 20m	22.5306	86.4427
	Rangamatia	74.	130m x 90m	22.5213	86.4595
		75.	40m x 30m	22.5164	86.4659
	Sonagara	76.	25m x 25m	22.5199	86.4807
		77.	25m x 25m	22.5238	86.4821
		78.	30m x 25m	22.5239	86.4789
		79.	20m x 15m	22.5271	86.4817
		80.	20m x 20m	22.5263	86.4845
		81.	40m x 40m	22.5269	86.4847
		82.	40m x 40m	22.5291	86.4871
		83.	30m x 30m	22.5290	86.4812
Musabani/Musabani/ Surda	**Barhania**	84.	30m x 30m	22.5446	86.4653
		85.	30m x 30m	22.5454	86.4640
		86.	30m x 30m	22.5456	86.4630
		87.	30m x 20m	22.5468	86.4629
		88.	30m x 20m	22.5512	86.4630
		89.	30m x 20m	22.5504	86.4569
	Laukeshra	90.	50m x 50m	22.5454	86.4540
		91.	40m x 40m	22.5439	86.4529
		92.	20m x 20m	22.5484	86.4509
		93.	60m x 30m	22.5445	86.4534
		94.	30m x 30m	22.5447	86.4525
		95.	20m x 20m	22.5457	86.4518
		96.	10m x 10m	22.5455	86.4523
		97.	20m x 20m	22.5411	86.4543
		98.	20m x 20m	22.5445	86.4578
	Merhia	99.	30m x 30m	22.5332	86.4609
		100.	80m x 60m	22.5374	86.4603
		101.	60m x 40m	22.5389	86.4589
		102.	20m x 20m	22.5391	86.4609
		103.	50m x 40m	22.5392	86.4575
		104.	20m x 15m	22.5358	86.4623
		105.	20m x 20m	22.5436	86.4636
		106.	30m x 30m	22.5384	86.4554
		107.	30m x 30m	22.5397	86.4541
		108.	40m x 30m	22.5406	86.4552
	Patharghara	109.	30m x 30m	22.5392	86.4430
		110.	40m x 40m	22.5407	86.4419
		111.	20m x 15m	22.5395	86.4410
		112.	30m x 30m	22.5347	86.4357
		113.	25m x 20m	22.5346	86.4351
		114.	40m x 40m	22.5335	86.4360

		115.	60m x 30m	22.5463	86.4432
		116.	60m x 30m	22.5406	86.4395
		117.	40m x 30m	22.5341	86.4392
		118.	20m x 40m	22.5313	86.4416
		119.	40m x 20m	22.5445	86.4431
		120.	30m x 20m	22.5440	86.4433
		121.	40m x 30m	22.5412	86.4457
		122.	40m x 30m	22.5409	86.4461
		123.	200m x 90m	22.5359	86.4492
		124.	30m x 30m	22.5373	86.4516
	Surda	125.	20m x 15m	22.5575	86.4463
		126.	15m x 15m	22.5569	86.4470
		127.	20m x 20m	22.5545	86.4522
Ghatshila/Galudih/ Kalajhor	**Jagannathpur**	128.	30m x 30m	22.6165	86.4381
		129.	30m x 30m	22.6153	86.4343
Ghatshila/Ghatshila/ Kashida	**Bagula**	130.	100m x 100m	22.5503	86.4913
		131.	50m x 50m	22.5519	86.4906
		132.	100m x 40m	22.5542	86.4871
		133.	70m x 20m	22.5552	86.4883
		134.	35m x 35m	22.5538	86.4834
		135.	20m x 20m	22.5529	86.4821
		136.	20m x 20m	22.5521	86.4847
		137.	35m x 35m	22.5516	86.4841
		138.	45m x 35m	22.5518	86.4835
		139.	30m x 30m	22.5500	86.4806
		140.	70m x 50m	22.5585	86.4862
	Ghatshila	141.	120m x 40m	22.5984	86.4746
		142.	30m x 30m	22.5960	86.4795
		143.	50m x 50m	22.5831	86.4809
		144.	60m x 50m	22.5855	86.4826
		145.	180m x 120m	22.5884	86.4754
		146.	70m x 60m	22.5916	86.4761
		147.	30m x 30m	22.5917	86.4777
		148.	120m x 60m	22.5920	86.47
		149.	120m x 60m	22.5881	86.4638
		150.	40m x 30m	22.5881	86.4659
		151.	40m x 30m	22.5881	86.4673
		152.	40m x 40m	22.5879	86.4702
		153.	30m x 30m	22.5862	86.4689
		154.	30m x 30m	22.5854	86.4698
		155.	150m x 60m	22.5829	86.4717
		156.	90m x 70m	22.5780	86.4842
		157.	90m x 80m	22.5769	86.4812
		158.	30m x 30m	22.5795	86.4832
		159.	250m x 200m	22.5825	86.4835
	Harindhukri	160.	30m x 30m	22.5526	86.4800
		161.	35m x 30m	22.5618	86.4873
		162.	40m x 40m	22.5616	86.4888
		163.	100m x 60m	22.5687	86.4870
Ghatshila/Ghatshila/ Bankati	**Dharambahal**	164.	150m x 120m	22.6028	86.4679
		165.	30m x 20m	22.6048	86.4668

		166.	40m x 30m	22.6023	86.4665
	Maubhandar	167.	40m x 30m	22.6075	86.4540
		168.	40m x 40m	22.6015	86.4470
		169.	40m x 40m	22.6013	86.4481
		170.	20m x 20m	22.6025	86.4532
		171.	10m x 10m	22.6007	86.4580
		172.	70m x60m	22.5995	86.4609
	Susnijobni	173.	150m x 120m	22.6017	86.4711
Rakhamines/Royam/ Kumirmuri	**Chapri**	174.	30m x 30m	22.6141	86.4125
		175.	30m x 30m	22.6137	86.4080
		176.	40m x 30m	22.6108	86.4029
		177.	30m x 25m	22.6157	86.4207
	Patkita	178.	50m x 50m	22.5979	86.3946
		179.	30m x 20m	22.5983	86.3945
		180.	90m x 40m	22.6003	86.3947
Rakhamines/Royam/ Bankai	**Dhobni**	181.	40m x 40m	22.5040	86.4475
		182.	40m x 40m	22.5035	86.4482
		183.	30m x 20m	22.5018	86.4392
		184.	90m x 40m	22.5081	86.4373
Rakhamines/Royam/ Kendadih	**Kakdaha**	185.	30m x 30m	22.5027	86.4175
		186.	30m x 30m	22.5075	86.4087
		187.	20m x 20m	22.5104	86.4068
		188.	30m x 30m	22.5107	86.4085
		189.	20m x 20m	22.5116	86.4061
		190.	20m x 20m	22.5122	86.4059
		191.	20m x 20m	22.5130	86.4043
		192.	20m x 20m	22.5214	86.4013
		193.	30m x 20m	22.5206	86.4030
		194.	20m x 15m	22.5248	86.3955
		195.	15m x 10m	22.5250	86.3953
		196.	10m x 10m	22.5249	86.3950
		197.	30m x 30m	22.5045	86.4185
		198.	30m x 30m	22.5058	86.4179
		199.	15m x 10m	22.5064	86.4173
		200.	20m x 15m	22.5065	86.4151
		201.	20m x 20m	22.5056	86.4167
		202.	30m x 30m	22.5078	86.4174
		203.	25m x 25m	22.5074	86.4153
	Samaydih	204.	30m x30m	22.5928	86.4060
		205.	50m x 30m	22.5809	86.4070
		206.	30m x 15m	22.5814	86.4057
		207.	40m x 30m	22.5820	86.4051
		208.	30m x 30m	22.5836	86.4081
		209.	25m x 25m	22.5771	86.4058
		210.	40m x 40m	22.5759	86.4050
		211.	30m x 30m	22.5740	86.4196
		212.	40m x 40m	22.5671	86.4182

5.2. FIELD SURVEY EXERCISE

The field survey of the target area has been carried out by teams consisting of the following members:

Table 3: Qualifications & Experience of the Survey Team Members

Sl. No.	Name	Qualification	Experience
1.	Kislay Kumar	M. Sc. Ecology	10 years
2.	Anzar Anis	M. Tech. Geoinformatics	4 years
3.	Vicky Mahto	M. Sc. Botany	3 years
4.	Lamboder Mahto	B. Sc. Zoology (Hons.)	2 years
5.	Vikas Kumar Sen	B. A.	2 years
6.	Biswa Darshi Behera	M. Sc. Geoinformatics	Fresher
7.	Sugandha Ganguli	M. Sc. Geoinformatics	Fresher
8.	Sujata Nath	M. Sc. Geoinformatics	Fresher

5.3. SNAPSHOTS OF REPRESENTATIVE PONDS


Latitude: 22.537666
Longitude: 86.461097
Elevation: 94.92±5 m
Accuracy: 3.8 m
Time: 31-01-2025 11:47
Note: pond dredff 80 x 82m


Latitude: 22.536843
Longitude: 86.448836
Elevation: 199.99±9 m
Accuracy: 5.4 m
Time: 31-01-2025 11:21
Note: pond dredff 200 x 200m

6. INDICATIVE BUDGET ESTIMATION TOWARDS DE-SILTATION OF PONDS LOCATED IN THE TARGET AREA

The gross budget estimation towards de-siltation has been made with a presumption that the manual method is adopted for the purpose. The de-siltation process (depth: 1.20m) of all the 212 ponds l within 5 km periphery of the lease area shall be spread over first five years. Next five years shall involve de-siltation by a depth of 0.40m. In other words, ponds de-silted by 1.20m in Year-1 shall be subjected again to de-siltation by a depth of 0.40m in Year-6 and so on, till the ponds de-silted by 1.20m in Year-5 are taken up again for de-siltation in Year-10, the final year of this Plan.

6.1. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-1 UNDER THE PLAN

Table 4: Site-Specific Budget Estimation for Year-1 (De-siltation Depth-1.20 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (1.20m) in Rs.
Musabani/Musabani/ Benashol	Amainagar	1.	20m x 20m	22.5711	86.4762	114900
		2.	20m x 20m	22.5748	86.4683	114900
		3.	30m x 30m	22.5738	86.4700	224200
		4.	30m x 30m	22.5722	86.4721	224200
		5.	100m x 40m	22.5758	86.4706	903600
	Benashol	6.	25m x 20m	22.5842	86.4440	137400
		7.	20m x 20m	22.5865	86.4448	114900
	Chakulia	8.	30m x 30m	22.6149	86.4285	224200
		9.	20m x 20m	22.6106	86.4264	114900
		10.	30m x 30m	22.6016	86.4307	224200
		11.	60m x 50m	22.6046	86.4125	680900
		12.	50m x 50m	22.6045	86.4181	571600
		13.	60m x 60m	22.606	86.4204	809600
	Kadamdih	14.	10m x 10m	22.5698	86.4724	48500
		15.	20m x 20m	22.5735	86.4643	114900
		16.	30m x 30m	22.5716	86.4681	224200
		17.	30m x 30m	22.571	86.4702	224200
		18.	30m x 30m	22.5761	86.4637	224200
	Kendadih	19.	50m x 40m	22.5952	86.4249	464300
		20.	30m x 30m	22.5973	86.4203	224200
		21.	30m x 30m	22.5981	86.4191	224200
		22.	30m x 30m	22.595	86.4152	224200
		23.	30m x 20m	22.6016	86.4174	159900
		24.	90m x 70m	22.5972	86.4258	1395000
		25.	25m x 25m	22.6036	86.4234	164200
		26.	20m x 20m	22.6042	86.4241	114900
		27.	40m x 30m	22.6013	86.4271	290600
		28.	10m x 10m	22.6009	86.4259	48500
		29.	10m x 10m	22.6006	86.426	48500
		30.	30m x 20m	22.6011	86.4116	159900
		31.	*200m x 260m	22.6012	86.4222	2190900
	Sohada	32.	60m x 60m	22.5627	86.4442	809600
		33.	20m x 20m	22.5627	86.4439	114900
	Terenga	34.	20m x 20m	22.5934	86.4263	114900
		35.	20m x 20m	22.5937	86.4287	114900
		36.	30m x 30m	22.5939	86.4297	224200

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(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊमण्डार-832103
झारखण्ड

		37.	20m x 20m	22.5945	86.4318	114900
		38.	40m x 40m	22.5908	86.4306	376400
		39.	*115m x 110m	22.5877	86.4273	2190900
		40.	30m x 30m	22.5883	86.4346	224200
	Tilabani	41.	20m x 20m	22.5605	86.4655	114900
		42.	20m x 20m	22.5592	86.4673	114900
	Uparbandha	43.	90m x 90m	22.5676	86.4634	1781200
		44.	80m x 60m	22.5707	86.4581	1071100
		45.	30m x 30m	22.5714	86.4566	224200
Estimated De-siltation Cost (Year-1)						**1,85,96,000.00**

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

6.2. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-2 UNDER THE PLAN

Table 5: Site-Specific Budget Estimation for Year-2 (De-siltation Depth-1.20 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (1.20m) in Rs.
Musabani/Musabani/ Musabani	Badiya	46.	30m x 20m	22.5082	86.4586	159900
		47.	60m x 20m	22.5060	86.4583	294700
		48.	30m x 20m	22.5094	86.4578	159900
		49.	30m x 30m	22.5100	86.4612	224200
		50.	40m x 40m	22.5084	86.4596	376400
		51.	60m x 40m	22.5079	86.4588	552200
		52.	*300m x 250m	22.5084	86.4558	2190900
	Jamshol	53.	30m x 30m	22.5272	86.473	224200
		54.	30m x 30m	22.5275	86.4755	224200
		55.	50m x 30m	22.5292	86.4772	357000
		56.	20m x 20m	22.5293	86.4782	114900
		57.	20m x 20m	22.5334	86.476	114900
		58.	20m x 20m	22.5338	86.4731	114900
		59.	20m x 20m	22.5321	86.4745	114900
		60.	30m x 30m	22.5324	86.4734	224200
		61.	20m x 20m	22.5322	86.4762	114900
		62.	30m x 30m	22.5292	86.4754	224200
	Koilisuta	63.	30m x 25m	22.5047	86.4230	192000
	Musabani	64.	60m x 60m	22.5259	86.4538	809600
		65.	100m x 80m	22.5264	86.4547	1761800
		66.	50m x 50m	22.526	86.4568	571600
		67.	40m x 40m	22.5251	86.4574	376400
		68.	30m x 30m	22.529	86.4583	224200
		69.	40m x 30m	22.5296	86.4528	290600
		70.	20m x 20m	22.5308	86.4485	114900
		71.	30m x 30m	22.5319	86.4383	224200
		72.	40m x 30m	22.5312	86.4409	290600
		73.	30m x 20m	22.5306	86.4427	159900
	Rangamatia	74.	130m x 90m	22.5213	86.4595	2190900
		75.	40m x 30m	22.5164	86.4659	290600
	Sonagara	76.	25m x 25m	22.5199	86.4807	164200
		77.	25m x 25m	22.5238	86.4821	164200
		78.	30m x 25m	22.5239	86.4789	192000
		79.	20m x 15m	22.5271	86.4817	93500
		80.	20m x 20m	22.5263	86.4845	114900
		81.	40m x 40m	22.5269	86.4847	376400
		82.	40m x 40m	22.5291	86.4871	376400
		83.	30m x 30m	22.5290	86.4812	224200
Musabani/Musabani/ Surda	Barhania	84.	30m x 30m	22.5446	86.4653	224200
		85.	30m x 30m	22.5454	86.464	224200
		86.	30m x 30m	22.5456	86.4630	224200
		87.	30m x 20m	22.5468	86.4629	159900
		88.	30m x 20m	22.5512	86.4630	159900
		89.	30m x 20m	22.5504	86.4569	159900
	Laukeshra	90.	50m x 50m	22.5454	86.4540	571600
		91.	40m x 40m	22.5439	86.4529	376400
		92.	20m x 20m	22.5484	86.4509	114900
		93.	60m x 30m	22.5445	86.4534	423400
		94.	30m x 30m	22.5447	86.4525	224200
		95.	20m x 20m	22.5457	86.4518	114900

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इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊमण्डार-832103
झारखण्ड

		96.	10m x 10m	22.5455	86.4523	48500
		97.	20m x 20m	22.5411	86.4543	114900
		98.	20m x 20m	22.5445	86.4578	114900
Estimated De-siltation Cost (Year-2)						**1,82,45,600.00**

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
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डाक-मऊभण्डार-832103
झारखण्ड

6.3. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-3 UNDER THE PLAN

Table 6: Site-Specific Budget Estimation for Year-3 (De-siltation Depth-1.20 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (1.20m) in Rs.
Musabani/Musabani/ Surda	Merhia	99.	30m x 30m	22.5332	86.4609	224200
		100.	80m x 60m	22.5374	86.4603	1071100
		101.	60m x 40m	22.5389	86.4589	552200
		102.	20m x 20m	22.5391	86.4609	114900
		103.	50m x 40m	22.5392	86.4575	464300
		104.	20m x 15m	22.5358	86.4623	93500
		105.	20m x 20m	22.5436	86.4636	114900
		106.	30m x 30m	22.5384	86.4554	224200
		107.	30m x 30m	22.5397	86.4541	224200
		108.	40m x 30m	22.5406	86.4552	290600
	Patharghara	109.	30m x 30m	22.5392	86.443	224200
		110.	40m x 40m	22.5407	86.4419	376400
		111.	20m x 15m	22.5395	86.4410	93500
		112.	30m x 30m	22.5347	86.4357	224200
		113.	25m x 20m	22.5346	86.4351	137400
		114.	40m x 40m	22.5335	86.436	376400
		115.	60m x 30m	22.5463	86.4432	423400
		116.	60m x 30m	22.5406	86.4395	423400
		117.	40m x 30m	22.5341	86.4392	290600
		118.	40m x 20m	22.5313	86.4416	204800
		119.	40m x 20m	22.5445	86.4431	204800
		120.	30m x 20m	22.5440	86.4433	159900
		121.	40m x 30m	22.5412	86.4457	290600
		122.	40m x 30m	22.5409	86.4461	290600
		123.	*200m x 90m	22.5359	86.4492	2190900
		124.	30m x 30m	22.5373	86.4516	224200
	Surda	125.	20m x 15m	22.5575	86.4463	93500
		126.	15m x 15m	22.5569	86.4470	76400
		127.	20m x 20m	22.5545	86.4522	114900
Ghatshila/Galudih/ Kalajhor	Jagannathpur	128.	30m x 30m	22.6165	86.4381	224200
		129.	30m x 30m	22.6153	86.4343	224200
Ghatshila/Ghatshila/ Kashida	Bagula	130.	100m x 100m	22.5503	86.4913	2190900
		131.	50m x 50m	22.5519	86.4906	571600
		132.	100m x 40m	22.5542	86.4871	903600
		133.	70m x 20m	22.5552	86.4883	339600
		134.	35m x 35m	22.5538	86.4834	295000
		135.	20m x 20m	22.5529	86.4821	114900
		136.	20m x 20m	22.5521	86.4847	114900
		137.	35m x 35m	22.5516	86.4841	295000
		138.	45m x 35m	22.5518	86.4835	372100
		139.	30m x 30m	22.5500	86.4806	224200
		140.	70m x 50m	22.5585	86.4862	790200
Ghatshila/Ghatshila/ Kashida	Ghatshila	141.	120m x 40m	22.5984	86.4746	1079300
Estimated De-siltation Cost (Year-3)						1,75,33,900.00

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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कार्यकारी निदेशक
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इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832102
झारखण्ड

6.4. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-4 UNDER THE PLAN

Table 7: Site-Specific Budget Estimation for Year-4 (De-siltation Depth-1.20 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (1.20m) in Rs.
Ghatshila/Ghatshila/ Kashida	Ghatshila	142.	30m x 30m	22.596	86.4795	224200
		143.	50m x 50m	22.5831	86.4809	571600
		144.	60m x 50m	22.5855	86.4826	680900
		145.	*180m x 120m	22.5884	86.4754	2190900
		146.	70m x 60m	22.5916	86.4761	940400
		147.	30m x 30m	22.5917	86.4777	224200
		148.	120m x 60m	22.5920	86.47	1594200
		149.	120m x 60m	22.5881	86.4638	1594200
		150.	40m x 30m	22.5881	86.4659	290600
		151.	40m x 30m	22.5881	86.4673	290600
		152.	40m x 40m	22.5879	86.4702	376400
		153.	30m x 30m	22.5862	86.4689	224200
		154.	30m x 30m	22.5854	86.4698	224200
		155.	150m x 60m	22.5829	86.4717	1986500
		156.	90m x 70m	22.5780	86.4842	1395000
		157.	90m x 80m	22.5769	86.4812	1588100
		158.	30m x 30m	22.5795	86.4832	224200
		159.	*250m x 200m	22.5825	86.4835	2190900
	Harindhukri	160.	30m x 30m	22.5526	86.4800	224200
		161.	35m x 30m	22.5618	86.4873	257400
		162.	40m x 40m	22.5616	86.4888	376400
		163.	100m x 60m	22.5687	86.4870	1332700
Estimated De-siltation Cost (Year-4)						**1,90,02,000.00**

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डाक-मऊभण्डार-832103
झारखण्ड

6.5. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-5 UNDER THE PLAN

Table 8: Site-Specific Budget Estimation for Year-5 (De-siltation Depth-1.20 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (1.20m) in Rs.
Ghatshila/Ghatshila/ Bankati	Dharambahal	164.	*150m x 120m	22.6028	86.4679	2190900
		165.	30m x 20m	22.6048	86.4668	159900
		166.	40m x 30m	22.6023	86.4665	290600
	Maubhandar	167.	40m x 30m	22.6075	86.4540	290600
		168.	40m x 40m	22.6015	86.4470	376400
		169.	40m x 40m	22.6013	86.4481	376400
		170.	20m x 20m	22.6025	86.4532	114900
		171.	10m x 10m	22.6007	86.458	48500
		172.	70m x60m	22.5995	86.4609	940400
	Susnijobni	173.	*150m x 120m	22.6017	86.4711	2190900
Rakhamines/Royam/ Kumirmuri	Chapri	174.	30m x 30m	22.6141	86.4125	224200
		175.	30m x 30m	22.6137	86.4080	224200
		176.	40m x 30m	22.6108	86.4029	290600
		177.	30m x 25m	22.6157	86.4207	192000
	Patkita	178.	50m x 50m	22.5979	86.3946	571600
		179.	30m x 20m	22.5983	86.3945	159900
		180.	90m x 40m	22.6003	86.3947	815700
Rakhamines/Royam/ Bankai	Dhobni	181.	40m x 40m	22.5040	86.4475	376400
		182.	40m x 40m	22.5035	86.4482	376400
		183.	30m x 20m	22.5018	86.4392	159900
		184.	90m x 40m	22.5081	86.4373	815700
	Kakdaha	185.	30m x 30m	22.5027	86.4175	224200
		186.	30m x 30m	22.5075	86.4087	224200
		187.	20m x 20m	22.5104	86.4068	114900
		188.	30m x 30m	22.5107	86.4085	224200
		189.	20m x 20m	22.5116	86.4061	114900
		190.	20m x 20m	22.5122	86.4059	114900
		191.	20m x 20m	22.5130	86.4043	114900
		192.	20m x 20m	22.5214	86.4013	114900
		193.	30m x 20m	22.5206	86.403	159900
		194.	20m x 15m	22.5248	86.3955	93500
		195.	15m x 10m	22.5250	86.3953	60300
		196.	10m x 10m	22.5249	86.3950	48500
		197.	30m x 30m	22.5045	86.4185	224200
		198.	30m x 30m	22.5058	86.4179	224200
		199.	15m x 10m	22.5064	86.4173	60300
		200.	20m x 15m	22.5065	86.4151	93500
		201.	20m x 20m	22.5056	86.4167	114900
		202.	30m x 30m	22.5078	86.4174	224200
		203.	25m x 25m	22.5074	86.4153	164200
	Samaydih	204.	30m x30m	22.5928	86.4060	224200
		205.	50m x 30m	22.5809	86.4070	357000
		206.	30m x 15m	22.5814	86.4057	127700
		207.	40m x 30m	22.582	86.4051	290600
		208.	30m x 30m	22.5836	86.4081	224200
		209.	25m x 25m	22.5771	86.4058	164200
		210.	40m x 40m	22.5759	86.4050	376400
		211.	30m x 30m	22.574	86.4196	224200
		212.	40m x 40m	22.5671	86.4182	376400

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झारखण्ड

Estimated De-siltation Cost (Year-5)	1,62,65,800.00

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डाक-मऊभण्डार-832103
झारखण्ड

6.6. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-6 UNDER THE PLAN

Table 9: Site-Specific Budget Estimation for Year-6 (De-siltation Depth-0.40 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (0.40m) in Rs.
Musabani/Musabani/ Benashol	Amainagar	1.	20m x 20m	22.5711	86.4762	57700
		2.	20m x 20m	22.5748	86.4683	57700
		3.	30m x 30m	22.5738	86.4700	95500
		4.	30m x 30m	22.5722	86.4721	95500
		5.	100m x 40m	22.5758	86.4706	331400
	Benashol	6.	25m x 20m	22.5842	86.444	65900
		7.	20m x 20m	22.5865	86.4448	57700
	Chakulia	8.	30m x 30m	22.6149	86.4285	95500
		9.	20m x 20m	22.6106	86.4264	57700
		10.	30m x 30m	22.6016	86.4307	95500
		11.	60m x 50m	22.6046	86.4125	251800
		12.	50m x 50m	22.6045	86.4181	214000
		13.	60m x 60m	22.606	86.4204	294700
	Kadamdih	14.	10m x 10m	22.5698	86.4724	34200
		15.	20m x 20m	22.5735	86.4643	57700
		16.	30m x 30m	22.5716	86.4681	95500
		17.	30m x 30m	22.571	86.4702	95500
		18.	30m x 30m	22.5761	86.4637	95500
	Kendadih	19.	50m x 40m	22.5952	86.4249	178200
		20.	30m x 30m	22.5973	86.4203	95500
		21.	30m x 30m	22.5981	86.4191	95500
		22.	30m x 30m	22.595	86.4152	95500
		23.	30m x 20m	22.6016	86.4174	74000
		24.	90m x 70m	22.5972	86.4258	493900
		25.	25m x 25m	22.6036	86.4234	74800
		26.	20m x 20m	22.6042	86.4241	57700
		27.	40m x 30m	22.6013	86.4271	119000
		28.	10m x 10m	22.6009	86.4259	34200
		29.	10m x 10m	22.6006	86.426	34200
		30.	30m x 20m	22.6011	86.4116	74000
		31.	*200m x 260m	22.6012	86.4222	760500
	Sohada	32.	60m x 60m	22.5627	86.4442	294700
		33.	20m x 20m	22.5627	86.4439	57700
	Terenga	34.	20m x 20m	22.5934	86.4263	57700
		35.	20m x 20m	22.5937	86.4287	57700
		36.	30m x 30m	22.5939	86.4297	95500
		37.	20m x 20m	22.5945	86.4318	57700
		38.	40m x 40m	22.5908	86.4306	147600
		39.	*115m x 110m	22.5877	86.4273	760500
		40.	30m x 30m	22.5883	86.4346	95500
	Tilabani	41.	20m x 20m	22.5605	86.4655	57700
		42.	20m x 20m	22.5592	86.4673	57700
	Uparbandha	43.	90m x 90m	22.5676	86.4634	622600
		44.	80m x 60m	22.5707	86.4581	384600
		45.	30m x 30m	22.5714	86.4566	95500
Estimated De-siltation Cost (Year-6)						**71,78,700.00**

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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डाक-मऊभण्डार-832103
झारखण्ड

6.7. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-7 UNDER THE PLAN

Table 10: Site-Specific Budget Estimation for Year-7 (De-siltation Depth-0.40 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (0.40m) in Rs.
Musabani/Musabani/ Musabani	Badiya	46.	30m x 20m	22.5082	86.4586	74000
		47.	60m x 20m	22.5060	86.4583	123000
		48.	30m x 20m	22.5094	86.4578	74000
		49.	30m x 30m	22.5100	86.4612	95500
		50.	40m x 40m	22.5084	86.4596	147600
		51.	60m x 40m	22.5079	86.4588	208900
		52.	*300m x 250m	22.5084	86.4558	760500
	Jamshol	53.	30m x 30m	22.5272	86.473	95500
		54.	30m x 30m	22.5275	86.4755	95500
		55.	50m x 30m	22.5292	86.4772	
		56.	20m x 20m	22.5293	86.4782	57700
		57.	20m x 20m	22.5334	86.476	57700
		58.	20m x 20m	22.5338	86.4731	57700
		59.	20m x 20m	22.5321	86.4745	57700
		60.	30m x 30m	22.5324	86.4734	95500
		61.	20m x 20m	22.5322	86.4762	57700
		62.	30m x 30m	22.5292	86.4754	95500
	Koilisuta	63.	30m x 25m	22.5047	86.4230	84800
	Musabani	64.	60m x 60m	22.5259	86.4538	294700
		65.	100m x 80m	22.5264	86.4547	617500
		66.	50m x 50m	22.526	86.4568	214000
		67.	40m x 40m	22.5251	86.4574	147600
		68.	30m x 30m	22.529	86.4583	95500
		69.	40m x 30m	22.5296	86.4528	119000
		70.	20m x 20m	22.5308	86.4485	57700
		71.	30m x 30m	22.5319	86.4383	95500
		72.	40m x 30m	22.5312	86.4409	119000
		73.	30m x 20m	22.5306	86.4427	74000
	Rangamatia	74.	130m x 90m	22.5213	86.4595	888200
		75.	40m x 30m	22.5164	86.4659	119000
	Sonagara	76.	25m x 25m	22.5199	86.4807	74800
		77.	25m x 25m	22.5238	86.4821	74800
		78.	30m x 25m	22.5239	86.4789	84800
		79.	20m x 15m	22.5271	86.4817	50500
		80.	20m x 20m	22.5263	86.4845	57700
		81.	40m x 40m	22.5269	86.4847	147600
		82.	40m x 40m	22.5291	86.4871	147600
		83.	30m x 30m	22.5290	86.4812	95500
Musabani/Musabani/ Surda	Barhania	84.	30m x 30m	22.5446	86.4653	95500
		85.	30m x 30m	22.5454	86.464	95500
		86.	30m x 30m	22.5456	86.463	95500
		87.	30m x 20m	22.5468	86.4629	74000
		88.	30m x 20m	22.5512	86.463	74000
		89.	30m x 20m	22.5504	86.4569	74000
	Laukeshra	90.	50m x 50m	22.5454	86.4540	214000
		91.	40m x 40m	22.5439	86.4529	147600
		92.	20m x 20m	22.5484	86.4509	57700
		93.	60m x 30m	22.5445	86.4534	166000
		94.	30m x 30m	22.5447	86.4525	95500
		95.	20m x 20m	22.5457	86.4518	57700

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डाक-मऊभण्डार-832103
झारखण्ड

		96.	10m x 10m	22.5455	86.4523	34200
		97.	20m x 20m	22.5411	86.4543	57700
		98.	20m x 20m	22.5445	86.4578	57700
Estimated De-siltation Cost (Year-7)						**72,10,400.00**

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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डाक-मऊभण्डार-832102
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6.8. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-8 UNDER THE PLAN

Table 11: Site-Specific Budget Estimation for Year-8 (De-siltation Depth-0.40 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (0.40m) in Rs.
Musabani/Musabani/ Surda	Merhia	99.	30m x 30m	22.5332	86.4609	95500
		100.	80m x 60m	22.5374	86.4603	384600
		101.	60m x 40m	22.5389	86.4589	208900
		102.	20m x 20m	22.5391	86.4609	57700
		103.	50m x 40m	22.5392	86.4575	178200
		104.	20m x 15m	22.5358	86.4623	50500
		105.	20m x 20m	22.5436	86.4636	57700
		106.	30m x 30m	22.5384	86.4554	95500
		107.	30m x 30m	22.5397	86.4541	95500
		108.	40m x 30m	22.5406	86.4552	119000
	Patharghara	109.	30m x 30m	22.5392	86.4430	95500
		110.	40m x 40m	22.5407	86.4419	147600
		111.	20m x 15m	22.5395	86.4410	50500
		112.	30m x 30m	22.5347	86.4357	95500
		113.	25m x 20m	22.5346	86.4351	65900
		114.	40m x 40m	22.5335	86.436	147600
		115.	60m x 30m	22.5463	86.4432	166000
		116.	60m x 30m	22.5406	86.4395	166000
		117.	40m x 30m	22.5341	86.4392	119000
		118.	40m x 20m	22.5313	86.4416	90400
		119.	40m x 20m	22.5445	86.4431	90400
		120.	30m x 20m	22.5440	86.4433	74000
		121.	40m x 30m	22.5412	86.4457	119000
		122.	40m x 30m	22.5409	86.4461	119000
		123.	*200m x 90m	22.5359	86.4492	760500
		124.	30m x 30m	22.5373	86.4516	95500
	Surda	125.	20m x 15m	22.5575	86.4463	50500
		126.	15m x 15m	22.5569	86.4470	44200
		127.	20m x 20m	22.5545	86.4522	57700
Ghatshila/Galudih/ Kalajhor	Jagannathpur	128.	30m x 30m	22.6165	86.4381	95500
		129.	30m x 30m	22.6153	86.4343	95500
Ghatshila/Ghatshila/ Kashida	Bagula	130.	100m x 100m	22.5503	86.4913	760500
		131.	50m x 50m	22.5519	86.4906	214000
		132.	100m x 40m	22.5542	86.4871	331400
		133.	70m x 20m	22.5552	86.4883	139400
		134.	35m x 35m	22.5538	86.4834	119800
		135.	20m x 20m	22.5529	86.4821	57700
		136.	20m x 20m	22.5521	86.4847	57700
		137.	35m x 35m	22.5516	86.4841	119800
		138.	45m x 35m	22.5518	86.4835	146800
		139.	30m x 30m	22.5500	86.4806	95500
		140.	70m x 50m	22.5585	86.4862	289600
Ghatshila/Ghatshila/ Kashida	Ghatshila	141.	120m x 40m	22.5984	86.4746	392700
Estimated De-siltation Cost (Year-8)						68,13,800.00

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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इकाई प्रमुख
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6.9. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-9 UNDER THE PLAN

Table 12: Site-Specific Budget Estimation for Year-9 (De-siltation Depth-0.40 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (0.40m) in Rs.
Ghatshila/Ghatshila/ Kashida	Ghatshila	142.	30m x 30m	22.596	86.4795	95500
		143.	50m x 50m	22.5831	86.4809	214000
		144.	60m x 50m	22.5855	86.4826	251800
		145.	*180m x 120m	22.5884	86.4754	760500
		146.	70m x 60m	22.5916	86.4761	339600
		147.	30m x 30m	22.5917	86.4777	95500
		148.	120m x 60m	22.5920	86.47	564400
		149.	120m x 60m	22.5881	86.4638	564400
		150.	40m x 30m	22.5881	86.4659	119000
		151.	40m x 30m	22.5881	86.4673	119000
		152.	40m x 40m	22.5879	86.4702	147600
		153.	30m x 30m	22.5862	86.4689	95500
		154.	30m x 30m	22.5854	86.4698	95500
		155.	150m x 60m	22.5829	86.4717	699200
		156.	90m x 70m	22.5780	86.4842	493900
		157.	90m x 80m	22.5769	86.4812	558300
		158.	30m x 30m	22.5795	86.4832	95500
		159.	*250m x 200m	22.5825	86.4835	760500
	Harindhukri	160.	30m x 30m	22.5526	86.4800	95500
		161.	35m x 30m	22.5618	86.4873	107200
		162.	40m x 40m	22.5616	86.4888	147600
		163.	100m x 60m	22.5687	86.4870	474500
Estimated De-siltation Cost (Year-9)						**68,94,500.00**

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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6.10. PHYSICAL AND FINANCIAL PROPOSALS FOR YEAR-10 UNDER THE PLAN

Table 13: Site-Specific Budget Estimation for Year-10 (De-siltation Depth-0.40 m)

Range/Beat/ Sub-Beat	Village	Pond Sl. No.	Dimension (Approx.)	Latitude	Longitude	Estimated De-siltation Cost (0.40m) in Rs.
Ghatshila/Ghatshila/ Bankati	Dharambahal	164.	*150m x 120m	22.6028	86.4679	760500
		165.	30m x 20m	22.6048	86.4668	74000
		166.	40m x 30m	22.6023	86.4665	119000
	Maubhandar	167.	40m x 30m	22.6075	86.4540	119000
		168.	40m x 40m	22.6015	86.4470	147600
		169.	40m x 40m	22.6013	86.4481	147600
		170.	20m x 20m	22.6025	86.4532	57700
		171.	10m x 10m	22.6007	86.458	34200
		172.	70m x60m	22.5995	86.4609	339600
	Susnijobni	173.	*150m x 120m	22.6017	86.4711	760500
Rakhamines/Royam/ Kumirmuri	Chapri	174.	30m x 30m	22.6141	86.4125	95500
		175.	30m x 30m	22.6137	86.4080	95500
		176.	40m x 30m	22.6108	86.4029	119000
		177.	30m x 25m	22.6157	86.4207	84800
	Patkita	178.	50m x 50m	22.5979	86.3946	214000
		179.	30m x 20m	22.5983	86.3945	74000
		180.	90m x 40m	22.6003	86.3947	300800
Rakhamines/Royam/ Bankai	Dhobni	181.	40m x 40m	22.5040	86.4475	147600
		182.	40m x 40m	22.5035	86.4482	147600
		183.	30m x 20m	22.5018	86.4392	74000
		184.	90m x 40m	22.5081	86.4373	300800
	Kakdaha	185.	30m x 30m	22.5027	86.4175	95500
		186.	30m x 30m	22.5075	86.4087	95500
		187.	20m x 20m	22.5104	86.4068	57700
		188.	30m x 30m	22.5107	86.4085	95500
		189.	20m x 20m	22.5116	86.4061	57700
		190.	20m x 20m	22.5122	86.4059	57700
		191.	20m x 20m	22.5130	86.4043	57700
		192.	20m x 20m	22.5214	86.4013	57700
		193.	30m x 20m	22.5206	86.403	74000
		194.	20m x 15m	22.5248	86.3955	50500
		195.	15m x 10m	22.5250	86.3953	38800
		196.	10m x 10m	22.5249	86.3950	34200
		197.	30m x 30m	22.5045	86.4185	95500
		198.	30m x 30m	22.5058	86.4179	95500
		199.	15m x 10m	22.5064	86.4173	38800
		200.	20m x 15m	22.5065	86.4151	50500
		201.	20m x 20m	22.5056	86.4167	57700
		202.	30m x 30m	22.5078	86.4174	95500
		203.	25m x 25m	22.5074	86.4153	74800
	Samaydih	204.	30m x30m	22.5928	86.4060	95500
		205.	50m x 30m	22.5809	86.4070	142500
		206.	30m x 15m	22.5814	86.4057	63300
		207.	40m x 30m	22.582	86.4051	119000
		208.	30m x 30m	22.5836	86.4081	95500
		209.	25m x 25m	22.5771	86.4058	74800
		210.	40m x 40m	22.5759	86.4050	147600
		211.	30m x 30m	22.574	86.4196	95500
		212.	40m x 40m	22.5671	86.4182	147600

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Estimated De-siltation Cost (Year-10)	64,75,400.00

*The ponds of area more than 1 ha (100m x100m) are proposed to be subjected to de-siltation within 1 ha only and accordingly the financial target has been fixed for such ponds.

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6.11. Abstract of Year-wise Expenditures Under the Plan

Table 14: Year-wise Financial Forecast of the Plan for De-siltation of Ponds

Activity	Estimated Cost (Rs. in Lakh)										Total (Rs. in Lakh)
	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10	
De-siltation (1.20m)	185.96	182.46	175.34	190.02	162.66	-	-	-	-	-	896.44
De-siltation (0.40m)	-	-	-	-	-	71.79	72.10	68.14	68.95	64.75	345.73
Capacity Building	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	15.00
Awareness Development	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	15.00
Miscellaneous Expenses	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00
Total	190.96	187.46	180.34	195.02	167.66	74.79	75.10	71.14	71.95	67.75	1282.17
Cost Escalation @ 20%	38.19	37.49	36.07	39.00	33.53	14.96	15.02	14.23	14.39	13.55	256.43
Grand Total	**229.15**	**224.95**	**216.41**	**234.02**	**201.19**	**89.75**	**90.12**	**85.37**	**86.34**	**81.30**	**1538.60**

Cost to the User Agency towards implementation of the Pond De-siltation Plan = Rs. 1538.60 Lakh.

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6.12. NOTABLE POINTS REGARDING IMPLEMENTATION OF THE PLAN

Following points are worth noting while implementing the Plan:

- As per the condition laid under the Stage-I order, **the User Agency is required *to regularly undertake de-silting of village tanks and other water bodies located within five km from the mine lease boundary*.** However, the de-siltation works may be carried out through the Forest Department.
- Provision of a flat rate of 20% has been made towards cost escalation in the Plan on account of increase in wage rate/material cost etc.
- The Plan has been formulated by taking into consideration the available Schedule of Rates at current wage rate (Rs. 401.00). Since the Plan is expected to begin its journey not any time before the next financial year i.e., 2026-27, cost escalation of 20% has been provided for, right from Year 1.
- **While estimating the cost of various activities under the Plan, approved schedule of rates has been followed. However, these are based on some broad assumptions. The implementing agency is expected to prepare pond-specific estimates considering the rates approved by the State Government against specific items required for a specific activity.**

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ANNEXURES

Annexure 1: MoEF & CC Letter granting Forest Clearance (Stage-I)

File No. 8-64/1993-FC(Vol.)
Government of India
Ministry of Environment, Forest & Climate Change
(Forest Conservation Division)
****

Indira Paryavaran Bhawan,
Aliganj, Jor Bag Road,
New Delhi - 110003.
Dated: As per e-Sign

To

The Principal Secretary (Forests),
Government of Jharkhand,
Ranchi.

Subject: Proposal for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favour of M/s Hindustan Copper Limited in Singhbhum district, Jharkhand – regarding.

Madam/Sir,

I am directed to refer to the Government of Jharkhand's letter No. Van Bhumi-15/2023-3696-A/V.P. dated 29.09.2023 on the above subject seeking prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and to say that the proposal has been examined by the Advisory Committee constituted by the Central Government under Section-3 of the aforesaid Act.

After careful examination of the proposal of the State Government and on the basis of the recommendations of the Advisory Committee, and with due approval of the competent authority, the Central Government hereby accords *"In-principle/Stage-I"* approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper Underground Mine project in favour of M/s Hindustan Copper Limited in Singhbhum district, Jharkhand subject to fulfillment of the following conditions:

1. Legal status of the diverted forest land shall remain unchanged;
2. The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal in accordance with the guidelines in the matter;
3. At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
4. *The Integrated Wildlife Management Plan approved by the PCCF(Wildlife)/CWLW shall be implemented at the cost of the user agency.*
5. *The State of Jharkhand shall reconcile the penal CA amount deposited by*

the user agency with the state of Bihar. The steps for completion of penal CA shall be taken in case the same has not yet been done by the State of Bihar. A detailed report in this regard shall be submitted;

6. The State Government shall upload the KML files of the area under diversion in the e-Green watch portal of FSI, before handling over forest land to the user agency;
7. All the funds received from the user agency under the project shall be transferred/deposited in CAMPA account only through **e-portal** (https://parivesh.nic.in/); Amount depsoted through other mode will not be accepted as compliance of the Stage-I clearance;
8. The user agency will protect and demarcate the diverted forest land on surface, in consultation with State Forest Department by construction of a stone wall/trench/barbed wire fencing with angle iron and will maintain the fencing during entire period of life of the mine
9. User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF&CC before Stage-II Clearance;
10. The surface area of diverted land for underground mining shall be Rehabilitated and enriched by using indigenous species with participation of local people at the project cost. The user agency shall prepare the plan for the purpose in consultation with state forest Dept.
11. The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF& CC before Stage-II approval;
12. The State Government and user agency shall monitor the mining induced subsidence and take appropriate mitigative measures to ensure that it remains within the permissible limit;
13. Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department. Approved scheme/plan shall be submitted to the Ministry along with compliance of Stage-I approval:

i. Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three year with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department.
ii. Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;
iii. Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved

scheme;

iv. Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 280; and

15. No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.
16. The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concerned Regional Office may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;
17. Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;
18. The surface area over the mine shall not be allowed to be used for construction of residential buildings or labour camps;
19. The State Government shall ensure that green cover on the ground over the underground part of mine shall be maintained as forest and supplemented by plantations in gaps at the cost of user agency;
20. The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
21. No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
22. The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;
23. The layout plan of the mining plan/ proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal;
24. The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
25. No damage to the flora and fauna of the adjoining area shall be caused;
26. The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project;
27. The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional

Office and to this Ministry by the end of March every year regularly;

28. Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife shall be carried with by the State Government and user agency; and
29. Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as issued by this Ministry on dated 29.12.2023.

After receipt of compliance report on fulfillment of the conditions mentioned above, the proposal shall be considered for final approval under Section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Transfer of forest land shall not be affected till final approval is granted by the Central Government in this regard.

Signed by Suneet Bhardwaj
Date: 15-06-2024 10:41:15

Yours faithfully

Sd/-

(Suneet Bhardwaj)
Assistant Inspector General of Forests

Copy to:

1. The PCCF (HoFF), Department of Forest, Government of Jharkhand, Ranchi;
2. The Dy. DGF (Central), Regional Office, Ranchi;
3. The Nodal Officer (FCA), Department of Forest, Government of Jharkhand, Ranchi;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi for uploading on PARIVESH portal.

Annexure 2: Model Estimate for De-siltation of Pond (30m x 30m; Depth: 1.20m)

Model Estimate - De-siltation of Pond (30m x 30m) - De-siltation Depth 1.2m

DETAILED ESTIMATE

S. No.	S.O.R. Item No.	Item of Works	Detail of Qty. (FT/M)				Quantity	Unit	Rate in Rs.	Amount
			No.	Length	width	Height/Depth				
1	D.S.R/2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood,trees and saplings of girth up to 30 cm measured at a height of 1 mabove ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.								
			4	30.00	2.00		240.00	M^2	14.36	3446.4
2	W.R.D/P-83	Provision of dewatering with 10 H.P diesel pump set including P.O.L part-B WRD PAGE 83 SL.NO 10								
			1			70.00	70.000	hours	330.00	23100.00
3	W.R.D/7.1.43.2	Earth work in excavation in canal by the hydraulic excavator as per design section in all kinds of soil ,soil mixed with kankar ,pabbles and boulders up to 300 mm size and disposal of spoil up to 500m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I. (7.1.43.2) part-B, WRD page no.-138.								
			1	30.000	30.000	1.20	1080.000	M^3	105.09	113497.20
4	W.R.D/5.1.37	Supply and laying 300 mm thick humous layer on slope of dam with manual compaction and turfing the surface with approved dub grass do..do..E/I								
			2	30.000	3.000		180.000	Sft		
							16.729	M^2	130.50	2183.09
5		Carrage of material								
		(35% of qty vide item no 3)					378.000	M^3		
		Soil (3P+1K) for 4km					378.000	M^3	171.23	64724.94
									Total Rs.	206951.63
		less 9.09% C.P Rs								-18811.90
		Sub - Total Rs.								188139.73
		Add GST @18% of Sub Total Rs.								33865.15
		Total Rs.								222004.88
		Add for Labour cess @ 1% of Total Rs.								2220.05
		Total Rs.								224224.93
		Say RS.								224200.00

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. मऊभंडार- ८३२१०३
जिला - पूर्वी सिंहभूम (झारखण्ड)

CIN : L27201WB1967GOI028825

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph : (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website : www.hindustancopper.com

Annexure -11

Undertaking for submission of approved plan for desilting of identified ponds and water bodies within five km of Surda Mine Lease boundary

The detailed approved plan for desilting of identified ponds and water bodies with GPS co-ordinates within five km of Surda Mine Lease boundary, being prepared in consultation with Forest Deptt and submitted before Divisional Forest Officer, Jamshedpur.

The cost of implementation of approved plan will be carried out by User Agency.

(Authorized Signatory)

Date: 05.04.2025

Place: Ghatsila

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झारखण्ड

HINDUSTAN COPPER LIMITED
(A Govt. Of India Enterprise)
TIN NO.20661100020
Materials & Contracts Department

Indian Copper Complex
P.O. Ghatsila-832303
Dist. Singhbhum (East)
Jharkhand
Phone: 06585-225871
Mail:maji_bk@hindustancopper.com,
:baban_t@hindustancopper.com

W. O. No.: HCL/ICC/Subsidence Monitoring Survey/PPO_16550/Mining Lease/2023 Date:08.02.2023

Work Order

To,

M/s Indian Institute of Technology
Deptt of Mining Engineering
IIT(ISM)
Dhanbad, Jharkhand-826004

Dear Sir,

Sub: Regular Subsidence Monitoring Survey of Surda Mining Lease, Kendadih Mining Lease and Rakha Mining Lease for three (03) years

Ref: 1) Your Letter No. MIN/SURVEY/HCL/1.0 Dtd: 26.07.2022 regarding submission of budgetary offer for conducting Regular Subsidence Monitoring Survey for three (03) year for Surda, Kendadih and Rakha Mining Lease.
2) Your E-Mail Dtd 30.09.2022 regarding final revised advance payment schedule @ 30% of total cost of the work.

With reference to the above, we are pleased to award you the subject work for contract period of three (03) years with a frequency of every quarter in a year basis at a value of Rs. 75,00,000/- (Rupees Seventy Five Lakh Only) plus GST as applicable @18%, on the terms and conditions enumerated below.

I) BRIEF DESCRIPTION OF JOB ALONG WITH RATES:

Sl. No.	Item Code	Description of Work	Unit	Qty	Rate (in Rs)	Total Basic Price (in Rs.)
1	905194649	Reconnaissance survey and submission of report of Surda Mining Lease	NUMBER	1	750000	750000
2	905194650	Reconnaissance survey and submission of report of Kendadih Mining Lease	NUMBER	1	750000	750000
3	905194651	Reconnaissance survey and submission of report of Rakha Mining Lease	NUMBER	1	750000	750000
4	905194652	Closed Traversing and Subsidence monitoring over permanent monitoring stations on quarterly basis of Surda Mining Lease	NUMBER	12	145833.33	1750000
5	905194653	Closed Traversing and Subsidence monitoring over permanent monitoring stations on quarterly basis of Kendadih Mining Lease	NUMBER	12	145833.33	1750000
6	905194654	Closed Traversing and Subsidence monitoring over permanent monitoring stations on quarterly basis of Rakha Mining Lease	NUMBER	12	145833.33	1750000

Total (Basic) = Rs. 7500000/-

GST @18% will be applicable for this Work Order.

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II) SCOPE OF WORK:

A	**Subsidence monitoring of Surda Mining Lease, Kendadih Mining Lease and Rakha Mining Lease.**
1.0	Survey in Surda, Kendadih & Rakha Mine Lease areas at surface terrain by means of Total Station survey instruments using standard survey methodology and picking of coordinates (X, Y, Z) of the control stations located at the surface terrain of Surda, Kendadih & Rakha Mine Lease. This survey is to be done with a frequency of every quarter in a year by reaching at the site by IIT(ISM) team along with all required instruments and human resource. This will be called the quarterly monitoring of subsidence.
2.0	IIT(ISM) team will campaign to ICC on Quarterly basis (4 campaigns in a year, 12 campaigns in three years) to undertake subsidence survey of Surda, Kendadih & Rakha Mine Leases.
2a	**Subsidence monitoring of Surda Mining Lease, Kendadih Mining Lease and Rakha Mining Lease will be done in two phase** **Phase-1: Reconnaissance survey and submission of report.** Report will consist of grid design and other relevant details for starting of the monitoring work (first quarter **Phase-2: Closed Traversing and Subsidence monitoring over permanent monitoring stations on quarterly basis** *It may please be noted that monitoring work will be started only after the fixing of monitoring stations (in the form of concrete pillar) on the ground as per grid design*.
3.0	**Broad Methodology to be adopted in the quarterly field survey will be as under –** **Available Control Data:** The whole work will be based on the coordinates of two control points/stations provided by HCL-ICC. However in case of any technical issue in providing the control points at HCL-ICC end, IIT(ISM) will support in finalization of the control points, using the IIT(ISM) technical insight and ground level intervention. **Establishment of Control Stations and Subsidence Monitoring Stations:** Establishment of permanent control stations nearby mine boundaries and fixing of the coordinates (X, Y, Z) at all such control stations with an aim to monitor any deviations in vertical positions of all permanent subsidence monitoring stations quarterly. These control stations will be established by embedding and casting concrete pillars in the loose grounds to a depth of at least 0.5 m. The establishment of control stations will be done by HCL-ICC, with required technical consultation with IIT(ISM), so as to avoid any execution time inadequacies w.r.t. the control stations. **Procedure to be adopted:** IIT(ISM) will do a precise EDM (Electronic Distance Measurement) closed traverse, to join all the control stations for the purpose of monitoring subsidence on all subsidence monitoring stations set in a grid pattern all along the subsidence area of Surda, Kendadih & Rakha Mine Leases from control stations. The horizontal angles will be observed upto 1" least count and distances and coordinates upto 1 mm with Electronic Reflector less Total Station for establishing X, Y and Z coordinates for all the control stations and subsidence monitoring stations.

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4.0	Lab / office based analysis of the data collected during the field survey. This includes (but not limited to) the processing of database acquired by the quarterly survey at each mine site, plotting of the coordinates (X, Y, Z) of subsidence monitoring stations of Surda, Kendadih & Rakha Mine Leases and assessment of ground movement (if any) on quarterly basis.
5.0	Submission of quarterly monitoring reports separately for Surda, Kendadih & Rakha Mine Leases within 15 days of field/monitoring data acquisition.
6.0	Submission of Final Report separately for Surda, Kendadih & Rakha Mine Leases on, completion of work i.e. at the end of contract.
7.0	IIT(ISM) will prepared all required drawings/ plans right from the Control Stations Plan required to start the survey and further any drawings/ plans required during procession of the work as well as during preparation of the quarterly / final reports.
8.0	To complete the work mentioned above, IIT(ISM) will primarily be utilized (but not will limited to), the Total Stations/DGPS/Auto level/Terrestrial LiDAR/terrestrial Laser Scanner/In SAR Datasets and associated software for data processing.
B	**Special Terms & Conditions -**
1.0	All documents, records information generated and collected during the contract period in the process of execution of the contract will be exclusively the property of HCL and are to be handed over to HCL at the time of completion of the awarded work.
C	**Deliverables -**
1.0	**All data are required to be submitted in hard as well as soft copies (i.e. the .docx, .xlsx, .dwg or other suitable format formats)**
2.0	**Quarterly Reports** (to be submitted with 15 days from the end of the quarter) – 02 hard copies. **Final Reports** (to be submitted at the end of the contract) – 02 hard copies.
D	**Obligations of HCL**
1.0	HCL-ICC shall provide all available database free of cost to IIT(ISM), summarized here as – a. Geological details of the deposit including topographical/geological maps and sections, exploration details etc. b. Map and Sections of Surda, Kendadih & Rakha Mine Lease. c. All rock mechanics investigations.
2.0	HCL-ICC shall provide non chargeable lodging and boarding for every quarter campaigns as well as during other required instances during the study for IIT(ISM) team, consisting of maximum of 4 executives. Theses Guest House amenities will be provided on 'As is available" basis of HCL-ICC properties. IIT (ISM) is required to plan its visits in full consultation with HCL-ICC, to avoid the period of non-availability of amenities and other resources.
2.a	At least 3-4 numbers of local Laborers are required to be arranged at mine site for clearing the bushes, line of sight and obstructions during the field survey.
2b	HCL/ICC management shall arrange vehicle from IIT(ISM) Dhanbad to ICC and return from ICC to IIT(ISM) Dhanbad in each quarter of monitoring during study period. Further, HCL/ICC management shall also arrange a vehicle during field survey at ICC in each quarter of monitoring during study period

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2.0	HCL-ICC shall support for forest clearance and other all statutory permissions/ clearances if required, and availability of land, clear entry, exit and transit at the place of work.
3.0	HCL-ICC will nominate a survey officer for Surda, Kendadih & Rakha Mine Leases for coordination with IIT(ISM) for this contract work. The Survey Officer / his representatives will be available along with the IIT(ISM) team during their visit for carrying out site inspection, field subsidence surveys at Surda, Kendadih & Rakha Mine Leases.
4.0	HCL shall maintain close cooperation and coordination with IIT(ISM) representative at work site to ensure smooth operation and timely completion of work.
5.0	HCL shall ensure and make all efforts, so that IIT(ISM)'s resources do not become idle for any reason, excluding force majeure conditions. HCL will not pay any compensation to the Contractor on account idle hours.
E	**Obligations of IIT(ISM)**
1.0	IIT(ISM) is requires to execute all work in full consultation and satisfaction of the Engineer-In-Charge appointed.
2.0	IIT(ISM) shall deploy adequate resources to complete the assigned work within the stipulated time.
3.0	IIT(ISM) will visit the mine sites, collect all available information and consult fully with HCL-ICC officials, for overview of the work and successful desired outputs of the contract.
4.0	IIT(ISM) shall carry out the various activities as per the standard norms and procedures of various guidelines of DGMS, MoEF&CC and other statutory government bodies, who have issued directives w.r.t. the above subsidence modeling and monitoring works.
F	**Payment terms**
1.0	30% of total cost of the work shall be paid after the reconnaissance survey of the site and submitting the report. The rest of the payment shall be paid on equal installment (after submitting the report of each quarter monitoring).

III)SPECIAL COMMERCIAL CONDITIONS:

1) **PERIOD OF CONTRACT:**

The contract shall be effective for Three (03) Years (12 Quarters) from the submission of 1st quarterly report for respective mines (excluding reconnaissance survey period).

2) **RATES:**

Rates shall be Firm and Final and no special clause, terms and conditions will be added in this regard. The rates will be fixed for the entire period of the contract. However GST will be paid extra as per rules prevailing at the time of execution of order.

3) **SECURITY DEPOSIT: - NIL**

4) **MANAGEMENT'S RIGHTS:**

i) The Company reserves the right to reject/accept any part or full tender.

ii) The Company reserves the right to award the work to eligible party either in full or parts thereof. The decision of the Company is final and binding.

iii) The Company reserves the right to change the specifications at any stage.

iv) In the event M/s IIT (ISM), Dhanbad withdraws after the issue of LOI/ Work Order by the Company any amount due with the Company will be withheld, besides initiating appropriate action.

5) **COMMENCEMENT OF WORK:**

M/s IIT-ISM, Dhanbad will be required to commence the work as stipulated in the LOI/ Work Order, whichever is earlier or as directed by the HCL/ICC.

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6) **PAYMENT:**

30% of the total cost of the work shall be paid after the reconnaissance survey of the site and submitting the report. The rest of the payment shall be paid on equal installment (after submitting the report of each quarter monitoring) and after acceptance of report at user department

Payment is due after 30 days after receipt of bill complete in all respect. Payment shall be made against submission of Bills subject to proper certification by the Engineer in Charge. The company shall release the payment electronically.

M/s IIT-ISM, Dhanbad must submit Bank Mandate for e-payment/RTGS payment in the format provided at Annexure-I.

7) **GST COMPLIANCE**:

"GST will be paid extra by HCL to be claimed in the bills so that HCL can avail Input Credit Tax for the same. No subsequent claim on this account will be entertained by HCL. The GST shall be deposited with the Government by the contractor/supplier in accordance with the statutory provisions of the GST Law. Further, the contractor/supplier agrees that he shall maintain high GST compliance rating track record at any given point of time and consents to the following:

a) The details of outward supplies made by the contractor/supplier to HCL will be uploaded in Form GSTR-1 by 11th of the month following the month/quarter for which the return is to be filed.

b) Once contractor/supplier has uploaded the details of outward supplies in Form GSTR- 1, contractor/supplier agrees to file the return in Form GSTR-3B by 20th of the month succeeding the month/quarter for which return is to be filed without any delay.

c) Wherever contractor/supplier is required to issue e-invoice containing all the particulars as specified in Form GST INV-01 in terms of Rule 48(4) of the CGST Rules, it is agreed that contractor/supplier will comply with such e-invoicing requirements.

d) In case the Input Tax Credit of GST is denied or demand is recovered from HCL on account of any non-compliance by contractor/supplier, including non-compliance with e-invoicing provisions, delay or non-filing of Form GSTR-1 and Form GSTR- 3B, non-payment of GST charged and recovered, contractor/supplier shall indemnify HCL in respect of all claims of tax, penalty and/or interest, input tax credit, loss, damages, costs, expenses and liability that may arise due to such non-compliance

e) Notwithstanding any other clause of the tender document the payment to the contractor/supplier shall be made only upon invoices being reflected in FOMR GSTR-2A/2B of the relevant month."

8) **INSPECTION:** The inspection of the work done will be done by our engineer whose decision shall be final and binding to M/s IIT-ISM, Dhanbad or during execution of the entire work.

9) **DETENTION OF EQUIPMENT AND IDLE LABOR:**

HCL/ICC will not pay detention charges and also any claim towards idle wages/hours due to any reasons, whatsoever.

10) **SAFETY OF THE LABORS:**

M/s IIT-ISM, Dhanbad shall be fully responsible for the safety of his employees in all phases of the work and shall provide and enforce the safety aids in all phases of the work and shall provide and enforce the safety aids customary to the job, as may be required by the regulations from time to time at his cost. All accidents shall be promptly reported to the authorities and contractor shall arrange to render all possible assistance to such employees.

11) **LOSS OR DAMAGE TO PROPERTY:**

Any loss or damage to the property of HCL by the Agency will be charged from the Agency bills.

12) **CONTRACT SUB- LETTING:**

Sub-letting of the contract to any third party / agency will not be permitted.

13) **HCL'S DISCRETION:**

HCL reserves the right to reject any or all the tenders without assigning any reasons whatsoever.

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14) **RISK & COST:**

a) In case M/s IIT-ISM, Dhanbad fails to execute the work as per the terms & conditions of the awarded work order after start of work, the Company reserves the right to award the contract for balance work at the Risk & Cost of M/s IIT-ISM, Dhanbad.

b) In case M/s IIT-ISM, Dhanbad backs out after the bid opening after the opening of Techno-Commercial bid/Price bid in two bid system. They will be suspended for next Six (06) Months from the date of issue of suspension letter for participation in the future tender of HCL/ICC.

c) In case M/s IIT-ISM, Dhanbad fails to start the work after award of Work Order within the time frame stipulated in the Work Order, suitable penal actions will be taken against agency as decided by the Company, including debarment, etc.

15) **DEDUCTION OF INCOME TAX:**

No tax will be deducted at source as M/s IIT (ISM), Dhanbad is exempted from applicable taxes (M/s IIT (ISM), Dhanbad shall submit supporting document as and when required).

16) **CENTRAL & STATE GOVT. ACTS:**

M/s IIT-ISM, Dhanbad shall abide by all the Acts and Regulations relevant to this work, of Central and State Govt. and Rules framed there under from time to time and also be responsible for any compensation / claim/ penalty payable as a consequence due to any accident / default or any other reasons whatsoever.

17) **STATUTORY OBLIGATIONS:**

M/s IIT-ISM, Dhanbad shall have to comply all rules and regulation under Mines Act, Mines Rules Metalliferous Mines Regulation/Factory Act and Rules and various States/Central Govts. Acts, etc. applicable from time to time while working in underground mining areas/surface areas and factory areas. The said provisions are illustrative only and not exhaustive. The Contractor will ensure all safety measures during the operations. The Contractor will be solely responsible for all consequences arising out of and during operation of the contract including payments/ compensation, etc. to be made under the various statutes / acts of State or Central Govt. etc. issued there under.

18) **SECURITY REGULATIONS:**

All the persons engaged by M/s IIT-ISM, Dhanbad on the job shall be subject to security check by Security Officials on duty.

19) **RECOVERY OF SUMS DUE:**

Whenever any claim against M/s IIT-ISM, Dhanbad for payment of any sum of money arises out of or under the contract, HCL/ICC Ghatsila shall be entitled to recover such sums from any sum when due or which at any time thereafter may become due from M/s IIT-ISM, Dhanbad under this or any other contract with HCL and should this sum be not sufficient to cover the recoverable amount, M/s IIT-ISM, Dhanbad shall pay to HCL/ICC, Ghatsila on demand the balance remaining due immediately.

20) **ABSOLUTE INTEGRITY OF THE CONTRACT:**

M/s IIT-ISM, Dhanbad and his persons shall maintain absolute integrity in carrying out the work and in case of any act detrimental to the interest of HCL/ICC including theft of Company's property by the Agency or any of his persons, the contract shall be terminated / suspended without any notice and the balance work shall be executed through alternate sources at the risk and cost of the Agency. In the event of suspension / termination of the work the Agency shall not raise any claim for the period of suspension / termination, nor shall the Company (HCL/ICC) be liable to pay for it.

21) M/s IIT-ISM, Dhanbad personnel shall not divulge or disclose to any persons any details of office, operation process, technical know-how, security arrangements and administrative/organizational matters as all are confidential in nature.

22) **GST, AS APPLICABLE:**

GST as applicable will be paid extra by HCL if claimed in the bills. No subsequent claim on this account will be entertained by HCL. M/s IIT-ISM, Dhanbad should have a GST Registration number. GST TDS shall be applicable at the time of payment.

23) No persons below 18 years of age shall be allowed to work as per The Mines Act and Bihar/Jharkhand Mines Rules.

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24) **ENGINEER –IN-CHARGE/OFFICER-IN-CHARGE:**

Mr. Amit Degvekar, Chief Manager (Exploration), Mobile No.-8210071178, E Mail Id-amit_nd@hindustancopper.com at ICC will act as the Engineer-in-charge(E-in-C) /Officer-in–charge (O-in-C) of the Contract. M/s IIT-ISM, Dhanbad shall meet the E-in-C/O-in-C periodically and keep in communication with him for smooth and effective functioning of the work. M/s IIT (ISM), Dhanbad shall directly report to E-in-C/O-in-C of the contract, in case of any difficulty and follow his orders and directions.

25) **DRAWINGS:** Drawings supplied to the agency, are the property of HCL's Unit at Indian Copper Complex and shall be returned to the company after successful completion of the job.

26) **CLAUSES PERTAINING TO LEGAL ASPECTS:**

1. **LIQUIDATED DAMAGES:**

Time is the essence of the contract. Liquidated Damages may be levied against contractor in case of delay in execution of contract beyond the date of completion of job specified in Contract. In case the contractor fails to complete the work within the stipulated period, as fixed in advance, he shall be liable to pay liquidated damage @ half percent per week of the delay subject to a maximum of 10% of the total awarded value of the category (excluding GST). L.D. will be recovered from the contractor's bills or any other dues of contractor with the company.

Extension of delivery / contract period may be granted at the discretion of the Competent Authority.

The extension of delivery / contract period when granted shall be subject to the following conditions:

i. No increase in price shall be granted if the same takes place during the extended period, despite a variation clause in the order but reduction, if any, shall be availed of.

ii. Any increase / decrease in taxes and duties on account of statutory increase / decrease fresh imposition of any duties or taxes which take place during the extended period shall be admissible / availed of, provided it is GST creditable / Set off is admissible against these levies.

iii. If it is in the interest of HCL to ensure completion of supply / execution of job and / or fulfillment of contractual obligations subject to levy of LD when reasons for delay are not attributable to HCL.

If the delay in completion of supply / execution of job is attributable to HCL, or due to a Force Majeure event, then Competent Authority may consider waiving of LD, provided the occurrence of the event is informed by notice to HCL, immediately thereof.

2. **EVENTS OF DEFAULT:**

The following events shall be termed as Events of Default:

If the Insurance provider shall not execute the contract in the manner as stipulated in the contract or if it, in the opinion of HCL:

a) Does not execute the contract in conformity with the provisions of the contract, or
b) Substantially suspends any part of its execution for a period of fourteen (14) days without authority from HCL, or
c) Fails to carry on and execute the contract to the satisfaction of HCL, or
d) Commits or permits any breach of any of the provisions of the contract (on the part of the insurer to be performed or observed), or persists in any of the above mentioned breach of the contract for fourteen (14) days, after notice in writing shall have been given to the contractor by HCL requiring such breach to be remedied, or
e) Abandons the work(s), or
f) During the continuance of the contract, becomes bankrupt, makes any arrangement or composition with its creditors, or permits any execution to be levied or goes into liquidation other than for the purpose of amalgamation or reconstruction, or
g) Does not perform as per the agreed programme submitted by the contractor.

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3. **TERMINATION DUE TO EVENTS OF DEFAULT:**

a) If HCL decides to terminate this contract, it shall in the first instance issue Preliminary Notice to the contractor. Within 15 days of receipt of the Preliminary Notice, the contractor shall submit to HCL in sufficient detail, the manner in which it proposes to cure the underlying Event of Default (the "Contractor's Proposal to Rectify"). In case of non-submission of the Contractor's Proposal to Rectify within the said period of fifteen (15) days, HCL shall be entitled to terminate this contract by issuing Termination Notice, and to appropriate any Security, if subsisting.

b) In the Contractor's Proposal to Rectify is submitted within the period stipulated thereof, the contractor shall have to its disposal a further period of fifteen (15) days to remedy / cure the underlying Event of Default. If, however, it fails to remedy / cure the underlying Event of Default within the stated period, HCL shall be entitled to terminate this contract and to appropriate the Security, if subsisting.
Penal action like forfeiting of Security Deposit, debarment for future tenders of HCL/ICC for one year may be taken as deemed fit.

4. **FORECLOSURE OF CONTRACT IN FULL OR IN PART:**

If at any time after acceptance of the Tender, HCL shall decide to foreclose or reduce the scope of the work(s) and hence not require the whole or any part of the work to be carried out, the Engineer-in-Charge shall give 10 days notice in writing to that effect to the contractor, provided that:
In the event, any such action is taken by HCL, the contractor shall be paid full amount for the up to date quantum of work executed at work site as per billing schedule under the relevant items of work under this contract and in addition, a reasonable amount as certified by the Engineer-in-Charge or any other agency appointed by HCL for those supplied items which could not be utilized for execution of the work to the full extent because of the foreclosure.

5. **FORCE MAJEURE EVENTS:**

If at any time during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of war, act of hostility of public enemy, civil disruption or sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lock-outs or acts of God (here-in-after referred to as events), provided notice of the happening of any such eventuality is given by the either party to the other within 21 days from the date of occurrence thereof, neither party shall by reasons of such event be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance / execution under the contract. Provided also that such performance / execution under the contract should commence as soon as practicable, after such event has come to an end or ceased to exist and the decision of HCL as to whether the performance in whole or in part or any execution under this contract is prevented or delayed by reasons of any such event for a period exceeding 60 days, either party may opt to terminate the contract. If the contract is terminated under this clause, HCL shall have the liberty to take over from the contractor at a reasonable price, all unused, undamaged and acceptable materials, machinery, equipments, etc. at the site, being used for the performance of the contract and in the possession of the contractor at the time of such termination of such portion thereof as HCL may deem it fit, except such materials, equipments, etc. that the contractor may with the concurrence of HCL elect to retain. It is also understood in addition that this Force Majeure clause will cover parties' inability to perform on account of change in law or imposition of rules or restrictions by the Government.

6. **AMICABLE RESOLUTION:**

a) Save where expressly stated to the contrary in this contract, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this contract including disputes, if any, with regard to any acts, decision or opinion of the Engineer-in-Charge and so notified in writing by either Party to the other (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set forth in part (b) below.

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b) Either Party may require such Dispute to be referred to the work in charge of HCL and the contractor for amicable settlement. Upon such reference, the two shall meet at the earliest as per their mutual convenience and in any event within fifteen (15) days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicable settled within fifteen (15) days of such meeting, either Party may refer the Dispute in accordance with the provisions of part (c) below.

c) In the event that any Dispute has not been resolved as per the provisions of (b) above, the same shall be referred to the Director or a person of equivalent designation, of HCL and the contractor for amicable settlement. Upon such reference, the two shall meet at the earliest as per their mutual convenience and in any event within fifteen (15) days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicable settled within fifteen (15) days of such meeting between the two, either Party may refer the Dispute to arbitration in accordance with the provisions of Arbitration clause.

7. **ARBITRATION:**

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes relating to Railways, Income –Tax, Customs & Excise Department), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14th December, 2022 and the decision of AMRCD on the said dispute will be binding on both the parties.

On Behalf of Hindustan Copper Limited

Nisha Murmu

Dy. Mgr. (Chem.)-M&C

Nisha Murmu
D.M. (Chem.)- M & C

To be submitted in Duplicate (For Accounts holder in other than SBI)
MANDATE FORM FOR ELECTRONIC PAYMENT THROUGH INTERNET
(For RTGS facility)

To,
Hindustan Copper Limited,
.....
.....
.....
Dear Sir,

Sub: Authorization for release of payment due from HCL,..... through Electronic fund transfer RTGS.

(Please fill in the information in CAPITAL LETTERS. Please TICK wherever it is applicable)

1. Name of the Party: .....
2. Address of the Party: .....
.....
City.....Pin Code.....
PAN No.....e-mail ID.....

3. Particulars of Bank:

Bank Name		Branch Name	
Branch Place		Branch City	
Pin Code		Branch Code	
MICR No.			
(9 digits code number appearing on the MICR Band of the cheque supplied by the Bank. Please attach Xerox copy of a cheque of your Bank for ensuring accuracy of the Bank name, Branch name and Code number)			
Account Type	Savings	Current	Cash Credit
Account Number (as appearing in the in the Cheque Book)			
RTGS/IFSC Code			

4. Date from which the mandate should be effective:

I hereby declare that the particulars given above are correct and complete. If any transaction is delayed or not effected for reasons of incomplete or incorrect information, I shall not hold Hindustan Copper Limited responsible. I also undertake to advise any change in the particulars of my account to facilitate updation of records for purpose of credit of amount through RBI EFT/ Internet/RTGS.

Place:
Date:

Signature of the Party/Authorized Signatory

Certified that particulars furnished above are correct as per our records.

Bank's Stamp:

Date:

(Signature of the Authorized Official from the Banks)

N.B.: RTGS facilities Centre;

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपकम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph: (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 13

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that there is no scope of damage of top soil during the course of mining operation in Surda Mining Lease as the project is a totally underground mining project.

This undertaking is being submitted towards compliance of condition no. 15, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Date: 22.07.2024
Place: Moubhandar

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
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CIN: L27201WB1967GOI028825

Annexure 14

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that concurrent reclamation plan as per IBM approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Divisional Forest Officer, Jamshedpur with a copy to Nodal Officer of State Govt & Regional Office at Ranchi of MoEF& CC, GoI on or before 30th April every year for the preceding financial year.

This undertaking is being submitted towards compliance of condition no. 16, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
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इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभंडार-832103
झारखण्ड

Date: 22.07.2024
Place: Moubhandar

हिन्दुस्तान कॉपर लिमिटेड
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CIN: L27201WB1967GOI028825

Annexure 15

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that period of diversion of the forest land of 65.52 ha under this approval shall be for a period co-terminus with the period of the mining lease granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under.

This undertaking is being submitted towards compliance of condition no. 17, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
सदैकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरका एक उपक्रम)
इण्डियन कॉपर कॉम्प्लेक्स
मऊभंडार-832103
झारखण्ड

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
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CIN: L27201WB1967GOI028825

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that the surface area over the mine shall not be allowed to be used for construction of residential buildings or labor camps.

This undertaking is being submitted towards compliance of condition no. 18, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

एस० एस० सेठी
कार्यकारी निदेशक

Date: 22.07.2024
Place: Moubhandar

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
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CIN: L27201WB1967GOI028825

Annexure 17

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that green cover on the ground over the underground part of mine shall be maintained as forest and supplemented by plantations in gaps at the cost of user agency as advised bt the State Government.

This undertaking is being submitted towards compliance of condition no. 19, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

एस० एस० सेठी
कार्यकारी निदेशक

Date: 22.07.2024
Place: Moubhandar

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environment Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The General Manager-ICC
Hindustan Copper Limited
M/s Hindustan Copper Limited.Indian Copper Complex, Moubhandar,Ghatsila,East Singhbhum,Jharkhand-832103

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/MIN/26614/2012 dated 05 May 2016. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22A001JH124978**
2.	**File No.**	J-11015/80/2012-IA-II(M)
3.	**Project Type**	New
4.	**Category**	A
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Surda Copper Mine
7.	**Name of Company/Organization**	Hindustan Copper Limited
8.	**Location of Project**	Jharkhand
9.	**TOR Date**	23 Jan 2015

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 30/05/2022

(e-signed)
Pankaj Verma
Scientist E
IA - (Non-Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

This is a computer generated cover page.

F.No. J-11015/80/2012-IA. II (M)
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division
******

Indira Paryavaran Bhavan
Vayu Wing, 3rdFloor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 30th May, 2022

To

M/s Hindustan Copper Limited
(Shri Sanjay Kumar Singh-Unit Head/ICC)
Indian Copper Complex
P.O Moubhandar-832103
Dist-East Singhbhum, Jharkhand

Subject: Surda Copper Mine for production of 0.9 million TPA (ROM) by M/s Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA:323.16 ha) – Environmental Clearance- reg.

Sir,

This has reference to proposal no. IA/JH/MIN/145023/2020 of M/s Hindustan Copper Limited is for production of 0.9 Million Tonne per annum (MTPA) of Copper Ore from – Surda Mine- (located at Survey Nos.100,101,102, 160 &1098, at Villages Surda, Sohada, Benasole, Pathargora, Forest Block, Tehsil Mosaboni, District East Singhbhum, State Jharkhand. The mining lease is located on Survey of India Topo-sheet no. 73 J/6 bounded between latitudes 22° 32"42" N and 22° 34"19" N and longitudes 86° 25"41" E and 86° 26"42" E.

2. The said project/activity is covered under Category 'A' [Sl.no. 1(a) of Schedule: "List of project or activities requiring prior environmental clearance"] of MoEF&CC.

3. The project proponent submitted that the initially the proposal of TOR was considered by the Expert Appraisal Committee in its meeting held during 20-22 June, 2012 to determine Terms of Reference (TOR) for undertaking detailed EIA study. The Committee observed that this is a case of violation of the Environment (Protection) Act, 1986 as the mine continues to operate after it fell due for renewal without requisite prior environment clearance. Accordingly, the Ministry initiated the actions on violation as per OM dated 12.12.2012 and issued letter to Project Proponent dated 08.05.2013, 02.09.2013 and 07.04.2014 for taking actions on violation. The Hon'ble High Court of Jharkhand, in its WP (C) no. 2364 of 2014, dated 28.11.2014, in the matter of Hindustan Copper Limited VsUoI & Ors., has quashed the order dated 07.04.2014 and directed to prescribe the Terms of Reference for capacity expansion and renewal of the mining lease of Surda Copper mine. The Ministry has examined the issues and the TOR was issued vide letter no J11015/80/2012-IA.II(M) dated 23rd January, 2015. Further Proponent submitted the EIA/EMP report online to the Ministry for seeking environmental clearance after conducting public hearing. The proposal was appraised in the EAC held during June 22-23, 2016 and July 21-22, 2016. Based on the information submitted, discussion held, the Committee recommended the proposal for

environmental clearance subject to forest clearance of Surda copper mine. PP vide letter no HCI/DIR(M)/EIA-EMP/SRD/MoEf/10/2019 dated 03.10.2019 submitted on PARIVESH portal on 28.10.2019, the matter has been examined in the Ministry and noted that PP has submitted the past production details from 1992-93 till 2018-19 based on the production details submitted by the PP it was observed that PP has been carried out the Mining operations without Prior EC Under the EIA notification 1994/2006 and exceeded the base year(i.e.1993-94) production to deal such cases Ministry issued the vide notification no 804(E) dated 14.03.2017. Thus the proposal was forwarded to the EAC (V) sector as a lateral entry proposal with the approval of the competent authority since the proposal was under the consideration in the Ministry at the time of notification issued by the Ministry. PP vide letter no.HCL/Ho/EIA/EMP/SRD/ MoEFCC/ 2020 dated 04.02.2020 submitted the FORM-I. The proposal was considered in the EAC (Violation) in its meeting held during 3rd-4th February, 2020. The Committee based on the discussion held and document submitted by the PP recommended the proposal for Surda Copper Mine 0.9 million TPA (ROM) by M/s. Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 388.68 ha) for issuing the Term of Reference (ToR) on 21.02.2020 under the provisions of Ministry's notification 804(E) dated 14.03.2017 along with the specific Term of Reference for undertaking EIA and preparation of Environmental Management Plan (EMP).

4. The proposal was considered for Environmental Clearance in EAC meeting held on 22nd -23rd April 2020, 4th June,2020 and 6th -7th August,2020.

5. Project proponent submitted that baseline environmental data generated by Env. Engg. Laboratory of M/s MECON for the period 06-02-2020 to 06-03-2020. Total Mining Lease Area of the project is 388.68 Ha having 149.03 ha of Forest land in it. Out of 149.03 Ha of FL, 83.51 Ha has been diverted whereas 65.52 Ha is yet to be diverted. PP apprised EAC that any u/g mining or any activities related to u/g mining shall not be carried out in the forest land within mining lease for which FC to be acquired. EAC noted that PP has submitted the land use plan of 323.16 ha (excluding the forest land for which FC to be obtained). EAC also noted that credible action against the PP u/s 19 of E(P) act 1986 has not been initiated. EAC also made an observation that instant project is for the first time EC and therefore should not be considered as an expansion project as far as EC is concerned. Accordingly, title of the project may be modified. PP apprised EAC that credible action has been initiated and complaint case has been filed by the State PCB, Jharkhand.

6. EAC deliberated the layout plan clearly demarcating the forest land (149.03 ha) already diverted (83.51 ha) and yet to divert (65.52 ha), Revised damage cost, Revised Post Mining Land Use Plan and Water Quality Entering the Stream from Mining &also ground water quality around the mine etc. Regarding Forest Clearance which is co-terminus with Mining lease, PP apprised EAC that Forest Department vide letter no. 1507 dated 15.06.2020, directed to submit document of lease extension for extension of FC as per extended period of Surda Mining Lease. HCL will be submitting the prescribed documents to the State Forest Department for Extension of FC.

7. Project Proponent submitted that the Surda is part of Mosaboni Mining lease and the mine lease was granted over an area of 6923ha for the period of 20 years i.e. from 16.06.1939 to 15.06.1984 in favour of M/s Hindustan Copper limited. The mine lease was 1st renewed from 16.06.1984 to 15.06.2004. Further PP submitted that the mine lease area of 2430ha was surrendered on 5.08.1994 to the state Government. The 2nd renewal was granted from 16.06.2004 to 15.06.2014 over an area of 388.68ha

and 4104.32 ha was surrendered vide gazette notification dated 22.06.2004. PP submitted that for the 3rd renewal was applied and obtained the Form-D on 18.03.2013 over the area of 388.68ha. Further PP submitted that the lease was extended for the period of 5 years w.e.f 15.07.2017 till 31.03.2020 vide letter no 517(M) dated 18.03.2015 and the lease deed was executed for 5 years. Now PP submitted that the mine lease renewal application was submitted to the State government as per the provisions of Mineral (Mining by Government Company) Rule 2015.

8. Total mine lease area is of 388.68ha out of which 149.030 ha is forest land, 111.048 ha is agricultural land, 118.696ha is Barren land, 3.504ha is surface bodies; and Settlements is 3.165ha. PP reported that the Stage-II Forest diversion permission has been accorded by Ministry of Environment and Forest vide letter no. 8-64/93–FC dated 15.05.1998 for Mosaboni, Surda, Dhoboni and Pathargora mining lease area over of 189.74ha (47.49ha is for surface mining already broken up and 142.25ha for underground mining) of Forest Land in favour of M/s Hindustan Copper Limited. Mining Plan along with Mine Closure Plan was approved by the IBM, vide No. 314 (3)/2012-MCCM (CZ)/ MP- 36/181, dated 18.02.2015, under rule 24 A of MCR, 1960 and rule 23(B) of MCDR 1988. As per the Approved mine plan the mining will be carried out by mechanised underground method by Horizontal Cut & Fill, Room & Pillar and Post Pillar Methods with with drilling and blasting. PP submitted that mining Plan for further period of 5 years from 1.04.2020 has been provisionally approved by IBM letter No. RAN/ ESB/Cu/MP-36/2019-20 dated 02.04.2020. PP submitted that total geological reserve is 28.57 Million Tonne, Extractable reserve is 20 Million Tonnes, Percent (%) of extraction is 70%. PP submitted that life of mine will be 30 years. PP submitted that one external waste rock dump created during early 1950s, Area of each dump shall be 5.49 ha, Height of each dump shall be ~5 m, Quantity (in MCm) of OB in each dump shall be 0.14 MCM, No. of OB dumps reclaimed is one.

9. Project Proponent reported that there is no National Parks, Wildlife Sanctuaries, Tiger Reserves located within 10 km radius of the mining lease boundary. One Schedule-I species namely Python molurus was reported within the study area. It was informed by the project proponent that conservation plan for Schedule I species has been prepared for the adjacent Rakha Mining Lease which will be implemented in case of Surda Mine Lease also. The said Conservation Plan for the adjacent Rakha mining lease is under approval.

10. The Public Hearing was conducted on 15thDecember, 2015 under the chairmanship of Shri B. K. Munda, Additional District Magistrate, East Singhbhum, District, Jharkhand. The representative of Regional Office from Jharkhand State Pollution Control Board was also present. The Committee discussed the issues raised during public hearing. There is no court case/ litigation pending against the project. The total project cost is estimated to be 203 Crores. The capital cost of the project towards implementation of EMP is estimated to be Rs. 157.00 Lakhs and recurring cost to be Rs. 104.0 Lakhs per year.

11. The project proponent submitted the past production details vide letter no.2995 dated 18.09.2019 from 1992-93 to 2017-18 and PP letter nil dated nil, as per production details it resembles PP had been carried out the mining operations from 1992-93 to2017-18 and 2018-19 without Prior EC under the EIA notification 1994/2006. Thus the instant proposal is deemed fit in to the violation of E (P) Act, 1986 as the mine was in operation without obtaining Environmental Clearance. Project Proponent has submitted the affidavit no IN-DL19351350784015S dated 04 February, 2020 in compliance of the Ministry's OM no. 3-50/2017-IA.III (Pt.), dated 30th May

2018 w.r.t. judgment of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

12. The project proponent reported that the total water requirement will be 1300m3/Day out of which 160m3/day will be required for drinking purpose. PP also reported that 1530m3/day water demand will be met by recycling effluents generated at the mine for the industrial usage. PP submitted that existing Ground water level in (M): 12 – 16 m below ground level. PP also submitted that permission for drawl of ground water received from Central Ground Water Authority vide letter no. 21-4(155)/MER/CGWA/2013-1095 dated 13 July, 2015. Withdrawal of surface water submitted to Secretary, Water Resources Department, Govt. of Jharkhand vide letter no. HCL/ICC/GM(M)/SRD/13 dated 18.05.2016.

13. The total capital cost Rs. 5.6478 Crores capex incurred between 1993-94 to 2019 and Rs. 203 Crores will be spent on expansion Total Cost is Rs 211.8519 Crore. The capital cost of the project towards implementation of EMP is estimated to be Rs. 157.00 Lakhs and recurring cost to be Rs. 104.0 Lakhs per year. PP submitted that budget earmarked for CSR activity for 2019 – 20 – Rs. 1.9773 Crores. The project will be generating the employment of 1600 persons.

14. EAC in its meeting held on 04.06.2020 deliberated on the information as presented and submitted by the PP. EAC observed that PP has submitted the letter dated 05.08.2020from Secretary, Mines, Department of Mines and Geology, Govt. of Jharkhand regarding extension of mining lease validity. EAC further noted PP has submitted the total budgetary provision of Rs 4.8425 Crores for Remediation Plan, Natural and Community Resource Augmentation Plan. EAC deliberated on the damage cost assessed by the PP. EAC also deliberated on the activities proposed under the plans and advised PP that proposed activities should not be confined within mining lease area instead should be planned in the surrounding. EAC further advised PP to revise the cost of rain water harvesting structures under NRA and development of roads under CRA. EAC, therefore, in view of the aforesaid suggestion, advised PP to revise the damage cost and activities as suggested and to be presented before the EAC by tomorrow i.e on 07.08.2020.

15. PP in view of the above suggestions of the EAC (Violation), revised the cost for Remediation Plan, Natural Resource Augmentation Plan and Community Resource Augmentation Plan to Rs 570.71 Lakhs. EAC also noted that Credible Action U/s 15 of the E(P) Act has been initiated and case has been filed in the Court of Chief Judicial Magistrate, Jamshedpur. EAC after detailed deliberation on the information submitted by the PP (EIA/EMP report, PH issues, Form 2, Additional information, Annexures, etc), recommended the proposal of Surda Copper Mine for production of 0.9 million TPA (ROM) located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 323.16 ha) by M/s Hindustan Copper Ltd for grant of Environmental Clearance subject to the compliance of following Specific conditions in addition to all Standard conditions applicable for such projects:

16. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto; and after accepting the recommendation of EAC (Violation) meeting held during August, 6-7, 2020, here by decided to accord the Environmental Clearance (EC) under the provisions thereof to the above mentioned proposal of M/s Hindustan Copper Ltd of Surda Copper Mine for production of 0.9 million TPA (ROM) located at village (s) - Surda, Sohada, Pathargora, Benashole

villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 323.16 ha) for grant of Environmental Clearance subject to the compliance of following Specific conditions in addition to all Standard conditions applicable for such projects:

A. Specific Conditions

I. EAC recommended for an amount of Rs 570.71 Lakhs towards Remediation plan and Natural and Community Resource Augmentation plan to be spent within a span of three years. The details are given below:

Remediation Plan along with Cost:

Attributes	Activity Proposed	Year 1	Year 2	Year 3	Total in₹lakhs
Air & Noise Environment	Providing medical equipment / instruments to Community Health Centre, Kendadih and Sub-Divisional, Hospital Ghatshila	5	5	2	12
	Construction of paved roads in Village Sohada.	7	7	4	18
Total Air Environment		**12**	**12**	**6**	**30**
Water Environment	Construction of check dam on nallas to ensure clarified water for downstream users to be selected in consultation with State administration.	3	3	1.5	7.5
Total Water Environment		**3**	**3**	**1.5**	**7.5**
Biological Environment	Plantation of locally growing variety of trees which provide fruits and other Non-Timber Forest Produce (NTFP) in consultation with District administration & local panchayats outside the ML area. ~45000 trees will be planted @ ₹ 500 per tree	100	80	45.85	225.85
	Free distribution of 25,000 saplings of locally growing fruit trees procured from State Forest Department @ ₹15 per sapling (Rate charged by Jharkhand State Forest Dept.)	1.5	1.5	0.75	3.75
Total Biological Environment		**101.5**	**81.5**	**46.6**	**229.6**
Total Fund For Remediation Measures		**116.5**	**96.5**	**54.1**	**267.1**

Natural Resource Augmentation Plan with the cost:

Sl. No.	Activity Proposed	Year 1	Year 2	Year3	Total (in ₹ lakhs)
	Solar Drinking water structure (Borewell with Motor fitting)including Soak PitforWaterRecharging invillagesMatiya&Boraghat /schools in consultation with localauthorities.	3	3	2	8
	Conversion of conventional drinking water structure in to solar Drinking water structures in villages Rakha&Surda	3	3		6
	Rainwater Harvesting structures in nearby villages in consultationwith district administration.	13	10	5	28
	Solar Power system in 2 nos. Community Halls at KendadihandBhaduri villages	1	1	-	2
	Increase in tree density of degraded forests equivalent to ~31500 treesoutside ML area at cost of ₹ 500 per tree. Areas to be identified in consultation with concerned local Govt.officials.	60	60	37.32	157.32
	Plantation of ~8000 trees in Forest Blanks outside ML Area at costof₹ 500 per tree in consultation with concerned local Government officials.	15	15	10	40
	Total Fund For Natural Resource Augmentation Plan	**95**	**92**	**54.32**	**241.32**

Community Resource Augmentation Plan with the cost:

Sl. No.	Activity Proposed	Year	Year 2	Year 3	Total (in ₹ lakhs)
1	Installation of Sanitary Napkin Vending Machines and Incinerators with maintenance for a period of 03 years. The napkins would be provided free of cost.	1	1	1	3
2	Providing Smart class/ digital support/ equipment / text-books for school library for supporting schools in line with the VidyaBharti Model of the New Education Policy. The schools will be selected in consultation with local elected people"s representatives and District Administration.	14	10	10	34
3	Construction of paved roads and conversion of unpaved roads to paved roads in nearby villages in consultation with local elected	10.29	10	5	25.29

	people"s representatives and District Administration.				
Total fund for Community Resource Augmentationplan		**25.29**	**21**	**16**	**62.29**

Summary:

Sl. No.	Plan	Total(in ₹ lakh)			
		Year-1	Year-2	Year-3	Total
1.	**Cost of Remediation Plan**	116.5	96.5	54.1	267.1
2.	**Natural Resources Augmentation Plan**	95	92	54.32	241.32
3.	**Community Resources Augmentation Plan**	25.29	21	16	62.29
Total Fund		**236.79**	**209.5**	**124.42**	**570.71**

II. Remediation plan shall be completed in 3 years whereas bank guarantee shall be for 5 years. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.

III. Fund allocation for Corporate Environment Responsibility (CER) of Rs. 368 lakhs/- to be implemented as per the details submitted to the Ministry and to be spent in three years.

IV. Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

V. The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon"ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

VI. State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon"ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

VII. Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.

VIII. Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.

IX. The mining lease holder shall, after ceasing mining operations, under take re-grassing the mining area and any other area which may have been disturbed

due to their mining activities and restore the land to condition which is fit for growth of fodder, flora and fauna etc.

X. Wildlife conservation plan for Schedule I species shall be implemented as approved by the Competent Authority.

XI. Ecology & Biodiversity Conservation as included in the EIA/EMP should be strictly followed to mitigate the impacts as predicted in the EIA/EMP

B. Standard conditions

I. Statutory compliance

1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors.

4) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

5) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

6) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

7) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.

8) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is

transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

II. Air quality monitoring and preservation

9) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

10) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

III. Water quality monitoring and preservation

11) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then project proponent shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

12) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

13) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May),

monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

14) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

15) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.

16) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

17) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and vibration monitoring and prevention

18) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

19) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. project proponents must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

20) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The project proponent shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

V. **Mining plan**

21) The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).

22) The shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. Project proponent shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. **Land reclamation**

23) The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.

24) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

25) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

26) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

VII. **Transportation**

27) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, project proponent shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the project proponent in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport]

28) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. Project proponent shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

29) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

30) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

31) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

IX. Public hearing and human health issues

32) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

X. Corporate Environment Responsibility (CER)

33) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

XI. Miscellaneous

34) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

35) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

36) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC &its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

37) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.

38) The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data / information / monitoring reports.

39) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any

other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

17. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

18. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.

19. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

20. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

21. This issues with the approval of Competent Authority.

Yours faithfully,

Pankaj Verma

(Pankaj Verma)
Scientist 'E'

Copy to:

1. . The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi
2. . The Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi
3. . The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi
4. . The Secretary, Department of Forest, Government of Jharkhand, Secretariat, Ranchi
5. . The Chief Wildlife Warden of the State Govt. of Jharkhand, Ranchi
6. . The Additional Principal Chief Conservator of Forests, Regional Office (ECZ), Bunglow no. A-2, Shyamali Colony, Ranchi, Jharkhand- 834 002.
7. . The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
8. . The Chairman, Jharkhand State Pollution Control Board, Ranchi, Jharkhand

9. . The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110 001.
10.. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
11.. The District Collector, Singhbhum (East), Jharkhand.
12.. Guard File
13.. MoEF&CC website (PARIVESH Portal)

Pankaj Verma

(Pankaj Verma)
Scientist E

F.No. J-11015/80/2012-IA-II(M)
Ministry of Environment, Forest and Climate Change
Impact Assessment Division
***

3rd Floor, Vayu Wing,
Indira Paryavaran Bhavan,
Jor Bagh Road, Aliganj,
New Delhi-110 003.

Dated: 25th July, 2024

To,

M/s Hindustan Copper Limited.,
Indian Copper Complex,
Moubhandar, Ghatsila,
East Singhbhum – 832 103, Jharkhand

Subject: - Amendment in EC dated 30.05.2022 for Surda Copper Mine for production of 0.9 million TPA (ROM) by M/s Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 388.68 ha) - Amendment in EC - regarding.

Sir,

The instant proposal is for amendment in EC dated 30.05.2022 for Surda Copper Mine for production of 0.9 million TPA (ROM) in the mine lease area of 388.68 ha by M/s Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand.

2. Details of the proposal, as ascertained from the proposal documents are given as under:

i. The mine lease area is located between Latitude 22°32'42"Nto 22°34'19"N and Longitude 86°25'41"E to 86°26'42"E. The mine lease area falls under the Survey of India Toposheet No: 73 J/6 and falls in Seismic Zone-II.

ii. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" as the mining lease area is greater than 250ha and appraised at the Central level.

iii. The project was granted Environmental Clearance by the Ministry vide letter dated 30.05.2022 based on the recommendation of EAC (Violation) meeting held during August 6-7, 2020.

iv. Now, the Project Proponent requested for amendment in EC dated 30.05.2022 w.r.t amendment in mine lease area from 323.16 ha to 388.68 ha in order to execute the mine lease deed over an area of 388.68 ha. PP submitted the following reasons which mandates for amendment in EC

   i. Govt. of Jharkhand vide order dtd. 06.01.2022 have extended the lease period of Surda ML over an area 388.68 ha w.e.f. 01.04.2020 till 31.03.2040 as per provision of Mineral (Mining by Government Company) Rules, 2015.
   ii. EIA-EMP, Public Hearing have been conducted over an area of 388.68 ha.
   iii. The total mine lease area is 388.68 ha having 149.03 ha of forest land which consists of 83.51 ha diverted forest area (31.07 ha for Surface utilization & 52.44 ha for Underground activities) and yet to divert 65.52 ha. For remaining area of 65.52 ha, NPV for an amount of Rs 52,61,256.0 has already been deposited in the Ad-hoc CAMPA fund of Govt. of Jharkhand as per demand note of Forest Dept., letter dated 24.03.2022.
   iv. Mining Plan was approved by Indian Bureau of Mines vide letter dated 27.04.2022 over an area of 388.68 ha, with a restriction of mining activities within an area of 323.16 ha.
   v. Environmental Clearance was granted by the Ministry vide letter dated 30.05.2022 for Surda Copper Mine for production of 0.9 million TPA (ROM) by M/s Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 323.16 ha).
   vi. Govt. of Jharkhand vide letter dated 29.08.2022 mandated to have similarity between mining lease area of 388.68 ha with EC accorded area in order to execute the mining lease deed.

3. Observation and Recommendation of the earlier 5th EAC committee meeting held during 18 to 20 October, 2022:

The EAC noted that the instant proposal is for amendment in EC dated 30.05.2022 w.r.t amendment in mine lease area from 323.16 ha to 388.68 ha in order to execute the mine lease deed over an area of 388.68 ha. The Project Proponent informed the EAC that the EC was obtained on 30.05.2022 for production of 0.9 million TPA (ROM) in the mine lease area of 323.16 ha. Project Proponent also informed the EAC that the total mine lease area is 388.68 ha, out of which forest land is 149.030 ha, already diverted area is 83.51 ha (31.07 ha for Surface utilization & 52.44 ha for Underground activities) and the area yet to be diverted is 65.52 ha. Further, the Project

Proponent informed the EAC that in view of the forest diversion, EC has been restricted to 323.16 ha whereas the Environmental Impact Assessment (EIA)/Environmental Management Plan (EMP), Public Hearing have been conducted over an area of 388.68 ha.

The Project Proponent informed the EAC that the Govt. of Jharkhand vide order dated 06.01.2022 has extended the lease period of Surda mine lease over an area of 388.68 ha w.e.f. 01.04.2020 to 31.03.2040 as per provision of Mineral (Mining by Government Company) Rules, 2015. Project Proponent also informed that the Govt. of Jharkhand vide letter dated 29.08.2022 mandated to have similarity between mining lease area of 388.68 ha with EC accorded area in order to execute the mining lease deed.The Project Proponent also has shown the land use pattern over an area of 388.68 ha including the unutilized area of the forest land of 65.52 ha for which FC is yet to be obtained and Project Proponent also informed that the Net present value (NPV) for an amount of Rs 52,61,256.0 has already been deposited in the Ad-hoc CAMPA fund of Govt. of Jharkhand as per demand note of Forest Dept., letter dated 24.03.2022. Further, Project Proponent informed that no mining activities will be undertaken over an area of 65.52 ha and the mining activities will be restricted to 323.16 ha only out of total mine lease area of 388.68 ha as per the Mining Plan approved by the Indian Bureau of Mines (IBM). Project Proponent also informed the EAC that there is no court case/litigation pending against the project.

Based on the above discussions held, the EAC (Non-Coal Mining)recommended the proposal during the 5th EAC meeting held during 18th-20th, October, 2022 for amendment in EC dated 30.05.2022 for Surda Copper Mine of M/s Hindustan Copper Ltd., for production capacity of 0.9 million TPA (ROM) in the mine lease area of 323.16 ha out of 388.68 ha, located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District: East Singhbhum, Jharkhand along with the following additional specific conditions: -

i. Mining activity shall be restricted over an area of 323.16 ha only.

ii. No mining activities shall be carried out over an area of 65.52 ha for which the Stage-I FC is yet to be obtained.

iii. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

iv. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain the records digitally.

v. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

vi. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres. PP shall explore the possibility of engaging electric vehicles/CNG to reduce the diesel consumption.

vii. The Project Proponent shall submit the action taken report and the amount spent towards the Ecological Damage Assessment, Natural Resource Augmentation Plan (NRAP), and Community Resource Augmentation Plan (CRAP) to the Ministry's Integrated Regional Office.

viii. The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent".

ix. All other terms and conditions mentioned in the EC letter dated 30.05.2022 shall remain unchanged.

5. The matter was examined in the Ministry and ADS were raised by the Ministry dated 28.11.2022, 14.12.2022 and 31.03.2023 to provide a)FC Stage-I for the 65.52 ha of remaining undiverted forest land; or b) Revised Mining plan for the reduced mine lease area of 323.16 ha approved by IBM.

With regard to the aforesaid ADS, project proponent replied on Parivesh portal and submitted a letter dated 15.06.2024 issued by FC Division of the Ministry. Vide aforesaid letter FC division of the Ministry has accorded " In-principle/Stage-I" approval under section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 65.52 ha of forest land for expansion of Surda Copper underground mine project of M/s Hindustan Copper Limited in Singhbhum District, Jharkhand.

6. **Observation and Recommendation of the Committee during 4 to 5 July, 2024:**

The EAC noted that the Project Proponent vide letter dated 15.06.2024 has obtained the Forest Clearance stage-I for diversion of 65.52 ha of forest land for expansion of Surda Copper underground mine project of M/s Hindustan Copper Limited in Singhbhum District, Jharkhand. The EAC reiterated that out of 388.68 ha of mine lease area, 149.03 ha area is forest land, PP had earlier obtained FC for an area of 83.51 ha, and has now obtained FC stage I for the remaining forest land of 65.52 ha , hence, as of now PP has FC for the entire forest land present in the lease area. Accordingly, EAC concluded that the conditions (i) and (ii) issued vide minutes of the 5th EAC meeting held during 18th-20th, October, 2022 needs to be deleted. EAC also noted that the Revised Mining plan for the reduced mine lease area of 323.16 ha is not required.

Based on the above discussions, the EAC (Non-Coal Mining) in its 31st meeting held during 4-5 July 2024 and supersession of earlier EAC meeting minutes dated 18-20th October,2022 **recommended** for amendment in EC dated 30.05.2022 for Surda Copper Mine of M/s Hindustan Copper Ltd., for production capacity of 0.9 million TPA (ROM) in the mine lease area of 388.68 ha, located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District: East Singhbhum, Jharkhand along with certain conditions.

7. The matter was examined in the Ministry in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and the undersigned is directed to say that the Ministry of Environment Forest & Climate Change after accepting the recommendation of EAC during its meeting held during 4-5 July 2024 hereby accords amendment in EC dated 30.05.2022 for Surda Copper Mine of M/s Hindustan Copper Ltd., for production capacity of 0.9 million TPA (ROM) in the mine lease area of 388.68 ha located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District: East Singhbhum, Jharkhand along with the following additional specific conditions: -

A. **Additional Specific Conditions**

i. Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

ii. The Project Proponent shall undertake Occupational Health survey for initial and Periodical medical examination of the workers engaged in the Project and maintain the records digitally.

iii. Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

iv. Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres. PP shall explore the possibility of engaging electric vehicles/CNG to reduce the diesel consumption.

v. The Project Proponent shall submit the action taken report and the amount spent towards the Ecological Damage Assessment, Natural Resource Augmentation Plan (NRAP), and Community Resource Augmentation Plan (CRAP) to the Ministry's Regional Office.

vi. The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent".

vii. All other terms and conditions mentioned in the EC letter dated 30.05.2022 shall remain unchanged.

8. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.

9. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

10. This issues with the approval of the Competent Authority.

Yours faithfully,

25.07.24

(Rajeev Ranjan)
Scientist 'E'

Copy to:

i. **The Secretary,** Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
ii. **The Secretary,** Department of Mines and Geology, Government of Jharkhand, Secretariat, Ranchi.
iii. **The Secretary,** Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
iv. **The Secretary,** Department of Forests, Government of Jharkhand, Secretariat, Ranchi.
v. **The Chief Wildlife Warden of the State Govt. of Jharkhand,** Forest Department, Ranchi.
vi. **The Deputy Director General of Forests (C),** Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Bungalow No. A-2, Shyamali Colony, Ranchi – 834002.
vii. **The Chairman,** Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
viii. **The Member Secretary,** Central Ground Water Authority, 18/11, Jam Nagar House, Man Singh Road, New Delhi-110011.
ix. **The Chairman,** Jharkhand State Pollution Control Board, H.E.C., Dhurwa, Ranchi-834004, Jharkhand.
x. **The Controller General,** Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur- 440 001.
xi. **The District Collector,** District East Singhbhum, Government of Jharkhand.
xii. **Guard File.**
xiii. **PARIVESH Portal.**

25.07.24

(Rajeev Ranjan)
Scientist 'E'

(भारत सरकारका एक उपकम)
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पो. ऑ. मऊभंडार- 832103
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e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure-**20**

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that no labor camp shall be established on the forest land and shall provide LPG cooking fuel and electricity to the laborers and the staff working at the site for avoiding damage and pressure on the nearby forest areas.

This undertaking is being submitted towards compliance of condition no. 21, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

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कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure 21

Latitude and Longitude with the forward and backward bearing of the proposed diverted forest area of 65.52 Ha within Surda Mining Lease of M/s Hindustan Copper Limited.

Locations	Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between
			Latitude, N	Longitude, E	D	M	S	D	M	S	
	A	AB1	22° 34' 18.848" N	86° 25' 31.849" E	167	3	11.860	347	3	11.86	29.61
	AB1	AB2	22° 34' 17.910" N	86° 25' 32.085" E	163	44	43.820	343	44	43.82	20.36
	AB2	AB3	22° 34' 17.275" N	86° 25' 32.287" E	166	21	46.230	346	21	46.23	16.65
	AB3	AB4	22° 34' 16.749" N	86° 25' 32.427" E	165	31	55.330	345	31	55.33	83.33
	AB4	AB5	22° 34' 14.128" N	86° 25' 33.167" E	165	22	59.320	345	22	59.32	50.12
	AB5	AB6	22° 34' 12.552" N	86° 25' 33.616" E	165	35	57.690	345	35	57.69	50.04
	AB6	AB7	22° 34' 10.978" N	86° 25' 34.059" E	165	54	17.090	345	54	17.09	49.77
	AB7	AB8	22° 34' 09.409" N	86° 25' 34.490" E	167	14	36.900	347	14	36.90	58.51
	AB8	AB9	22° 34' 07.555" N	86° 25' 34.950" E	160	52	9.650	340	52	9.65	41.28
	AB9	AB10	22° 34' 06.289" N	86° 25' 35.429" E	167	33	47.060	347	33	47.06	50.31
	AB10	AB11	22° 34' 04.692" N	86° 25' 35.815" E	165	46	59.210	345	46	59.21	50.18
	AB11	AB12	22° 34' 03.112" N	86° 25' 36.253" E	167	57	57.030	347	57	57.03	48.12
	AB12	AB13	22° 34' 01.583" N	86° 25' 36.610" E	163	37	56.070	343	37	56.07	55.29
	AB13	AB14	22° 33' 59.860" N	86° 25' 37.163" E	165	39	41.370	345	39	41.37	46.52
	AB14	AB15	22° 33' 58.395" N	86° 25' 37.572" E	165	23	25.460	345	23	25.46	49.74
	AB15	AB16	22° 33' 56.832" N	86° 25' 38.018" E	165	46	40.010	345	46	40.01	50.42
	AB16	AB17	22° 33' 55.244" N	86° 25' 38.459" E	165	55	20.020	345	55	20.02	50.00
	AB17	AB18	22° 33' 53.668" N	86° 25' 38.891" E	165	17	44.380	345	17	44.38	49.55
	AB18	AB19	22° 33' 52.111" N	86° 25' 39.338" E	166	4	33.560	346	4	33.56	50.97
	AB19	AB20	22° 33' 50.504" N	86° 25' 39.774" E	165	41	47.520	345	41	47.52	48.75
	AB20	AB21	22° 33' 48.969" N	86° 25' 40.202" E	165	36	17.140	345	36	17.14	50.75
	AB21	AB22	22° 33' 47.372" N	86° 25' 40.650" E	164	8	17.840	344	8	17.84	50.37
	AB22	AB23	22° 33' 45.798" N	86° 25' 41.139" E	166	44	55.180	346	44	55.18	50.13
	AB23	AB24	22° 33' 44.213" N	86° 25' 41.547" E	164	18	52.500	344	18	52.50	49.21
	AB24	AB25	22° 33' 42.674" N	86° 25' 42.020" E	166	41	27.710	346	41	27.71	50.35
	AB25	AB26	22° 33' 41.082" N	86° 25' 42.432" E	166	14	7.830	346	14	7.83	50.23
	AB26	AB27	22° 33' 39.497" N	86° 25' 42.857" E	165	26	1.810	345	26	1.81	50.10
	AB27	AB28	22° 33' 37.922" N	86° 25' 43.305" E	164	29	58.320	344	29	58.32	48.05
	AB28	AB29	22° 33' 36.418" N	86° 25' 43.761" E	166	48	38.290	346	48	38.29	49.93
	AB29	AB30	22° 33' 34.838" N	86° 25' 44.166" E	168	17	23.390	348	17	23.39	51.12
	AB30	AB31	22° 33' 33.211" N	86° 25' 44.536" E	164	8	11.090	344	8	11.09	50.11

Annexure 21

Locations	Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between
			Latitude, N	Longitude, E	D	M	S	D	M	S	
Patch 1 & 9	AB31	AB32	22° 33' 31.646" N	86° 25' 45.022" E	164	30	21.080	344	30	21.08	50.62
	AB32	AB33	22° 33' 30.061" N	86° 25' 45.502" E	165	50	20.670	345	50	20.67	49.58
	AB33	AB34	22° 33' 28.499" N	86° 25' 45.933" E	165	19	44.700	345	19	44.70	50.35
	AB34	AB35	22° 33' 26.916" N	86° 25' 46.386" E	165	31	56.990	345	31	56.99	49.90
	AB35	AB36	22° 33' 25.347" N	86° 25' 46.829" E	165	47	9.890	345	47	9.89	49.51
	AB36	AB37	22° 33' 23.787" N	86° 25' 47.261" E	165	37	59.880	345	37	59.88	50.69
	AB37	AB38	22° 33' 22.192" N	86° 25' 47.708" E	165	54	44.000	345	54	44.00	49.87
	AB38	AB39	22° 33' 20.620" N	86° 25' 48.140" E	165	23	59.290	345	23	59.29	49.74
	AB39	AB40	22° 33' 19.056" N	86° 25' 48.585" E	166	34	4.750	346	34	4.75	30.24
	AB40	AB41	22° 33' 18.101" N	86° 25' 48.835" E	165	47	7.290	345	47	7.29	48.63
	AB41	AB42	22° 33' 16.569" N	86° 25' 49.259" E	163	32	26.250	343	32	26.25	70.50
	AB42	AB43	22° 33' 14.373" N	86° 25' 49.968" E	167	58	58.130	347	58	58.13	51.29
	AB43	AB44	22° 33' 12.743" N	86° 25' 50.348" E	165	51	59.050	345	51	59.05	49.01
	AB44	AB45	22° 33' 11.199" N	86° 25' 50.774" E	165	25	17.780	345	25	17.78	50.34
	AB45	AB46	22° 33' 09.616" N	86° 25' 51.224" E	165	56	7.730	345	56	7.73	50.06
	AB46	AB46'	22° 33' 08.038" N	86° 25' 51.656" E	165	13	10.220	345	13	10.22	39.68
	AB46'	RA27	22° 33' 06.793" N	86° 25' 52.018" E	68	37	57.850	248	37	57.85	21.16
	RA27	RA26	22° 33' 7.045" N	86° 25' 52.705" E	26	32	2.850	206	32	2.85	146.31
	RA26	C1'	22° 33' 11.310" N	86° 25' 54.976" E	26	57	22.550	206	57	22.55	61.68
	C1'	C1	22° 33' 13.100" N	86° 25' 55.949" E	243	19	49.910	63	19	49.91	53.40
	C1	B1	22° 33' 12.316" N	86° 25' 54.280" E	242	24	53.360	62	24	53.36	15.76
	B1	B2	22° 33' 13.415" N	86° 25' 54.681" E	298	38	4.810	118	38	4.81	50.66
	B2	B3	22° 33' 12.861" N	86° 25' 52.232" E	33	12	23.070	213	12	23.07	51.25
	B3	B4	22° 33' 12.077" N	86° 25' 53.792" E	121	54	18.770	301	54	18.77	49.41
	B4	B4'	22° 33' 14.259" N	86° 25' 53.209" E	211	53	53.700	31	53	53.70	39.66
	B4'	C1"	22° 33' 12.316" N	86° 25' 53.951" E	65	9	15.180	245	9	15.18	65.75
	C1"	UA19	22° 33' 13.244" N	86° 25' 56.024" E	26	57	22.550	206	57	22.55	30.43
	UA19	UA20	22° 33' 14.129" N	86° 25' 56.505" E	335	46	35.820	155	46	35.82	34.72
	UA20	UA21	22° 33' 15.157" N	86° 25' 56.002" E	350	44	19.650	170	44	19.65	23.41
	UA21	UA22	22° 33' 15.908" N	86° 25' 55.867" E	21	59	59.230	201	59	59.23	147.62
	UA22	UA23	22° 33' 20.366" N	86° 25' 57.785" E	338	16	45.590	158	16	45.59	150.14
	UA23	UA24	22° 33' 24.895" N	86° 25' 55.821" E	335	34	54.600	155	34	54.60	132.64
	UA24	UA25	22° 33' 28.816" N	86° 25' 53.885" E	355	38	21.440	175	38	21.44	81.93
	UA25	UA26	22° 33' 31.472" N	86° 25' 53.656" E	326	51	16.670	146	51	15.67	101.58
	UA26	UA27	22° 33' 34.231" N	86° 25' 51.700" E	4	23	18.590	184	23	18.59	135.50

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इन्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure - 21

Locations	Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between
			Latitude, N	Longitude, E	D	M	S	D	M	S	
	UA27	UA28	22° 33' 38.626" N	86° 25' 52.045" E	334	51	25.100	154	51	25.10	264.37
	UA28	E59	22° 33' 46.395" N	86° 25' 48.080" E	350	6	23.840	170	6	23.84	279.77
	E59	E58	22° 33' 55.352" N	86° 25' 46.360" E	335	23	33.600	155	23	33.60	89.85
	E58	E57	22° 33' 58.004" N	86° 25' 45.039" E	50	56	46.160	230	56	46.16	23.46
	E57	E56	22° 33' 58.487" N	86° 25' 45.675" E	148	1	39.280	328	1	39.28	76.01
	E56	UA29	22° 33' 56.395" N	86° 25' 47.093" E	14	12	19.480	194	12	19.48	105.40
	UA29	UA30	22° 33' 59.721" N	86° 25' 47.985" E	18	44	53.050	198	44	53.05	93.37
	UA30	UA31	22° 34' 2.600" N	86° 25' 49.024" E	27	15	51.980	207	15	51.98	129.19
	UA31	F4	22° 34' 6.342" N	86° 25' 51.081" E	351	47	0.150	171	47	0.15	68.92
	F4	F5	22° 34' 8.559" N	86° 25' 50.727" E	211	53	10.050	31	53	10.05	28.72
	F5	F6	22° 34' 7.764" N	86° 25' 50.199" E	208	58	50.010	28	58	50.01	30.45
	F6	F7	22° 34' 6.896" N	86° 25' 49.686" E	217	5	7.680	37	5	7.68	30.94
	F7	F1"	22° 34' 6.091" N	86° 25' 49.036" E	217	5	11.710	37	5	11.71	25.40
	F1"	F1'	22° 34' 5.430" N	86° 25' 48.504" E	316	28	33.260	136	28	33.26	67.09
	F1'	F1	22° 34' 7.007" N	86° 25' 46.877" E	31	38	10.900	211	38	10.90	24.70
	F1	F2	22° 34' 7.692" N	86° 25' 47.329" E	31	38	9.980	211	38	9.98	76.32
	F2	UA32	22° 34' 9.810" N	86° 25' 48.722" E	313	39	11.640	133	39	11.64	89.63
	UA32	UA33	22° 34' 11.814" N	86° 25' 46.443" E	338	35	8.500	158	35	8.50	62.59
	UA33	RA30	22° 34' 13.706" N	86° 25' 45.635" E	1	59	13.750	181	59	13.75	119.40
	RA30	RA31	22° 34' 17.587" N	86° 25' 45.764" E	285	19	41.370	105	19	41.37	39.87
	RA31	RA32	22° 34' 17.925" N	86° 25' 44.416" E	174	14	50.310	354	14	50.31	101.29
	RA32	RA33	22° 34' 14.649" N	86° 25' 44.785" E	245	56	46.100	65	56	46.10	11.00
	RA33	RA34	22° 34' 14.502" N	86° 25' 44.434" E	335	20	28.110	155	20	28.11	74.26
	RA34	RA35	22° 34' 16.693" N	86° 25' 43.340" E	287	45	5.060	107	45	5.06	33.99
	RA35	RA36	22° 34' 17.026" N	86° 25' 42.205" E	212	25	53.520	32	25	53.52	21.70
	RA36	RA37	22° 34' 16.429" N	86° 25' 41.800" E	317	29	31.980	137	29	31.98	92.30
	RA37	DA22	22° 34' 18.636" N	86° 25' 39.605" E	271	33	5.450	91	33	5.45	21.89
	DA22	DA23	22° 34' 18.650" N	86° 25' 38.841" E	270	16	34.520	90	16	34.52	49.99
	DA23	DA24	22° 34' 18.652" N	86° 25' 37.090" E	273	55	25.930	93	55	25.93	49.23
	DA24	DA25	22° 34' 18.755" N	86° 25' 35.370" E	271	48	51.730	91	48	51.73	50.59
	DA25	A	22° 34' 18.801" N	86° 25' 33.599" E	271	52	1.490	91	52	1.49	49.99

Patch 2	G1	G2	22° 34' 10.846" N	86° 26' 4.887" E	346	50	17.750	166	50	17.75	119.22
	G2	RA39	22° 34' 14.618" N	86° 26' 3.921" E	107	13	5.510	187	13	5.51	53.42
	RA39	RA41	22° 34' 14.110" N	86° 26' 5.710" E	152	30	46.790	332	30	46.79	82.31

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Locations	Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between
			Latitude, N	Longitude, E	D	M	S	D	M	S	
	RA41	G1	22° 34' 11.740" N	86° 26' 7.050" E	246	13	33.620	66	13	33.62	67.61
Patch 3	G6	G7	22° 34' 16.296" N	86° 26' 3.521" E	350	19	59.690	170	19	59.69	51.41
	G7	DA10	22° 34' 17.943" N	86° 26' 3.212" E	16	10	15.510	196	10	15.51	1.17
	DA10	DA9	22° 34' 17.980" N	86° 26' 03.223" E	94	10	7.390	274	10	7.39	70.68
	DA9	DA8	22° 34' 17.821" N	86° 26' 05.692" E	88	48	18.780	268	48	18.78	42.24
	DA8	RA38	22° 34' 17.855" N	86° 26' 7.171" E	92	0	20.080	272	0	20.08	64.80
	RA38	G6	22° 34' 17.800" N	86° 26' 9.450" E	255	1	2.160	75	1	2.16	175.13
Patch 4	RA17	RA18	22° 32' 59.924" N	86° 26' 19.040" E	148	24	15.120	328	24	15.12	31.81
	RA18	RA19	22° 32' 59.045" N	86° 26' 19.627" E	115	18	26.080	295	18	26.08	32.48
	RA19	RA20	22° 32' 58.597" N	86° 26' 20.657" E	54	19	7.450	234	19	7.45	29.26
	RA20	RA21	22° 32' 59.155" N	86° 26' 21.487" E	337	23	25.580	157	23	25.58	48.37
	RA21	RA17	22° 33' 0.605" N	86° 26' 20.830" E	247	56	30.460	67	56	30.46	55.25
Patch 5	RA12	RA13	22° 33' 3.339" N	86° 26' 10.211" E	131	19	18.990	311	19	18.99	228.99
	RA13	RA14	22° 32' 58.443" N	86° 26' 16.252" E	58	36	37.880	238	36	37.88	81.56
	RA14	RA15	22° 32' 59.833" N	86° 26' 18.684" E	345	28	4.490	165	28	4.49	88.08
	RA15	RA16	22° 33' 2.603" N	86° 26' 17.899" E	332	54	41.310	152	54	41.31	106.10
	RA16	UA10	22° 33' 5.669" N	86° 26' 16.195" E	332	30	18.550	152	30	18.55	45.08
	UA10	UA11	22° 33' 6.967" N	86° 26' 15.461" E	268	46	37.080	88	46	37.08	82.08
	UA11	UA12	22° 33' 6.900" N	86° 26' 12.588" E	266	52	36.000	86	52	36.00	64.92
	UA12	RA12	22° 33' 6.777" N	86° 26' 10.319" E	181	53	14.050	1	53	14.05	105.76
Patch 6	RA22	RA23	22° 33' 1.779" N	86° 26' 19.501" E	338	28	40.280	158	28	40.28	14.04
	RA23	RA24	22° 33' 2.203" N	86° 26' 19.319" E	270	48	46.760	90	48	46.76	14.74
	RA24	RA25	22° 33' 2.208" N	86° 26' 18.803" E	173	45	31.670	353	45	31.67	19.56
	RA25	RA22	22° 33' 1.576" N	86° 26' 18.880" E	70	49	36.080	250	49	36.08	18.80
Patch 7	RA28	RA29	22° 33' 17.621" N	86° 26' 38.795" E	350	8	15.690	170	8	15.69	64.65
	RA29	CD14'	22° 33' 19.691" N	86° 26' 38.399" E	103	3	52.490	283	3	52.49	2.70
	CD14'	CD14	22° 33' 19.670" N	86° 26' 38.490" E	165	57	47.400	345	57	47.40	14.90
	CD14	CD13	22° 33' 19.202" N	86° 26' 38.619" E	163	22	39.360	343	22	39.36	50.98
	CD13	CD12'	22° 33' 17.615" N	86° 26' 39.136" E	166	48	24.570	346	48	24.57	19.00
	CD12'	RA28	22° 33' 17.014" N	86° 26' 39.289" E	323	1	54.880	143	1	54.88	23.43

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एक उपक्रम
इण्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभण्डार-832109
झारखण्ड

Annexure - 21

Locations	Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between
			Latitude, N	Longitude, E	D	M	S	D	M	S	
Patch 8	RA1	RA2	22° 32' 51.077" N	86° 26' 27.442" E	329	14	23.350	149	14	23.35	136.57
	RA2	RA3	22° 32' 55.040" N	86° 26' 24.881" E	308	1	43.900	128	1	43.90	40.02
	RA3	RA4	22° 32' 55.838" N	86° 26' 23.774" E	247	50	2.040	67	50	2.04	92.79
	RA4	RA5	22° 32' 54.689" N	86° 26' 20.770" E	224	29	11.090	44	29	11.09	97.10
	RA5	RA6	22° 32' 52.428" N	86° 26' 18.397" E	184	16	2.600	4	16	2.60	75.59
	RA6	BC11'	22° 32' 49.976" N	86° 26' 18.210" E	147	45	32.140	327	45	32.14	42.99
	BC11'	BC12	22° 32' 48.797" N	86° 26' 19.018" E	74	7	16.140	254	7	16.14	37.67
	BC12	BC13	22° 32' 49.136" N	86° 26' 20.285" E	74	20	52.450	254	20	52.45	40.88
	BC13	BC14	22° 32' 49.499" N	86° 26' 21.662" E	71	10	18.710	251	10	18.71	101.03
	BC14	BC15	22° 32' 50.571" N	86° 26' 25.005" E	73	17	26.530	253	17	26.53	49.96
	BC15	RA1	22° 32' 51.044" N	86° 26' 26.679" E	73	15	53.250	253	15	53.25	19.80
Patch 10	B	BC1	22° 32' 43.119" N	86° 25' 58.633" E	73	28	48.410	253	28	48.41	37.26
	BC1	BC2	22° 32' 43.468" N	86° 25' 59.882" E	77	39	50.420	257	39	50.42	48.87
	BC2	BC3	22° 32' 43.813" N	86° 26' 01.552" E	70	4	59.370	250	4	59.37	51.15
	BC3	BC4	22° 32' 44.386" N	86° 26' 03.233" E	72	6	37.250	252	6	37.25	50.37
	BC4	RA7	22° 32' 44.895" N	86° 26' 04.910" E	72	15	26.930	252	15	26.93	29.16
	RA7	RA8	22° 32' 45.164" N	86° 26' 5.876" E	11	15	49.820	191	15	49.82	52.18
	RA8	RA9	22° 32' 46.853" N	86° 26' 6.231" E	297	5	50.430	117	5	50.43	115.34
	RA9	RA10	22° 32' 48.549" N	86° 26' 2.629" E	298	2	14.670	118	2	14.67	173.88
	RA10	RA11	22° 32' 51.188" N	86° 25' 57.245" E	266	56	27.400	86	56	27.40	24.44
	RA11	AB57	22° 32' 51.142" N	86° 25' 56.380" E	165	11	32.420	345	11	32.42	13.29
	AB57	AB58	22° 32' 50.725" N	86° 25' 56.511" E	165	18	7.970	345	18	7.97	51.26
	AB58	AB59	22° 32' 49.114" N	86° 25' 56.973" E	166	3	39.190	346	3	39.19	48.82
	AB59	AB60	22° 32' 47.575" N	86° 25' 57.391" E	166	23	19.830	346	23	19.83	51.38
	AB60	AB61	22° 32' 45.952" N	86° 25' 57.821" E	164	33	31.880	344	33	31.88	47.13
	AB61	B	22° 32' 44.476" N	86° 25' 58.267" E	166	8	39.03	346	8	39.03	43.02

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इण्डियन कॉपर कॉमप्लेक्स
डाक-मऊभण्डार-832103
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Latitude and Longitude with the forward and backward bearing of Surda Mining Lease (388.68Ha) of M/s Hindustan Copper Limited.

Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between pillars (m)
		Latitude, N	Longitude, E	D	M	S	D	M	S	
A	AB1	22° 34' 18.848" N	86° 25' 31.849" E	167	3	11.86	347	3	11.86	29.61
AB1	AB2	22° 34' 17.910" N	86° 25' 32.085" E	163	44	43.82	343	44	43.82	20.36
AB2	AB3	22° 34' 17.275" N	86° 25' 32.287" E	166	21	46.23	346	21	46.23	16.65
AB3	AB4	22° 34' 16.749" N	86° 25' 32.427" E	165	31	55.33	345	31	55.33	83.33
AB4	AB5	22° 34' 14.128" N	86° 25' 33.167" E	165	22	59.32	345	22	59.32	50.12
AB5	AB6	22° 34' 12.552" N	86° 25' 33.616" E	165	35	57.69	345	35	57.69	50.04
AB6	AB7	22° 34' 10.978" N	86° 25' 34.059" E	165	54	17.09	345	54	17.09	49.77
AB7	AB8	22° 34' 09.409" N	86° 25' 34.490" E	167	14	36.90	347	14	36.90	58.51
AB8	AB9	22° 34' 07.555" N	86° 25' 34.950" E	160	52	9.65	340	52	9.65	41.28
AB9	AB10	22° 34' 06.289" N	86° 25' 35.429" E	167	33	47.06	347	33	47.06	50.31
AB10	AB11	22° 34' 04.692" N	86° 25' 35.815" E	165	46	59.21	345	46	59.21	50.18
AB11	AB12	22° 34' 03.112" N	86° 25' 36.253" E	167	57	57.03	347	57	57.03	48.12
AB12	AB13	22° 34' 01.583" N	86° 25' 36.610" E	163	37	56.07	343	37	56.07	55.29
AB13	AB14	22° 33' 59.860" N	86° 25' 37.163" E	165	39	41.37	345	39	41.37	46.52
AB14	AB15	22° 33' 58.395" N	86° 25' 37.572" E	165	23	25.46	345	23	25.46	49.74
AB15	AB16	22° 33' 56.832" N	86° 25' 38.018" E	165	46	40.01	345	46	40.01	50.42
AB16	AB17	22° 33' 55.244" N	86° 25' 38.459" E	165	55	20.02	345	55	20.02	50.00
AB17	AB18	22° 33' 53.668" N	86° 25' 38.891" E	165	17	44.38	345	17	44.38	49.55
AB18	AB19	22° 33' 52.111" N	86° 25' 39.338" E	166	4	33.56	346	4	33.56	50.97
AB19	AB20	22° 33' 50.504" N	86° 25' 39.774" E	165	41	47.52	345	41	47.52	48.75
AB20	AB21	22° 33' 48.969" N	86° 25' 40.202" E	165	36	17.14	345	36	17.14	50.75
AB21	AB22	22° 33' 47.372" N	86° 25' 40.650" E	164	8	17.84	344	8	17.84	50.37
AB22	AB23	22° 33' 45.798" N	86° 25' 41.139" E	166	44	55.18	346	44	55.18	50.13
AB23	AB24	22° 33' 44.213" N	86° 25' 41.547" E	164	18	52.50	344	18	52.50	49.21
AB24	AB25	22° 33' 42.674" N	86° 25' 42.020" E	166	41	27.71	346	41	27.71	50.35
AB25	AB26	22° 33' 41.082" N	86° 25' 42.432" E	166	14	7.83	346	14	7.83	50.23
AB26	AB27	22° 33' 39.497" N	86° 25' 42.857" E	165	26	1.81	345	26	1.81	50.10
AB27	AB28	22° 33' 37.922" N	86° 25' 43.305" E	164	29	58.32	344	29	58.32	48.05
AB28	AB29	22° 33' 36.418" N	86° 25' 43.761" E	166	48	38.29	346	48	38.29	49.93
AB29	AB30	22° 33' 34.83[illegible]	86° 25' 44.166" E	168	17	23.39	348	17	23.39	51.12

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(भारत सरकार का एक उपक्रम)
कॉम्प्लेक्स

Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between pillars (m)
		Latitude, N	Longitude, E	D	M	S	D	M	S	
AB30	AB31	22° 33' 33.211" N	86° 25' 44.536" E	164	8	11.09	344	8	11.09	50.11
AB31	AB32	22° 33' 31.646" N	86° 25' 45.022" E	164	30	21.08	344	30	21.08	50.62
AB32	AB33	22° 33' 30.061" N	86° 25' 45.502" E	165	50	20.67	345	50	20.67	49.58
AB33	AB34	22° 33' 28.499" N	86° 25' 45.933" E	165	19	44.70	345	19	44.70	50.35
AB34	AB35	22° 33' 26.916" N	86° 25' 46.386" E	165	31	56.99	345	31	56.99	49.90
AB35	AB36	22° 33' 25.347" N	86° 25' 46.829" E	165	47	9.89	345	47	9.89	49.51
AB36	AB37	22° 33' 23.787" N	86° 25' 47.261" E	165	37	59.88	345	37	59.88	50.69
AB37	AB38	22° 33' 22.192" N	86° 25' 47.708" E	165	54	44.00	345	54	44.00	49.87
AB38	AB39	22° 33' 20.620" N	86° 25' 48.140" E	165	23	59.29	345	23	59.29	49.74
AB39	AB40	22° 33' 19.056" N	86° 25' 48.585" E	166	34	4.75	346	34	4.75	30.24
AB40	AB41	22° 33' 18.101" N	86° 25' 48.835" E	165	47	7.29	345	47	7.29	48.63
AB41	AB42	22° 33' 16.569" N	86° 25' 49.259" E	163	32	26.25	343	32	26.25	70.50
AB42	AB43	22° 33' 14.373" N	86° 25' 49.968" E	167	58	58.13	347	58	58.13	51.29
AB43	AB44	22° 33' 12.743" N	86° 25' 50.348" E	165	51	59.05	345	51	59.05	49.01
AB44	AB45	22° 33' 11.199" N	86° 25' 50.774" E	165	25	17.78	345	25	17.78	50.34
AB45	AB46	22° 33' 09.616" N	86° 25' 51.224" E	165	56	7.73	345	56	7.73	50.06
AB46	AB47	22° 33' 08.038" N	86° 25' 51.656" E	165	13	10.22	345	13	10.22	50.30
AB47	AB48	22° 33' 06.458" N	86° 25' 52.112" E	166	1	56.74	346	1	56.74	49.92
AB48	AB49	22° 33' 04.884" N	86° 25' 52.541" E	167	15	13.77	347	15	13.77	46.78
AB49	AB50	22° 33' 03.401" N	86° 25' 52.908" E	165	59	27.80	345	59	27.80	47.82
AB50	AB51	22° 33' 01.894" N	86° 25' 53.319" E	163	25	48.23	343	25	48.23	53.64
AB51	AB52	22° 33' 00.224" N	86° 25' 53.862" E	166	21	36.60	346	21	36.60	52.77
AB52	AB53	22° 32' 58.558" N	86° 25' 54.304" E	164	38	33.54	344	38	33.54	49.64
AB53	AB54	22° 32' 57.003" N	86° 25' 54.771" E	167	8	4.97	347	8	4.97	50.46
AB54	AB55	22° 32' 55.404" N	86° 25' 55.171" E	164	47	44.13	344	47	44.13	49.19
AB55	AB56	22° 32' 53.862" N	86° 25' 55.629" E	165	57	41.34	345	57	41.34	49.79
AB56	AB57	22° 32' 52.293" N	86° 25' 56.058" E	165	11	32.42	345	11	32.42	49.91
AB57	AB58	22° 32' 50.725" N	86° 25' 56.511" E	165	18	7.97	345	18	7.97	51.26
AB58	AB59	22° 32' 49.114" N	86° 25' 56.973" E	166	3	39.19	346	3	39.19	48.82
AB59	AB60	22° 32' 47.575" N	86° 25' 57.391" E	166	23	19.83	346	23	19.83	51.38
AB60	AB61	22° 32' 45.952" N	86° 25' 57.821" E	164	33	31.88	344	33	31.88	47.13
AB61	B	22° 32' 44.476" N	86° 25' 58.267" E	166	8	39.03	346	8	39.03	43.02
B	BC1	22° 32' 43.119" N	86° 25' 58.633" E	73	28	48.41	253	28	48.41	37.26
BC1	BC2	22° 32' 43.468" N	86° 25' 59.882" E	77	39	50.42	257	39	50.42	48.87

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(भारत ... एक उपक्रम)
इन्डियन ... कॉम्प्लेक्स
डाक-गजमण्डार-832103
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Annexure- 21

Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between pillars (m)
		Latitude, N	Longitude, E	D	M	S	D	M	S	
BC2	BC3	22° 32' 43.813" N	86° 26' 01.552" E	70	4	59.37	250	4	59.37	51.15
BC3	BC4	22° 32' 44.386" N	86° 26' 03.233" E	72	6	37.25	252	6	37.25	50.37
BC4	BC5	22° 32' 44.895" N	86° 26' 04.910" E	72	15	26.93	252	15	26.93	46.78
BC5	BC6	22° 32' 45.364" N	86° 26' 06.468" E	72	5	13.35	252	5	13.35	58.39
BC6	BC7	22° 32' 45.955" N	86° 26' 08.410" E	76	2	51.33	256	2	51.33	44.59
BC7	BC8	22° 32' 46.310" N	86° 26' 09.924" E	73	13	0.84	253	13	0.84	50.32
BC8	BC9	22° 32' 46.788" N	86° 26' 11.609" E	73	23	56.47	253	23	56.47	49.89
BC9	BC10	22° 32' 47.258" N	86° 26' 13.281" E	74	11	5.90	254	11	5.90	54.89
BC10	BC11	22° 32' 47.751" N	86° 26' 15.128" E	74	3	45.72	254	3	45.72	90.24
BC11	BC12	22° 32' 48.567" N	86° 26' 18.163" E	74	7	16.14	254	7	16.14	63.09
BC12	BC13	22° 32' 49.136" N	86° 26' 20.285" E	74	20	52.45	254	20	52.45	40.88
BC13	BC14	22° 32' 49.499" N	86° 26' 21.662" E	71	10	18.71	251	10	18.71	101.03
BC14	BC15	22° 32' 50.571" N	86° 26' 25.005" E	73	17	26.53	253	17	26.53	49.96
BC15	BC16	22° 32' 51.044" N	86° 26' 26.679" E	73	15	53.25	253	15	53.25	92.16
BC16	BC17	22° 32' 51.918" N	86° 26' 29.765" E	73	59	34.29	253	59	34.29	8.46
BC17	BC18	22° 32' 51.995" N	86° 26' 30.050" E	72	17	55.14	252	17	55.14	14.88
BC18	BC19	22° 32' 52.144" N	86° 26' 30.545" E	74	9	3.92	254	9	3.92	35.12
BC19	BC20	22° 32' 52.460" N	86° 26' 31.727" E	72	41	54.51	252	41	54.51	49.76
BC20	BC21	22° 32' 52.947" N	86° 26' 33.388" E	73	32	0.03	253	32	0.03	99.58
BC21	BC22	22° 32' 53.876" N	86° 26' 36.728" E	76	7	49.18	256	7	49.18	60.51
BC22	BC23	22° 32' 54.355" N	86° 26' 38.783" E	68	8	56.35	248	8	56.35	39.73
BC23	BC24	22° 32' 54.841" N	86° 26' 40.072" E	73	48	36.11	253	48	36.11	49.90
BC24	BC25	22° 32' 55.299" N	86° 26' 41.748" E	75	2	41.65	255	2	41.65	45.60
BC25	C	22° 32' 55.687" N	86° 26' 43.289" E	71	57	12.16	251	57	12.16	54.37
C	CD1	22° 32' 56.241" N	86° 26' 45.097" E	346	1	33.67	166	1	33.67	29.80
CD1	CD2	22° 32' 57.181" N	86° 26' 44.841" E	346	54	23.47	166	54	23.47	49.93
CD2	CD3	22° 32' 58.761" N	86° 26' 44.439" E	344	7	9.67	164	7	9.67	50.05
CD3	CD4	22° 33' 00.325" N	86° 26' 43.953" E	333	28	38.62	153	28	38.62	60.88
CD4	CD5	22° 33' 02.093" N	86° 26' 42.994" E	350	11	55.53	170	11	55.53	49.22
CD5	CD6	22° 33' 03.669" N	86° 26' 42.695" E	350	8	25.58	170	8	25.58	29.11
CD6	CD7	22° 33' 04.601" N	86° 26' 42.516" E	350	47	8.61	170	47	8.61	60.74
CD7	CD8	22° 33' 06.550" N	86° 26' 42.168" E	346	12	32.06	166	12	32.06	52.23
CD8	CD9	22° 33' 08.198" N	86° 26' 41.725" E	345	36	38.14	165	36	38.14	49.52
CD9	CD10	22° 33' 09.756" N	86° 26' 41.288" E	345	19	10.42	165	19	10.42	50.59

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Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between pillars (m)
		Latitude, N	Longitude, E	D	M	S	D	M	S	
CD10	CD11	22° 33' 11.346" N	86° 26' 40.833" E	345	48	35.56	165	48	35.56	49.72
CD11	CD12	22° 33' 12.912" N	86° 26' 40.400" E	345	56	50.47	165	56	50.47	105.33
CD12	CD13	22° 33' 16.232" N	86° 26' 39.491" E	346	48	24.57	166	48	24.57	43.72
CD13	CD14	22° 33' 17.615" N	86° 26' 39.136" E	343	22	39.36	163	22	39.36	50.98
CD14	CD15	22° 33' 19.202" N	86° 26' 38.619" E	345	57	47.40	165	57	47.40	50.14
CD15	CD16	22° 33' 20.782" N	86° 26' 38.187" E	345	18	2.96	165	18	2.96	50.28
CD16	CD17	22° 33' 22.362" N	86° 26' 37.734" E	345	19	36.68	165	19	36.68	64.52
CD17	CD18	22° 33' 24.390" N	86° 26' 37.154" E	345	19	15.45	165	19	15.45	45.60
CD18	CD19	22° 33' 25.823" N	86° 26' 36.744" E	345	14	48.39	165	14	48.39	81.93
CD19	CD20	22° 33' 28.397" N	86° 26' 36.003" E	345	18	25.37	165	18	25.37	67.75
CD20	CD21	22° 33' 30.526" N	86° 26' 35.392" E	347	14	6.46	167	14	6.46	39.83
CD21	CD22	22° 33' 31.789" N	86° 26' 35.079" E	345	5	49.67	165	5	49.67	50.41
CD22	CD23	22° 33' 33.371" N	86° 26' 34.619" E	345	16	16.58	165	16	16.58	47.99
CD23	CD24	22° 33' 34.879" N	86° 26' 34.186" E	345	24	20.26	165	24	20.26	50.24
CD24	CD25	22° 33' 36.458" N	86° 26' 33.736" E	346	9	9.19	166	9	9.19	51.77
CD25	CD26	22° 33' 38.091" N	86° 26' 33.296" E	345	39	38.35	165	39	38.35	49.53
CD26	CD27	22° 33' 39.650" N	86° 26' 32.860" E	345	29	55.76	165	29	55.76	50.04
CD27	CD28	22° 33' 41.224" N	86° 26' 32.415" E	345	30	5.35	165	30	5.35	50.20
CD28	CD29	22° 33' 42.803" N	86° 26' 31.969" E	345	42	54.41	165	42	54.41	49.85
CD29	CD30	22° 33' 44.373" N	86° 26' 31.532" E	345	2	33.56	165	2	33.56	49.97
CD30	CD31	22° 33' 45.941" N	86° 26' 31.074" E	345	30	57.07	165	30	57.07	50.02
CD31	CD32	22° 33' 47.515" N	86° 26' 30.629" E	342	33	3.37	162	33	3.37	51.11
CD32	CD33	22° 33' 49.099" N	86° 26' 30.086" E	348	43	23.84	168	43	23.84	49.08
CD33	CD34	22° 33' 50.663" N	86° 26' 29.744" E	345	25	31.81	165	25	31.81	50.10
CD34	CD35	22° 33' 52.238" N	86° 26' 29.296" E	345	28	39.23	165	28	39.23	49.93
CD35	CD36	22° 33' 53.808" N	86° 26' 28.851" E	345	47	30.58	165	47	30.58	50.02
CD36	CD37	22° 33' 55.384" N	86° 26' 28.415" E	345	37	12.78	165	37	12.78	50.76
CD37	CD38	22° 33' 56.981" N	86° 26' 27.967" E	344	59	58.89	164	59	58.89	48.31
CD38	CD39	22° 33' 58.497" N	86° 26' 27.523" E	347	5	17.75	167	5	17.75	52.93
CD39	CD40	22° 34' 00.173" N	86° 26' 27.102" E	344	1	23.18	164	1	23.18	48.15
CD40	CD41	22° 34' 01.677" N	86° 26' 26.632" E	345	40	37.58	165	40	37.58	99.73
CD41	CD42	22° 34' 04.817" N	86° 26' 25.756" E	345	34	32.24	165	34	32.24	50.47
CD42	CD43	22° 34' 06.405" N	86° 26' 25.309" E	344	42	33.96	164	42	33.96	49.96
CD43	CD44	22° 34' 07.970" N	86° 26' 24.841" E	346	4	11.87	166	4	11.87	49.76

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान [illegible] लिमिटेड
(भारत [illegible] एक उपक्रम)
इण्डियन [illegible] कॉम्पलेक्स
डाक-मऊभण्डार-832103
झारखण्ड

Annexure 21

Pillar No		Coordinate DMS		Forward Bearing			Backward Bearing			Distance between pillars (m)
		Latitude, N	Longitude, E	D	M	S	D	M	S	
CD44	CD45	22° 34' 09.539" N	86° 26' 24.416" E	345	42	10.86	165	42	10.86	50.05
CD45	CD46	22° 34' 11.115" N	86° 26' 23.976" E	345	4	23.39	165	4	23.39	49.84
CD46	CD47	22° 34' 12.680" N	86° 26' 23.521" E	345	54	31.23	165	54	31.23	50.06
CD47	CD48	22° 34' 14.257" N	86° 26' 23.087" E	345	25	58.56	165	25	58.56	49.91
CD48	D	22° 34' 15.827" N	86° 26' 22.642" E	345	31	7.60	165	31	7.60	50.04
D	DA1	22° 34' 17.401" N	86° 26' 22.197" E	271	57	12.99	91	57	12.99	38.63
DA1	DA2	22° 34' 17.439" N	86° 26' 20.845" E	272	14	31.73	92	14	31.73	49.91
DA2	DA3	22° 34' 17.496" N	86° 26' 19.098" E	272	1	53.76	92	1	53.76	10.71
DA3	DA4	22° 34' 17.507" N	86° 26' 18.723" E	271	59	34.23	91	59	34.23	47.98
DA4	DA5	22° 34' 17.556" N	86° 26' 17.044" E	272	7	32.26	92	7	32.26	29.80
DA5	DA6	22° 34' 17.588" N	86° 26' 16.001" E	272	7	14.48	92	7	14.48	48.86
DA6	DA7	22° 34' 17.641" N	86° 26' 14.291" E	272	10	23.62	92	10	23.62	77.76
DA7	DA8	22° 34' 17.727" N	86° 26' 11.570" E	272	0	20.08	92	0	20.08	125.69
DA8	DA9	22° 34' 17.855" N	86° 26' 7.171" E	268	48	18.78	88	48	18.78	42.24
DA9	DA10	22° 34' 17.821" N	86° 26' 05.692" E	274	10	7.39	94	10	7.39	70.68
DA10	DA11	22° 34' 17.980" N	86° 26' 03.223" E	270	27	42.63	90	27	42.63	45.81
DA11	DA12	22° 34' 17.986" N	86° 26' 01.619" E	272	17	57.99	92	17	57.99	50.68
DA12	DA13	22° 34' 18.046" N	86° 25' 59.845" E	271	46	14.33	91	46	14.33	50.13
DA13	DA14	22° 34' 18.090" N	86° 25' 58.091" E	272	6	28.24	92	6	28.24	49.65
DA14	DA15	22° 34' 18.143" N	86° 25' 56.353" E	271	50	42.84	91	50	42.84	49.61
DA15	DA16	22° 34' 18.189" N	86° 25' 54.616" E	272	22	1.79	92	22	1.79	50.05
DA16	DA17	22° 34' 18.250" N	86° 25' 52.865" E	272	8	58.89	92	8	58.89	50.69
DA17	DA18	22° 34' 18.306" N	86° 25' 51.090" E	271	57	35.97	91	57	35.97	50.66
DA18	DA19	22° 34' 18.356" N	86° 25' 49.317" E	271	14	42.34	91	14	42.34	49.05
DA19	DA20	22° 34' 18.384" N	86° 25' 47.600" E	272	41	57.28	92	41	57.28	44.81
DA20	DA21	22° 34' 18.447" N	86° 25' 46.032" E	272	5	38.09	92	5	38.09	155.19
DA21	DA22	22° 34' 18.612" N	86° 25' 40.601" E	271	33	5.45	91	33	5.45	50.29
DA22	DA23	22° 34' 18.650" N	86° 25' 38.841" E	270	16	34.52	90	16	34.52	49.99
DA23	DA24	22° 34' 18.652" N	86° 25' 37.090" E	273	55	25.93	93	55	25.93	49.23
DA24	DA25	22° 34' 18.755" N	86° 25' 35.370" E	271	48	51.73	91	48	51.73	50.59
DA25	A	22° 34' 18.801" N	86° 25' 33.599" E	271	52	1.49	91	52	1.49	49.99

एस० एस० सेठी
कार्यकारी निदेशक
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हिन्दुस्तान [illegible] लिमिटेड
(भारत [illegible] एक उपक्रम)
इंडियन [illegible] कॉम्प्लेक्स
डाक-मेजमण्डार-832103
शारदा

हिन्दुस्तान कॉपर लि०
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. आ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

(A Govt. of India ...)
INDIAN COPPER COMPLEX
P.O. MOUBHANDAR - 832103
Dist. East Singhbhum (Jharkhand)
Ph: (06585) 225878 (Unit Head)
e-mail: shyam_ss@hindustancopper.com
Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 22&23

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that layout plan of mining plan shall not be changed without the prior approval of IBM (the approving authority). Forest land shall not be used for any purpose other than that specified in the proposal and under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government.

This undertaking is being submitted towards compliance of condition no. 23 & 24, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान ... लिमिटेड
(भारत ... - एक उपक्रम)
इन्डिय... कॉम्प्लेक्स
...-832103

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
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CIN: L27201WB1967GOI028825

Annexure 24

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that no damage to the flora and fauna of the adjoining area shall be caused during any Stage-I of mining operation.

This undertaking is being submitted towards compliance of condition no. 25, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

Sd/- Sd/-

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इंडियन कॉपर कॉम्पलेक्स
डाक-मऊभंडार-832103
झारखण्ड

हिन्दुस्तान कॉपर लि.
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

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Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 25

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project will be complied.

This undertaking is being submitted towards compliance of condition no. 26, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
पो.-मऊभंडार-832103
जिला-पू.सिंहभूम (झारखण्ड)

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपकम)
इन्डियन कॉपर कॉम्प्लेक्स
पो. ऑ. मऊभंडार- 832103
जिला-पूर्वीसिंहभूम (झारखण्ड)

(A Govt. of India Enterp...
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CIN: L27201WB1967GOI028825

Annexure 26

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that the annual self compliance report in respect of the conditions stipulated in Stage-I approval vide letter dated 15.06.2024 to the Divisional Forest Officer, Jamshedpur with a copy to State Government and Regional Office, MoEF& CC, Ranchi and MoEF& CC, GoI Delhi by the end of March every year regularly.

This undertaking is being submitted towards compliance of condition no. 27, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
...लिमिटेड
उपक्रम
हिन्द...

हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकारका एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
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Website: www.hindustancopper.com

CIN: L27201WB1967GOI028825

Annexure 27

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that in the interest of conservation, protection & development of forests & wildlife, any other conditions, suggested from time to time from Regional Office, MoEF& CC, Ranchi and State Forest Deptt. will also be implemented.

This undertaking is being submitted towards compliance of condition no. 28, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
इकाई प्रमुख
हिन्दुस्तान कॉपर लिमिटेड
(भारत सरकार का एक उपक्रम)
इन्डियन कॉपर कॉम्प्लेक्स
डाक-मऊभंडार-832103
झारखण्ड

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CIN: L27201WB1967GOI028825

Annexure 28

Undertaking

M/s. Hindustan Copper Ltd, a Govt. of India Enterprises, hereby undertakes that the conditions stipulated in Stage-I approval vide letter dated 15.06.2024 will be complied in letter & spirit for avoidance of violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. In case of violation of any of the stipulated conditions, user agency will be liable for action as applicable.

This undertaking is being submitted towards compliance of condition no. 29, as stipulated in Stage-I Clearance vide File No. 8-64/1993-FC(Vol.) dated 15.06.2024 of MoEF& CC, GoI.

(Signature of Authorized Person)

Date: 22.07.2024
Place: Moubhandar

एस० एस० सेठी
कार्यकारी निदेशक
एवं
लिमिटेड
उपक्रम)
लेक्स

FORM-II

(For projects other than linear projects)

Government of Jharkhand

Office of the District Magistrate and Deputy Commissioner, Purvi Singhbhum, Jamshedpur

Memo No. 507 **Date** 06.03.2025

TO WHOMSOEVER IT MAY CONCERN

In compliance of the Ministry of Environment and Forests (MoEF), Government of India's letter No. 11-9/98-FC (pt.) dated 3rd August 2009 wherein the MoEF issued guidelines on submission of evidences for having initiated and completed the process of settlement or rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of forest Rights) Act, 2006 on the forest land proposed to be diverted for non-forest purposes read with MoEF's letter dated 5th February 2013 wherein MoEF issued certain relaxation in respect of linear projects, it is to certified that total **65.52 hectares** of forest land proposed to be diverted in favour of Surda Mining Lease of M/s Hindustan Copper Limited situated in Ghatsila Tehsil of district East Singhbhum, Jharkhand falls within jurisdiction of the following Mouzas in Ghatsila Sub-Division :-

(i) Mouza-Benashole, Sohada, Surda, Pathargora & Forest Block under Musabani Anchal.

It is further certified that:

(a) The complete process for identification and settlement for rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of forest Rights) Act, 2006 has been carried out for the entire 65.52 hectares of forest area proposed for diversion. A copy of records of all consultations and meetings of the Village Forest Rights Committee, Sub-Division Level Committee and the District Level Committee are enclosed as annexure-1 to annexure-3.

(b) The proposal for such diversion (with full details of the projects and its implications, in vernacular/local language) have been placed before each concerned Gram Sabha of forest dwellers, who are eligible under the FRA;

(c) Each of concerned Gram Sabhas, has certified that all formalities/processed under the FRA have been carried out, and that they have given their consent to the proposed diversion and the compensation and ameliorative measures, if any, having understood the purpose and details of proposed diversion. A copy of certificate issued by the gram sabha of Benashole, Sohada, Surda, Pathargora & Forest Block Mouzas are enclosed as annexure 4 to annexure 6;

(d) The discussion and decisions on such proposals had taken place only when there was a quorum of minimum 50% of the members of Gram Sabha present;

(e) The diversion of forest land for above mentioned purpose does not attract provisions of section 3(2) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of forest Rights) Act, 2006.

(f) The rights of Primitive Groups and Pre-Agricultural communities, where applicable have been specifically safeguarded as per section 3(1) (e) of the FRA.s

Encl.: As above

4/3/25

District Welfare Officer,
East Singhbhum, Jamshedpur

Project Director,
I.T.D.A.
East Singhbhum, Jamshedpur.

Project Director
Integrated Tribal Development Agency
East Singhbhum, Jamshedpur.

4/3/25

Signature
(Full name and official seal of the Deputy Commissioner)

DEPUTY COMMISSIONER
EAST SINGHBHUM, JAMSHEDPUR

ग्राम सभा एवं ग्राम वनाधिकार समिति
रेजोल्यूशन

ग्राम–**बेनाशोल** दिनांक–14/05/2023

सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन पट्टा के अंतर्गत मौजा–सोहदा, सुरदा, बेनाशोल, ताम्बाजुड़ी एवं पाथरगोड़ा में स्थित कुल 65.52 हेक्टेयर वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक 11/05/2023 को दी गई सूचना के आधार पर दिनांक 14/05/2023 को **सांस्कृतिक भवन, बेनाशोल** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई । बैठक का आयोजन ग्राम प्रधान **श्री मोहन मुर्मू** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिती में किया गया । बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई ।

प्रस्ताव–1 :– सर्वश्री हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन पट्टा के अंतर्गत भूमिगत खनन हेतु **बेनाशोल** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया ।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
100	234	17(P)	0.59 हेक्टेयर

प्रस्ताव–2 :– उपरोक्त प्रस्तावित वन भूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावो पर विचार किया गया ।

प्रस्ताव–3 :– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाती एवं अन्य पारम्परिक वनवासी (वनाधिकारो को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया । प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाती अथवा अन्य पारम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नही है ।

अत: बैठक में सर्वसम्मती से निर्णय लेते हुए सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु **बेनाशोल** ग्राम की 0.59 **हेक्टेयर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया ।

नोट:- उपरोक्त बैठक में ग्राम वनाधिकार समिति एवं ग्राम सभा के 50 प्रतिशत से अधिक सदस्य उपस्थित हुए । उपस्थिती सूचि संलग्न रजिस्टर के पृष्ट संख्या- ..01..... से ..45..... तक दि गई है । ग्राम सभा में महिलाओं की भागीदारी 1/3 थी ।
अनुमंडलीय स्तरीय वन अधिकार समिति से अगले कार्रवाई के लिए अग्रेसित किया जाए ।

ग्राम प्रधान 21.06.2023
ग्राम महासभा
ग्राम+पंचायत-बेनाशोल
पो० दोन्दाडीह जिला-पूर्वी सिंहभूम

अध्यक्ष, वनाधिकार समिति 21.06.2023
अध्यक्ष
वन अधिकार समिति
ग्राम बेनाशोल

सचिव, वनाधिकार समिति 21.06.2023
सचिव
वन अधिकार समिति
ग्राम-बेनाशोल

अंचल प्रतिनिधि

वनक्षेत्र प्रतिनिधि वनरक्षी
बेनाशोल उपरिक्षेत्र

वनाधिकार समिति के सदस्यों के हस्ताक्षर

ग्राम सभा सदस्यों के हस्ताक्षर

अनुमंडल पदाधिकारी का कार्यालय, घाटशिला, पूर्वी सिंहभूम।

दिनांक– 04.08.2023 को अनुमण्डल कार्यालय, घाटशिला में आहूत अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक की कार्यवाही :–

अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक दिनांक– 04.08.2023 को अनुमण्डल पदाधिकारी, घाटशिला –सह– अध्यक्ष, अनुमण्डल स्तरीय वन अधिकार समिति की अध्यक्षता में सम्पन्न हुई। बैठक में निम्नांकित पदाधिकारी एवं सदस्य उपस्थित हुए :–

1) अनुमण्डल पदाधिकारी, घाटशिला।
2) सहायक वन संरक्षक, पूर्वी सिंहभूम, जमशेदपुर।
3) श्री रामदेव हेम्ब्रम, प्रमुख, मुसाबनी प्रखण्ड।
4) श्री परमा बानरा, मुखिया, फॉरेस्ट ब्लॉक पंचायत, मुसाबनी।
5) श्रीमती रेखा रानी मुर्मू, मुखिया, माटिहाना पंचायत, बहरागोड़ा।

1– सर्वप्रथम अध्यक्ष महोदय द्वारा बैठक में उपस्थित प्रतिनिधियों को स्वागत करते हुए बताया गया कि हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य के क्रम वनभूमि पर जनजातीय एवं परम्परागत वनवासी के अधिकारों के संबंध में अनापत्ति–प्रमाण पत्र के लिए उपायुक्त, पूर्वी सिंहभूम, जमशेदपुर को संबोधित पत्र संख्या– HCL/ICC/GM/SURDA MINE/2023 दिनांक– 25.04.2023 द्वारा अनुरोध किया गया है कि पूर्वी सिंहभूम, जिले के घाटशिला अनुमण्डल के मुसाबनी अंचल अन्तर्गत सुरदा माईंस लीज एरिया **65.52 हेक्टेयर** भूमि परिवर्तन के लिए प्रस्तावित है, जिसमें से **मौजा– बेनाशोल** खनन क्षेत्रफल एरिया **0.59 हेक्टेयर** है। खनन कार्य अपयोजन हेतु अनुसूचित जनजाति और अन्य परंपरागत वनवासी (वन अधिकरों की मान्यता) अधिनियम, 2006, 2008 एवं नियम 2012 के अन्तर्गत अनापत्ति निर्गत किया जाय। अनापत्ति हेतु प्रस्तावित भूमि की विवरणी मौजावार निम्न प्रकार है :–

SL No.	Village	Mouza No.	Plot No. (As Per Survey Settlement record 1960-61)	Area Applied for diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F. (P)	52.60
			P.F. (P)	3.50
		Total Area (In Ha)		**65.52**

4– सभी संबंधित ग्रामसभा (ओं), ने प्रमाणित किया है कि FRA 2006 के तहत सभी औपचारिकताओं/प्रक्रियाओं को पूरा किया गया है और यह कि उन्होंने प्रस्तावित अपयोजन, मुआवजा और प्रगतिशील उपायों, अगर कोई हो, को प्रस्तावित अपयोजन के उद्देश्य और विवरण समझने के पश्चात अपनी सहमती दे दी है। बेनाशोल ग्राम की ग्रामसभा द्वारा जारी किए गए प्रमाण–पत्र की प्रतियाँ संलग्न है।

5– इस तरह के प्रस्तावों पर चर्चा और निर्णय जब लिया गया ग्राम सभा में उपस्थित सदस्यों की न्यूनतम 50 प्रतिशत की एक कोरम उपस्थित थी।

6– FRA 2006 के Section 3 (2) के तहत सरकार द्वारा प्रबंधित सुविधाओं के लिए वन भूमि के अपयोजन पूरा हो चुका हैं और ग्राम सभाओं ने इसके लिए अपनी सहमति दे दी है।

7– FRA 2006 के Section 3 (1) (ई) के अनुसार आदिम जनजातीय समूहों तथा पूर्व कृषि समुदाय, जहाँ लागू हों के अधिकार की विशेष रूप से रक्षा की गई है।

अतः मुसाबनी अंचल अन्तर्गत मौजा– बेनाशोल में उपरोक्त विवरणी की 0.59 हेक्टेयर वनभूमि के अपयोजन हेतु ग्राम वन अधिकार समिति, हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु अनापत्ति प्रमाण–पत्र निर्गत करने हेतु सर्वसम्मति से निर्णय लिया गया।

सधन्यवाद बैठक की कार्यवाही सम्पन्न हुई।

P. Barwa 04/08/23
श्री परमा बानरा,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
फॉरेस्ट ब्लॉक पंचायत, मुसाबनी,
प्रखण्ड।

04/08/23
श्रीमती रेखा रानी मुर्मू,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
माटिहाना पंचायत, बहरागोड़ा,
प्रखण्ड।

04/08/23
श्री रामदेव हेम्ब्रम,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– प्रमुख,
मुसाबनी प्रखण्ड।

4/8/23
सदस्य,
अनुमण्डल स्तरीय वन
अधिकार समिति,
सहायक वन संरक्षक,
जमशेदपुर प्रमण्डल,
पूर्वी सिंहभूम, जमशेदपुर।

अध्यक्ष,
अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह–
अनुमण्डल पदाधिकारी,
घाटशिला।

अनुमंडल पदाधिकारी का कार्यालय, घाटशिला, पूर्वी सिंहभूम।

दिनांक– 04.08.2023 को अनुमण्डल कार्यालय, घाटशिला में आहूत अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक की कार्यवाही :–

अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक दिनांक– 04.08.2023 को अनुमण्डल पदाधिकारी, घाटशिला –सह– अध्यक्ष, अनुमण्डल स्तरीय वन अधिकार समिति की अध्यक्षता में सम्पन्न हुई। बैठक में निम्नांकित पदाधिकारी एवं सदस्य उपस्थित हुए :–

1) अनुमण्डल पदाधिकारी, घाटशिला।
2) सहायक वन संरक्षक, पूर्वी सिंहभूम, जमशेदपुर।
3) श्री रामदेव हेम्ब्रम, प्रमुख, मुसाबनी प्रखण्ड।
4) श्री परमा बानरा, मुखिया, फॉरेस्ट ब्लॉक पंचायत, मुसाबनी।
5) श्रीमती रेखा रानी मुर्मू, मुखिया, माटिहाना पंचायत, बहरागोड़ा।

1– सर्वप्रथम अध्यक्ष महोदय द्वारा बैठक में उपस्थित प्रतिनिधियों को स्वागत करते हुए बताया गया कि हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य के क्रम वनभूमि पर जनजातीय एवं परम्परागत वनवासी के अधिकारों के संबंध में अनापत्ति–प्रमाण पत्र के लिए उपायुक्त, पूर्वी सिंहभूम, जमशेदपुर को संबोधित पत्र संख्या– HCL/ICC/GM/SURDA MINE/2023 दिनांक– 25.04.2023 द्वारा अनुरोध किया गया है कि पूर्वी सिंहभूम, जिले के घाटशिला अनुमण्डल के मुसाबनी अंचल अन्तर्गत सुरदा माईंस लीज एरिया **65.52 हेक्टेयर** भूमि परिवर्तन के लिए प्रस्तावित है, जिसमें से **मौजा– सोहदा** खनन क्षेत्रफल एरिया **0.97 हेक्टेयर** है। खनन कार्य अपयोजन हेतु अनुसूचित जनजाति और अन्य परंपरागत वनवासी (वन अधिकरों की मान्यता) अधिनियम, 2006, 2008 एवं नियम 2012 के अन्तर्गत अनापत्ति निर्गत किया जाय। अनापत्ति हेतु प्रस्तावित भूमि की विवरणी मौजावार निम्न प्रकार है :–

SL No.	Village	Mouza No.	Plot No. (As Per Survey Settlement record 1960-61)	Area Applied for diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F. (P)	52.60
			P.F. (P)	3.50
		Total Area (in Ha)		**65.52**

2– हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु प्राप्त अपयोजन प्रस्ताव के अनापत्ति हेतु अधोहस्ताक्षरी के कार्यालय पत्रांक– 36/क0, दिनांक– 09.05.2023 द्वारा अंचल अधिकारी, मुसाबनी को हिन्दुस्तान कॉपर लिमिटेड इंडियन कॉपर कॉम्प्लेक्स, डाक– मऊभण्डार के पत्रांक– HCL/ICC/GM(ICC)/FRA/2023 दिनांक– 25.04.2023 के आलोक में **मौजा– सोहदा** के वनभूमि पर अनापत्ति हेतु ग्रामसभा के माध्यम से उपलब्ध कराने हेतु निदेश दिया गया।

3– अंचल अधिकारी, मुसाबनी के पत्रांक– 287, दिनांक– 28.07.2023 द्वारा हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना से संबंधित ग्राम के ग्रामसभा एवं वन अधिकार समिति **सोहदा** द्वारा वनभूमि पर खनन कार्य हेतु अनापत्ति प्रमाण–पत्र एवं बैठक की कार्यवाही की मूल प्रति प्राप्त कराया गया है। ग्राम वन अधिकार समिति द्वारा बैठक की कार्यवाही निम्न प्रकार है :–

(ख) ग्राम सोहदा

उपस्थिति पंजी में अलग से संधारित है, जो संलग्न है।

हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन क्षेत्र के अंतर्गत **मौजा– सोहदा** में स्थित कुल **0.97 हेक्टेयर** वनभूमि का भूमिगत खनन कार्य हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक– 11.05.203 को दी गई सूचना के आधार पर **दिनांक– 18.05.2023** को **मांझी मण्डप, सोहदा** में ग्राम वनाधिकार समिति एवं ग्राम सभा की बैठक बुलाई गई। बैठक का आयोजन ग्राम प्रधान **श्री दिलीप हेम्ब्रम** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिति में किया गया। बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई।

प्रस्ताव :– (i)– हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन क्षेत्र के अंतर्गत भूमिगत खनन हेतु **सोहदा** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
101	253	135	0.04 हेक्टेयर
		150(P)	0.59 हेक्टेयर
		618	0.34 हेक्टेयर
		कुल	**0.97 हेक्टेयर**

प्रस्ताव :– (ii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावों पर विचार किया गया।

प्रस्ताव :– (iii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाति एवं अन्य पारम्परिक वनवासी (वनाधिकारों को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गों पर पड़ने वाले प्रभावों पर विचार किया गया। प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाति अथवा अन्य पारंम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नहीं है।

अतः बैठक में सर्ववम्मति से निर्णय लेते हुए हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु सोहदा ग्राम को **0.97 हेक्टयेर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया।

4– सभी संबंधित ग्रामसभा (ओं), ने प्रमाणित किया है कि FRA 2006 के तहत सभी औपचारिकताओं/प्रक्रियाओं को पूरा किया गया है और यह कि उन्होंने प्रस्तावित अपयोजन, मुआवजा और प्रगतिशील उपायों, अगर कोई हो, को प्रस्तावित अपयोजन के उद्देश्य और विवरण समझने के पश्चात अपनी सहमती दे दी है। **सोहदा** ग्राम की ग्रामसभा द्वारा जारी किए गए प्रमाण–पत्र की प्रतियाँ संलग्न है।

5– इस तरह के प्रस्तावों पर चर्चा और निर्णय जब लिया गया ग्राम सभा में उपस्थित सदस्यों की न्यूनतम 50 प्रतिशत की एक कोरम उपस्थित थी।

6– FRA 2006 के Section 3 (2) के तहत सरकार द्वारा प्रबंधित सुविधाओं के लिए वन भूमि के अपयोजन पूरा हो चुका हैं और ग्राम सभाओं ने इसके लिए अपनी सहमति दे दी है।

7– FRA 2006 के Section 3 (1) (ई) के अनुसार आदिम जनजातीय समूहों तथा पूर्व कृषि समुदाय, जहाँ लागू हों के अधिकार की विशेष रूप से रक्षा की गई है।

अतः मुसाबनी अंचल अन्तर्गत **मौजा– सोहदा** में उपरोक्त विवरणी की **0.97 हेक्टेयर** वनभूमि के अपयोजन हेतु ग्राम वन अधिकार समिति, हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु अनापत्ति प्रमाण–पत्र निर्गत करने हेतु सर्वसम्मति से निर्णय लिया गया।

सधन्यवाद बैठक की कार्यवाही सम्पन्न हुई।

श्री परमा बानरा,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
फॉरेस्ट ब्लॉक पंचायत, मुसाबनी,
प्रखण्ड।

श्रीमती रेखा रानी मुर्मू,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
माटिहाना पंचायत, बहरागोड़ा,
प्रखण्ड।

श्री रामदेव हेम्ब्रम,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– प्रमुख,
मुसाबनी प्रखण्ड।

सदस्य,
अनुमण्डल स्तरीय वन
अधिकार समिति,
सहायक वन संरक्षक,
जमशेदपुर प्रमण्डल,
पूर्वी सिंहभूम, जमशेदपुर।

अध्यक्ष,
अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह–
अनुमण्डल पदाधिकारी,
घाटशिला।

ग्राम सभा एवं ग्राम वनाधिकार समिति
रेजोल्यूशन

ग्राम–सोहदा

दिनांक–18/05/2023

सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन पट्टा के अंतर्गत मौजा सोहदा, सुरदा, बेनाशोल, ताम्बाजुड़ी एवं पाथरगोड़ा में स्थित कुल 65.52 हेक्टेयर वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक 11/05/2023 को दी गई सूचना के आधार पर दिनांक 18/05/2023 को **मांझी मंडप, सोहदा** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई । बैठक का आयोजन ग्राम प्रधान **श्री दिलीप हेम्ब्रम** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिती में किया गया । बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई ।

प्रस्ताव–1 :– सर्वश्री हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन पट्टा के अंतर्गत भूमिगत खनन हेतु **सोहदा** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया ।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
101	253	135	0.04 हेक्टेयर
101	253	150(P)	0.59 हेक्टेयर
101	253	618	0.34 हेक्टेयर
		कुल	**0.97 हेक्टेयर**

प्रस्ताव–2 :– उपरोक्त प्रस्तावित वन भूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावो पर विचार किया गया ।

प्रस्ताव–3 :– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाती एवं अन्य पारम्परिक वनवासी (वनाधिकारो को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया । प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाती अथवा अन्य पारम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नही है ।

अत: बैठक में सर्वसम्मती से निर्णय लेते हुए सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु सोहदा ग्राम की 0.97 हेक्टेयर वनभूमि के अपयोजन का प्रस्ताव पारित किया गया ।

नोट:- उपरोक्त बैठक में ग्राम वनाधिकार समिति एवं ग्राम सभा के 50 प्रतिशत से अधिक सदस्य उपस्थित हुए । उपस्थिती सूचि संलग्न रजिस्टर के पृष्ट संख्या- ..01... से .....38..... तक दि गई है ।

अनुमंडलीय स्तरीय वन अधिकार समिति से अग्रेसित कराई के लिए अग्रेसित किया जाए।

Dilip Hembram
ग्राम प्रधान

ग्राम प्रधान
दिलीप हेम्ब्रम
ग्राम–सोहदा,पो०–सुरदा मांईस
पूर्वी सिंहभूम (झारखण्ड)

Kandra Murmu
अध्यक्ष, वनाधिकार समिति

अध्यक्ष
वन अधिकार समिति
ग्राम सोहदा, पो० - सुरदा
जिला पूर्वी सिंहभूम (झारखण्ड)

सचिव, वनाधिकार समिति

सचिव
वन अधिकार समिति
ग्राम - सोहदा, पो० - सुरदा
जिला पूर्वी सिंहभूम (झारखण्ड)

अंचल प्रतिनिधि

वनक्षेत्र प्रतिनिधि

ग्राम सभा सदस्यों के हस्ताक्षर (रजिस्टर संलग्न)

अनुमंडल पदाधिकारी का कार्यालय, घाटशिला, पूर्वी सिंहभूम।

दिनांक– 04.08.2023 को अनुमण्डल कार्यालय, घाटशिला में आहूत अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक की कार्यवाही :–

अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक दिनांक– 04.08.2023 को अनुमण्डल पदाधिकारी, घाटशिला –सह– अध्यक्ष, अनुमण्डल स्तरीय वन अधिकार समिति की अध्यक्षता में सम्पन्न हुई। बैठक में निम्नांकित पदाधिकारी एवं सदस्य उपस्थित हुए :–

1) अनुमण्डल पदाधिकारी, घाटशिला।
2) सहायक वन संरक्षक, पूर्वी सिंहभूम, जमशेदपुर।
3) श्री रामदेव हेम्ब्रम, प्रमुख, मुसाबनी प्रखण्ड।
4) श्री परमा बानरा, मुखिया, फॉरेस्ट ब्लॉक पंचायत, मुसाबनी।
5) श्रीमती रेखा रानी मुर्मू, मुखिया, माटिहाना पंचायत, बहरागोड़ा।

1– सर्वप्रथम अध्यक्ष महोदय द्वारा बैठक में उपस्थित प्रतिनिधियों को स्वागत करते हुए बताया गया कि हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य के क्रम वनभूमि पर जनजातीय एवं परम्परागत वनवासी के अधिकारों के संबंध में अनापत्ति–प्रमाण पत्र के लिए उपायुक्त, पूर्वी सिंहभूम, जमशेदपुर को संबोधित पत्र संख्या– HCL/ICC/GM/SURDA MINE/2023 दिनांक– 25.04.2023 द्वारा अनुरोध किया गया है कि पूर्वी सिंहभूम, जिले के घाटशिला अनुमण्डल के मुसाबनी अंचल अन्तर्गत सुरदा माईंस लीज एरिया **65.52 हेक्टेयर** भूमि परिवर्तन के लिए प्रस्तावित है, जिसमें से **मौजा– सुरदा** खनन क्षेत्रफल एरिया **4.68 हेक्टेयर** है। खनन कार्य अपयोजन हेतु अनुसूचित जनजाति और अन्य परंपरागत वनवासी (वन अधिकरों की मान्यता) अधिनियम, 2006, 2008 एवं नियम 2012 के अन्तर्गत अनापत्ति निर्गत किया जाय। अनापत्ति हेतु प्रस्तावित भूमि की विवरणी मौजावार निम्न प्रकार है :–

SL No.	Village	Mouza No.	Plot No. (As Per Survey Settlement record 1960-61)	Area Applied for diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F. (P)	52.60
			P.F. (P)	3.50
		Total Area (in Ha)		**65.52**

2– हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु प्राप्त अपयोजन प्रस्ताव के अनापत्ति हेतु अधोहस्ताक्षरी के कार्यालय पत्रांक– 36/क0, दिनांक– 09.05.2023 द्वारा अंचल अधिकारी, मुसाबनी को हिन्दुस्तान कॉपर लिमिटेड इंडियन कॉपर कॉम्प्लेक्स, डाक– मऊभण्डार के पत्रांक– HCL/ICC/GM(ICC)/FRA/2023 दिनांक– 25.04.2023 के आलोक में **मौजा– सुरदा** के वनभूमि पर अनापत्ति हेतु ग्रामसभा के माध्यम से उपलब्ध कराने हेतु निदेश दिया गया।

3– अंचल अधिकारी, मुसाबनी के पत्रांक– 287, दिनांक– 28.07.2023 द्वारा हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना से संबंधित ग्राम के ग्रामसभा एवं वन अधिकार समिति **सोहदा** द्वारा वनभूमि पर खनन कार्य हेतु अनापत्ति प्रमाण–पत्र एवं बैठक की कार्यवाही की मूल प्रति प्राप्त कराया गया है। ग्राम वन अधिकार समिति द्वारा बैठक की कार्यवाही निम्न प्रकार है :–

(ग) ग्राम सुरदा

उपस्थिति पंजी में अलग से संधारित है, जो संलग्न है।

हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन क्षेत्र के अंतर्गत मौजा– सुरदा में स्थित कुल **4.68 हेक्टेयर** वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक– 11.05.203 को दी गई सूचना के आधार पर **दिनांक– 16.05.2023** को **मांझी मण्डप, सुरदा** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई। बैठक का आयोजन ग्राम प्रधान **श्री लखन टुडू** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिति में किया गया। बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई।

प्रस्ताव :– (i)– हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन पट्टा के अंतर्गत भूमिगत खनन हेतु **सुरदा** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
102	224	204	0.26 हेक्टेयर
		212	4.26 हेक्टेयर
		220	0.03 हेक्टेयर
		775(P)	0.13 हेक्टेयर
		कुल	**4.68 हेक्टेयर**

प्रस्ताव :– (ii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावों पर विचार किया गया।

प्रस्ताव :– (iii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाति एवं अन्य पारम्परिक वनवासी (वनाधिकारों को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया। प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाति अथवा अन्य पारंम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नहीं है।

अतः बैठक में सर्ववम्मति से निर्णय लेते हुए हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु **सुरदा** ग्राम को **4.68 हेक्टयेर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया।

4– सभी संबंधित ग्रामसभा (ओं), ने प्रमाणित किया है कि FRA 2006 के तहत सभी औपचारिकताओं / प्रक्रियाओं को पूरा किया गया है और यह कि उन्होंने प्रस्तावित अपयोजन, मुआवजा और प्रगतिशील उपायों, अगर कोई हो, को प्रस्तावित अपयोजन के उद्देश्य और विवरण समझने के पश्चात अपनी सहमती दे दी है। **सुरदा** ग्राम की ग्रामसभा द्वारा जारी किए गए प्रमाण–पत्र की प्रतियाँ संलग्न है।

5– इस तरह के प्रस्तावों पर चर्चा और निर्णय जब लिया गया ग्राम सभा में उपस्थित सदस्यों की न्यूनतम 50 प्रतिशत की एक कोरम उपस्थित थी।

6– FRA 2006 के Section 3 (2) के तहत सरकार द्वारा प्रबंधित सुविधाओं के लिए वन भूमि के अपयोजन पूरा हो चुका हैं और ग्राम सभाओं ने इसके लिए अपनी सहमति दे दी है।

7– FRA 2006 के Section 3 (1) (ई) के अनुसार आदिम जनजातीय समूहों तथा पूर्व कृषि समुदाय, जहाँ लागू हों के अधिकार की विशेष रूप से रक्षा की गई है।

अतः मुसाबनी अंचल अन्तर्गत **मौजा– सुरदा** में उपरोक्त विवरणी की **4.68 हेक्टेयर** वनभूमि के अपयोजन हेतु ग्राम वन अधिकार समिति, हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु अनापत्ति प्रमाण–पत्र निर्गत करने हेतु सर्वसम्मति से निर्णय लिया गया।

सधन्यवाद बैठक की कार्यवाही सम्पन्न हुई।

श्री परमा बानरा,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
फॉरेस्ट ब्लॉक पंचायत, मुसाबनी,
प्रखण्ड।

श्रीमती रेखा रानी मुर्मू,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
माटिहाना पंचायत, बहरागोड़ा,
प्रखण्ड।

श्री रामदेव हेम्ब्रम,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– प्रमुख,
मुसाबनी प्रखण्ड।

सदस्य,
अनुमण्डल स्तरीय वन
अधिकार समिति,
सहायक वन संरक्षक,
जमशेदपुर प्रमण्डल,
पूर्वी सिंहभूम, जमशेदपुर।

अध्यक्ष,
अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह–
अनुमण्डल पदाधिकारी,
घाटशिला।

ग्राम सभा एवं ग्राम वनाधिकार समिति

रेजोल्यूशन

ग्राम– सुरदा

दिनांक–16./05/2023

सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन पट्टा के अंतर्गत मौजा सोहदा, सुरदा, बेनाशोल, ताम्बाजुड़ी एवं पाथरगोड़ा में स्थित कुल 65.52 हेक्टेयर वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक 11/05/2023 को दी गई सूचना के आधार पर दिनांक 16/05/2023 को मांझी मंडप, सुरदा में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई । बैठक का आयोजन ग्राम प्रधान श्री लखन टुडू की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिती में किया गया । बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई ।

प्रस्ताव–1 :– सर्वश्री हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन पट्टा के अंतर्गत भूमिगत खनन हेतु सुरदा ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया ।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
102	224	204	0.26 हेक्टेयर
102	224	212	4.26 हेक्टेयर
102	224	220	0.03 हेक्टेयर
102	224	775(P)	0.13 हेक्टेयर
		कुल	4.68 हेक्टेयर

प्रस्ताव–2 :– उपरोक्त प्रस्तावित वन भूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावो पर विचार किया गया ।

प्रस्ताव–3 :– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाती एवं अन्य पारम्परिक वनवासी (वनाधिकारो को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया । प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाती अथवा अन्य पारम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नही है ।

अतः बैठक में सर्वसम्मती से निर्णय लेते हुए सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु सुरदा ग्राम की **4.68 हेक्टेयर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया ।

नोटः- उपरोक्त बैठक में ग्राम वनाधिकार समिति एवं ग्राम सभा के 50 प्रतिशत से अधिक सदस्य उपस्थित हुए । उपस्थिती सूचि संलग्न रजिस्टर के पृष्ट संख्या- ...01.... से .....11....... तक दि गई है । ग्राम सभा में महिलाओं कि भूमिका 1/3 थी, अग्रेतर कार्यवाही के लिए अध्यक्ष/सचिव वनाधिकार समिति को अधिकृत किया जाये।

लखन टुडू
ग्राम प्रधान
ग्राम प्रधान
ग्रा०+पो० - सुरदा
प्रखण्ड - मुसाबनी
पूर्वी सिंहभूम (झारखण्ड)

चरन टुडू
अध्यक्ष, वनाधिकार समिति
अध्यक्ष
वन अधिकार समिति
ग्राम-सुरदा, पो०-सुरदा
जिला-पूर्वी सिंहभूम, झारखण्ड

Fatu Ram Majhi
सचिव, वनाधिकार समिति
सचिव
वन अधिकार समिति
ग्राम-सुरदा पो० सुरदा
जिला पूर्वी सिहभूम, झारखण्ड

अंचल प्रतिनिधि

अंचल मुसाबनी

वनक्षेत्र प्रतिनिधि

ग्राम सभा सदस्यों के हस्ताक्षर (रजिस्टर संलग्न)

अनुमंडल पदाधिकारी का कार्यालय, घाटशिला, पूर्वी सिंहभूम।

दिनांक– 04.08.2023 को अनुमण्डल कार्यालय, घाटशिला में आहूत अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक की कार्यवाही :–

अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक दिनांक– 04.08.2023 को अनुमण्डल पदाधिकारी, घाटशिला –सह– अध्यक्ष, अनुमण्डल स्तरीय वन अधिकार समिति की अध्यक्षता में सम्पन्न हुई। बैठक में निम्नांकित पदाधिकारी एवं सदस्य उपस्थित हुए :–

1) अनुमण्डल पदाधिकारी, घाटशिला।
2) सहायक वन संरक्षक, पूर्वी सिंहभूम, जमशेदपुर।
3) श्री रामदेव हेम्ब्रम, प्रमुख, मुसाबनी प्रखण्ड।
4) श्री परमा बानरा, मुखिया, फॉरेस्ट ब्लॉक पंचायत, मुसाबनी।
5) श्रीमती रेखा रानी मुर्मू, मुखिया, माटिहाना पंचायत, बहरागोड़ा।

1– सर्वप्रथम अध्यक्ष महोदय द्वारा बैठक में उपस्थित प्रतिनिधियों को स्वागत करते हुए बताया गया कि हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य के क्रम वनभूमि पर जनजातीय एवं परम्परागत वनवासी के अधिकारों के संबंध में अनापत्ति–प्रमाण पत्र के लिए उपायुक्त, पूर्वी सिंहभूम, जमशेदपुर को संबोधित पत्र संख्या– HCL/ICC/GM/SURDA MINE/2023 दिनांक– 25.04.2023 द्वारा अनुरोध किया गया है कि पूर्वी सिंहभूम, जिले के घाटशिला अनुमण्डल के मुसाबनी अंचल अन्तर्गत सुरदा माईंस लीज एरिया **65.52 हेक्टेयर** भूमि परिवर्तन के लिए प्रस्तावित है, जिसमें से **मौजा– फॉरेस्ट ब्लॉक** खनन क्षेत्रफल एरिया **56.10 हेक्टेयर** है। खनन कार्य अपयोजन हेतु अनुसूचित जनजाति और अन्य परंपरागत वनवासी (वन अधिकरों की मान्यता) अधिनियम, 2006, 2008 एवं नियम 2012 के अन्तर्गत अनापत्ति निर्गत किया जाय। अनापत्ति हेतु प्रस्तावित भूमि की विवरणी मौजावार निम्न प्रकार है :–

SL No.	Village	Mouza No.	Plot No. (As Per Survey Settlement record 1960-61)	Area Applied for diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F. (P)	52.60
			P.F. (P)	3.50
		Total Area (in Ha)		**65.52**

2– हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु प्राप्त अपयोजन प्रस्ताव के अनापत्ति हेतु अधोहस्ताक्षरी के कार्यालय पत्रांक– 36/क0, दिनांक– 09.05.2023 द्वारा अंचल अधिकारी, मुसाबनी को हिन्दुस्तान कॉपर लिमिटेड इंडियन कॉपर कॉम्प्लेक्स, डाक– मऊभण्डार के पत्रांक– HCL/ICC/GM(ICC)/FRA/2023 दिनांक– 25.04.2023 के आलोक में **मौजा– फॉरेस्ट ब्लॉक** के वनभूमि पर अनापत्ति हेतु ग्रामसभा के माध्यम से उपलब्ध कराने हेतु निदेश दिया गया।

3– अंचल अधिकारी, मुसाबनी के पत्रांक– 287, दिनांक– 28.07.2023 द्वारा हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना से संबंधित ग्राम के ग्रामसभा एवं वन अधिकार समिति **फॉरेस्ट ब्लॉक** द्वारा वनभूमि पर खनन कार्य हेतु अनापत्ति प्रमाण–पत्र एवं बैठक की कार्यवाही की मूल प्रति प्राप्त कराया गया है। ग्राम वन अधिकार समिति द्वारा बैठक की कार्यवाही निम्न प्रकार है :–

(ड.) ग्राम फॉरेस्ट ब्लॉक (ताम्बाजुड़ी)

उपस्थिति पंजी में अलग से संधारित है, जो संलग्न है।

हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन क्षेत्र के अंतर्गत मौजा– **फॉरेस्ट ब्लॉक (ताम्बाजुड़ी)** में स्थित कुल **56.10 हेक्टेयर** वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक– 11.05.203 को दी गई सूचना के आधार पर **दिनांक– 17.05.2023** को **ताम्बाजुड़ी आसड़ा क्लब, फॉरेस्ट ब्लॉक** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई। बैठक का आयोजन ग्राम प्रधान **श्री फुरमल टुडू** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिति में किया गया। बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई।

प्रस्ताव :– (i)– हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन क्षेत्र के अंतर्गत भूमिगत खनन हेतु **फॉरेस्ट ब्लॉक** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
1098	222	R.F. (P)	52.60 हेक्टेयर
		P.F. (P)	3.50 हेक्टेयर
		कुल	56.10 हेक्टेयर

प्रस्ताव :– (ii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावों पर विचार किया गया।

प्रस्ताव :– (iii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाति एवं अन्य पांरम्परिक वनवासी (वनाधिकारों को मान्यता) अधिनियम 2006 एवं नियम 2008 का संशोधित नियम 2012 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया। प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाति अथवा अन्य पारंम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नहीं है।

अतः बैठक में सर्वसम्मति से निर्णय लेते हुए हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु **फॉरेस्ट ब्लॉक** ग्राम को **56.10 हेक्टयेर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया।

4– सभी संबंधित ग्रामसभा (ओं), ने प्रमाणित किया है कि FRA 2006 के तहत सभी औपचारिकताओं/प्रक्रियाओं को पूरा किया गया है और यह कि उन्होंने प्रस्तावित अपयोजन, मुआवजा और प्रगतिशील उपायों, अगर कोई हो, को प्रस्तावित अपयोजन के उद्देश्य और विवरण समझने के पश्चात अपनी सहमती दे दी है। **फॉरेस्ट ब्लॉक** ग्राम की ग्रामसभा द्वारा जारी किए गए प्रमाण–पत्र की प्रतियाँ संलग्न है।

5– इस तरह के प्रस्तावों पर चर्चा और निर्णय जब लिया गया ग्राम सभा में उपस्थित सदस्यों की न्यूनतम 50 प्रतिशत की एक कोरम उपस्थित थी।

6– FRA 2006 के Section 3 (2) के तहत सरकार द्वारा प्रबंधित सुविधाओं के लिए वन भूमि के अपयोजन पूरा हो चुका हैं और ग्राम सभाओं ने इसके लिए अपनी सहमति दे दी है।

7– FRA 2006 के Section 3 (1) (ई) के अनुसार आदिम जनजातीय समूहों तथा पूर्व कृषि समुदाय, जहाँ लागू हों के अधिकार की विशेष रूप से रक्षा की गई है।

अतः मुसाबनी अंचल अन्तर्गत **मौजा– फॉरेस्ट ब्लॉक** में उपरोक्त विवरणी की **56.10 हेक्टेयर** वनभूमि के अपयोजन हेतु ग्राम वन अधिकार समिति, हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु अनापत्ति प्रमाण–पत्र निर्गत करने हेतु सर्वसम्मति से निर्णय लिया गया।

सधन्यवाद बैठक की कार्यवाही सम्पन्न हुई।

04/08/23

श्री परमा बानरा,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
फॉरेस्ट ब्लॉक पंचायत, मुसाबनी,
प्रखण्ड।

04/08/23

श्रीमती रेखा रानी मुर्मू,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
माटिहाना पंचायत, बहरागोड़ा,
प्रखण्ड।

04/08/23

श्री रामदेव हेम्ब्रम,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– प्रमुख,
मुसाबनी प्रखण्ड।

04/8/23

सदस्य,
अनुमण्डल स्तरीय वन
अधिकार समिति,
सहायक वन संरक्षक,
जमशेदपुर प्रमण्डल,
पूर्वी सिंहभूम, जमशेदपुर।

4/8/23

अध्यक्ष,
अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह–
अनुमण्डल पदाधिकारी,
घाटशिला।

ग्राम सभा / वन अधिकार समिति फॉरेस्ट ब्लॉक

प्रखंड– मुसाबनी, अनुमंडल –घाटशिला जिला, पूर्वी – सिहंभमू झारखण्ड

अभिलेख संख्या 01/2023–24

वन अधिकार समिति फॉरेस्ट ब्लॉक के समक्ष अंचल अधिकारी मुसाबनी का ज्ञापांक संख्या 181, दिनांक 11/05/2023 को सूचना प्राप्त हुआ है पत्र की अभिप्रमाणित प्रति संलग्न की गई है ।

थाना न0	खाता न0	प्लॉट न0	प्रस्तावित वनक्षेत्र
1098	222	आर.एफ. (P)	52.60 हेक्टेयर
1098	222	पी.एफ. (P)	3.50 हेक्टेयर
		कुल	56.10 हेक्टेयर

जिसमें सर्व श्री हिन्दुस्तान कॉपर लिमिटेड के सूरदा माइन्स खनन पट्टा के अंतर्गत भूमिगत खनन के लिए मौजा फॉरेस्ट ब्लॉक थाना नंबर 1098 खाता नंबर 222 की कुल 56.10 हेक्टेयर वन भूमि का भूमि अपयोजन प्रस्ताव पारित करना है। उपरोक्त प्रस्तावित वन भूमि उपयोजन से अनुसूचित जनजाति और अन्य परंपरागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम 2006 एवं नियम, 2008 का संशोधित नियम 2012 के आलोक में सभी वर्गों पर पड़ने वाले प्रभाव पर विचार किया जाना है।

प्रस्ताव को अंचल अधिकारी के निर्देशानुसार वन अधिकार समिति और ग्राम फॉरेस्ट ब्लॉक (ताम्बाजुड़ी) की ग्राम सभा के समक्ष संयुक्त बैठक में दिनांक 17/05/2013 को विचार हेतु रखे हैं।

बैठक की कार्यवाही

आज दिनांक 17/5/2023 को ग्राम वन अधिकार समिति फॉरेस्ट ब्लॉक और ग्राम सभा के संयुक्त बैठक में हिन्दुस्तान कॉपर लिमिटेड के पदाधिकारी भी उपस्थित है। अंचल कार्यालय मुसाबनी की ओर से हल्का कर्मचारी श्री दुर्गा चरण बोयपाई एवं वन विभाग की ओर से श्री उमेश सिहं पदनाम उप परिसर पदाधिकारी के उपस्थिति में उपरोक्त प्रस्तावित वन भूमि अपयोजन के उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभाव पर विचार विमर्श किया गया।

अनुसूचित जनजाति एवं अन्य परंपरागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम 2006 एवं नियम; 2008 का संशोधित नियम 2012 आलोक में सभी वर्गों पर पड़ने वाले प्रभाव के बारे में विस्तृत चर्चा की गई। प्रस्तावित भूमि पर खनन कार्य भूमिगत होने के कारण सतह पर खनन कार्य से किसी भी प्रकार का नकारात्मक प्रभाव नहीं पड़ेगा और ना ही ग्रामीणों को किसी प्रकार का नुकसान होगा । अपितु कंपनी चलने से रोजगार सृज़न होंगे और क्षेत्र में समृद्धि आएगी ।

बैठक में सर्वसम्मति से निर्णय लेते हुए सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु फॉरेस्ट ब्लॉक (ताम्बाजुड़ी) ग्राम की 56.10 हेक्टेयर वनभूमि अपयोजन का प्रस्ताव पारित किया गया ।

संकल्प

बैठक में ग्राम वन अधिकार समिति एवं ग्राम सभा के 50 प्रतिशत से अधिक सदस्य उपस्थित हुए और सभी की संतुष्टि भी प्राप्त है। उपस्थिति पंजी ग्राम सभा की मूल कॉपी में क्रम संख्या. 25 .से 46 तक में दर्ज है। हम अधोहस्ताक्षरी अध्यक्ष, सचिव ,ग्राम प्रधान और ग्रामीण भूमिगत खनन हेतु भूमि अपयोजन का अनुमति /खनन पट्टा दिए जाने के अनुकूल में अनुशंसा करते है । अग्रेत्तर कार्रवाई हेतु अभिलेख अनुमंडल स्तरीय वन अधिकार समिति को भेजा जाता है।

अनु– ग्राम सभा की कॉपी संलग्न है।

अध्यक्ष	सचिव	ग्राम प्रधान
Hansda	U. Murmu	Furu
महेश्वर हॉसदा	उदय मुर्मू	फुरमल टुडू
अध्यक्ष	सचिव	ग्राम-सभा अध्यक्ष (माझी)
वन अधिकार समिति	वन अधिकार समिति	ग्राम-ताम्बाजुड़ी
ग्राम - फोरेष्ट ब्लॉक	ग्राम - फोरेष्ट ब्लॉक	पोस्ट-सुरदा माईन्स
प्रखण्ड - मुसाबनी	प्रखण्ड - मुसाबनी	पूर्वी सिंहभूम (झारखण्ड)

अंचल प्रतिनिधि

वन क्षेत्र प्रतिनिधि

अनुमंडल पदाधिकारी का कार्यालय, घाटशिला, पूर्वी सिंहभूम।

दिनांक– 04.08.2023 को अनुमण्डल कार्यालय, घाटशिला में आहूत अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक की कार्यवाही :–

अनुमण्डल स्तरीय वन अधिकार समिति, घाटशिला की बैठक दिनांक– 04.08.2023 को अनुमण्डल पदाधिकारी, घाटशिला –सह– अध्यक्ष, अनुमण्डल स्तरीय वन अधिकार समिति की अध्यक्षता में सम्पन्न हुई। बैठक में निम्नांकित पदाधिकारी एवं सदस्य उपस्थित हुए :–

1) अनुमण्डल पदाधिकारी, घाटशिला।
2) सहायक वन संरक्षक, पूर्वी सिंहभूम, जमशेदपुर।
3) श्री रामदेव हेम्ब्रम, प्रमुख, मुसाबनी प्रखण्ड।
4) श्री परमा बानरा, मुखिया, फॉरेस्ट ब्लॉक पंचायत, मुसाबनी।
5) श्रीमती रेखा रानी मुर्मू, मुखिया, माटिहाना पंचायत, बहरागोड़ा।

1– सर्वप्रथम अध्यक्ष महोदय द्वारा बैठक में उपस्थित प्रतिनिधियों को स्वागत करते हुए बताया गया कि हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य के क्रम वनभूमि पर जनजातीय एवं परम्परागत वनवासी के अधिकारों के संबध में अनापत्ति–प्रमाण पत्र के लिए उपायुक्त, पूर्वी सिंहभूम, जमशेदपुर को संबोधित पत्र संख्या– HCL/ICC/GM/SURDA MINE/2023 दिनांक– 25.04.2023 द्वारा अनुरोध किया गया है कि पूर्वी सिंहभूम, जिले के घाटशिला अनुमण्डल के मुसाबनी अंचल अन्तर्गत सुरदा माईंस लीज एरिया **65.52 हेक्टेयर** भूमि परिवर्तन के लिए प्रस्तावित है, जिसमें से **मौजा– पाथरगोड़ा** खनन क्षेत्रफल एरिया **3.18 हेक्टेयर** है। खनन कार्य अपयोजन हेतु अनुसूचित जनजाति और अन्य परंपरागत वनवासी (वन अधिकरों की मान्यता) अधिनियम, 2006, 2008 एवं नियम 2012 के अन्तर्गत अनापत्ति निर्गत किया जाय। अनापत्ति हेतु प्रस्तावित भूमि की विवरणी मौजावार निम्न प्रकार है :–

SL No.	Village	Mouza No.	Plot No. (As Per Survey Settlement record 1960-61)	Area Applied for diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F. (P)	52.60
			P.F. (P)	3.50
		Total Area (in Ha)		**65.52**

2– हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु प्राप्त अपयोजन प्रस्ताव के अनापत्ति हेतु अधोहस्ताक्षरी के कार्यालय पत्रांक– 36/क0, दिनांक– 09.05.2023 द्वारा अंचल अधिकारी, मुसाबनी को हिन्दुस्तान कॉपर लिमिटेड इंडियन कॉपर कॉम्प्लेक्स, डाक– मऊभण्डार के पत्रांक– HCL/ICC/GM(ICC)/FRA/2023 दिनांक– 25.04.2023 के आलोक में **मौजा– पाथरगोड़ा** के वनभूमि पर अनापत्ति हेतु ग्रामसभा के माध्यम से उपलब्ध कराने हेतु निदेश दिया गया।

3– अंचल अधिकारी, मुसाबनी के पत्रांक– 287, दिनांक– 28.07.2023 द्वारा हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना से संबंधित ग्राम के ग्रामसभा एवं वन अधिकार समिति **पाथरगोड़ा** द्वारा वनभूमि पर खनन कार्य हेतु अनापत्ति प्रमाण–पत्र एवं बैठक की कार्यवाही की मूल प्रति प्राप्त कराया गया है। ग्राम वन अधिकार समिति द्वारा बैठक की कार्यवाही निम्न प्रकार है :–

(घ) ग्राम पाथरगोड़ा

उपस्थिति पंजी में अलग से संधारित है, जो संलग्न है।

हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन क्षेत्र के अंतर्गत **मौजा– पाथरगोड़ा** में स्थित कुल **3.18 हेक्टेयर** वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक– 11.05.203 को दी गई सूचना के आधार पर **दिनांक– 20.05.2023** को **मांझी मण्डप, पाथरगोड़ा** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई। बैठक का आयोजन ग्राम प्रधान **श्री सुदर्शन हाँसदा** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिति में किया गया। बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई।

प्रस्ताव :– (i)– हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन क्षेत्र के अंतर्गत भूमिगत खनन हेतु **पाथरगोड़ा** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
160	245	1132 (P)	3.18 हेक्टेयर

प्रस्ताव :– (ii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावों पर विचार किया गया।

प्रस्ताव :– (iii)– उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाति एवं अन्य पांरम्परिक वनवासी (वनाधिकारों को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया। प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाति अथवा अन्य पारंम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नहीं है।

अतः बैठक में सर्ववम्मति से निर्णय लेते हुए हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु **पाथरगोड़ा** ग्राम को **3.18 हेक्टयेर** वनभूमि के अपयोजन का प्रस्ताव पारित किया गया।

4– सभी संबंधित ग्रामसभा (ओं), ने प्रमाणित किया है कि FRA 2006 के तहत सभी औपचारिकताओं/प्रक्रियाओं को पूरा किया गया है और यह कि उन्होंने प्रस्तावित अपयोजन, मुआवजा और प्रगतिशील उपायों, अगर कोई हो, को प्रस्तावित अपयोजन के उद्देश्य और विवरण समझने के पश्चात अपनी सहमती दे दी है। **पाथरगोड़ा** ग्राम की ग्रामसभा द्वारा जारी किए गए प्रमाण–पत्र की प्रतियाँ संलग्न है।

5– इस तरह के प्रस्तावों पर चर्चा और निर्णय जब लिया गया ग्राम सभा में उपस्थित सदस्यों की न्यूनतम 50 प्रतिशत की एक कोरम उपस्थित थी।

6– FRA 2006 के Section 3 (2) के तहत सरकार द्वारा प्रबंधित सुविधाओं के लिए वन भूमि के अपयोजन पूरा हो चुका हैं और ग्राम सभाओं ने इसके लिए अपनी सहमति दे दी है।

7– FRA 2006 के Section 3 (1) (ई) के अनुसार आदिम जनजातीय समूहों तथा पूर्व कृषि समुदाय, जहाँ लागू हों के अधिकार की विशेष रूप से रक्षा की गई है।

अतः मुसाबनी अंचल अन्तर्गत **मौजा– पाथरगोड़ा** में उपरोक्त विवरणी की **3.18 हेक्टेयर** वनभूमि के अपयोजन हेतु ग्राम वन अधिकार समिति, हिन्दुस्तान कॉपर लिमिटेड के सुरदा माईंस परियोजना जो भारत सरकार का एक उपक्रम के खनन कार्य हेतु अनापत्ति प्रमाण–पत्र निर्गत करने हेतु सर्वसम्मति से निर्णय लिया गया।

सधन्यवाद बैठक की कार्यवाही सम्पन्न हुई।

श्री परमा बानरा,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
फॉरेस्ट ब्लॉक पंचायत, मुसाबनी,
प्रखण्ड।

श्रीमती रेखा रानी मुर्मू,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– मुखिया,
माटिहाना पंचायत, बहरागोड़ा,
प्रखण्ड।

श्री रामदेव हेम्ब्रम,
सदस्य, अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह– प्रमुख,
मुसाबनी प्रखण्ड।

सदस्य,
अनुमण्डल स्तरीय वन
अधिकार समिति,
सहायक वन संरक्षक,
जमशेदपुर प्रमण्डल,
पूर्वी सिंहभूम, जमशेदपुर।

अध्यक्ष,
अनुमण्डल स्तरीय वन
अधिकार समिति,
–सह–
अनुमण्डल पदाधिकारी,
घाटशिला।

ग्राम सभा एवं ग्राम वनाधिकार समिति
रेजोल्यूशन

ग्राम-**पाथरगोड़ा** दिनांक-20/05/2023

सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के सुरदा खनन पट्टा के अंतर्गत मौजा सोहदा, सुरदा, बेनाशोल, ताम्बाजुड़ी एवं पाथरगोड़ा में स्थित कुल 65.52 हेक्टेयर वनभूमि का भूमिगत खनन हेतु अपयोजन प्रस्ताव पर विचार करने के लिए अंचल अधिकारी द्वारा दिनांक **11/05/2023** को दी गई सूचना के आधार पर दिनांक **20/05/2023** को **मांझी मंडप, पाथरगोड़ा** में ग्राम वनाधिकार समिति एवं ग्राम सभा कि बैठक बुलाई गई । बैठक का आयोजन ग्राम प्रधान **श्री सुदर्शन हांसदा** की अध्यक्षता में अंचल एवं वन क्षेत्र के प्रतिनिधियों की उपस्थिती में किया गया । बैठक में निम्नलिखित प्रस्तावों पर विस्तृत चर्चा की गई ।

प्रस्ताव-1 :- सर्वश्री हिन्दुस्तान कॉपर लिमिटेड द्वारा सुरदा खनन पट्टा के अंतर्गत भूमिगत खनन हेतु **पाथरगोड़ा** ग्राम में प्रस्तावित वनभूमि का गैर वानिकी उपयोग हेतु अपयोजन, जिसका विवरण निम्नानुसार है, विचार किया गया ।

थाना नं0	खाता नं0	प्लॉट नं0	प्रस्तावित वनक्षेत्र
160	245	1132 (P)	3.18 हेक्टेयर

प्रस्ताव-2 :- उपरोक्त प्रस्तावित वन भूमि के अपयोजन का उद्देश्य तथा इससे प्रत्यक्ष अथवा परोक्ष रूप से पड़ने वाले प्रभावो पर विचार किया गया ।

प्रस्ताव-3 :- उपरोक्त प्रस्तावित वनभूमि के अपयोजन से अनुसूचित जनजाती एवं अन्य पारम्परिक वनवासी (वनाधिकारो को मान्यता) अधिनियम 2006 के आलोक में सभी वर्गो पर पड़ने वाले प्रभावों पर विचार किया गया । प्रस्तावित वनभूमि पर किसी अनुसूचित जनजाती अथवा अन्य पारम्परिक वनवासी के व्यक्तिगत अधिकार/दावा स्वीकृत/लंबित नही है ।

अत: बैठक में सर्वसम्मती से निर्णय लेते हुए सर्वश्री हिन्दुस्तान कॉपर लिमिटेड के पक्ष में सुरदा खनन परियोजना के अंतर्गत भूमिगत खनन हेतु पाथरगोड़ा ग्राम की 3.18 हेक्टेयर वनभूमि के अपयोजन का प्रस्ताव पारित किया गया ।

नोट:- उपरोक्त बैठक में ग्राम वनाधिकार समिति एवं ग्राम सभा के 50 प्रतिशत से अधिक सदस्य उपस्थित हुए । उपस्थिती सूचि संलग्न रजिस्टर के पृष्ट संख्या- ...01.... से .....05..... तक दि गई है । ग्राम सभा में महिलाओं की भागीदारी 1/3 थी। अनुमंडलीय स्तरीय वन अधिकार समिति से अगले कार्रवाई के लिए अग्रेषित किया जाय।

ग्राम प्रधान

ग्राम प्रधान
सुदर्शन हाँसदा
ग्राम-पाथर गोड़ा
पंचायत- फॉरेस्ट ब्लॉक
जिला-पूर्वी सिंहभूम (झारखण्ड)

अंचल प्रतिनिधि

अध्यक्ष, वनाधिकार समिति

अध्यक्ष
वन अधिकार समिति
गाँव- पाथर गोड़ा
पूर्वी सिंहभूम (झारखण्ड)

सचिव, वनाधिकार समिति

सचिव
ग्राम वनाधिकार समिति
ग्राम-पाथरगोड़ा
पूर्वी सिंहभूम (झारखंड)

वनक्षेत्र प्रतिनिधि

वनाधिकार समिति के सदस्यों के हस्ताक्षर (राजेश्वर)

ग्राम सभा सदस्यों के हस्ताक्षर (राजेश्वर)

समेकित जनजातीय विकास अभिकरण,(आई०टी०डी०ए०)
पूर्वी सिंहभूम, जमशेदपुर

उपायुक्त–सह–अध्यक्ष, जिलास्तरीय वन अधिकार समिति की अध्यक्षता में दिनांक–**15.01.2025** को अनुसूचित जनजाति एवं अन्य परम्परागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम 2006 के नियम 2008 एवं संशोधित नियम 2012 के अन्तर्गत हिन्दुस्तान कॉपर लिमिटेड, सुरदा माईन्स परियोजना के द्वारा ग्राम बेनाशोल, सुरदा, सोहदा, फॉरेस्ट ब्लॉक एवं पाथरगोड़ा के वनभूमि का अपयोजन से संबंधित अनापत्ति प्रमाण पत्र निर्गत करने के सम्बन्ध में बैठक की कार्यवाही :–

उपस्थिति :– पंजी में संधारित है।

कार्यवाही :– सर्वप्रथम सदस्य सचिव, जिला कल्याण पदाधिकारी, पूर्वी सिंहभुम, जमशेदपूर के द्वारा समिति को बताया गया कि अनुसूचित जनजाति एवं अन्य परम्परागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम 2006 के नियम 2008 एवं संशोधित नियम 2012 के अन्तर्गत आयोजित बैठक में निर्णय के आलोक में हिन्दुस्तान कॉपर लिमिटेड, सुरदा माईन्स परियोजना के द्वारा ग्राम बेनाशोल, सुरदा, सोहदा, फॉरेस्ट ब्लॉक एवं पाथरगोड़ा के वनभूमि का अपयोजन से संबंधित अनापत्ति प्रमाण पत्र निर्गत करने हेतु विचार किया जाना है :–

कुल संलग्न भूमि एवं स्थान संबंधित विवरणी :–

Sl.No.	Village	Mouza No.	Plot No. (As Per Survey Settlement Record 1960-61)	Area Applied For Diversion (in Ha)
1	Benashole	100	17(P)	0.59
2	Sohada	101	~~315~~ 135	0.04
			150(P)	0.59
			618	0.34
3	Surda	102	204	0.26
			212	4.26
			220	0.03
			775(P)	0.13
4	Pathargora	160	1132(P)	3.18
5	Forest Block	1098	R.F (P)	52.60
			P.F (P)	3.50
Total Area (in Ha)				**65.52**

Durgan Murmu

अनुमण्डल पदाधिकारी–सह–अध्यक्ष, अनुमण्डल वन अधिकार, समिति, घाटशिला, पूर्वी सिंहभुम, की अध्यक्षता में, दिनांक– 04.08.2023 को आयोजित अनुमण्डल स्तरीय वन अधिकार, समिति की बैठक में सर्व सम्मति से पारित उपरोक्त वन भुमि के अपयोजन से संबंधित प्रतिवेदन प्राप्त है।

उक्त के आलोक में आज दिनांक–15.01.2025 को उपायुक्त–सह–अध्यक्ष, जिलास्तरीय वन अधिकार समिति की अध्यक्षता में अनुसूचित जनजाति एवं अन्य परम्परागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम 2006 के नियम 2008 एवं संशोधित नियम 2012 के अन्तर्गत हिन्दुस्तान कॉपर लिमिटेड, सुरदा माईन्स परियोजना के द्वारा ग्राम बेनाशोल, सुरदा, सोहदा, फॉरेस्ट ब्लॉक एवं पाथरगोड़ा के वनभूमि का अपयोजन से संबंधित अनापत्ति प्रमाण पत्र निर्गत करने हेतु सर्वसम्मति से अनुमोदन किया गया ।

अन्त में सधन्यवाद बैठक की कार्यवाही समाप्त की गई ।

Somoni Sardar 15.1.2025

श्रीमती सोनामनी सरदार
जिला परिषद् सदस्या, पोटका

Devjani Murmu 15/01/2025

श्रीमती देवयानी मुर्मू
जिला परिषद् सदस्या, घाटशिला।

28/2/2025

श्री लखी मार्डी,
जिला परिषद् सदस्य, मुसाबनी

15/01/25

जिला कल्याण पदाधिकारी,
पूर्वी सिंहभूम, जमशेदपुर।

15/01/25

वन प्रमण्डल पदाधिकारी,
वन प्रमण्डल,जमशेदपुर।

उपायुक्त,
पूर्वी सिंहभूम,जमशेदपुर।