Date: 22.01.2019

To,
The Member Secretary,
Expert Appraisal Committee (Thermal & Coal Mining)
Ministry of Environment, Forest & Climate Change
Indira Paryavaran Bhawan
Jorbagh Road
New Delhi - 110 003

Sub.: Environment Clearance of Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited in Districts Surguja & Surajpur (Chhattisgarh) – reg

### Ref:

- 1. Minutes of meeting of Expert Appraisal Committee held on 15-16<sup>th</sup> February 2018
- 2. Letter from Principal Chief Conservator of Forests (Wildlife) to MoEF&CC, no. क्र./व.प्रा./प्रबंध/18/3029 dated 18<sup>th</sup> May 2018
- 3. Minutes of meeting of Expert Appraisal Committee held on 24<sup>th</sup> July 2018.
- 4. Minutes of meeting of Forest Advisory Committee (FAC) held on 26<sup>th</sup> July 2018
- 5. Proof of fund deposited by RVUNL for ICFRE Study vide letter dated 10<sup>th</sup> August 2018
- 6. Minutes of meeting of Expert Appraisal Committee held on 27<sup>th</sup> September 2018
- 7. Minutes of meeting of Forest Advisory Committee (FAC) held on 19<sup>th</sup> December 2018
- 8. RVUNL to PCCF (Wildlife) vide letter no. RVUN/Addl.CE(Fuel)/D.1863 dated 9<sup>th</sup> October 2018
- 9. Fact Sheet for FAC meeting dated 15<sup>th</sup> January 2019
- 10. Minutes of meeting of FAC dated 15<sup>th</sup> January 2019

Dear Sir,

This is with reference to minutes of the meeting of the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) held on 27<sup>th</sup> September, 2018 *(copy enclosed as Annexure-I)* regarding proposal for grant of Environmental Clearance for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA (**Agenda Item No. 38.1**). In the said meeting, EAC desired comments on following in view of the recommendations of FAC in its meeting held on 26<sup>th</sup> July 2018-

- 1. Comprehensive study on conservation of biodiversity and wildlife conducted by the ICFRE.
- **2.** Opinion of Ministry of Law & Justice/ASG on applicability of the approval accorded by the then Hon'ble MEF&CC vide order dated 23rd June, 2011 for prospecting in the said coal block/other coal blocks in Hasdeo Arand forest area pending final disposal of the matter in the Apex court.
- **3.** Success of reclamation works in the adjoining coal blocks (Tara & PEKB).

Our comments on the above recommendations are as follows-

1. The Biodiversity Study shall be conducted through ICFRE, Dehradun in consultation with Wildlife Institute of India, Dehradun for the whole Hasdeo Arand Coalfield comprising of Tara, Parsa, Parsa East & Kanta Basan and Kete Extension to be funded by M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL). State Government requested ICFRE vide its letter dated 2<sup>nd</sup> January 2018 (*Copy enclosed as Annexure-II*) to submit its proposal for above-mentioned study. Proposal for the study has been submitted by ICFRE to State

Government. RVUNL, vide its letter dated 10<sup>th</sup> August 2018 has deposited an amount of Rs. 1,74,68,250/- i.e. 75% of Rs. 232.91 Lakhs based on the demand of DFO, Surguja for the study (*Copy enclosed as Annexure-III*). It is in final stage of ordering to ICFRE by Government of Chhattisgarh. The Scope of study is for preparation of Integrated Wildlife Management Plan (IWMP), identification of conservation area and the expert committee of ICFRE will recommend mitigation measures. The study period for the same is two years. RVUNL is committed to implement the recommendations of the study.

- 2. Proposal of Forest Clearance for Parsa Coal Block was considered in FAC meeting held on 19.12.2018 after receipt of expert legal opinion from ASG. (*Copy of FAC Minutes of meeting enclosed as Annexure-IV*). FAC noted that the Additional Solicitor General of India (ASG) has tendered his opinion, that there is no legal restriction for FAC to consider the instant proposal. FAC also noted that lot of time has elapsed since the proposal was first considered in the Ministry.
- 3. FAC in its meeting dated 19<sup>th</sup> December 2018 formed the following sub-committee to make a site inspection, examine the relevant issues and submit its report so that the matter can be placed before FAC again for a final decision
  - i. Shri Kanwaljeet Singh, APCCF, Regional Office, MoEF&CC, Nagpur
  - ii. Shri S.S. Bajaj, Nodal Officer (FCA), Govt. of Chhattisgarh
  - iii. Shri Deepak Mohanty, Member, FAC

The sub-committee consisting of members listed at serial no. 1 and 3 above carried out the site visit on 8<sup>th</sup> January 2019, the other member Shri S.S. Bajaj, Nodal Officer, Chhattisgarh could not accompany the subcommittee.

Findings of sub-committee regarding success of reclamation works in the adjoining coal blocks (Please refer Point no. 28 (a, b & d) of the Factsheet of the FAC prepared for January 2019 FAC meeting enclosed as Annexure-V)-

The views/finding of the sub-committee are:

- though the mining operations in the Parsa East and Kante Basen coal block started in February 2013 and are still going on, no mining operations have started in the Tara coal block, which is still intact
- ii) More than five years have elapsed since the Hon'ble Minister has noted his observations on 23.06.2011,
- iii) In the Parsa East and Kante Basen open cast Coal mine project the back filling and reclamation works have started from the year 2013-14 onwards and so far an area of approximately 161 Ha has been back filled and 121.77 Ha been treated with plantation and biological reclamation.

"The sub-committee observed that the physical and biological reclamation/plantations taken up by the user agency in the Parsa East and Kante Basen open cast Coal mine project is done in a professional way and as per the approved progressive mine closure plan. Though some gully formations are observed in the initial overburden dump but the subsequent reclamation / plantations work is appreciable. The reclamation and plantation works taken up by the user agency is also supported by a report on the vegetation mapping and land reclamation for Parsa East Kante Basen (PEKB) open Cast coal mine Surguja prepared by Geotrax International Services, which was engaged by the user agency." (Copy of the report enclosed as Annexure-VI along with a photo album of the reclamation work is enclosed as Annexure-VII)

Accordingly, based on the report of the sub-committee, all facts of the proposal and considering the inputs received from the Additional CS (Govt of Chhattisgarh), User agency and APCCF (Regional Office), FAC decided to recommend for grant of in-principle approval. (*please refer Agenda Item No. 2 of attached Minutes of meeting of FAC dated 15<sup>th</sup> January 2019 attached as Annexure-VIII)*.

4. Further, in its meeting held on 27<sup>th</sup> September 2018, EAC insisted the following-

"The committee also insisted for compliance of its earlier recommendations in respect of opinion of the State Wild Life Board regarding impact of existing and proposed mining operations on elephant movement and other wild life species needs to be sought, in view of part of the area proposed for Lemru Elephant Reserve."

Comments/opinion of Principal Chief Conservator of Forests (Wildlife) was submitted to MoEF&CC vide its letter no. क्र./व.प्रा./प्रबंध/18/3029 dated 18th May 2018 as compliance of the above mentioned clarifications desired by EAC (*Copy enclosed as Annexure-IX*).

Further, RVUNL vide its letter no. RVUN/Addl. CE(Fuel)/D.1863 dated 9<sup>th</sup> October 2018, again requested to Principal Chief Conservator of Forests (Wildlife) to pursue the matter for comments/opinion for compliance of above EAC comments (*Copy of the letter enclosed as Annexure-X*). We have not received any response from State Government. We understand that PCCF (Wildlife), Chhattisgarh is competent Authority to reply on subject of impact of existing and proposed mining operations on elephant movement and other wild life species. PCCF (Wildlife) in its letter referred above clarified that, State Government rejected the proposal of Lemru Elephant reserve. Therefore, as on today, Lemru Elephant Reserve does not exist. Moreover, a detailed Wildlife Management Plan has been prepared for the project and approved by Government of Chhattisgarh, Salient Features of the Wildlife Management Plan are placed below-

- A Wildlife Study was done by team led by Mr. Ashok Masih, RETD. Addl. PCCF.
- Primary data was collected by visiting field and special emphasis was given to wildlife habitat and possible improvement and innovations therein.
- ➤ Data so collected was ratified with the Range Officers and other Senior Officers. Secondary data was obtained from working plan, divisional reports, district statistical data, forest maps, geological maps, forest survey of India maps, mining plan, published reports of forest department etc.
- > The action plan and mitigation measures and action plan was discussed with Divisional Forest Officers, Conservator of Forests and other senior officers.
- Scheme area (1017.936 sq.km.) of the study includes Udaipur and Lakhanpur range of Ambikapur Division and Ramanujnagar range of Surajpur Division.
- Total 77 species of trees recorded in the study area. The scheme area contains mostly Sal Forests (91%) and mixed forests (9%).
- ➤ Total 28 species of mammals, 82 species of birds, 8 species of reptiles reported in the scheme area.
- Most commonly seen carnivores are bear, jackal, hyena, wild dog, wild cat etc. Other commonly seen animals are wild boar, rhesus monkey, langoor, porcupine, hare etc.
- Amongst herbivore, cheetal deer and barking deer are the most common.
- > Scheme area is not a regular habitat of elephants but the elephants have been visiting and revisiting the area at irregular intervals.

- In view of the threats to flora and fauna such as illicit felling, increased fire threat, mining activities, habitat fragmentation etc. scheme has been designed incorporating mitigations measures such as public awareness and people's participation, dealing animal human conflict, protection and intensive supervision, fire protection, soil conservation etc.
- A scheme with total fund of Rs. 1216 Lakhs for implementation of wildlife management plan over a period of 20 years has been prepared.

The 'Parsa' coal block has been allotted to Rajasthan Rajya Vidyut Utpadan Nigam Limited for utilization of washed coal in Chhabra TPP (1820 MW), Kalisindh TPP (1200 MW) and Suratgarh Super Critical TPP (1320 MW). All the units of Kalisindh TPP (2x600 MW) and Chhabra TPP (2x250 MW+1x600 MW) are already under operation while 1 unit of Chhabra TPP (1x600 MW) are at advance stage of commissioning. The total coal requirement for above-mentioned power plants is about 26 MTPA and it is very difficult to meet the present requirement of our Thermal Power Stations. Any further delay in approval & clearances of Parsa Coal Block shall severely affect the operation of power plant.

In light of the above facts, we request you to kindly expedite Environmental Clearance of Parsa Coal Block.

Thanking you,

Yours faithfully, For Rajasthan Rajya Vidyut Utpadan Nigam Limited

Enclosures: As above

Annexure-I Minutes of meeting of EAC dated 27.09.2018

Minutes of the 38<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) held on 27<sup>th</sup> September, 2018 for appraisal of coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3

The 38<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 27<sup>th</sup> September, 2018 in the Ministry to consider the proposals relating to coal mining sector. List of EAC members and the project proponent/participants is at Annexure-I & II, respectively.

## **Confirmation of minutes**

There being no comments from any of the members of the Committee, minutes of the 36<sup>th</sup> meeting of the EAC held on 31<sup>st</sup> August, 2018 were confirmed.

Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

## Agenda No.38.1

Parsa Opencast Coal Mining Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajashtan Rajya Vidyut Utpadan Nigam Limited in an area of 1252.447 ha located at Hasdeo-Arand Coalfield in Districts Surguja&Surajpur (Chhattisgarh) - For EC

## [IA/CG/CMIN/59215/2016; F No. J-11015/76/2016- IA.II(M)]

- **38.1.1** The proposal is for environmental clearance to Parsa Opencast Coal Mining Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajashtan Rajya Vidyut Utpadan Nigam Limited in an area of 1252.447 ha at Hasdeo-Arand Coalfield in Districts Surguja & Surajpur (Chhattisgarh).
- **38.1.2** The proposal was earlier considered by the EAC in its 26<sup>th</sup> EAC held on 15-16 February, 2018, wherein the Committee after deliberations and taking cognizance of the concerns raised during public hearing, desired for certain clarifications from the PP and after receipt of the same, the proposal was again considered by the EAC in its 34<sup>th</sup> meeting held on 24<sup>th</sup> July, 2018. The Committee, after deliberations, on the same observed shortcomings and insisted for compliance of its earlier observations in its meeting held on 15-16 February, 2018, which inter-alia included comments from the State Tribal Welfare Department, State Water Resource Department and opinion of the State Wildlife Board.
- **38.1.3** The PP vide their letter dated 7<sup>th</sup> August, 2018 submitted the information as per the observations of the EAC. Summary of the same is given as under:

S. No.	Observations of the EAC	Status of compliance by the PP
1.	Welfare Department regarding permission for the project from Gram Sabha, impact on livelihood of tribal population, and their concurrence as	RVUNL vide its letter dated 6 <sup>th</sup> April 2018 requested State Tribal Welfare Department to provide its comment and the State Tribal Welfare Department, in turn, vide their letter dated 18 <sup>th</sup> May 2018 sought comments from the Collector, District Surguja & Surajpur on the observation of

	Extension to Scheduled Areas Act, 1996 (PESA Act) as applicable in the instant case.	the EAC. The District Collector (DC) Surguja & Surguja vide their letters dated 28 <sup>th</sup> May 2018 and 1 <sup>st</sup> June 2018 respectively replied to State Tribal Welfare Department. Subsequently, State Tribal Welfare Department has forwarded the same to MoEF&CC vide its letter dated 7 <sup>th</sup> June 2018.
2.	The State Water Resources/Irrigation Department of the State Government to assess the cumulative impact of diversion of streams, and existing and proposed mining operations on Hasdeo river.	It is informed that Water Resource Department, Government of Chhattisgarh stated in its report that "It can be concluded that there will be no cumulative adverse impact of Nala diversion and existing & proposed coal mining operation on Hasdeo River." NOC of proposed Nala diversion has been issued vide its letter no. 4708/F-7/25/31/S-2/2018 dated 6th August 2018.
3.	Opinion of the State Wild Life Board regarding impact of existing and proposed mining operations on elephant movement and other wild life species needs to be sought, in view of part of the area proposed for Lemru Elephant Reserve.	RVUNL vide its letter dated 16 <sup>th</sup> May 2018 requested PCCF (Wildlife), State Wildlife Department to provide comments on the above query raised by EAC. The PCCF (Wildlife), State Wildlife Department in its letter dated 18 <sup>th</sup> May 2018 to MoEF&CC informed following to MoEF&CC-
		(i) As per records of forest Department, Mining Lease Area of Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s. Rajasthan Rajya Vidyut Utpadan Nigam Limited in Districts Surguja & Surajpur (Chhattisgarh) does not fall in any notified protected area including national parks, wildlife sanctuaries, animal/elephant corridors etc. Proposed Project area also does not fall in 10 Km radius of any such protected area.
		(ii) State Government vide letter No. F-5-6/10-2/2009 dated 20th July 2009 rejected the proposal of Lemru Elephant Reserve. So, Lemru Elephant Reserve does not exist.
		(iii) It was also decided that wildlife conservation and management has to be carried out by improving habitat of the existing national park and sanctuaries rather than creating new elephant reserve, national park and sanctuary.
		(iv) As per records of local forest officials as well as study undertaken for Wildlife Conservation Plan for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5

- MTPA, this area is not а regular habitat/corridor elephants. Although of occasional visits of stray elephants have been reported in the area resulting into human-wildlife conflict property and damages.
- (v) Keeping that in mind, an elaborate Wildlife Management Plan with an estimated cost of Rs. 12.16 Crs, has prepared by Mr. Ashok Masih, (Retd. Add I. P.C.C.F) Member of "Society for Social Services, Madhya Bharat Chapter, Bhilai" to mitigate the impact of project, if any. Effective mitigation measures have been taken particularly with reference to elephant movement and protection. Wildlife Management Plan has also been approved by CWLW, Chhattisgarh vide letter dated 8<sup>th</sup> June, 2017.
- (vi) In Wildlife Management Plan provisions to reduce human-animal conflict, solar fencing, public awareness, establishment of Elephant Control Room at divisional level, Elephant Protection Team at range level and Elephant Friend Group (Hathi Mitra Samooh) at concerned village level has been made.

It is further mentioned by the PCCF (Wildlife) that that Government of Chhattisgarh, after examining all the aspects of forest & wildlife, recommended forest proposal of 841.538 ha forest land for the Parsa Coal Block for diversion of forest land to MoEF&CC vide its letter dated 02<sup>nd</sup> May 2018.

- **38.1.4** The EAC, after deliberations and especially in view of recommendations of the Forest Advisory Committee (FAC) in the Ministry in its meeting held on 26<sup>th</sup> July, 2018, desired for their comments on the following:-
  - Comprehensive study on conservation of biodiversity and wildlife conducted by the ICFRE.
  - Opinion of Ministry of Law & Justice/ASG on applicability of the approval accorded by the then Hon'ble MEF&CC vide order dated 23<sup>rd</sup> June, 2011 for prospecting in the said coal block/other coal blocks in Hasdeo Arand forest area pending final disposal of the matter in the Apex court.
  - Success of reclamation works in the adjoining coal blocks (Tara & PEKB).

The Committee also insisted for compliance of its earlier recommendations in respect of opinion of the State Wildlife Board on impact of existing and proposed mining operations on elephant movement and other wild life species needs to be sought, in view of part of the area proposed for Lemru Elephant Reserve.

The proposal was, therefore, deferred for want of needful on the above lines.

Annexure-II Letter from Govt. of Chhattisgarh to ICFRE regarding proposal for Wildlife Study



## कार्यालय प्रधान मुख्य वन संरक्षक, छत्तीसगढ

अरण्य भवन, सेक्टर-19, नार्थ ब्लॉक, कैंपिटल काम्पलेक्स, नया रायपुर - 492002 (अपर प्रधान मुख्य वन संरक्षक – भू-प्रबंध)

दुरभाष: 0771 - 2512840

- मेल: apccf-lm.eg@gov.in

क्र./भू-प्रबंध/खनिज/ 331-228/ 15 प्रति.

रायप्र. दिनांक 02/01/2018

महा निदेशक

भारतीय वानिकी एवं अनुसंधान परिषद एफ.आर.आई. कैम्पस देहरादून, उत्तराखण्ड

विषय: Proposal for prospecting of 1745.883 hectares of forest land of kente extention coal block in favour of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited for

exploration of coal reserves by undertaking Bore holes of 4" dia in Surguja

District in the State of Chhattisgarh - reg.

वन सलाहकार समिति (FAC) की बैठक दिनांक 26.10.2017 का कार्यवाही विवरण (एजेंण्डा-4)। संदर्भः

आवेदक संस्थान M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited का पत्र क्र/ 2. RVUN/ CE (Fuell) Dy CE (Fuell / D. 2454 दिनांक 01.12.2017

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कृपया संदर्भ - 1 का अवलोकन हो।

प्रकरण वन संरक्षण अधिनियम, 1980 के तहत 1745.883 हे. केते एक्टेंशन कोल ब्लॉक, सरगुजा जिला, छत्तीसगढ़ में प्रोरपेक्टिंग संबंधित है, जिसमें 153 बोरहोल्स किये जाने के प्रस्ताव पर संदर्भित बैठक में वन सलाहकार समिति (FAC) द्वारा विचार किया जाकर एजेण्डा 4 – बिन्दु 13-A पर बायोडावर्सिटी स्टडी कराने हेतु तथा वाइल्ड लाईफ मैनेजमेंट प्लान तैयार करने हेतु निम्नानुसार अनुशंसा की गई है :-

"Biodiversity assessment study is to be conducted by state government through ICFRE Dehradun in consultation with Wildlife institute ofIndia Dehradun for the whole Hasdeo-Arand coalfields comprising of Tara, Parsa, Parsa East, Kante to be funded by M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd (RVUNL). The study is to be awarded by State Government by associating the Indian Council of Forestry Research and Education (ICFRE). Dehradun and Wildlife Institute of India (WII) Dehradun and integrated wildlife management plan (IWMP)will be prepared and conservation area will be identified and mitigation measures will be recommended by the expert committee. The cost of study and cost of implementation of recommendations shall be borne by Mls Rajasthan RajyaVidyutUtpadan Nigam Ltd (RRVUNL). The report will be submitted within two years"

- भारत सरकार पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय नई दिल्ली के पत्र दिनांक 19:12 2017 की 2. छायाप्रति संलग्न है जिससें विषयांकित प्रकरण में प्रथम चरण की स्वीकृति जारी की गई है। इस पत्र के बिन्दु (ii) पर उक्त अनुशंसा को शर्त के रूप में शामिल किया गया है।
- उक्त अनुशंसा के पालन में निम्नानुसार मानचित्र संदर्भ पत्र–2 से आवेदक विभाग द्वारा इस कार्यालय 3. को उपलब्ध कराये गये है :--
- 1. Map of Hasdeo-Arand Coal Field on Google Earth
- 2. Map of Hasdeo-Arand Coal Field with Geographic Coordinates
- 3. Geology of Hasdeo-Arand Coal Field
- 4. Intergrated Map showing all three coal blocks allotted to RVUNL namely Parsa Coal Block. Kente Extension Coal Block and Parsa East & Kenta Basan Coal Blocks on Toposheet (WGS 84)



उक्त पत्र की छायाप्रति मानचित्रों सहित आपकी और प्रेषित है।

शर्त में उल्लेखित अन्य प्रकरण तारा कोल ब्लॉक मा. सर्वोच्च न्यायालय के निर्णय अनुसार प्रकरण निरस्त है। तारा कोल ब्लाक का मानचित्र पृथक से संलग्न है।

कृपया भारत सरकार पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय नई दिल्ली का पत्र क्रमांक/ F.No. 8-46/2017-FC दिनांक 19.12.2017 के अनुसार Biodiversity assessment study तथा Integrated wildlife management plan (IWMP) तैयार करने हेतु सहमति के साथ प्रस्ताव शीघ्र उपलब्ध कराने का अनुरोध है। इस हेतु प्रारूप T.O.R. की एक प्रति भी संलग्न की जा रही है।

संलग्न:-संदर्भ - 1 तथा संदर्भ-2 की छायाप्रति मानचित्र सहित तथा प्रथम चरण स्वीकृति की छायाप्रति एवं T.O.R.

(एस.एस. बजाज) अ.प्र.मु.व.स (भू - प्रबंध / व.सं.अ) छत्तीसगढ

पृ. क्र0/भू-प्रबंध/खनिज/331-228/ 16 प्रतिलिपि सूचनार्थ एवं आवश्यक कार्यवाही हेतुः रायपुर दिनांक 02/01/2018

वन महानिरीक्षक (एफ.सी), भारत सरकार - पर्यावरण एवं वन मंत्रालय, इंदिरा पर्यावरण भवन, कक्ष क्रमांक . 556, पांचवी मंजिल, अग्नि विंग, जोर बाग रोड, नई दिल्ली – 110003

निदेशक, भारतीय वन जीव संस्थान, पो.बा. नंबर 18, चंद्रबनी देहरादून— 248001 उत्तराखण्ड । 2.

मुख्य वन संरक्षक, सरगुजा वृत्त, अंबिकापुर, छत्तीसगढ। 3.

वन मंडलाधिकारी, सरगुजा वन मंडल, अंबिकापुर, छत्तीसगढ़।

अधीक्षण अभियंता (फ्यूल), मेसर्स राजस्थान राज्य विद्युत उत्पादन निगम मर्याद्भित, विद्युत भवन जनपथ, ज्योति नगर, जयपुर (राजस्थान)।



## Terms of Reference (TOR) for Biodiversity Assessment Study of HasdeoArand Coal Field comprising of Tara Coal Block, Parsa Coal Block, Parsa East &KantaBasan Coal Blocks &Kente Extension Coal Block

## 1. Background-

As per the recommendation ofForest Advisory Committee (FAC), Ministry of Environment, Forests & Climate Change (MOEF&CC) in the meeting held on 26th October, 2017, regarding permission for prospecting over 1745.883 ha of forest land of Kente Extension Coal Block in favour of Rajasthan RajyaVidyutUtpadan Nigam Limitedfor exploration of coal reserves by undertaking 153 boreholes of 4" Dia in Surguja District in State of Chhattisgarh, MOEF&CC vide letter no. F. No. 8-46/2017-FC dated 19th December 2017 issuedStage-I Forest Clearance with the condition thatBiodiversity Assessment study for entireHasdeo-Arand Coal Fields has to be conducted by Government of Chhattisgarh through ICFRE, Dehradun in consultation with Wildlife Institute of India, Dehradun

Condition no. ii of the Stage-I Forest Clearance regarding Biodiversity Assessment of Hasdeo-Arand Coal Field is reproduced below for reference-

"(ii) A Biodiversity Assessment study is to be conducted by State Government through ICFRE, Dehradun in consultation with Wildlife Institute of India, Dehradun for the whole Hasdeo-Arand Coal Field comprising of Tara, Parsa, Parsa East, Kante to be funded by M/s Rajasthan RajyaVidyutUtpadan Nigam Limited (RVUNL). The study is to be awarded by State Government by associating the Indian Council of Forestry Research & Education (ICFRE), Dehradun and Wildlife Institute of India (WII) Dehradun and integrated Wildlife Management Plan (IWMP) will be prepared and conservation area will be identified and mitigation measures will be recommended by the expert committee. The cost of study and cost of implementation of the recommendations shall be borne by M/s Rajasthan RajyaVidyutUtpadan Nigam Limited (RRVUNL). The report will be submitted within two years."

## 2. Objectives & Scope of the Study-

The above study aims in identifying potential impacts on flora and fauna of the Hasdeo-Arand Coal Field due to proposed & undergoing mining activities and to suggest relevant compensatory and mitigation measures to protect/conserve biodiversity in the likely impacted area of the Hasdeo-Arand Coal Field and prepareIntegrated Biodiversity and Wildlife Management Plan for Wildlife & Biodiversity Conservation of the proposed area.

## 3. Approach & Methodology of the Study

The study will be essentially carried out in two parts:

## Baseline Study from secondary sources/review of literature-

Baseline study in order to determine what flora & fauna species of concern might be found in the Hasdeo-Arand Coal Field through review of data from secondary sources like existing forest working

plans/wildlife management plans important data base (IBAT Business), using Satellite imaginary like GIS and GPS technique, IUCN Red data lists, other literatures/publications, various notifications/ gazette, and other studies, if available.

## ii. Baseline data collection through primary survey-

Field study and collection of primary data in Hasdeo-Arand Coal Field in protected/sensitive areas on key parameters like-

- a) Details of flora & fauna with special reference to endemic/threatened species population reported from the study area along with details of existing forest cover in the study area.
- Description of habitat for such endemic/ threatened species, ecology and likely threats including, foraging pattern and its conservation
- c) Details of migratory route/corridor of any wild animal particularly, elephant migration through the study area if any.
- Socio-economic values of the affected area Vis-a'-Vis biodiversity values.
- e) Consultations with forest/wildlife officials, local communities, technical & managerial staff of proposed/ongoing mining projects of the Hasdeo-Arand Coal Field.
- f) Identification of conservation areas

## 4. Output/deliverables of the Study-

The agency will submit a comprehensive biodiversity assessment report including integrated biodiversity and wildlife management plan (for the whole Hasdeo-Arand Coal Field comprising of Tara, Parsa, Parsa East & KantaBasan and Kente Extension Coal blocks) broadly covering following aspects-

- i. Baseline status of diversity values of project affected area (proposed/ongoing mining projects)-Biodiversity assessment shall include details on forest/ tree cover with species and girth distribution, density/crown, description of under-storey and middle storey flora & fauna, if any, survey of fauna including species abundance, major habitats, current distribution etc. The study shall also cover seasonal and spatial distribution of flora and geographical issues related to wildlife movement. This study shall also identify rare, endangered, threatened, and endemic species of flora and fauna present in the area if any. If such species are present, the assessment shall also include geographical features and other associations important for survival of these species and their role in community ecology.
- ii. Study of ecological, environmental and socio-economic impacts: The study should concentrate on the likely impacts on flora & fauna including their role in community ecology & habitat fragmentation due to ongoing/proposed mining activities. The study shall also include impact on socio-economic aspects including ancillary activities such as provision of access roads to site, on other resources and on biodiversity value of the area.
- Study of efficacy of Mine Closure Plans and Conservation measures proposed in operational/upcoming coal blocks and recommendations if any.

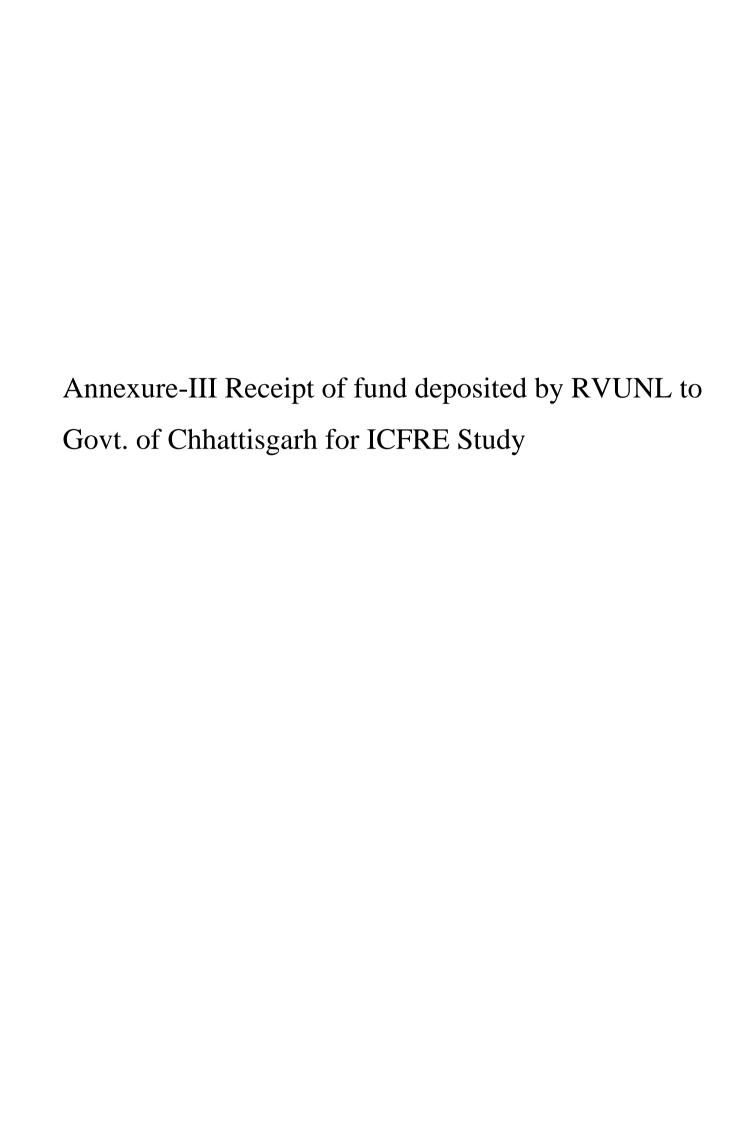
iv. Integrated Biodiversity and Wildlife Management Plan for Wildlife & Biodiversity Conservation: Based on the assessment, suitable integrated biodiversity and wildlife management plan for whole Hasdeo-Arand Coal Field comprising of Tara, Parsa, Parsa East &KantaBasan&Kente Extension shall be prepared describing adequate compensation, mitigation and management measures with respect to identified impacts, if any with budgetary provisions for the same. Plan should also focus on study on avifauna of the region, likely impact due to mining activities and measures to be taken for maintaining alternate habitat/home for avifauna including the design of artificially made eco-friendly nests. Measures for conservation of important resources, recommending avoidance of impacts by modifying specific project activities/ components/technology( if feasible &practical) should also be highlighted.

## 5. Agency-

ICFRE will be the nodal agency and coordinate the entire study by taking the services of wildlife experts from Wtl for providing necessary input with respect to Wildlife Study & Wildlife Management Plan. It is anticipated that the assignment will require a Biodiversity Experts assisted by a field team of support professionals including taxonomist, ecologist, Wildlife Biologist etc.

## 6. Completion Schedule-

It is expected that the above study will be completed within 18 months from the date of issuance of work order. The agency will submit final report in both hard and soft copy within 2 weeks of acceptance of report.





## राजस्थान राज्य विद्युत उत्पादन निगम लिमिटेड कार्यालय मुख्य अभियन्ता (पयुल) 120, विद्युत भवन, जनपध, ज्योति नगर, जयपुर (राज.) – 302005 फोन न. 0141-2744927, टेली-फैक्स न. 0141-2740633 ई- मेल fuel.rvun@gmail.com



कमांक-रावि उ.नि. / अति -मुख्य अभि (पयूल) / प्रे. 1502 जयपुर, दिनांकः 10-81/8

वनमण्डलाधिकारी. सरगुजा वनमण्डल अम्बिकापुर (छ०ग०)।

- raya- Proposal for prospecting of coal for use of 1745.883 hectares of forest land of Kente Extension Coal Block in favour of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited for exploration of coal reserves by undertaking bore holes of 4" dia in Surguja District in the State of Chhattisgarh-Reg.
- संदर्भ 1. छत्तीसगढ, शासन, वन विभाग का पत्र क्रमांक / एफ-05-44 / 2017 / 10-2 दिनांक 04.07.2018 ।
  - 2. कार्यालय प्रधान मुख्य वन संरक्षक, छत्तीसगढ़ का पत्र क./भू-प्रबंध/खनिज/331-228/2227, रायपुर दिनांक 13/07/2018 ।
  - 3. वनमण्डलाधिकारी, सरगुजा वनमण्डल, अम्बिकापुर का पत्र क्रमांक / तक अधि / नरथी क्र 16 / 3932 अभ्बिकापुर, दिनांक 20/07/2018।
  - 4 छत्तीसगढ, शासन, खनिज साधन विभाग, मंत्रालय का पत्र क्रमांक / एफ-0-24/2013 / 12. रायपुर दिनांक 02 अगस्त 2018।
  - ICFRE letter No.14/1-23/2006-ADG(EM)/EoI/ICFRE/Vol.II, dtd: 12.07.18.

महोदया.

विषयांन्तर्गत निवेदन है कि संदर्भित पत्र सं--। के द्वारा राजस्थान राज्य विद्युत उत्पादन निगम लिमिटेड को केते एक्सटेशन कोल ब्लॉक के पूर्वेक्षण अनुजापित हेत् कुल 17 शर्तों के साथ सरगुजा जिले में 4" व्यास के 153 बोर होल के द्वारा exploration of Coal reserves हेत् अनुमति प्रदान की गई है।

उक्त सदर्गित पत्र स.—3 के द्वारा Biodiversity Assessment Study तथा Integrated Wildlife Management Plan(IWMP) तैयार करने हेत रूपये 232.91 लाख (दो करोड बतीस लाख एक्यानवे हजार रूपये) का 75% अर्थात रूपये1,74,68,250/- (एक करोड़ चीहत्तर लाख अड़सठ हजार दों सी प्रचास रूपये) वनभण्डलाधिकारी सरगुजा के पी.डी. खाते में जमा करवाने हेत् निर्देष दिया गया है।

उक्त पत्र के द्वारा रूपये 3500 / - प्रति बोर होल की दर से 153 बोरहोल के लिये रूपये 5,35,500.00 (पाँच लाख पैतीस हजार पाँच साँ रूपये मात्र) की अमानत राशि की मांग की गई है एवं उच्त पत्र में ही संदर्भित पत्र-। में ग्रणित समस्त शतों के पालन हेत् वचन पत्र प्राप्त करने का भी निर्देश दिया गया है।

इस कम में Biodiversity Assessment Study लक्षा Integrated Wildlife Management Plan (IWMP) तैयार करने में आने वाले ध्यय की रावि 232.91 लाख रू0 का 75 प्रतिषत 174.68 लाख रू0 का आई सी आई शी. आई बैंक के द्वारा जारी बिमांड डाफ्ट राख्या 510471 रूपये 1,74,68,250 / दिनाक 10.08,2018 बन गंडलाधिकारी, सरगुजा के पक्ष में पीठडीठ खाते में जमा करने हेतु संलग्न है। उक्त विषय में शेष साँश के भुगतान हेतु वयन पत्र संलग्न हैं। डिमाण्ड ड्राफ्ट अनुलग्नक । एवं वयन पत्र अनुलग्नक ॥ के रूप में संलग्न हैं।





संदर्भित पत्र सं.—4 के बिन्दु क्रमांक 12 के द्वारा राज्य शासन एतद् द्वारा राजस्थान राज्य विद्युत उत्पादन निगम लिमिटेड के पक्ष में कोयला की पुर्वेक्षण अनुज्ञप्ति 03 वर्षों की अवधि के लिये रवीकृत की गई है।

संदर्भित पत्र—3 में ही उल्लेखित प्रति बोरहोल रूपये 3500/— की दर से 153 बोरहोल के लिये रूपये 5,35,500.00 (पाँच लाख पैतीस हजार पाँच सौ रूपये मात्र) की अमानत राषि पूर्व में आई. सी. आई. सी. आई. बैंक के डिमांड ड्राफ्ट संख्या.190327 दिनांक 07/09/2016 के माध्यम से इस कार्यालय के पत्र क्रमांक रा.वि.उ.नि./उप—मूख्य अभि. (फ्यूल)/प्रे. 1911, जयपुर दिनांक 8,9,16 के द्वारा जमा कर दी गई है जिसकी छाया प्रति अनुलग्नक—III के रूप में संलग्न है।

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली के पत्र दिनाक 14/06/2018 के पत्र में जारी समस्त शर्तों के अनुपालन हेतु वचन पत्र इस कार्यालय के पत्र इस कार्यालय के पत्र क्रमांक रा.वि.ज.नि./उप-मुख्य अभि (पयूल)/प्रे.. 1163 जयपुर, दिनांकः 21 /06/2018 द्वारा आपके कार्यालय में दिनाक 29.06.2018 को जम। कर री गई है। पत्र के पावती की छाया प्रति अनुलग्नक — IV के रूप में संलग्न है।

अतः आपसे निवेदन है कि केते एक्सटेंशन कोल ब्लॉक में कोयला के 4" व्यास के 153 बोरहोल के द्वारा 1745.883 है. वन भूमि में पुर्वेक्षण कार्य हेतु भू—प्रवेष की अनुमति प्रदान करने की कृपा करें।

धन्यवाद ।

(प्रकाश ईसरानी) अति मुख्य अभियंता (प्यूल)

प्राधिकृत अधिकारी

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छत्तीसगढ शासन, वन विभाग का पत्र क्रमांक / एफ-5-44 / 2017 / 10-2 दिनांक 04.07 2018

अपर प्रधान मुख्य वन संरक्षक (भू-प्रबंध/व सं.अ.) छ ग. रायपुर का पत्र क्रमांक/ भू-प्रबंध / खनिज / 331-228 / 2227 दिनांक 13.07.2018

-00-विषयांतर्गत भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली का पत्र क्रमांक दिनाक एवं छत्तीसगढ शासन वन F.No.846/2017-FC 14.06 2018 कमांक / एफ-5-44 / 2017 / 10-2 दिनांक 04.07.2018 द्वारा 1745.883 हे. वनभूमि को वन संरक्षण अधिनियम 1980 की धारा - 2 के अन्तर्गत Exploration of coal reserves हेतु 4 इच ब्यास के कुल 153 नग बोर डोल के पूर्वेक्षण कार्य हेतु अंतिम चरण की स्वीकृति में अधिरोपित समस्त शर्तों के पालन प्रतिवेदन आवेदक संस्थान से प्राप्त किये जाने के उपरांत स्वीकृति जारी किया गया है।

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी स्वीकृति के शर्त क्रमाक (ii) के संबंध में संदर्भित पत्र-2 द्वारा जारी निर्देशानुसार Biodiversity assessment study तथा Integrated wildlife management plan (IWMP) तैयार करने में आने वाले व्यय की राशि 232.91 लाख रू. का 75 प्रतिशत (174.68 लाख रू.) का डिमाण्ड ड्राफ्ट "वनमण्डलाधिकारी सरगुजा वनमण्डल अम्बिकापुर" के नाम से जमा करें। शेष राशि का संदर्भित पत्र क्रमांक 02 द्वारा दिये गये निर्देशानुसार निर्धारित समयावधि में प्राप्त करने हेतु वचन पत्र परतुत करें। समस्त शर्तो का पालन प्रतिवेदन मय आवश्यक वचन पत्र सहित प्रस्तूत करें।

प्रकरण अन्तर्गत कुल 153 नग बोर होल के लिए दर रूपये 3500 / - प्रति बोर होल हेत् कुल राशि

रूपये 535500 / - जमा करें ।

प्रकरण अन्तर्गत संदर्भिव पत्रों की छायाप्रति आवश्यक कार्यवाही हेतु संलग्न प्रेषित है। स्वीकृति में अधिरोपित समस्त शर्तों का पालन प्रतिवेदन मय वचन पत्र सहित प्रस्तुत करें, ताकि प्रकरण में अग्रिम कार्यवाही की जा सके। कार्य के दौरान कहीं भी शतों का उल्लंघन पाए जाने पर नियमानुसार कार्यवाही किया जावेगा। संलग्न - उपरोक्तानुसार।

> वनमण्डलाधिकारी सरगुजा वनमण्डल, अम्बिकापुर अम्बिकापुर, दिनाक 🗸 ठ

प्रक्रमांक / तक अघि / नस्थी क 16 / 3933 प्रतिलिपि:-

 अपर प्रधान मुख्य वन संरक्षक (भू-प्रबंध) छ.ग. नया रायपुर को संदर्भित पत्र के अनुक्रम में सूचनार्थ एव आवश्यक कार्यवाही हेत् सम्प्रेषित।

2. मुख्य वन संरक्षक सरगुजा वनवृत्त अम्बिकापुर को सूचनार्थ एवं आवश्यक कार्यवाही हेत् सम्प्रेषित

सरगुजा वनमण्डल, अम्बिकापुर

Annexure-IV Minutes of meeting of FAC dated 19.12.2018

## Agenda No. 5

F.No.8-36/2018-FC

Sub: Proposal for diversion of 841.538 hectares of forest land for non-forest purpose under Forest Conservation Act. 1980 for the proposed Parsa Open Cast Mine (5MTPA) in favour of M/s. Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL), in Surguja and Surajpur Districts in the State of Chhattisgarh.

The above stated agenda item was considered by FAC in its meeting on 19.12.2018. The corresponding agenda note may be seen at <u>parivesh.nic.in</u>.

## **Decisions of FAC**

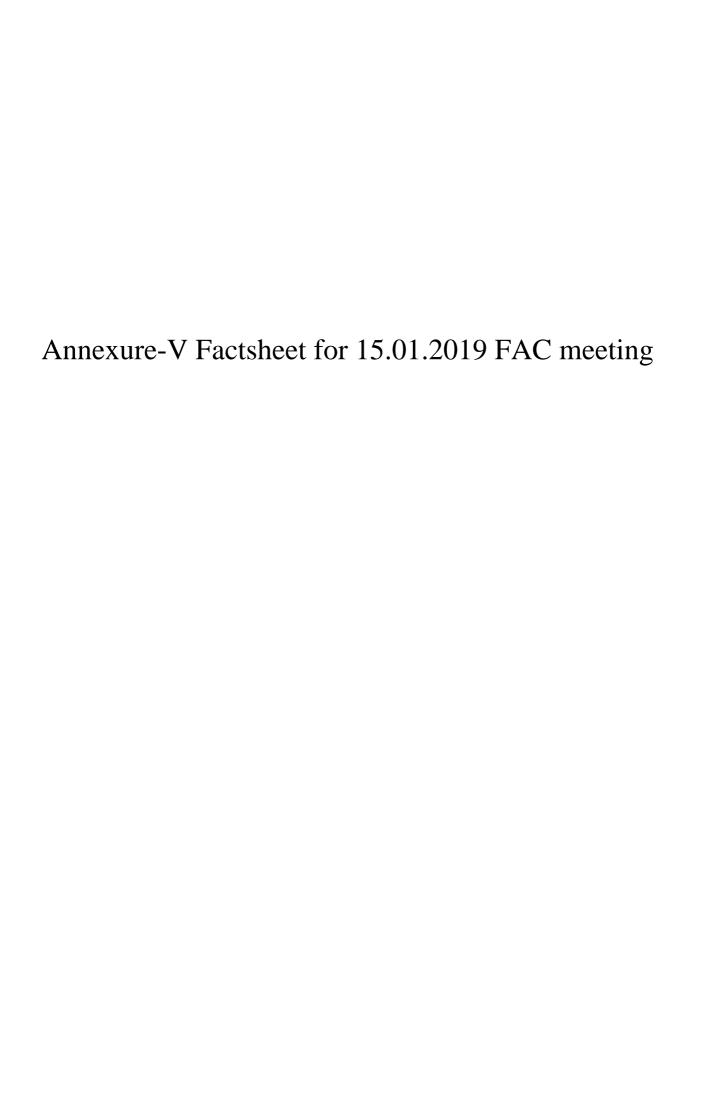
FAC discussed the proposal thouroughly with with APCCF (Regional Office, Nagpur), Nodal Officer (FCA) of state and User agency. During deliberations, FAC noted that the Additional Solicitor General of India (ASG) has tendered his opinion, that there is no legal restriction for FAC to consider the instant proposal. FAC also noted that lot of time has elapsed since the proposal was first considered in the Ministry and also there been certain directions of Hon'ble NGT and Hon'ble upreme Court, observations of Minister, EF&CC on the matter which needs to be given due regard before taking a final view on the proposal.

Accordingly, FAC formed the following sub-committee to make a site inspection, examine the relevant issues and submit its report so that the matter can be placed before FAC again for a final decision.

- i. Shri Kanwaljeet Singh, APCCF, Regional Office, MoEF&CC, Nagpur
- ii. Shri S.S. Bajaj, Nodal Officer (FCA), Govt. of Chhatishgarh
- iii. Shri Deepak Mohanty, Member, FAC

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## F.No.8-36/2018-FC

- Sub: Proposal for diversion of 841.538 hectares of forest land for non-forest purpose under Forest Conservation Act. 1980 for the proposed Parsa Open Cast Mine (5MTPA) in favour of M/s. Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL), in Surguja and Surajpur Districts in the State of Chhattisgarh.
  - 1. The State Government of Chhattisgarh vide their letter No. F-5-17/2018/10-2 dated 02.05.2018 submitted the above subject proposal for seeking prior approval of the Central Government under Section-2 of the Forest (Conservation) Act, 1980.
  - 2. The said proposal was placed before Forest Advisory Committee (FAC) in its meeting held on 26.07.2018. The detailed minutes of the said FAC meeting held on 26.07.2018 is placed on the website of this Ministry: www.forrestclearance.nic.in and a copy of the same is placed in file at F/X for ready reference.
  - **3.** FAC after thorough deliberation and discussion with the Nodal officer (FCA) of Chhattisgarh, Representative of APCCF, Regional Office, Nagpur and user agency observed that:
  - **4.** The User Agency has three coal blocks allotted in its favour in **Hasdeo-Arand Coal field** as per detail given below:

S. No.	Name of Coal Block	Forest Area (Ha)	Non-forest land (Ha)	Total Area (H)
1.	Parsa	841.538	410.909	1252.447
2.	ParsaEastandKeteBasan	1898.328	812.706	2711.034
3.	KeteExtension	1745.883	16.956	1762.839
	Total	4485.749	1240.571	5726.32

- **5.** Major part of the coalfield is still virgin with huge resources of power grade coal. There are 18 coal block in Hasdeo-Arand Coal fields. Out of the 18 coal blocks, currently, mining operations are being carried out in 2 coal blocks namely Parsa East and Kete Basan and Chotia coal blocks while proposal in respect of other 4 coal blocks are under consideration in the State/Central Government level.
- 6. It is reported that the area is sensitive from erosion point of view. The vegetation density in the area is reported to be 0.5. total number of trees reported to be felled are 95,458.
- 7. FAC took a note of the fact that similar case of PEKB and Tara Coal block in Hasdeo-Arand Coal was granted approval by the competent authority by overriding the recommendation of the then FAC. The then FAC also took into consideration the observations of the sub-committee of the FAC, which visited the area that the quality of the forest cover available in the Parsa East and Kante Basan coal block is poorer compared to area in the Tara coal block. However, as per the study jointly undertaken by the MoEF and MoC, Gross Forest Cover is 52.95% and Weighted Forest Cover comes to 27.55%. The then FAC after considering all the findings and observations did not recommend the diversion of the proposed forest area in view of fact that area proposed for diversion has high ecological and forest value and the number of trees to be felled was very high, which did not justify diversion from conservation point of view.

Recommendation of FAC was placed for approval before the Hon'ble Minister of Environment & Forests for their acceptance. The then Hon'ble Minister of State for Environment & Forests after considering the recommendations of FAC and taking into consideration the various issues, proceeded on to grant permission for Stage – I approval to the proposal on 23.06.2011.

## 8. The Hon'ble MEF had overruled(F/Y) the recommendation of the FAC on the following grounds:

- a) Coal block located in fringe area and not in biodiversity rich area of Hasdeo-Arand Coal filed.
- b) Substantial changes have been introduced in the mining plan as originally envisaged. Revised plan envisage mining in two phases of 15 years each.
- c) Concern identified relating to wildlife should be taken care of through a well-prepared and well-executed Wildlife Management Plan and Programme under the aegis of WII, Dehradun.
- d) These coal blocks are linked to super critical thermal power generating stations. In fact this is an explicit pre-condition for approval in order to remove any ambiguity on this score.
- e) Both the State Government involved —Chhattisgarh and Rajasthan (which will use the coal mined at Parsa East and Kante Basan) have been persistently following up since their power generation plans are closely linked with these coal blocks.
- f) While the FAC has to do its due diligence with single-minded focus, as the Minister I have necessarily to keep the boarder development picture in mind and balance out different objectives and considerations
- 9. On the basis of the order dated 23.06.2011 of the then Minister, this Ministry decided to give Stage-I clearance to diversion proposal of (I) Tara Coal Block and (II) PEKB Coal Block in Hasdeo-Arand Coal Block. MoEF granted Stage-I clearance dated 06.07.2011 to the diversion of 1898.328 ha of forest land (for mining in two phases) in Parsa East and Kante Bassan captive coal blocks open cast mining project in favour of M/s RVUNL in South Sarguja Forest division in Sarguja district of Chhattisgarh subject to fulfilment of certain terms & conditions, as specified therein. The State Government of Chhattisgarh has furnished the satisfactory compliance report on conditions stipulated in the Stage-I approval dated 6.07.2011 vide their letter no. 331-53/2455 dated 31.12.2011. After having found the compliance report submitted by the State Government complete, the stage –II approval was granted by MoEF on 15.3.2012 for the said proposal subject to fulfilment of certain conditions.
- 10. Subsequently, an appeal was filed by Mr. Sudiep Shrivastava before the Hon'ble NGT challenging the order dated 28-3-2012 passed by the State Govt. of Chhattisgarh under section-2 of the FCA for diversion of 1898.328 Ha of forest land of Parsa East and Kante Besan Captive Coal Blocks open cast mining project. Matter was concluded after series of hearing conducted by the Hon'ble NGT and judgment was passed on 24.03.2014 wherein the Hon'ble NGT inter-alia directed as under:
  - a) "Order dated 23rd June, 2011 passed by the respondent no. 2- MoEF Government of India and consequential order dated 28th March, 2012 passed by the respondent no. 1 State of Chhattisgarh under section 2 of the Forest (Conservation) Act 1980 for diversion of forest land of PEKB Coal Blocks are set-aside;

- b) The case is remanded to the MoEF with directions to seek fresh advice of the FAC within reasonable time on all aspects of the proposal discussed herein above with emphasis on seeking answers to the following questions: (i) What type of flora and fauna in terms of bio-diversity and forest cover existed as on the date of the proposal in PEKB Coal Blocks in question. (ii) is/was the PEKB Coal Blocks habitat to endemic or endangered species of flora and fauna. (iii) Whether the migratory route/corridor of any wild animal particularly, elephant passes through the area in question and, if yes, its need. (iv) Whether the area of PEKB Block has that significant conservation/protection value so much so that the area cannot be compromised for coal mining with appropriate conservation/management strategies. (v) What is their opinion about opening the PEKB Coal Blocks for mining as per the sequential mining and reclamation method proposed as well as the efficacy of the translocation of the tree vis-a-vis the gestation period for regeneration of the flora (vi) What is their opinion about the Wildlife Management plan finally prescribed. (vii) What conditions and restriction do they propose on the mining in question, if they favour such mining? Liberty is granted to the FAC to seek advice/opinion/specialised knowledge from any authoritative source such as Indian Council of Forestry Research and Education Dehradun or Wildlife Institute of India including the sources indicated in the present case by the parties.
- c) The MoEF shall pass a reasoned order in light of the advice given by the FAC in accordance with law and pass appropriate order in accordance with law.
- d) All work commenced by the respondent no. 3 project proponent and respondent no.4 pursuant to the order dated 28th March, 2012 passed by the respondent no. 1 State of Chhattisgarh under section 2 of the FC Act 1980, except the work of conservation of existing flora and fauna, shall stand suspended till such further orders are passed by the MoEF in accordance with law."
- 11. The Order of NGT was challenged in Hon'ble Supreme Court through Civil Appeal No. 4395 of 2014.
- **12.** In compliance of the NGT order, the FAC considered the proposal again on 29-30<sup>th</sup> April 2014 and reviewed the whole matter and after examination of the issue, recommended that since the matter is subjudice, decision on the matter may be deferred.
- **13.** In the meanwhile the Hon'ble Supreme Court heard the matter on 28.04.2014 and directed as under:
  - "....we stay the direction in the impugned order that all works commenced by the appellant pursuant to the order dated 28th March, 2012 passed by the State of Chhattisgarh under Section 2 of the Forest Conservation Act, 1980 shall stand suspended till further orders are passed by the Ministry of Environment and Forests".
- 14. Based on the stay order the user agency continued the work. Since 2014, the matter is pending in the Supreme Court and user agency is working in the area based on the stay order of Hon'ble Supreme Court.
- 15. In the meanwhile the user agency had approached the IA division of MoEF&CC for grant of EC to the expansion project "Parsa East and Kanta Basan (PEKB)" Opencast Coal Mine from 10 MTPA to 15 MTPA along with the expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA.
- **16.** The file was processed and Hon'ble Minister of State for EF&CC directed that "since the matter is pulling for long, FAC may convene a meeting and decide the matter in 4 weeks
- 17. The Ministry observed that since the Supreme Court has stayed the part (4) of the order of the NGT whereby the ongoing operation of mining was suspended, the matter should be placed before the FAC in compliance of the remaining part of the NGT order namely (1), (2), and (3) and seek advice of FAC on the whole issue.

- **18.** The Ministry is of the opinion that since the Supreme Court has not stayed the complete order of the NGT except the part 4 whereby the mining operation was suspended, the case was remanded to the FAC for reconsideration as directed by NGT and the Hon'ble Minister of State MoEF&CC.
- 19. The matter of PEKB was discussed in FAC meeting on 25.01.18. FAC analyzed the existing condition of the mining lease area using the shape file on the DSS of the Ministry and google images and satellite imageries. FAC observed that the mining in the area is under process and forest has been cut as per the mining plan after the stay order granted by the Hon'ble Supreme Court against NGT order. The mining cannot be stopped now due to the stay order on suspension of mining operation. Since the matter has become a *fait accompli* situation, the user agency has to comply the mitigation measure as recommended in the Stage-II granted by the Ministry. FAC decided to recommend that the Ministry should ensure compliance of all conditions referred in Stage-II clearance subject to the final Decision of Hon'ble Supreme Court in Civil Appeal No. 4395 of 2014 in the matter of Rajasthan Rajya Vidyut Nigam Ltd. Vs. Sudiep Shrivastava.
- **20.** Now the matter related to adjoining area of Parsa Coal block is proposed for diversion. The area is located in the same Hasdeo Arnand Coal field. This cannot be taken in isolation.
- **21.** FAC also considered the representations of BNHS,eRC and other such agencies.
- 22. In concluding remarks of his note the then Hon'ble MOS(I/S)E&F dated 23.06.2011 (F/Y)has mentioned that 'After taking all factors into account, I am of the view that permission should be granted to opening the Tara and Parsa East-kante Basan Coal blocks as proposed by Chattisgarh government, while granting this permission I must reiterate that any more opening of Coal blocks in the main Hasdeo-Arand forest area will severely disturb the fragile ecosystem of the region.perhaps the Chattisgarh government could be compensated through some sort of 'green bonus' (either through additional centeral assistance or through additional allocation of power from the centeral pool) for not giving any further permissions for coal mining in Hasdeo-Arnand region. This green bonus policy will of course, apply to yhe project in other states as well which may not see the light of day on account of ecological factors.

Since the Parsa block of Chhattisgarh state electricity board is in between the Tara and the Parsa East –Kante basan Coal blocks permission for prospecting only as sought for by the state government is also hereby accorded. this block should not be worked commercially for at least the next five year till after some reclamation on portion of two other coal block has commenced in a visible manner.

# 23. Taking into consideration the above facts, the FAC in its meeting held on 26.07.2018 recommended that:

- (i) Vide Judgment dated 24<sup>th</sup> March 2014 the Hon'ble NGT set aside the orders of MOEF dated 23 June 2011, which is related to Forest Clearance accorded for Parsa East & Kanta Basan coal block (PEKB) and is limited only to that. There is no mention of Parsa coal block in the order of NGT. However, considering that conservation of biodiversity and wildlife cannot be limited to this coal block only and has to cover the entire region, the FAC in its previous meetings had expressed serious concern and had instructed State Government to get a comprehensive study conducted by a reputed institution like ICFRE or WII and prepare a holistic report of the area which will be funded and executed by the user agencies. State government has already initiated the process.
- (ii) At that point of time MoEF&CC has taken a decision that Parsa coal block should not be worked commercially for at least 5 years till visible reclamation is done in the other two coal blocks (Tara &

- PEKB). The mining operation in PKEB has been continuing in view of the stay granted by the Hon'ble Supreme Court on the impugned orders of the NGT and is in operation since February 2013 and more than five years have elapsed. The User Agency also presented documentary evidence regarding successful reclamation works. In view of this MoEF&CC may take a view.
- (iii)FAC felt that final orders by the Hon'ble Supreme Court in this case would facilitate taking a clear-cut view for granting FC for Parsa coal block. However, FAC recommended that expert legal opinion may be obtained from ASG whether in-principle approval can be considered for this coal block/other coal blocks in Hasdeo-Arand forest area pending final disposal of the case in the Apex court.
- **24.** A copy of civil appeal No. 4395 of 2014 made against judgement order dt. 24.03.2014 passed by the National Green Tribunal (NGT), New Delhi, Orders of NGT & Hon'ble Supreme Court are placed for ready reference at **F/XX** and **F/YY** respectively.
- **25.** Based on the recommendation of FAC, the opinion of ASG through Ministry of Law and Justice, Department of Legal has been solicited as to whether in-principle approval can be considered for this coal block/other coal blocks in Hasdeo-Arand forest area pending final disposal of the case in the Apex court.
- **26.** The opinion has now been received (**Pg.32-33/n**) and reproduced below:

## **LEGAL OPIONION**

## **Querry:**

The Querist seeks opinion with regard to whether in-principle approval can be considered for certain other Coal Blocks in hasdeo-Arand forest area pending final disposal of the case in the Hon'ble Supreme Court in Civil Appeal No 4395 of 2014 against judgment dated 24.03.2014 passed by the Hon'ble National Green Tribunal with respect to Parsa East and kete Basan (PEKB) Coal Block.

## **Opinion:**

I have perused the opinion file CAS Dy. No. 2387/2018 in MoEF &CC F.No. 8-36/2018-FC(PT) with regard to the instant matter in hand. After perusal of the file it appears that FAC needs expert legal opinion whether in-principle approval can be considered for other Coal Blocks in hasdeo-Arand forest area pending final disposal of the Civil Appeal No. 4392 of 2014 before Hon'ble Supreme Court.

It is hereby pertinent to mention that the user agency has proposed for diversion of 841.538 hectares of Forest land for non-forest purpose under Forest Conservation Act. 1980 for the proposed Parsa Open Caste Mine in Surguja and Surjpur Districts in the State of Chhattisgarh which is one among the 18 Coal Blocks situated in Hasdeo-Arnad Coal Filed. Out of this 18 Coal Blocks in the said Coal field, at present mining operations are being carried out in only 2 blocks namely, PEKB and Chotiya Coal Blocks.

It is also very apparent from the case file that the pending Civil Appeal No 4392 of 2014 before Hon'ble Supreme Court and the NGT Order dated 24.03.2014 pertains only with regard to forest clearance granted with regard for 1898.328 ha of PEKB Coal Block.

The Hon'ble Supreme Court vide Interim Order dated 28.04.2014 stayed only direction No. 4 of the impugned Order of NGT dated 24.03.2014 that "All works commenced by the appellant pursuant to the

Order dated 28<sup>th</sup> March 2012 passed by the State of Chhattisgarh under section 2 of the Forest Conservation Act 1980 shall stand suspended till further orders are passed by the Ministry of Environemnt and Forest."

Apart from this, Order No. 2 and 3 of the NGT Order dated 24.03.2014 has not been stayed by the Hon'ble Supreme Court. The said Orders deal with the peculiar facts of the PEKB Coal Block diversion for Coal Mining purpose in context of environmental concerns, as per the expert opinion of the FAC. MoEF has been further directed by the NGT to pass a reasoned Order in light of the advice given by the FAC in accordance with law and pass appropriate order in accordance with law. All the said orders in any case only deal with the PEKB Block.

The new and present proposal for diversion of forest land for mining purpose is with regard to 'Parsa Coal Block' which is adjacent and contiguous to PEKB Coal Block, MoEF has processed this proposal and directed FAC that it may convene a meeting and decide the matter in 4 weeks for considering this proposal. It also appears that the said request by the ministry was only for the 'Parsa Coal Block' which is not in the lis pending before the Hon'ble Supreme Court.

At this juncture FAC is soliciting legal opinion as to whether they should consider in principal approval proposal for Parsa Coal Block in Hasdeo-Arnnd forest area during the pending Civil Appeal before the Hon'ble Supreme Court.

It is very apparent from the perusal of the file that there is no bar imposed by any of the Courts/Tribunals with regard to FAC to consider the conversion proposal for Parsa Coal Block in the Hasdeo-Arand Coal Fields. In the present case, rather the orders of NGT which has not been stayed by the Hon'ble Supreme Court are still operating and MoEF appear correct in its Opinion that since the Hon'ble Supreme Court has not stayed the Complete Order of the NGT except the Para 4 whereby the mining operation was suspended, the case could be sent to the FAC for reconsideration as directed by the NGT.

I have been further informed by the concerned officials of the Ministry with whom I have held detailed conference in this regard on 24.10.20158 and 26.1.2018 at Supreme Court that there is no other Orders or Directions passed by any of the Courts/Tribunals/other authorities with regard to Parsa Coal Block in hasdeo-Arand Coal field which restricts or prohibits FAC to consider the proposal for in-principal approval of such diversion of land.

I am, therefore, of the opinion that there is no bar for the FAC to consider the proposal for in-principal approval and the pending case before the Supreme Court has no bearing with the 'Parsa Coal Block' as such. However, it must be clarified that the FAC is competent and not restricted in any manner to take any decision in regard to the proposed conversion of lad on any scientific or environmental concern which it may have.

27. The above facts were placed before Forest Advisory Committee (FAC) in its meeting held on 19.12.2018 and on the recommendation of FAC, the MoEF&CC vide its OM dated 20<sup>th</sup> December 2018 (Pg.7097/c)constituted a sub-committee of the following members for visiting the area proposed for diversion of 841.538 Ha of Forest Land for Coal Mining in Parsa Open Cast (OC) mine (5MTP) Block by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL) in Surajpur and Surguja District of Chhattisgarh, and submit their report-:

- (i) Kanwarjit Singh Addl. PCCF (C), Regional Office, MoEF&CC, Nagpur
- (ii) Shri S.S. Bajaj, Nodal Officer, Chhattisgarh
- (iii)Shri Deepak Mohanty, Member, FAC
- 28. The committee as constituted on 19.12.2018 visited the area proposed for diversion and submit their report (Pg.7098-7101/c) as below:

Report of the Sub-Committee formed to make a visit to the area of diversion of 841.538 Ha of Forest Land for Coal Mining in Parsa Open Cast (OC) mine (5MTP) Block by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL) in Surajpur and Surguja District of Chhattisgarh

Vide Ministry of Environment, Forest and Climate Change notification dated 20<sup>th</sup> December 2018 a sub-committee of the following members was formed to make site visit to the area of diversion of 841.538 Ha of Forest Land for Coal Mining in Parsa Open Cast (OC) mine (5MTP) Block by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL) in Surajpur and Surguja District of Chhattisgarh-:

- (i) Kanwarjit Singh Addl PCCF (C), Regional Office, MoEF&CC, Nagpur
- (ii) Shri S.S. Bajaj, Nodal Officer, Chhattisgarh
- (iii) Shri Deepak Mohanty, Member, FAC

Copy of the notification is at Annexure-I.

The sub-committee consisting of members listed at serial no. 1 and 3 above carried out the site visit on 8<sup>th</sup> January 2019, the other member Shri S.S. Bajaj, Nodal Officer, Chhattisgarh could not accompany the sub-committee.

The sub-committee; -

- Visited the 841.538 Ha. Area of the Forest Land proposed for diversion for Coal Mining in Parsa Open Cast (OC) mine (5MTP) block by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL) in Surajpur and Surguja District of Chhattisgarh.
- Visited the Mining area of the adjoining Parsa East and Kante Basen which consist of total 2711.034 Ha (1898.328 Ha of Forest Area and 812.706 Ha. of Non-Forest Area).
- Had discussions with the representatives of Rajasthan Rajya Vidyut Utpaadan Nigam Limited (RRUVNL) and the local officials of the Forest Department.

Based on the observations on the above site visit and discussions, the aspect/issues wise findings and views of the sub-committee are as follows-:

a) Implementation status of the direction of Hon'ble NGT vide its order dated 24.03.2014 of para (b) of the operative part which reads as "The case is remanded to MoEF with direction to seek fresh advise of the FAC within reasonable time on all aspects of the proposal discussed herein above with emphasis on seeking answers to the following questions: (i) what type of flora and fauna in terms of biodiversity and forest cover existed on the date of the proposal in PEKB coal blocks in question (ii) is/was the PEKB coal blocks habituated to endemic or endangered species of flora and fauna (iii) whether the migratory rout/corridor of any wild animal particularly, elephant passed through the area in question and, if yes, its need. (iv) whether the area of the PEKB block has that significant conservation/protection values so much so that the area cannot be compromised for coal mining with appropriate conservation/management strategies (v)

what is their opinion about opening the PEKB coal blocks for mining as per the sequential mining reclamation method proposed as well as the efficacy for the trans location of the trees vis-à-vis the gestation period of the regeneration of the flora (vi) what is their opinion about the wildlife management plan finding prescribed (viii) what conditions and restrictions do they propose on the mining in question if they favor such mining? Liberty is granted to the FAC to seek advice/opinion/specialized knowledge from any authoritative source such as Indian Council of Forestry Research and Education, Dehradun or Wildlife Institute of India including the sources indicated in the present case by the parties."

## The point wise implantation status in view of the sub-committee is as follows-:

(i to vii) - As per the directions of the FAC, the State Government of Chhattisgarh is at the final stage of awarding "Biodiversity assessment study for the whole Hasdeo-Arand Coal fields consisting of Tara, Parsa, Parsa East and Kante Basen to the ICFRE, Dehradun in consultation with Wildlife Institute of India Dehradun". These points will be addressed in this study.

However, the sub-committee intends to point out that the mining operations in Parsa East and Kanta Basen has already started since February 2013 and so far an area of 537.24 Ha has already been broken up and sequential mining and reclamation is also going on and so far an 161.63 Ha has been back-filled, 79.70 ha physically reclaimed and 50.2 Ha of internal dumps 43.62 Ha of external dumps and 21.96 Ha of other area have been reclaimed through plantation/biological reclamation. The company has a trans-location machine and trees upto 60 cm dia are being trans-located/transplanted on the dumps. The Sal trees trans-located in the past have well established.

b) Action taken on the observations of the Hon'ble Minister dated 23.06.2011 "Since the Parsa Coal Block of Chhattisgarh State Electricity Board is in between the Tara and The Parsa East – Kante Basen Coal blocks, permission for the prospecting only as sought by the State Government is also hereby accorded. This block should not be worked commercially for at least the next five years till after some reclamation on the portion of the other two coal blocks has commenced in a visible manner."

The views/finding of the sub-committee are:

- i) though the mining operations in the Parsa East and Kante Basen coal block started in February 2013 and are still going on, no mining operations have started in the Tara coal block, which is still intact
- ii) More than five years have elapsed since the Hon'ble Minister has noted his observations on 23.06.2011,
- iii) In the Parsa East and Kante Basen open cast Coal mine project the back filling and reclamation works have started from the year 2013-14 onwards and so far an area of approximately 161 Ha has been back filled and 121.77 Ha been treated with plantation and biological reclamation.
- c) Scope of excluding the VDF from the proposed diversion area and carrying out other appropriate exercises so that the area does not come under inviolate area:

It was observed during the site visit and also evident from the working plan stock maps made available that this area of 841.538 Ha proposed for diversions do not have VDF and the maximum density of the Forest is around 0.5

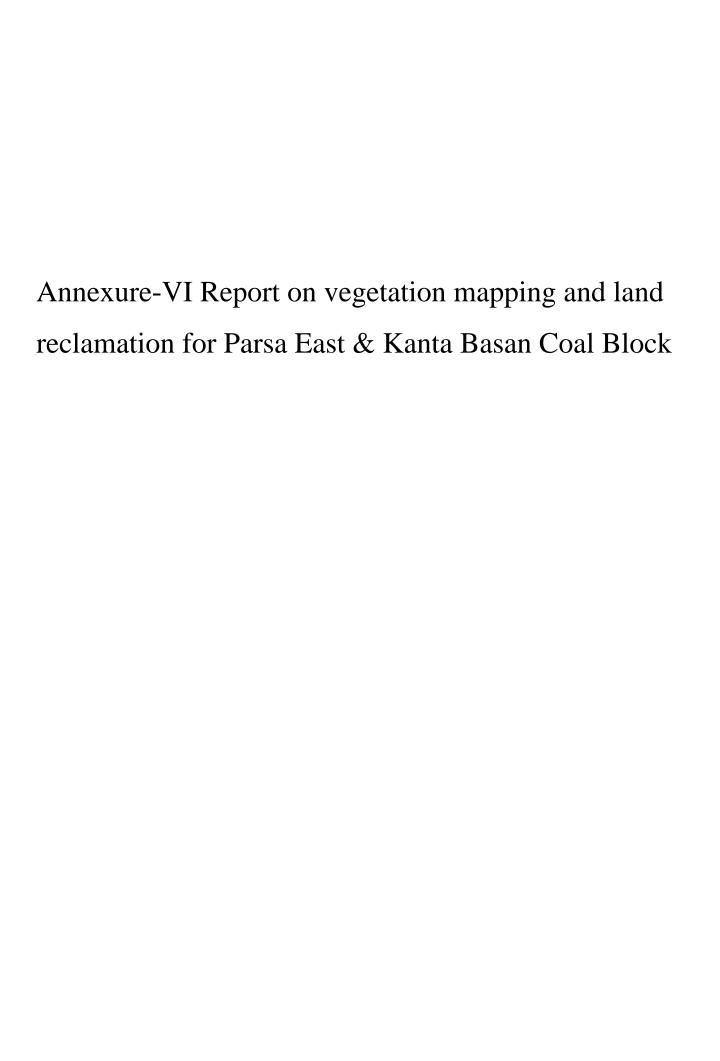
## d) Any other matter that the sub-committee feels to include:

The sub-committee observed that the physical and biological reclamation/plantations taken up by the user agency in the Parsa East and Kante Basen open cast Coal mine project is done in a professional way and as per the approved progressive mine closure plan. Though some gully formations are observed in the initial overburden dump but the subsequent reclamation / plantations work is appreciable.

The reclamation and plantation works taken up by the user agency is also supported by a report on the vegetation mapping and land reclamation for Parsa East Kante Basen (PEKB) open Cast coal mine Surguja prepared by Geotrax International Services which was engaged by the user agency. The report is attached with the Annexure-II.

The facts related to the above proposal may be placed before FAC in its meeting scheduled to be held on 15.01.2019 for their examination and appropriate recommendation.

\*\*\*\*



# REPORT ON VEGETATION MAPPING AND LAND RECLAMATION FOR PARSA EAST KANTA BASEN (PEKB) OPEN CAST COAL MINE, SURGUJA

Report s ubmitted to M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL)

Activities: 1. Land use and Land Cover mapping from year 2012 to year 2018 using very high resolution satellite imagery 2. Study of reclamation practices, show photographic evidence of reclamation and restoration of landscape 3. Results and recommendations for reclamation project- Parsa East Kanta Basan coal block.

1

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Geotrax 2019

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### **Introduction**

The present study has been commissioned by M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited(RVUNL) (State Government of Rajasthan undertaking) to study the land use and land cover pattern prior to start of mining and post mining of Parsa East Kanta Basan (PEKB) coal block.

As per minutes of the meeting of The Hon'ble Forest Advisory Committee (FAC) of Minisitry of Environment and Forests, Govt. of India dtd: 26.07.2018, a comprehensive study is conducted to know the present status of reclamation in terms of restoration of soil, water and vegetation (through plantation) in Parsa East Kanta Basan (PEKB) Coal Block of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited(RVUNL).

The study will also find Satellite imagery, Photographic and Drone survey evidence to show the present status of reclamation in terms of restoration of soil, water and vegetation (through plantation) in Parsa East Kanta Basan (PEKB) coal block, pursuant to the orders of Forest Advisory Committee (FAC) of Ministry of Environment and Forests, Govt. of India in its meeting dated 26.07.2018.

M/s Rajasthan Rajaya Vidyut Nigam Limited is a party in the said FAC proceedings requesting for diversion of 841.538 Ha of forest land in the Parsa Coal Block. The said minutes of meeting dated 26.07.2018 is annexed herein and marked as Annexure-A.

RVUNL engaged "M/s Geotrax International Services" to study & submit the report on "VEGETATION MAPPING AND LAND RECLAMATION for Parsa East Kanta Basan (PEKB) Coal Block, SURGUJA, Chhattisgarh State". M/s Geotrax International Services is one of the empanelled agency of the Chhattisgarh State to carry out surveys. Letter of empanelled agency is marked as Annexure-B.

- i) The Parsa Coal Block, Parsa East and Kanta Basan (PEKB) and Tara Coal blocks are located in Surguja & Surajpur districts of State of Chhattisgarh. These Coal Blocks belong to Hasdeo-Arand Coalfields on Central India.
- ii) The Parsa Coal Block, Parsa East and Kanta Basan (PEKB) projects were allotted to M/s Rajasthan Rajaya Vidyut Nigam Limited (RVUNL) (Rajasthan State government) to meet the energy requirement of the State.

- iii) Mining operations started in PEKB in the year 2012, and mining has been going on as per the mining plan. The reclamation of mined out area started from 2nd year onwards.
- iv) As part of the study the very high resolution satellite imageries from the year 2012 and for subsequent years are collected.
- v) These imageries are obtained to ascertain the baseline details of land cover i.e., areas under forest/vegetation cover, barren land, agriculture land prior to start of mining operations and post mining till the current year.
- vi) The more specific objective is to study the reclamation practices and provide present status of reclamation with the help of Satellite imagery, Photographic and Drone survey evidences of

PEKB Coal Block belonging to M/s Rajasthan Rajya Vidyut Nigam Limited (RVUNL).

# 1. Chapter 1: Backgrounntd of Geotrax International Services



### **COMPANY PROFILE**

#### Overview:

Geotrax International Services is India's #1 Land Survey Company and India's first manufacturer of DGPS and relevant survey equipment. Geotrax also deals with CAD/GIS/Photogrammetry/Lidar and retained its position in the market for well over a decade. Geotrax is well equipped to provide Land Mapping and Services to customers across India and other parts of the world. By thoughtfully combining resources from worldwide facilities, Geotrax is able to meet customer expectations cost-effectively to achieve customer delight.

Geotrax International Services established in 1999 grown as a leading Professional Land Mapping and Service provider across India. During the last 16 years, we had an opportunity to execute variety of survey projects for various private and government bodies pan India and Middle East. Our projects include RIS, LIS and Municipal GIS, Remote Sensing, Photogrammetry, Lidar, Data Processing, software customization and other related technologies. Cadastral Surveys using ETS/DGPS and Provision of Ground control conforming to stringent accuracy standards using high end instruments such as RTK/GPRS DGPS is our specialty.

#### Geotrax Mission:

Be amongst India's front running Survey Mapping solution provider

#### Geotrax Vision:

Work towards Survey solutions in various meaningful development programs to create long term growth with customer growth

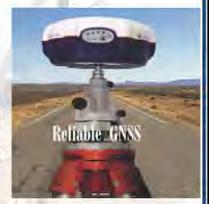
### Partnerships:

Geotrax enjoys trusting and long-standing partnership with global technology leader ComNav Technology Ltd. ComNav Technology Ltd. develops and manufactures such multi-constellation, multi-frequency GNSS measurement engine boards and receivers for ultimate high precision positioning applications. ComNav is also the very first Chinese company to develop, design and produces combined GNSS (GPS and GLONASS) plus BeiDou OEM board. Its technology already been used in lots of applications such as surveying, construction, machine control, agriculture, intelligent transportation, precise timing, deformation monitoring, unmanned system and so on.

### Infrastructure:

With 8000 Sq ft Office space dedicated to Sales and post sales Service, our clients can be rest assured of all the servicing needs. We have office spaces with well trained staff and sophisticated equipment across India and Middle East.

We are asset rich organization as we own our own Survey equipment that makes us enjoy the advantage of independence. The ownership of asset provides us competitive advantage that makes us completely differentiated from our competitors. GeoTrax's equipment resources include 25 DGPS, 300 handheld GPS units, Theodolites, Electronic Digital and Automatic levels, 19 Electronic Total Stations and data collectors.





### Services:

Since inception the company has been true to the fundamentals of service, support, repair and training of all instruments offered to the construction, surveying and engineering communities. We repair and service all types of instruments from a simple level to GPS. Our accuracy standard is NIST traceable. Geotrax International Sales specializes in selling a variety of Survey equipment including RTK/GPRS/Static mode DGPS; Total Stations; Levelling Equipments and accessories.





Geotrax International Sales provides solutions and systems for positioning, surveying, mapping, navigation, cadastral, building and construction, photogrammetry, mining and engineering, and other

surveying and measurement applications. Measuring systems include high precision GPS, Total Stations, Theodolites, Levels, GIS, Software and Hand Held measurement

devices.

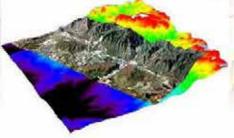
On the mapping side, our CAD and GIS professionals assist the survey projects by creating accurate maps. We have dedicated CAD experts who have extensive experience with different CAD software's.

### Geotrax expertise covers:

- Boundary and cadastral surveys using DGPS and Total station& Levelling.
- Topographic surveys.
- Ground control surveys for photogrammetric projects, including Airborne GPS.
- Only one of the two companies in India who are empanelled by for DGPS survey for ground control point collection
- Route and alignment surveys combining conventional and methods.

Construction and cross-section surveys (from road design to precision layout and quality control).







NRSA

photogrammetric



### Manufacturing:

Geotrax started manufacturing operations in 2012 to prove its capabilities in production of highly sophisticated survey equipment. We are the leading manufacturers of GPS & Survey Equipment categorized under Small Scale Industries. We delivered cutting edge technology to our esteemed clients with the help of our technology partner China HuaCe and now we



collaborated with ComNav Technology Ltd. ComNav and develops manufactures multiconstellation, multi-GNSS frequency measurement engine

boards and receivers for ultimate high precision positioning applications.

ComNav is also the very first Chinese company to develop, design and produces combined GNSS (GPS and GLONASS) plus BeiDou OEM board. Its technology already been used in lots of applications such as surveying, construction, machine control, agriculture, intelligent transportation, precise timing, deformation monitoring, unmanned system and so on.

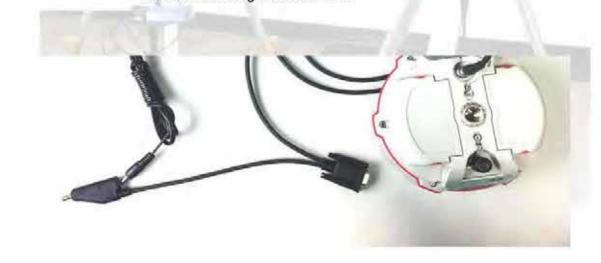


The product portfolio of GeoMatrix consists of world class GNSS (GPS and GLONASS) Global Positioning System of 256 channel tracking (with RTK mode and 1 watt radio + GSM radios for basic and rover) survey grade equipment along with all accessories like tribrach, tripod, bipod and processing and downloading software.

Current Production capacity of Geotrax is upto 300 units per annum on single shift basis. We are scaling up our capacity to meet the increasing market demand.









#### Human Resources:

Geotrax is headed by Mr. V.V.S Bandhakavi (Ex surveyor of "Survey of India") who has more than 40 years of experience in survey domain in India and overseas. Geotrax headquartered in Hyderabad has over 250+ employees on payrolls.

Geotrax employees are highly educated, skilled and experienced in multiple disciplines and well trained to meet customer satisfaction and delight. Geotrax employees have expertise in

- **Project Planning**
- Project Management
- Project Engineering
- Customer Support
- Software Development
- Survey data collection
- GIS and Remote Sensing
- Project Monitoring and Documentation
- World Class Training
- Capacity Building



### Quality Policy:

Geotrax's philosophy is to provide products and services that consistently meet and exceed customers' expectations further aiming customer delight. We at Geotrax aggressively pursue goals aimed at achieving excellence, through continual improvement in the products and services that we provide to our customers.

### Quality Objectives:

Our objective at Geotrax is to provide trustworthy products and services that meet customer expectations First Time, On Time, Every Time. We continuously and systematically review our processes to make sure that all our commitments, services and products are an expression of quality. Geotrax by its continuous obsession for customer satisfaction in terms of service and support, has earned the coveted ISO 9001 certificate We are certified ISO 9001:2008 company which is a testimony of being a well documented, well organized, efficiently growing our capabilities in Quality Management Systems.





#### Clientele:

Being a client focused organization, Geotrax's combination of survey equipment, personnel, and computer resources allow for the tailoring of the project approach to match the Orders of Accuracy and precision requirements for each project

Some of our prestigious clients include

- Odisha Space Application Centre (ORSAC)
- Survey Settlement and Land Records Department (Govt. Of Gujarat)
- Irrigation Dept (Govt. of J &K)
- National Remote Sensing Agency (Hyderabad)
- Meinhardt India Private Limited (Delhi),
- Nagarjuna Construction Company (NCC, Hyderabad)
- Consulting Engineering Services (CES, New Delhi)
- Lee Associates of South Asia (LASA, Delhi)
- Reliance (infocomm, technical services, Hyderabad, Mumbai)
- Gayatri Constructions (Hyderabad)
- Shapoorji Pallonji (Hyderabad)
- Infotech (Hyderabad)
- Tea Board (Govt of India)
- Ambuja Cements
- Power development Corporation (Govt. of Jammu and Kashmir)























## 1.1 Experts



### a. Mr. VVS Bandhakavi - Ex SOI, Survey expert

Mr.VVS Bandhakavi is a professional land surveyor with more than 40yrs of experience in India and Abroad. He started his career at Survey of India in the year 1965 and successfully completed highest level certificate courses from Institution of Surveyors which is equivalent of Bachelor of Engineering. After working for 17 years in Survey of India, he moved to private industry, and worked in India and Aborad. Mr. Bandhakavi worked in Kuwait and Oman as survey supervisor and returned to India in the year 1999. Mr. Bandhakavi is the founder and CEO Geotrax International Services, which focuses on variety of Land surveying and mapping projects. In the year 2009, Geotrax was one of the two companies empanelled with National Remote Sensing Agency, Hyderabad for providing Field Surveying and mapping services in the country. More than 100 small to large scale surveying projects have been taken up by Geotrax under the leadership of Mr. VVS Bandhakavi.



b. Mr. Ravi Shankar Bandhakavi- MS in GIS and RS (USA), Mapping Expert

Mr. Ravi is currently the Technical Director in Geotrax International Services. Mr. Ravi received his Bachelor degree from University of Agricultural Sciences, Dharwad, Karnataka and studied in North Carolina State University, USA for MS Degree with Geographical Information System as his Major. In the year 2001, Mr. Ravi started his career with Intergraph, USA as a GIS Support Engineer, and worked in Intergraph for nearly 10 years. During his brief stay at Intergraph, Mr. Ravi had an opportunity to work with Intergraph's Core GIS Software's Product verification & Product Development departments and also worked in the Utility Mapping and Services division. Mr. Ravi moved to India in the year 2009, and started working with Geotrax International Services. In Geotrax, Mr. Ravi manages projects related to GIS & Mapping of Land Records, consultancy services on Forest Conservation Act, Asset Mapping, Utility Mapping etc.

Mr. Ravi has provided forest mapping and vegetation change detection related consultancy services to companies such as Monnet Ispat Energy Ltd, and M/s BALCO Ltd. for their cases in National Green Tribunal and **Hon'ble** Supreme Court, Govt. of India, New Delhi.



c. Mr. Prasad Reddy-IFS, Ex-PCCF (Retd.)

### **Professional experience:**

Indian Forest Service

Principal Chief Conservator of Forests

32 years of administrative and professional experience in managing natural resources and wildlife

### **Educational Qualifications:**

M.Sc., (Biosciences ) S.V. University, Tirupathi
M.Phil, Delhi University, Delhi
PhD in Forestry, ICFRE Deemed University,
Dehradun

### **Professional International Trainings:**

"Research Methods in Forestry": Oxford University, UK

### **Areas of Expertise and Experience:**

Professional experience of thirty two years in managing Forests and Wildlife.

- Extensive experience in planning, implementing and managing Forestry projects. Experience in preparing World Bank Project on Community Forest Management Project of Andhra Pradesh and JICA project.
- Expertise in research: Successfully formulated and implemented research component of the World Bank Projects. Established four research stations.

## 2. Chapter 2: Introduction and Objectives of current study

In order to fulfill the mandate given by M/s. Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL), the following activities are required to be under taken:-

- i) Mapping of land use and land cover classes (including forest/vegetation) for different time periods which includes study of baseline forest and environmental conditions as of year 2011 and post mining years i.e., upto the current year 2018.
- ii) The mapping will involve creation of land use and land cover classes using very high resolution imageries of different time periods.
- land and increase the vegetation cover via plantation. The report will present statistical analysis of the physical and biological reclamation for different time periods post 2011.
- iv) Submission of satellite imagery, drone survey & photographic evidence of visible reclamation in the PEKB coal block with an aim to restore traditional land use evidence of visible

reclamation in the PEKB coal block with an aim to restore traditional land use.

A more detailed description of these activities are given below: -

### 2.1 Study and mapping of Baseline environmental conditions

- 1. Collection of baseline information which include estimates of available topsoil, study of forest/vegetation types and study of existing topography
- 2. Study of mining plan and preparation of GIS base map showing different aspects of the mine plan (mining pits, Infrastructure areas, green-belt areas, overburden dumps etc.)

## 2.2 Land Use and Land Cover Mapping

- 1. Procurement of very high resolution satellite imagery from National Remote Sensing Center (NRSC), Hyderabad for time periods year 2013, 2015, 2016 and 2018.
- 2. Land use and land cover mapping and study of baseline landscape and post mining in the PEKB Coal Block
- 3. Scanning, Geo-referencing and digitizing of forest maps, revenue maps etc.

- 4. Forest and revenue land mapping: Preparation of maps (hard and softcopy) that shows boundary of forest land (compartment wise), revenue survey numbers, land use type (e.g., forest, Abadi land, road, water body etc.).
- 5. Comparative area statistics of land cover classes for different time periods, including baseline conditions prior to start of mining, and upto the current year

# 2.3 Land Reclamation activities and Land Cover Change detection analysis

- 1. A study of year wise reclamation activities for both physical and biological reclamation inside the Parsa East and Kanta Basan Coal Block
- 2. Understanding of mine-pits, out-of-pit dumps and stockpiled toposoil
- 3. Maps showing location of the areas where visible reclamation (back filling of top soil and closing mine pits) and landscape restoration is seen and areas where revegetation is taken up years.
- 4. Data in tabular form giving details of the acreage of land for physical and biological reclamation particulars for different time periods.

### 3. Chapter 3: Study Area

The Parsa East & Kanta Basan (PEKB) coal block is located in the Surguja region of Chhattisgarh. The coal block can be approached from Bilaspur-Ambikapur state highway (SH 2A) near village Janardanpur, which is at a distance of about 175km from Bilaspur through a fair weather forest road. The distance of the block is about 75km from Ambikapur, in the revenue districts of Surguja.

A. Parsa East Kanta Basan (PEKB): The Parsa East Kante Basan coal block is located east of Parsa Coal block and its eastern boundary is adjoining the Kanta extension coal block. The coal block is bounded by North-West pillar "A" with Latitude 22°51'14.277" and Latitude 82°47'15.974" (WGS 84 datum) and at the South-East rectangle is pillar "B" with Latitude 22°47'39.797" and Longitude 82°49'21.991" (WGS 84 datum). The total block area is 27.11 Sq. km. The block is covered under Survey of India Toposheet No. 64J/13 (OSM: F44K13) on RF 1:50000. The certified coordinates given by CMPDI are given below.

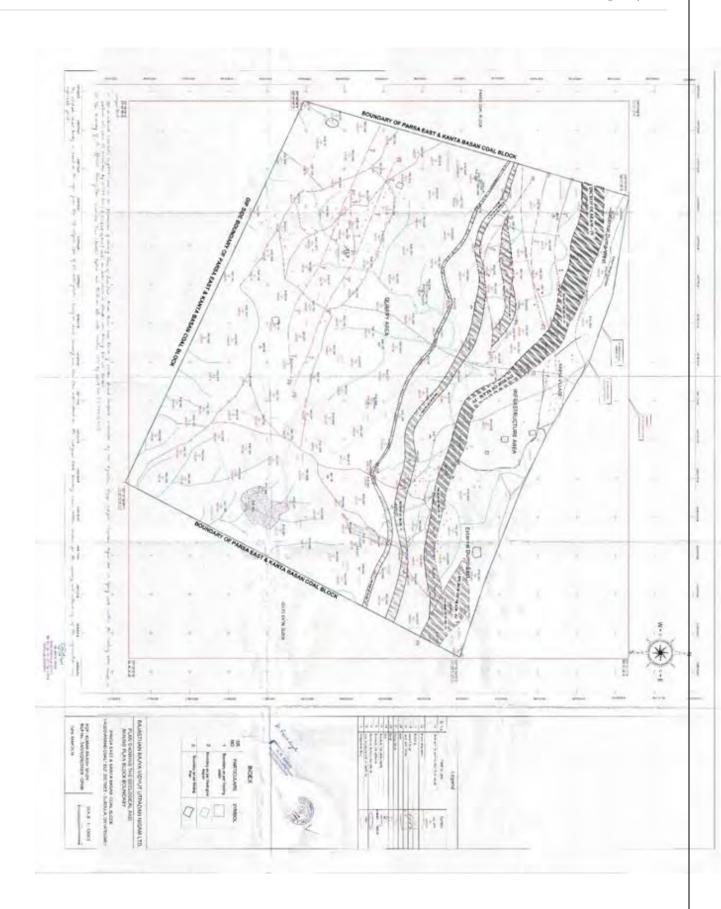
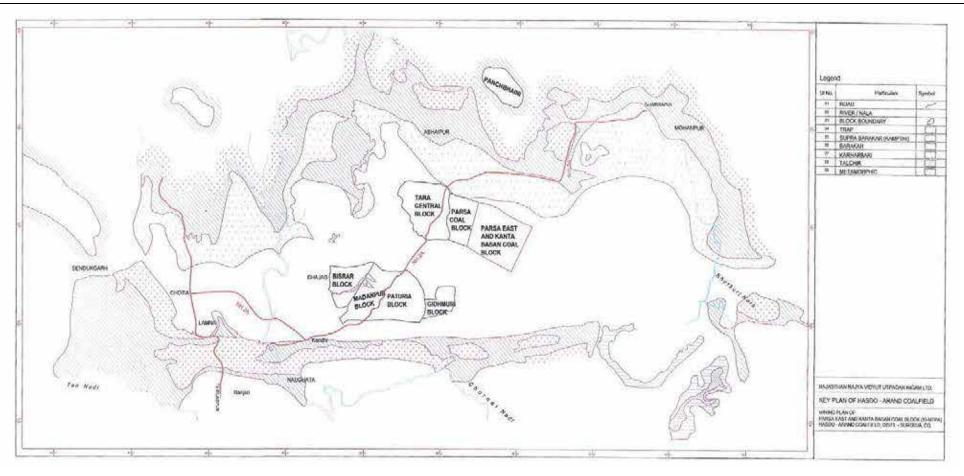




Fig-1: Parsa East Kanta Basan (PEKB) Coal Block Boundary on Satellite Imagery

Project name	PEKB Reclamation & Vegetation Change detection study				
Forest area in the allotted mine	1898.328 Hectares				
Tehsil	Udaipur				
District and State	District: Surguja, State: Chhattisgarh				
Latitude	22°51'14.277" -22°47'39.797" N				
Longitude	82°47'15.974"-82°49'21.991" E				
Total Mapping Area	2711.034 Hectares.				
SOI Toposheet	64J/13 (OSM: F44K13)				



SI No.	SI No. Particulars			
01	ROAD	-		
02	RIVER / NALA	1		
03	BOUNDARY OF PARSA BLOCK			
04	TRAP	1		
05	SUPRA BARAKAR (KAMPTHI)			
06	BARAKAR			
07	KARHARBARI	10.7		
08	TALCHIR			
09	METAMORPHIC	***		
10	BOUNDARY OF OTHERS BLOCK	D		

Fig-2: Map showing coal blocks in Hasdeo-Arand area

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# 4. Chapter 4: Methodology on Mapping Reclamation Indicators

## 4.1 Background

M/s RVUNL provided the very high resolution satellite imagery duly obtained from National Remote Sensing Center (NRSC), Hyderabad.

Geotrax was given the lease boundary maps, and other reports related to mining plan, plantation reports.

The project vision as envisioned by M/s RVUNL is application of best reclamation practices necessary to create a non-erosive and sustainable landform, establish perennial vegetation and restore traditional land use.

The baseline information studied include estimates of available topsoil, sampling for suitability of the backfill material for plant growth, survey of existing topography, and study of native vegetation

A reclamation plan is prepared based on the following studies

a. The mine area, out-of-pit dumps and adjacent undisturbed lands were surveyed to develop a post-mining landscape

design to establish through drainage and return a stable landform.

b. Backfill material was sampled to identify its suitability for plant growth

The High Resolution Satellite imagery products were obtained for different periods starting from the year 2011. The satellite imagery is then Geo-referenced, and the PEKB lease boundary is superimposed on it.

The objective of the study was to delineate the mine reclamation indicators. For the current study the following mine reclamation indicators are mapped from the satellite imagery

- 1. Broken Area
- 2. Excavation Area (Coal)
- 3. External Dump Area
  - a. Physical Reclamation
  - b. Biological Reclamation
- 4. Backfilled Area (Internal Dump)
  - a. Physical Reclamation
  - b. Biological Reclamation

Various Land use and Land cover layers were digitized on the satellite imagery of different time periods.

# 4.2 Study of Pre-mine topography & baseline environmental conditions

The objective here is to prepare a digital map which will give immediate access to various pre-mine information, such as pre-mine topography of land, vegetation density, distribution and classification etc.

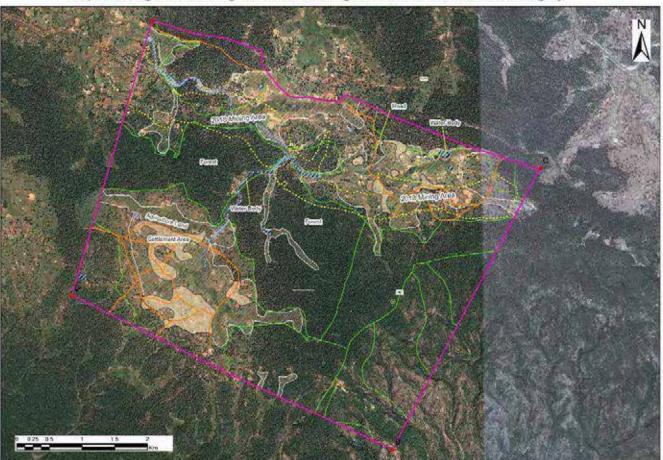
### 4.2.1 <u>Mapping of the pre-mine topography</u>:

The objective here is to carry out:

- i) Using High resolution satellite imagery mapping the topography prior to start of mining
- ii) Preparation of baseline maps showing different land use and land cover classes

# 4.2.2 <u>Digitization of land cover in pre-mine conditions:</u>

Geotrax carried out digitizing of land use and land cover layers using year 2011 High resolution imagery. The forest land, agriculture land, barren land, settlement areas, water bodies were mapped to show the pre-mine topography and land use/cover of the PEKB mine.



### Map Showing PEKB Mining Lease Area on High Resolution 2011 Satellite Imagery

Fig1: Satellite Imagery Map showing Land use/cover of PEKB as of 2011

### Details of Land Use/Land Cover as of 2011 based on Satellite imagery:

SI.No	Land Use/Land Cover Category	Area (Ha)	Remarks
1	Forest Cover	1869 Ha	
2	Agriculture Land	522 Ha	
3	Settlement Area	114 Ha	
4	Other Areas (Barren Land, Water Bodies, Roads etc.)	177 Ha	

# 5. Chapter 5: Mapping of Reclamation Indicator postmining

## 5.1 Background

For the current study on mapping of reclamation indicators, as suggested by MoEF, satellite imagery of different time periods is procured from National Remote Sensing Center, Hyderabad. The remote sensing imagery will be used to identify & differentiate reclamation indicators inside the PEKB mine.

# **5.2 Satellite Imagery Products currently available**

New technology in Spaceborne and Airborne remote sensing platforms (Spaceborne example- satellites with more advanced sensors; Airborne example- Airplanes, drones) is providing imagery at higher spatial and temporal resolutions than previously available, driving interest in using these new data for potentially more accurate analyses.

Some of the high resolution satellite imagery products available in the market are given in the below table

Sl.No Imagery		Indian Satellite/Foreign Satellite	Spatial Resolution	
1	IRS-P6 LISS-III	Indian Satellite	23.5m	
2	IRS-P6 LISS-IV	Indian Satellite	5.8m	

Sl.No	Imagery	Indian Satellite/Foreign Satellite	Spatial Resolution	
3	IKONOS 4 Multi Spectral	foreign Satellite	4mt	
4	Cartosat-1	Indian Satellite	2.5m	
5	Cartosat-2	Indian Satellite	1mt	
6	IKONOS 1 Panochromatic	foreign Satellite	1mt	
7	World View-1	foreign Satellite	1mt	
8	World View-2	foreign Satellite	0.5mt	

For the current study the satellite imagery procured/used are described below.

Sl.No	Imagery	Indian Satellite/Foreign Satellite	Spatial Resolution	Year
1	World View-1	foreign Satellite	1mt	23.12.2011
2	World View-1	foreign Satellite	1mt	25.12.2013
3	World View-2	foreign Satellite	1mt	20.05.2015
4	World View-2	foreign Satellite	1mt	18.11.2016
5	World View-2	foreign Satellite	1mt	18.11.2018
6	Drone based Ortho imagery	UAV	2.4cm	October 2018

# **5.3 Reclamation Indicators**

- 5. Broken Area
- 6. Excavation Area (Coal)
- 7. External Dump Area
  - a. Physical Reclamation
  - b. Biological Reclamation
- 8. Backfilled Area (Internal Dump)
  - a. Physical Reclamation
  - b. Biological Reclamation

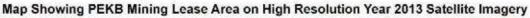
# 5.4 Mapping of reclamation indicators post-mining and Change analysis

The objective of mapping reclamation indicators and change analysis is to ascertain the exact nature and coverage of reclamation-both Physical and Biological. In the present study, the change in the nature and coverage of reclamation indicators is mapped for the years between 2013 to 2018.

Particulars		YEAR 2012- 13	YEAR 2013- 14	YEAR 2014- 15	YEAR 2015- 16	YEAR 2016- 17	YEAR 2017- 18	YEAR 2018-19 (Till 31st Dec 2018)	Total
Broken Area (Ha)		60	28	45	97.4	92.1	115.4	99.34	537.24
Excavation Area (Coal)		4.8	13.2	26.2	52.5	75.8	81.9	84.6	339
External dump	area (Ha)	20	17.4	4.9	18.7	7	29.2	0	97.2
Backfilled a	rea (Ha)	0	14.4	16.7	29.4	33.8	21	46.33	161.63
Physical Reclamation (Ha)		0	12.7	1.3	10.44	10.96	22	22.3	79.7
Plantation/ Biological Reclamation (Ha)	Others Area (Ha)	1.5	2.3	5.1	4.6	9.35	3.61	1.5	27.96
	External dump area (Ha)	0	0	0	0	21.65	14.49	7.47	43.61
	Internal dump Area (Ha)			0.8	3.1	8.2	10.2	27.9	50.2
	Total Area	1.5	2.3	5.9	7.7	39.2	28.3	36.87	121.77

Reclamation status of PEKB Open Cast Coal Mine between Year 2013-18

# 5.4.1 Map showing reclamation particulars on Satellite imagery of October 2013



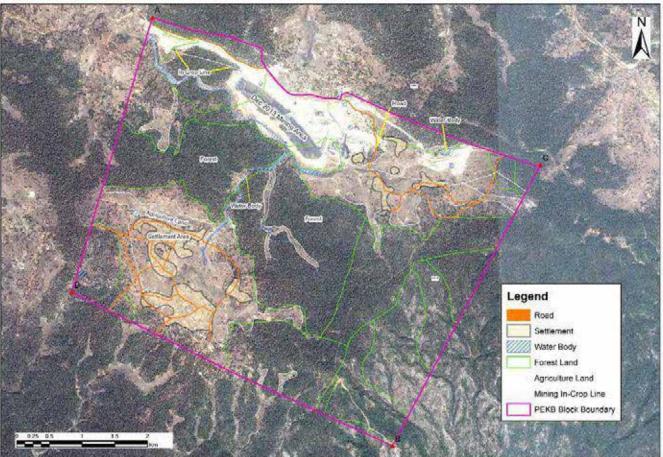


Fig2: Map showing reclamation areas as of 2013 on Digital Globe satellite imagery

Year 2013 Inset Image showing Mining Pit, Internal Dump and External

<u>Dump</u>



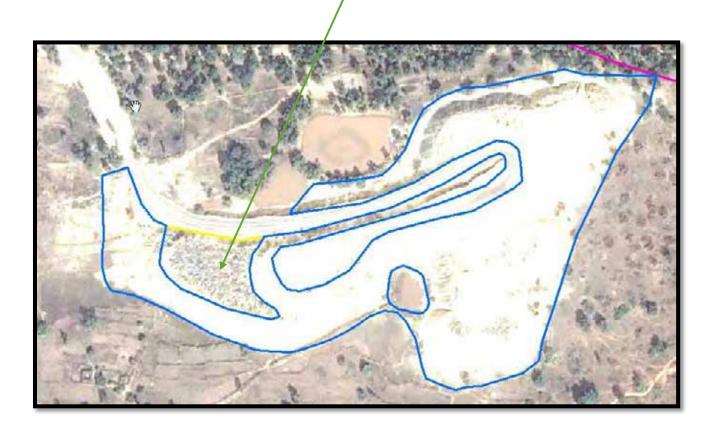
2013 Satellite Imagery Showing Safety Zone Plantation



2013 Satellite Imagery Showing Safety Zone Plantation



2013 Satellite Imagery Showing Plantation in External Dump



# 5.4.2 Map showing reclamation particulars on satellite imagery of October 2015

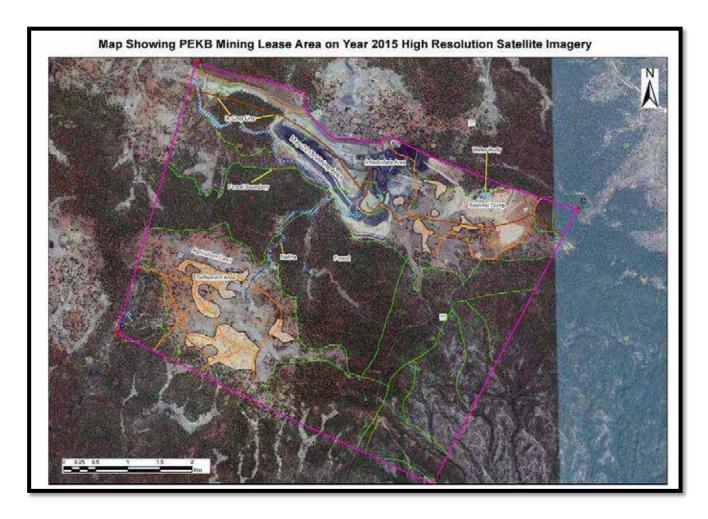


Fig4: Map showing reclamation areas as of 2015 on Digital Globe satellite imagery

2015 Satellite Imagery Showing Plantation in Backfilled Area



2015 Satellite Imagery Showing Safety Zone Plantation



# 2015 Satellite Imagery Showing Plantation on Dump Slopes



# 5.4.3 Map showing reclamation particulars on Satellite imagery FCC (False Color Composite) of January 2017



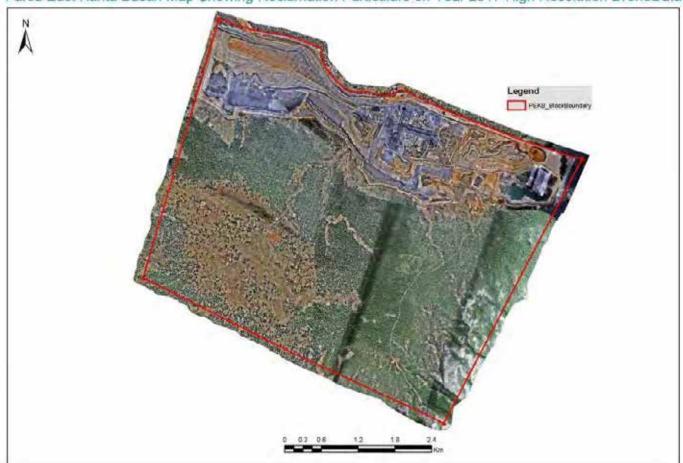


Fig6: Map showing reclamation areas as of 2017 on satellite imagery

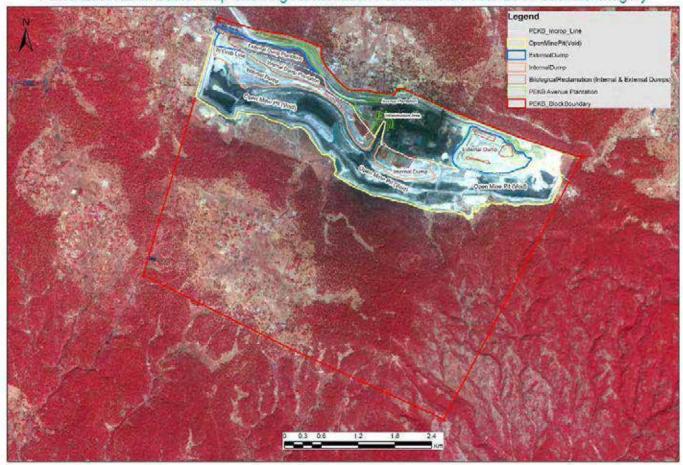
# 5.4.4 Map showing reclamation particulars on Satellite imagery FCC (False Color Composite) of January 2017



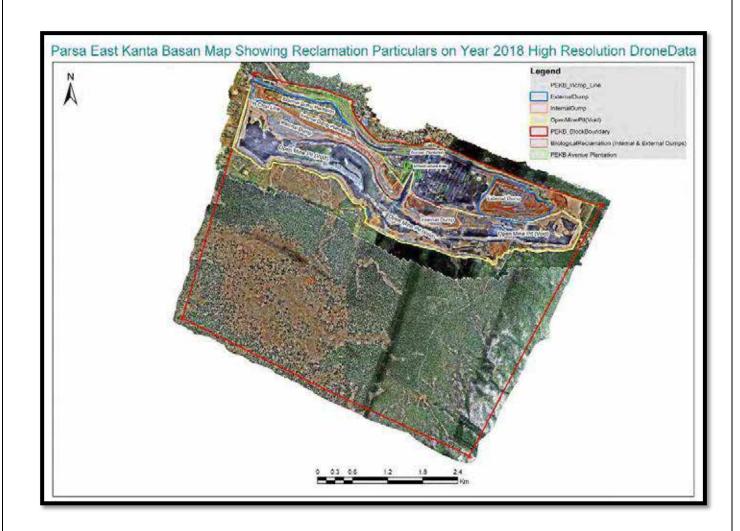
Fig6: Map showing reclamation areas as of 2017 on satellite imagery

# 5.4.5 Map showing reclamation particulars on Satellite Imagery of 2018





# 5.4.6 Map showing reclamation particulars on Drone Ortho imagery of October 2018



2018 Ortho Imagery Showing Plantation on Internal Dump





# 2018 Ortho Imagery Showing Green Belt Plantation



- 6. Chapter 6: Field Photographs showing Afforestation by M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited(RVUNL) inside and Outside PEKB Lease boundary
  - **6.1** Field Photographs of Biological Reclamation (Plantation)



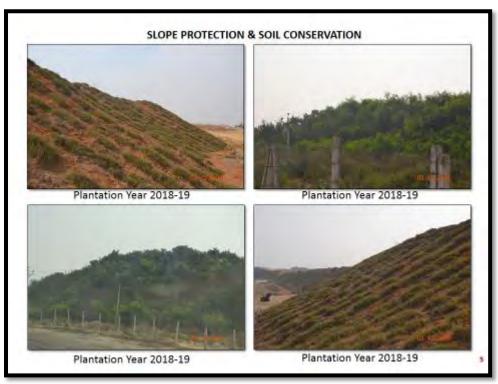


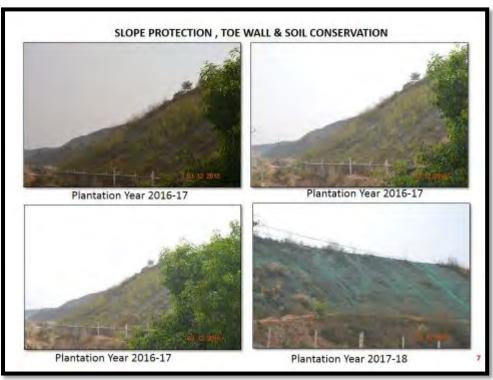










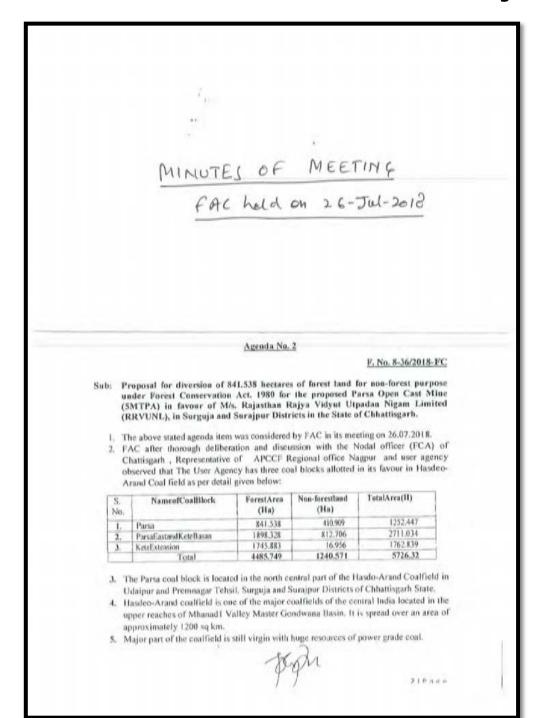


## 7. Chapter 7: Conclusion

- 1. M/s RVUNL has adopted the best practices for successful physical and biological reclamation practices in the ongoing and active mining operations at PEKB
- 2. The re-vegetation monitoring results indicate visible reclamation and successful establishment of native vegetation

#### 8. Annexures

#### 8.1 Annexure A- FAC 26.0.2018 Minutes of Meeting



- 6. There are 18 coal block in Hasdeo-Arand Coal fields. Out of the 18 coal blocks, currently, mining operations are being carried out in 2 coal blocks namely Parsa East and Kete Basan and Chotia coal blocks while proposal in respect of other 4 coal blocks are under consideration in the State/Central Government level.
- 7. The Parsa Coal Block was earlier allotted to M/s Chhattisgarh State Power Generation Company Limited (CSPGCL) and Mining Plan and Mine Closure Plan (5 MTPA) was approved by Ministry of Coal Vide Letter No.-13016/90/2006-C A-I (Part) on 19th May, 2014. However, Hon'ble Supreme Court vide its order dated 24th September 2014 de-allocated coal blocks including Parsa Coal Block. Subsequently, in accordance with the provisions of the Coal Mines (Special Provisions) Ordinance, 2014, the Ministry of Coal, GOI vide its letters dated 18th December 2014 and 18th February 2015 earmarked coal blocks for allotment and invited applications from the Government Companies. The User Agency applied to Nominated Authority of Ministry of Coal, GOI for allotment of Parsa Coal Block for captive use in its thermal Plants located in the State of Rajasthan. Subsequently, Ministry of Coal, Government of India on 24.03.2015 allotted Parsa Coal Block to the User Agency in accordance to Coal Mines (Special Provisions) Act, 2015 & Coal Mines (Special Provision) Rules, 2014 and executed the allotment agreement.
- The Parsa coal block is contiguous to Parsa East and Kete Basan (PEKB) and Tara coal blocks.
- Parsa Coal Block is located in six villages, namely Salhi, Hariharpur, Ghatbara, Fatepur under Udayapur Tahasil of Surguja district and Janardanpur, village of Premnagar Tahasil of Surajpur district.
- 10. The block is rectangular in shape and extends about 3.10 km along the strike direction (NW-SE) and about 4.3 km along the dip direction (SW).
- Total geological reserves estimated for stands at 256.40 MT while mineable reserves estimated by opencast mining stands at 200.41 MT. Mining plan was approved for production capacity of 5 MTPA.
- 12. It is reported that the area is sensitive from erosion point of view. The vegetation density in the area is reported to be 0.5.total number of trees reported to be felled are 95.458
- 13. FAC took a note of the fact that similar case of PEKB and Tara Coal block in Hasdeo-Arand Coal was granted approval by the competent authority by overriding the recommendation of the then FAC.
- 14. In case of PEKB (Parsa East and Kante Basan) coal block open cast mining in Hasdeo Arand forest the State Government of Chhattisgarh, vide their letter dated 28.04.2010, submitted a proposal seeking prior approval of the Central Government under the Forest (Conservation) Act, 1980 for diversion of 1898.328 ha.
- 15. The proposal for PEKB along with the site inspection report submitted by the RO, Bhopal was considered by the then FAC in its meeting held on 10.03.2011 and the Committee desired that area may be visited by the Sub-Committee of the FAC to have a better appreciation of the proposal. The site was visited by the Sub-Committee of FAC and report submitted to the FAC. Subsequently, the proposal was again considered by the FAC in its meeting held on 20-21<sup>st</sup> June, 2011 and the Committee noted the following:
  - The coal block is on the northern fringe of Hasdeo-Arand.

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- The mining is planned in two phases with the aim of sequential mining, scientific void management, planned felling of tress and afforestation, top so il management, and reclamation, etc.
- In phase-I (15 years), total requirement of forest area is 762 ha (40% of total), where 1,25,547 trees will be affected.
- In phase-II (16th year onwards), total requirement of forest area will be 1136.328ha, where 2,42,670 trees will be affected.
- v. The reclamation of mined out area will start from 3rd year onwards.
- The project belongs to the State Government and is directed to meet the energy requirements of the State.
- 16. The then FAC also took into consideration the observations of the sub-committee of the FAC, which visited the area that the quality of the forest cover available in the Parsa East and Kante Basan coal block is poorer compared to area in the Tara coal block. However, as per the study jointly undertaken by the MoEF and MoC, Gross Forest Cover is 52.95% and Weighted Forest Cover comes to 27.55%.
- 17. The then FAC after considering all the findings and observations did not recommend the diversion of the proposed forest area in view of fact that area proposed for diversion has high ecological and forest value and the number of trees to be felled was very high, which did not justify diversion from conservation point of view.
- 18. Recommendation of FAC was placed for approval before the Hon'ble Minister of Environment & Forests for their acceptance. The then Hon'ble Minister of State for Environment & Forests after considering the recommendations of FAC and taking into consideration the various issues, proceeded on to grant permission for Stage – I approval to the proposal on 23.06.2011.
- 19. The Hon'ble MEF had overruled the recommendation of the FAC on the following grounds:
  - a) Coal block located in fringe area and not in biodiversity rich area of Hasdeo-Arand Coal filed.
  - b) Substantial changes have been introduced in the mining plan as originally envisaged. Revised plan envisage mining in two phases of 15 years each.
  - c) Concern identified relating to wildlife should be taken care of through a well-prepared and well-executed Wildlife Management Plan and Programme under the aegis of WII, Dehradun.
  - d) These coal blocks are linked to super critical thermal power generating stations. In fact this is an explicit pre-condition for approval in order to remove any ambiguity on this score.
  - e) Both the State Government involved—Chhottisgarh and Rajasthon (which will use the coal mined at Parsa East and Kante Basan) have been persistently following up since their power generation plans are closely linked with these coal blocks.
  - f) While the FAC has to do its due diligence with single-minded focus, as the Minister I have necessarily to keep the boarder development picture in mind and balance out different objectives and considerations

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- 20. On the basis of the order dated 23.06.2011 of the then Minister, this Ministry decided to give Stage-I clearance to diversion proposal of (I) Tara Coal Block and (II) PEKB Coal Block in Hasdeo-Arand Coal Block. MoEF granted Stage-I clearance dated 06.07.2011 to the diversion of 1898.328 ha of forest land (for mining in two phases) in Parsa East and Kante Bassan captive coal blocks open cast mining project in favour of M/s RVUNL in South Sarguja Forest division in Sarguja district of Chhattisgarh subject to fulfilment of certain terms & conditions, as specified therein.
- 21. The State Government of Chhattisgarh has furnished the satisfactory compliance report on conditions stipulated in the Stage-I approval dated 6.07.2011 vide their letter no. 331-53/2455 dated 31.12.2011. After having found the compliance report submitted by the State Government complete, the stage –II approval was granted by MoEF on 15.3.2012 for the said proposal subject to fulfilment of certain conditions.
- 22. Subsequently, an appeal was filed by Mr. Sudiep Shrivastava before the Hon'ble NGT challenging the order dated 28-3-2012 passed by the State Govt. of Chhattisgarh under section-2 of the FCA for diversion of 1898.328 Ha of forest land of Parsa East and Kante Besan Captive Coal Blocks open cast mining project. Matter was concluded after series of hearing conducted by the Hon'ble NGT and judgment was passed on 24,03,2014 wherein the Hon'ble NGT inter-alia directed as under:
  - a) "Order dated 23rd June, 2011 passed by the respondent no. 2- MoEF Government of India and consequential order dated 28th March, 2012 passed by the respondent no. 1 State of Chhattisgarh under section 2 of the Forest (Conservation) Act 1980 for diversion of forest land of PEKB Coal Blocks are set-aside;
  - b) The case is remanded to the MoEF with directions to seek fresh advice of the FAC within reasonable time on all aspects of the proposal discussed herein above with emphasis on seeking answers to the following questions: (i) What type of flora and fauna in terms of bio-diversity and forest cover existed as on the date of the proposal in PEKB Coal Blocks in question. (ii) is/was the PEKB Coal Blocks habitat to endemic or endangered species of flora and fauna. (iii) Whether the migratory route/corridor of any wild animal particularly, elephant passes through the area in question and, if yes, its need. (iv) Whether the area of PEKB Block has that significant conservation/protection value so much so that the area cannot be compromised for coal mining with appropriate conservation/management strategies. (v) What is their opinion about opening the PEKB Coal Blocks for mining as per the sequential mining and reclamation method proposed as well as the efficacy of the translocation of the tree vis-a-vis the gestation period for regeneration of the flora (vi) What is their opinion about the Wildlife Management plan finally prescribed. (vii) What conditions and restriction do they propose on the mining in question, if they favour such mining? Liberty is gramed to the FAC to seek advice/opinion/specialised knowledge from any authoritative source such as Indian Council of Forestry Research and Education Dehradun or Wildlife Institute of India including the sources indicated in the present case by the parties.
  - c) The MoEF shall pass a reasoned order in light of the advice given by the FAC in accordance with law and pass appropriate order in accordance with law.

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- d) All work commenced by the respondent no. 3 project proponent and respondent no.4 pursuant to the order dated 28th March, 2012 passed by the respondent no. 1 State of Chhattisgarh under section 2 of the FC Act 1980, except the work of conservation of existing flora and fauna, shall stand suspended till such further orders are passed by the MoEF in accordance with law."
- The Order of NGT was challenged in Hon'ble Supreme Court through Civil Appeal No. 4395 of 2014.
- 24. In compliance of the NGT order, the FAC considered the proposal again on 29-30<sup>th</sup> April 2014 and reviewed the whole matter and after examination of the issue, recommended that since the matter is sub-judice, decision on the matter may be deferred.
- 25. In the meanwhile the Hon'ble Supreme Court heard the matter on 28.04.2014 and directed as under:

"....we stay the direction in the impugned order that all works commenced by the appellant pursuant to the order dated 28th March, 2012 passed by the State of Chhattisgarh under Section 2 of the Forest Conservation Act, 1980 shall stand suspended till further orders are passed by the Ministry of Environment and Forests".

- 26. Based on the stay order the user agency continued the work. Since 2014, the matter is pending in the Supreme Court and user agency is working in the area based on the stay order of Hon'ble Supreme Court.
- 27. In the meanwhile the user agency had approached the iA division of MoEF&CC for grant of EC to the expansion project "Parsa East and Kanta Basan (PEKB)" Opencast Coal Mine from 10 MTPA to 15 MTPA along with the expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA
- 28. The file was processed and Hon'ble Minister of State for EF&CC directed that "since the matter is pulling for long. FAC may convene a meeting and decide the matter in 4 weeks
- 29. The Ministry observed that since the Supreme Court has stayed the part (4) of the order of the NGT whereby the ongoing operation of mining was suspended, the matter should be placed before the FAC in compliance of the remaining part of the NGT order namely (1), (2), and (3) and seek advice of FAC on the whole issue.
- 30. The Ministry is of the opinion that since the Supreme Court has not stayed the complete order of the NGT except the part 4 whereby the mining operation was suspended, the case was remanded to the FAC for reconsideration as directed by NGT and the Hon'ble Minister of State MoEF&CC.
- 31. The matter of PEKB was dicussed in FAC meeting on 25.01.18. FAC analyzed the existing condition of the mining lease area using the shape file on the DSS of the Ministry and google images and sateilite imageries. FAC observed that the mining in the area is under process and forest has been cut as per the mining plan after the stay order granted by the Hon'ble Supreme Court against NGT order. The mining cannot be stopped now due to the stay order on suspension of mining operation. Since the matter has become a fait accompli situation, the user agency has to comply the mitigation measure as recommended in the Stage-II granted by the lelinistry. FAC decided to

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- recommend that the Ministry should ensure compliance of all conditions referred in Stage-II clearance subject to the final Decision of Hon'ble Supreme Court in Civil Appeal No. 4395 of 2014 in the matter of Rajasthan Rajya Vidyut Nigam Ltd. Vs. Sudiep Shrivastava.
- 32. Now the matter related to adjoining area of Parsa Coal block is proposed for diversion. The area is located in the same Hasdeo Arnand Coal field. This cannot be taken in isolation.
- 33. FAC also considered the representations of BNHS,eRC and other such agencies.
- 34. In concluding remarks of his note the then Hon'ble MOS(I/S)E&F dated 23.06.2011 has mentioned that'After taking all factors into account, I am of the view that permission should be granted to opening the Tara and Parsa East-kante Basan Coal blocks as proposed by Chattisgarh government, while granting this permission I must reiterate that any more opening of Coal blocks in the main Hasdeo-Arand forest area will severely disturb the fragile ecosystem of the region, perhaps the Chattisgarh government could be compensated through some sort of 'green bonus' (either through additional centeral assistance or through additional allocation of power from the centeral pool) for not giving any further permissions for coal mining in Hasdeo-Arnand region. This green bonus policy will, of course, apply to yhe project in other states as well which may not see the light of day on account of ecological factors.

Since the Parsa block of chattisgarh state electricity board is in between the Tara and the Parsa East—Kante basan Coal blocks permission for prospecting only as sought for by the state government is also hereby accorded this block should not be worked commercially for atleast the next five year till after some reclaimation on portion of two other coal block has commenced in a visible manner.

#### Recomendation of FAC:

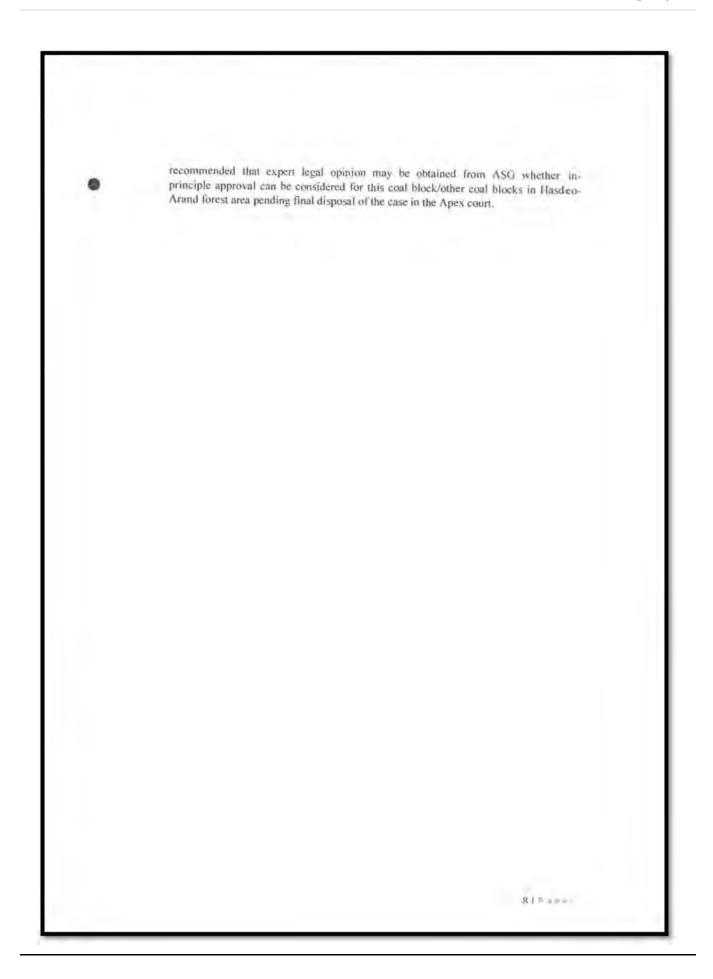
Vide Judgment dated 24th March 2014 the Hon'ble NGT set aside the orders of MOEF dated 23 June 2011, which is related to Forest Clearance accorded for Parsa East & Kanta Basan coal block (PEKB) and is limited only to that. There is no mention of Parsa coal block in the order of NGT. However, considering that conservation of biodiversity and wildlife cannot be limited to this coal block only and has to cover the entire region, the FAC in its previous meetings had expressed serious concern and had instructed State Government to get a comprehensive study conducted by a reputed institution like ICFRE or WII and prepare a holistic report of the area which will be funded and executed by the user agencies. State government has already initiated the process.

At that point of time MoEF&CC has taken a decision that Parsa coal block should not be worked commercially for at least 5 years till visible reclamation is done in the other two coal blocks (Tara & PEKB). The mining operation in PKEB has been continuing in view of the stay granted by the Hon'ble Supreme court on the impugned orders of the NGT and is in operation since February 2013 and more than five years have elapsed. The User Agency also presented documentary evidence regarding successful reclamation works. In view of this MoEF&CC may take a view.

FAC felt that final orders by the Hon'ble Supreme Court in this case would facilitate taking a clear-cut view for granting FC for Parsa coal block. However, FAC

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# 8.2 Annexure B- Geotrax Chhattisgarh State Empanelment Certificate for Survey and Mapping



#### छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद

एम.आई.जी. 25, इन्द्रावती कॉलोनी, रायपुर, (छ.ग.) 492 001

Chhattisgarh Council of Science & Technology

MIG - 25, Indravati Colony, Raipur, (C.G.) 492 001 Tel: 0771-2434569 Fax: 2434093

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Prof. M.M. Hambarde Director General No. 2470 /CCOST/2026 Date: 23/6/ /2016

प्रति

Geotrax International Services

(Survey and Mapping Consultancy),— H/o. 23-88A,

Krishnavan Nagar, Kothipat,

Hyderabad (A.P.) 500 058,

Email: info@geotrax.in, Web: www.geotrax.in

विषय :- DGPS / GIS Services प्रदान करने हेतु Empanelment के संबंध में।

परिषद द्वारा पूर्व में DGPS / GIS Services प्रदान करने हेतु firms के empanelment हेतु EOI (Expression of Interest) बुलाये गये थे। जिसके संदर्भ में आपके द्वारा आवेदन प्रस्तुत किया गया था।

दिनांक 28.12.2015 को आपके द्वारा विषय विशेषज्ञ समिति के समक्ष दिये गये प्रस्तुतिकरण के आधार पर समिति द्वारा डीजीपीएस सर्वे कार्य हेतु आपकी संस्था का empanelment किया जाता है।

कृपया अपनी सहमति परिषद को प्रदान करने का कष्ट करें।

(महानिदेशक)

# **8.3** Annexure C- Details of Planting of Saplings and Transplantation of Trees

Sr.	Spacias		2012-	2013-	2014-	2015-	2016-	2017-	2018-	Total
No.	Species		13	14	15	16	17	18	19	Total
	Local	Botanical								
	Name	name								
1	SAL	Shorea	1341	993	118	668	1110	1476	561	6267
2	MAHUW	Madhuca	45	0	215	330	455	40	40	1125
3	CHAR	Buchanania	20	0	0	45	35	0	5	105
4	JACK	Artocarpus	1	0	0	0	0	0	0	1
5	AMALTAS	Casia Fistula	4	0	0	0	1	0	12	17
6	MANGO	Mangifera	3	0	0	2	6	1	0	12
7	GUAVA	Psidium	1	0	0	0	0	0	0	1
8	BHELVA	Semecarpus	0	0	0	5	1	0	1	7
9	HALDU	Haldina	0	0	0	1	0	0	0	1
10	KUMBHI	Careya	0	0	0	0	1	0	0	1
11	TENDU	Diospyros	0	0	0	20	12	0	7	39
12	JAMUN	Syzygium	0	0	0	1	6	0	0	7
13	KAHUWA	Terminalia	0	0	0	0	0	0	1	1
14	SIDHA	Justicia	0	0	0	0	0	0	16	16
15	KASAEE	Pometia	0	0	0	0	0	0	1	1
16	BEL	Aegle	0	0	0	0	0	0	1	1
17	SEMAL	Bombax ceiba	0	0	0	0	0	0	1	1
18	KORKOT	Dillenia	0	0	0	0	0	0	1	1
19	BARGAD	Ficus	0	0	0	0	0	0	1	1
20	KUSUM	Schleichera	0	0	0	0	0	0	1	1
	TOTAL		1415	993	333	1072	1627	1517	649	7606

Sr. No.	Species	Botanical Name	2012- 13	2013- 14	2014- 15	2015- 16	2016- 17	2017- 18	2018- 19	G. Total
1	SAL	Shorea robusta	313	313	809	2487	1023	133	1284	6062
2	KARANJ	Pongamia pinnata	0	550	5019	4780	6836	0	0	17185
3	KHAMHAR	Gmelina arborea	352	692	992	255	7882	10670	33	20876
4	ANOLA	Phyllanthus emblica	430	1110	0	1805	165	200	0	3710
5	SHESHAM	Dalbergia sissoo	526	526	3543	450	0	0	0	5045
6	SIRAS	Albizia lebbeck	0	0	0	125	0	0	0	125
7	BEL	Aegle marmelos	0	0	0	527	0	0	0	527
8	KHAIR	Senegalia catechu	0	3	0	400	0	5225	4890	10518
9	Mango	Mangifera indica	3	0	0	494	7	1396	3028	4928
10	SHISHU	Dalbergia sissoo	0	0	3542	6415	37187	16294	24990	84312
11	GULMOHAR	Delonix regia	486	986	666	169	1993	0	0	4300
12	GUAVA	Psidium guajava	4	4	0	0	183	0	0	191
13	TEAK	Tectona grandis	0	462	0	0	25036	0	0	25498
14	PELTOPHORUM	Peltophorum Pterocacarpum	0	4	170	885	1560	0	0	2619
15	ACACIA	Acasia auriculifarmis	0	50	0	0	3234	0	0	3284
16	Kathal	Artocarpus heterophyllus	462	199	0	209	5	200	0	1075
17	JAMUN	Syzygium cumini	4	0	0	225	517	201	2623	3570
18	BARGAD	Ficus rubiginosa	0	10	0	0	1	694	1711	1897
19	ARJUN	Terminalia arjuna	0	1	0	0	411	0	5408	5820
20	PIPAL	Ficus religiosa	0	6	0	0	1	2431	2038	3950
21	IMLI	Tamarindus indica	0	10	58	0	713	0	0	781
22	AMALTAS	Casia Fistula	0	145	0	0	328	0	0	473
23	ORANGE	Citrus X sinensis	199	219	0	0	196	0	0	614
24	MAHUVA	Madhuca longifolia	10	0	0	0	0	0	0	10
25	SAJA	Terminalia Elliptica.	1	0	0	0	0	3184	7677	10664
26	TILSA	Bauhinia Purpurea	6	0	0	0	0	0	0	6
27	HARRA	Termineia Chebula	145	0	0	0	0	0	0	145
28	BAHERRA	Terminalia bellirica.	219	0	0	0	0	0	0	219
29	KOSHAM	Kosham tree	561	0	0	0	0	0	0	561
30	CHAR	Buchanania cochinchinensis	1	0	0	0	0	0	0	1
31	BAMBOO	Bambusa Vulgaris	0	561	0	0	9710	5487	11376	27134
32	NEEM	Azadirachata Indica	10	1	0	0	915	8148	3805	12724
33	SEMAL	Bombax ceiba	0	0	0	70	0	0	0	70
34	HALDU	Haldina Cordifolia	0	0	0	0	0	3265	5601	8866
35	MUNDI	Sphaeranthus indicus	0	0	0	0	0	8475	6373	14848
36	CHIKU	Achras sapota	0	0	0	0	0	200	0	200
37	LICHI	Litchi chinensis	0	0	0	0	0	200	0	200
38	KADAM	Neolamarckia cadamba Pterocarpus	0	0	0	0	0	151	0	151
39	BIJA	Pterocarpus Marsupium	0	0	0	0	0	4151	9216	10775
40	GULAR	Ficus racemosa	0	0	0	0	0	0	2107	2107
41	PAKAD	Ficus virens	0	0	0	0	0	0	18	18
	TOTAL		3732	5852	14799	19296	97903	70705	92178	304465

Annexure-VII Photo album showing reclamation status of
PEKB Coal Block

# RECLAMATION STATUS IN PARSA EAST & KANTA BASAN OPENCAST COAL MINE PROJECT, SURGUJA, CHHATTISGARH OF RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED

## RECLAMATION STATUS OF PARSA EAST & KANTA BASAN OPENCAST COAL MINE PROJECT

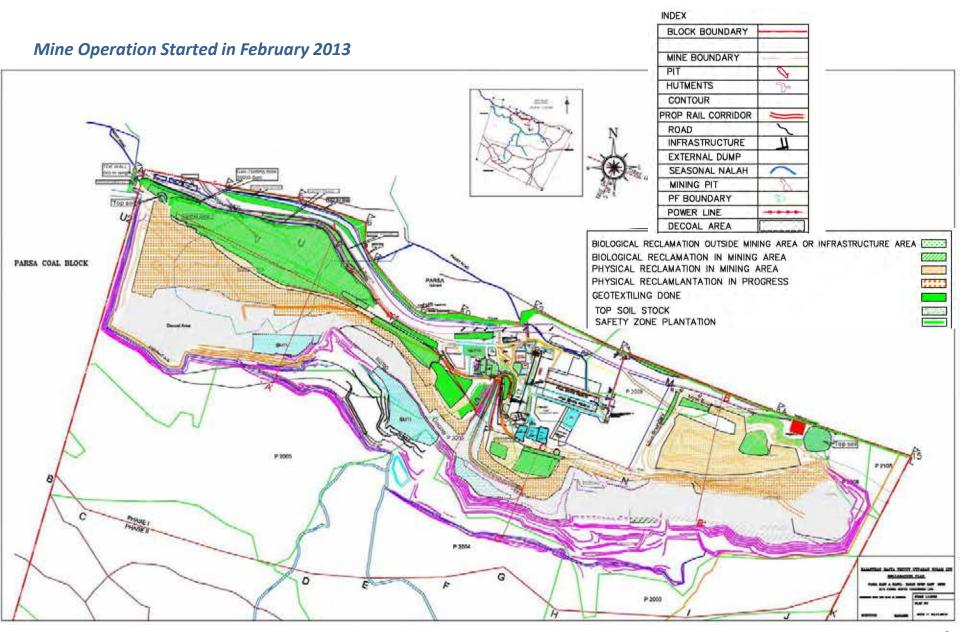
Mine Operation Started in February 2013

Parti	YEAR 2012- 13	YEAR 2013- 14	YEAR 2014-15	YEAR 2015-16	YEAR 2016- 17	YEAR 2017- 18	YEAR 2018-19 (Till 31st Dec 2018 )	Total	
Broken Area (Ha)		60	28	45	97.4	92.1	115.4	99.34	537.24
Excavation	Area (Coal)	4.8	13.2	26.2	52.5	75.8	81.9	84.6	339
External dui	mp area (Ha)	20	17.4	4.9	18.7	7	29.2	0	97.2
Backfilled area (Ha)		0	14.4	16.7	29.4	33.8	21	46.33	161.63
Physical Recl	Physical Reclamation (Ha)		12.7	1.3	10.44	10.96	22	22.3	79.7
	Others Area (Ha)	1.5	2.3	5.1	4.6	9.35	3.61	1.5	27.96
Plantation/ Biological	External dump area (Ha)	0	0	0	0	21.65	14.49	7.47	43.61
Reclamation (Ha)	Internal dump Area (Ha)			0.8	3.1	8.2	10.2	27.9	50.2
	Total Area	1.5	2.3	5.9	7.7	39.2	28.3	36.87	121.77
Total plant	Total plantation (Nos.)		5852	14799	19296	97903	70705	92178	304465
Coal (Million Te)		0.29	1.2	3.44	6.21	8.27	8.33	10.08	37.82

## **SPECIES-WISE PLANTATION DETAILS TILL DECEMBER 2018**

Sr. No.	Species	Botanical Name	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	G. Total
1	SAL	Shorea robusta	313	313	809	2487	1023	133	1284	6062
2	KARANJ	Pongamia pinnata	0	550	5019	4780	6836	0	0	17185
3	KHAMHAR	Gmelina arborea	352	692	992	255	7882	10670	33	20876
	ANOLA	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		1110	0	1805	165	200	0	3710
	SHESHAM Dalbergia sissoo		430 526	526	3543	450	0	0	0	5045
	SIRAS	Albizia lebbeck	0	0	0	125	0	0	0	125
	BEL	Aegle marmelos	0	0	0	527	0	0	0	527
8	KHAIR	Senegalia catechu	0	3	0	400	0	5225	4890	10518
9	Mango	Mangifera indica	3	0	0	494	7	1396	3028	4928
	SHISHU		0	0	3542	6415	37187	16294	24990	84312
	GULMOHAR	Dalbergia sissoo	486	986	666	169	1993	0	0	4300
		Delonix regia						_		
	GUAVA	Psidium guajava	4	4	0	0	183	0	0	191
	TEAK	Tectona grandis	0	462	0 170	0 885	25036	0	0	25498
14	PELTOPHORUM	Peltophorum Pterocacarpum	0	4			1560	0	0	2619
	ACACIA	Acasia auriculifarmis	0	50	0	0	3234	0	0	3284
16	Kathal	Artocarpus heterophyllus	462	199	0	209	5	200	0	1075
17	JAMUN	Syzygium cumini	4	0	0	225	517	201	2623	3570
	BARGAD	Ficus rubiginosa	0	10	0	0	1	694	1711	1897
	ARJUN	Terminalia arjuna	0	1	0	0	411	0	5408	5820
	PIPAL	Ficus religiosa	0	6	0	0	1	2431	2038	3950
	IMLI	Tamarindus indica	0	10	58	0	713	0	0	781
	AMALTAS	Casia Fistula	0	145	0	0	328	0	0	473
23	ORANGE	Citrus X sinensis	199	219	0	0	196	0	0	614
	MAHUVA	Madhuca longifolia	10	0	0	0	0	0	0	10
	SAJA	Terminalia Elliptica.	1	0	0	0	0	3184	7677	10664
26	TILSA	Bauhinia Purpurea	6	0	0	0	0	0	0	6
27	HARRA	Termineia Chebula	145	0	0	0	0	0	0	145
28	BAHERRA	Terminalia bellirica.	219	0	0	0	0	0	0	219
29	KOSHAM	Kosham tree	561	0	0	0	0	0	0	561
30	CHAR	Buchanania cochinchinensis	1	0	0	0	0	0	0	1
31	ВАМВОО	Bambusa Vulgaris	0	561	0	0	9710	5487	11376	27134
32	NEEM	Azadirachata Indica	10	1	0	0	915	8148	3805	12724
33	SEMAL	Bombax ceiba	0	0	0	70	0	0	0	70
34	HALDU	Haldina Cordifolia	0	0	0	0	0	3265	5601	8866
35	MUNDI	Sphaeranthus indicus	0	0	0	0	0	8475	6373	14848
36	СНІКИ	Achras sapota	0	0	0	0	0	200	0	200
37	LICHI	Litchi chinensis	0	0	0	0	0	200	0	200
38	KADAM	Neolamarckia cadamba	0	0	0	0	0	151	0	151
39	BIJA	Pterocarpus Marsupium	0	0	0	0	0	4151	9216	10775
40	GULAR	Ficus racemosa	0	0	0	0	0	0	2107	2107
	PAKAD	Ficus virens	0	0	0	0	0	0	18	18
	TOTAL		3732	5852	14799	19296	97903	70705	92178	304465

#### RECLAMATION STATUS OF PARSA EAST & KANTA BASAN OPENCAST COAL MINE PROJECT





Plantation Year 2012-13



Plantation Year 2012-13



Plantation Year 2012-13



Plantation Year 2012-13



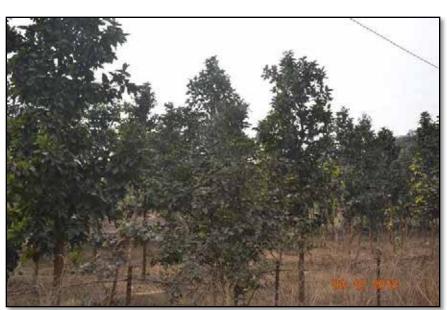
Plantation Year 2013-14



Plantation Year 2013-14



Plantation Year 2013-14



Plantation Year 2013-14



Plantation Year 2014-15



Plantation Year 2014-15



Plantation Year 2014-15

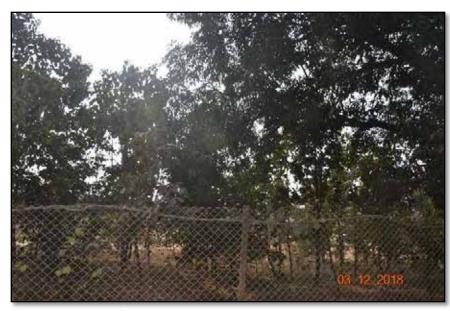


Plantation Year 2014-15





Plantation Year 2015-16



Plantation Year 2015-16



Plantation Year 2015-16

#### **AVENUE PLANTATION**



Plantation Year 2016-17



Plantation Year 2017-18



Plantation Year 2016-17



Plantation Year 2017-18

#### **AVENUE PLANTATION**



Plantation Year 2016-17



Plantation Year 2017-18



Plantation Year 2016-17



Plantation Year 2017-18

#### INNOVATIVE SAL REGENERATION PRACTICE

- Sal regeneration is unique process initiated at PEKB coal block for propagation of indigenous Sal Trees in the restoration area.
- The process includes from flower collection to seed to hardening and then sapling preparation resulting a healthy Sal tree.



Regenerated Sal



# **PIT-HEAD NURSERY**









## **PIT-HEAD NURSERY**









## **PIT-HEAD NURSERY**

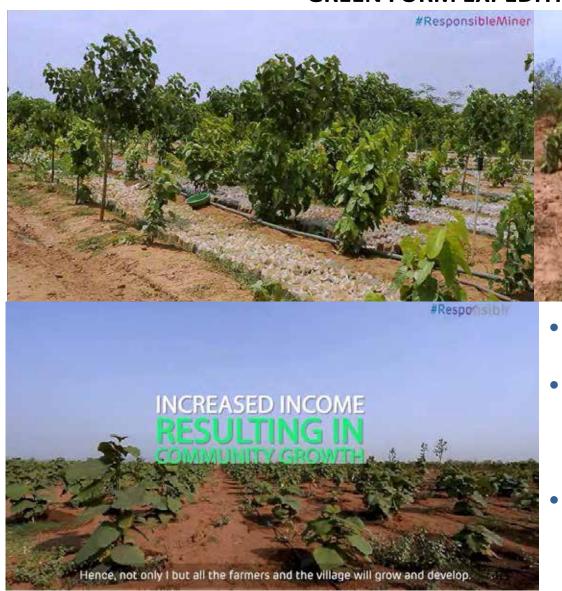








# RESPONSIBLE GREEN MINING: BRINGING THE MINED LAND TO ITS ORIGINAL GREEN FORM EXPEDITIOUSLY





- More than 50% of the land mined has been reclaimed
- Undertaken 3 tier plantation with grass, shrubs & trees to bring the land to its original form in shortest possible time
- Sal plants and fruit giving plants are planted.

# **RECLAIMED OVER BURDEN (OB) DUMP**



Plantation Year 2018-19





Plantation Year 2018-19



Plantation Year 2018-19



Plantation Year 2018-19

# **RECLAIMED OVER BURDEN (OB) DUMP**







Plantation Year 2018-19



Plantation Year 2018-19

Plantation Year 2018-19





Plantation Year 2018-19



Plantation Year 2018-19



Plantation Year 2018-19



Plantation Year 2015-16



Plantation Year 2016-17



Plantation Year 2015-16



Plantation Year 2016-17

# **RECLAIMED OVER BURDEN (OB) DUMP** (Photo taken during monsoon)



Plantation Year 2015-16



Plantation Year 2015-16



Plantation Year 2016-17

Plantation Year 2016-17







Plantation Year 2016-17



Plantation Year 2016-17

Plantation Year 2016-17





Plantation Year 2015-16



Plantation Year 2015-16

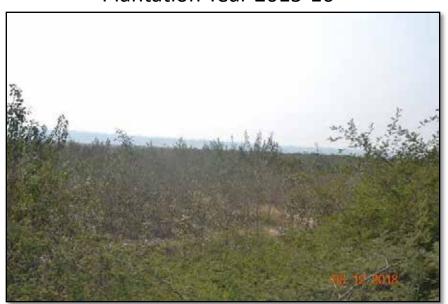
Plantation Year 2015-16







Plantation Year 2015-16



Plantation Year 2016-17

Plantation Year 2016-17



Plantation Year 2017-18



Plantation Year 2017-18



Plantation Year 2017-18



Plantation Year 2017-18

# **BIOLOGICALLY RECLAIMED LAND WITHIN 3 YEARS OF MINING**





# **RECLAIMED LAND OVER OB DUMP**





Plantation Year 2015-16





### **RECLAIMED LAND OVER OB DUMP**



-N 12 2018

Plantation Year 2014-15



Plantation Year 2015-16



Plantation Year 2015-16

### **RECLAIMED LAND OVER OB DUMP**





Plantation Year 2015-16

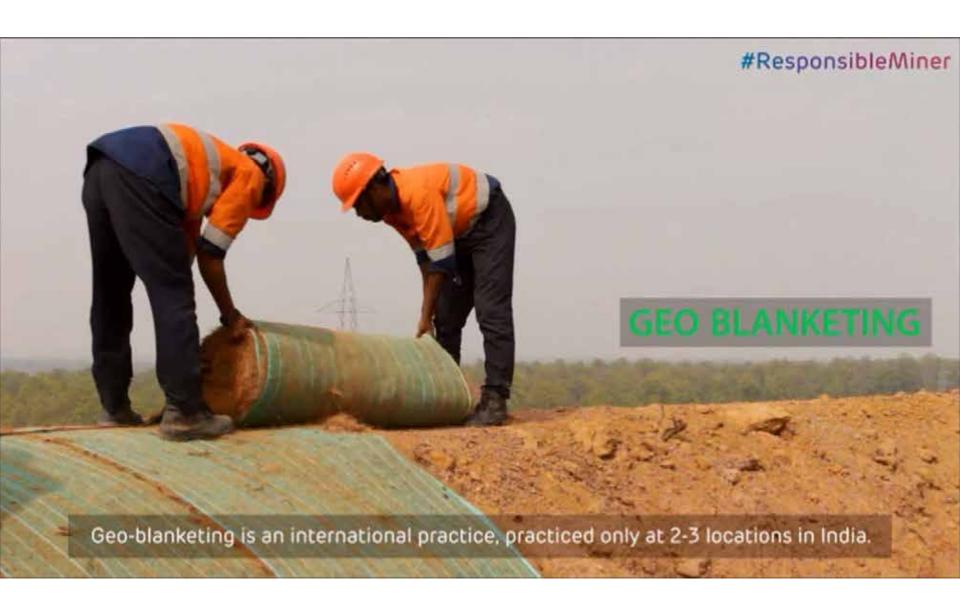


Plantation Year 2014-15



Plantation Year 2015-16

### **GEO- BLANKETING FOR DUMP SLOPE STABILITY**



### **SLOPE PROTECTION & SOIL CONSERVATION**



Plantation Year 2018-19



Plantation Year 2018-19



Plantation Year 2018-19



Plantation Year 2018-19

# **SLOPE PROTECTION, TOE WALL & SOIL CONSERVATION**





Plantation Year 2016-17



Plantation Year 2016-17



Plantation Year 2017-18

# SPECIES-WISE DETAIL OF TRANSPLANTATION OF TREES UPTO 60 CM GIRTH (STATUS UP TO 31/12/2018)

C.	Species									
Sr. No.	Local Name	Botanical name	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1	SAL	Shorea robusta	1341	993	118	668	1110	1476	561	6267
2	MAHUWA	Madhuca longifolia	45	0	215	330	455	40	40	1125
3	CHAR	Buchanania cochinchinensis	20	0	0	45	35	0	5	105
4	JACK FRUIT	Artocarpus heterophyllus	1	0	0	0	0	0	0	1
5	AMALTAS	Casia Fistula	4	0	0	0	1	0	12	17
6	MANGO	Mangifera indica	3	0	0	2	6	1	0	12
7	GUAVA	Psidium guajava	1	0	0	0	0	0	0	1
8	BHELVA	Semecarpus Anacardium	0	0	0	5	1	0	1	7
9	HALDU	Haldina Cordifolia	0	0	0	1	0	0	0	1
10	KUMBHI	Careya arborea	0	0	0	0	1	0	0	1
11	TENDU	Diospyros tomentosa	0	0	0	20	12	0	7	39
12	JAMUN	Syzygium cumini	0	0	0	1	6	0	0	7
13	KAHUWA	Terminalia arjuna	0	0	0	0	0	0	1	1
14	SIDHA	Justicia adhatoda	0	0	0	0	0	0	16	16
15	KASAEE	Pometia pinnata	0	0	0	0	0	0	1	1
16	BEL	Aegle marmelos	0	0	0	0	0	0	1	1
17	SEMAL	Bombax ceiba	0	0	0	0	0	0	1	1
18	KORKOT	Dillenia pentagyna Roxb.	0	0	0	0	0	0	1	1
19	BARGAD	Ficus benghalensis	0	0	0	0	0	0	1	1
20	KUSUM	Schleichera oleosa	0	0	0	0	0	0	1	1
	TOTAL		1415	993	333	1072	1627	1517	649	7606

# **Responsible Green Mining – Tree Transplantation**



- State of art technology for tree transplantation
- Pioneers in tree transplantation with more than 80% survival rate
- More than 7600 trees have been relocated in the last 5 years

### TRANSPLANTATION OF TREES IN NON-COAL BEARING AREAS









### **TRANSPLANTED TREES**



Plantation Year 2014-15



Plantation Year 2016-17



Plantation Year 2014-15



Plantation Year 2016-17

### **TRANSPLANTED TREES**



03 12 2018

Plantation Year 2018-19



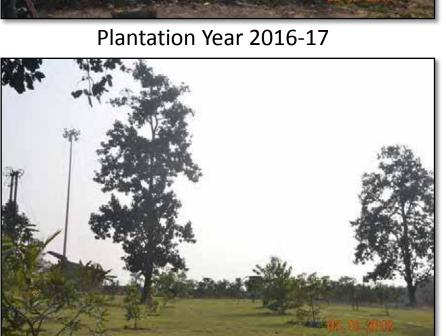
Plantation Year 2018-19



Plantation Year 2018-19

Plantation Year 2018-19





Plantation Year 2016-17



Plantation Year 2016-17



Plantation Year 2016-17

























Annexure-VIII Minutes of meeting of FAC dated 15.01.2019

#### Agenda No. 2

F.No.8-36/2018-FC

Sub: Proposal for diversion of 841.538 hectares of forest land for non-forest purpose under Forest Conservation Act. 1980 for the proposed Parsa Open Cast Mine (5MTPA) in favour of M/s. Rajasthan RajyaVidyutUtpadan Nigam Limited (RRVUNL), in Surguja and Surajpur Districts in the State of Chhattisgarh.

The above stated agenda item was considered by FAC in its meeting on 15.12.2019. The corresponding agenda note may be seen at <u>parivesh.nic.in</u>.

#### **Decisions of FAC**

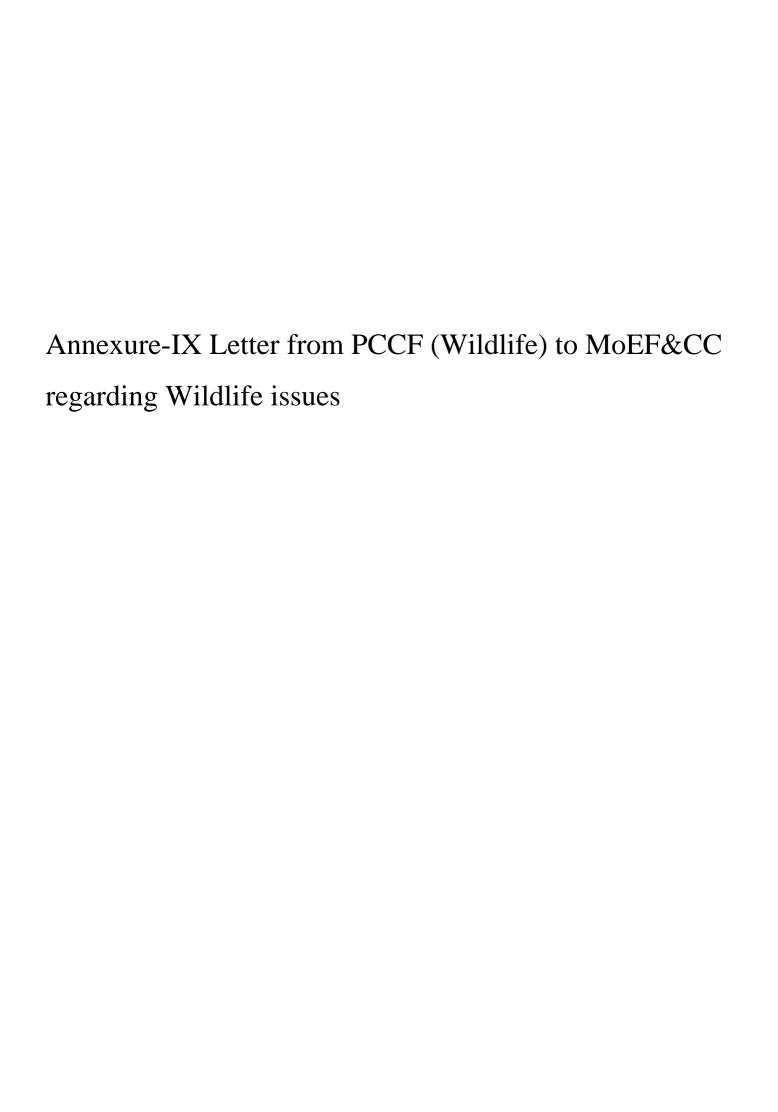
The FAC deliberated on the SIR submitted by the sub-committee with respect to the ToR. The recommendation of the State Government, opinion of the ASG that 'FAC can consider the proposal' and the report of the sub-committee against the whole background and agenda note of the proposal, were discussed in detail. FAC also noted that the State Government representative in the subcommittee could not participate during the site visit.

During the meeting the Additional CS (Forest) of Govt. of Chhattisgarh was present. He was of the opinion that the site inspection should be taken up again with a larger committee and over a longer duration. FAC observed that, no additional information is expected to be obtained by one more site inspection. Moreover, FAC had decided to take up the site inspection as a matter of abundant precaution and felt that there is no further need to carry out any more site inspection. FAC noted that the proposal has been submitted by the State Govt and had categorically recommended for grant of Forest Clearance, and ASG has also given his considered opinion that there is no legal impediment for grant of Forest Clearance.

Accordingly, based on the report of the sub-committee, all facts of the proposal and considering the inputs received from the Additional CS (Govt of Chhattisgarh), User agency and APCCF (Regional Office), FAC decided to recommend for grant of in-principle approval, with general, standard and following Specific condition:

i. The State Government shall reconfirm the presence/absence of VDF in the northeastern part of the proposed forest land under diversion and scope of excluding the same from the proposal.

\*\*\*\*\*



# कार्यालय प्रधान मुख्य वन संरक्षक (वन्यप्राणी प्रबंधन एवं जैव विविधता संरक्षण सह मुख्य वन्यप्राणी अभिरक्षक), छत्तीसगढ़

अरण्य भवन, नार्थ ब्लाक, सेक्टर 19, नया रायपुर

Office Of The Principal Chief Conservator Of Forest (Wildlife Managment And Biodiversity Conservation Cum Chief Wildlife Warden) Chhattisgarh

अरण्य भवन, नार्थ ब्लाक, सेक्टर 19, नया रायप्र

ईमेल - cwlwcg@gmail.com

(Ph.0771-2512880, Fax 0771-2512881)

क्र./व.प्रा./प्रबंध/18/.<u>३.०२</u>९ प्रति. रायपुर दिनांक 18./05/2018

Mr. S.K.Shrivastava
Director, I- II (M) Coal Mining Division &
Member Secretary, Expert Appraisal Committee
Ministry Of Environment & Forest & Climate Change,
Indira Paryavarn Bhawan,
Jor Bag Road, New Delhi 110003

Sub: Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajashtan Rajya Vidyut Utpadan Nigam Limited in a total area of 1252.447 ha at Hasdeo-Arand Coal Field in Districts Surguja & Surajpur(Chhattisgarh) – For EC.

Ref: (i) Minutes of meeting (MoM) of Expert Appraisal Committee (Thermal & Coal Mining) held on 15<sup>th</sup>February 2018

...000...

Sir,

In a reference to MoM of Expert Appraisal Committee (Thermal & Coal Mining) held on 15<sup>th</sup> February 2018 Agenda Item no. 26.1.4(4) views of Chief Wildlife Warden regarding opinion sought by Expert Appraisal Committee (Thermal & Coal Mining) regarding Impact of existing and proposed mining operation on Elephant movement and other wildlife species needs to be sought, in view of part of the area proposed for Lemru Elephant Reserve.

In view of the above factual status of the project is given below-

The total project area of 1252.447 ha includes 841.538 ha of forestland (includes 556.004 ha RF & PF + 285.534 ha of Chhote bade jharka jungle), 365.366 ha is tenancy land (321.09 ha of Adivasi + 44.276 ha of non-adivasi land) and 45.543 ha of Government land. Details of forest land given below:

Sr. No.	Forest Division	Name of the Block/ Compartment No.	Required Area (ha)	*CJJ + BJJ (Rev. Forest)	Total Area	
1	Surajpur	Piriya (1982)	124.748	29.51	154.258	
2	2 Surajpur Piriya (1981)		12.483	12.26	24.743	
3	Surajpur	Tara (East) (P-1986)	37.209	78.609	115.818	
4	Surajpur	Janardanpur(P-1997)	11.109	4.822	15.931	
5	Surguja	Ghatbarra (P-2006)	298.496	74.895	373.391	
6	Surguja	Ghatbarra (P-2005)	50.63	85,438	136.068	
7	Surguja	Fatehpur (P-1998)	21.329	52,752	21.329	
	Total		556.004	285.534	841.538	

\*CJJ- ChhoteJhar Ki Jungle, BJJ- Bade Jhar Ki Jungle

- As per records of forest Department, Mining Lease Area of Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s. Rajasthan Rajya Vidyut Utpadan Nigam Limited in Districts Surguja & Surajpur (Chhattisgarh) does not fall in any notified protected area including national parks, wildlife sanctuaries, animal/elephant corridors etc. Proposed Project area also does not fall in 10 Km radius of any such protected area.
- I would like to mention here that State Government vide letter No. F-5-6/10-2/2009 dated 20<sup>th</sup> July 2009 (enclosed) rejected the proposal of Lemru Elephant Reserve. So as on today Lemru Elephant Reserve does not exist. It was also decided that wildlife conservation and management has to be carried out by improving habitat of the existing national park and sanctuaries rather than creating new elephant reserve, national park and sanctuary.
- As per records of local forest officials as well as study undertaken for Wildlife Conservation Plan for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA, this area is not a regular habitat/corridor of elephants. Although occasional visits of stray elephants have been reported in the area resulting into human-wildlife conflict and property damages.
- Keeping that in mind, an elaborate Wildlife Management Plan with an estimated cost of Rs. 12.16 Crs, has prepared by Mr. Ashok Masih, (Retd. Addl. P.C.C.F) Member of "Society for Social Services, Madhya Bharat Chapter, Bhilai" to mitigate the impact of project, if any. Effective mitigation measures have been taken particularly with reference to elephant movement and protection. Wildlife Management Plan has also been approved by CWLW, Chhattisgarh vide letter dated 8<sup>th</sup>June, 2017.
- In Wildlife Management Plan provisions to reduce human-animal conflict, solar fencing, public awareness, establishment of Elephant Control Room at divisional level, Elephant Protection Team at range level and Elephant Friend Group (Hathi Mitra Samooh) at concerned village level has been made.

After examining all aspects of forest & wildlife issues, the state government has forwarded the Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajashtan Rajya Vidyut Utpadan Nigam Limited to MoEF & CC vide letter no. F-5-17/2018/10-2 dated 02<sup>nd</sup> May 2018, for perusal and necessary action.

Above are the comments for your consideration and necessary action

Principal Chief Conservator of Forest (Wildlife) & CWLW Chhattisgarh, Raipur

रायपुर दिनांक 1/2 /05 / 2018

पृ.क. / व.प्रा. / प्रबंध / 18 / .2030

Copy To

1. Additional Principal Chief Conservator Of Forest (LM) Chhattisgarh Raipur

2. Rajasthan Rajya Vidyut Utpadan Nigam Ltd. Vidyut Bhawan, janpath, Jyoti Nagar, Jaipur - 302005

Principal Chief Conservator of Forest (Wildlife) & CWLW Chhattisgarh, Raipur

### छत्तीसगढ शासन वन विभाग

डी०के०एस० भवन, मंत्रालय, रायपुर

कमांक / एफ-5-6 / 10-2 / 2009

रायपर दिनांक २० /०.३ / 2009

प्रति

प्रधान मुख्य वन संरक्षक, वन्य-प्राणी छत्तीसगढ

विषय - कोरबा वन मण्डल में हाथी रिजर्व का प्रस्ताव । संदर्न - आपका पत्र कमांक 1357, रायपुर दिनांक 22-06-2009, पत्र कमांक 1525/ दिनांक 24.06.08 एवं प्रत्र कमांक 2493, दिनांक 17.10.08.

विषयांतर्गत लेख है कि छत्तीसगढ़ में हाथी की समस्या को देखते हुए राज्य शासन ने यह निर्णय लिया है कि बादलखोल, सेमरसोत एवं तमोर पिंगला अम्यारण्यों में हाथी रिजर्य दनाने का कार्य जारी ख्खा जाय, लेगरू से संबंधित प्रस्ताव विचारोपरांत अमान्य किया जाता है। प्रदेश के अन्य किसी भी स्थान पर कोई नया हाथी रिजर्व, सेन्युरी अथवा नेशनल पार्क न बनाया जार्य ।

वर्तमान में जो नेशनल पार्क एवं अम्यारण्य अस्तित्व में है उन पर ही मली मांति ध्यान देकर वन्य प्राणियों के सुरक्षा एवं विकास की कार्य किया जाय तथा क्षेत्रिय वन मण्डलों में जो उन्य प्राणी पाये जाते हैं उनके लिए संबंधित वन मण्डलाधिकारी द्वारा वन्य प्राणी प्रबंधन के लिए पानी के श्रोत एवं रहवास विकसित करने के प्रयास उनके वन मण्डल के सभी कार्यों के साथ'-साथ किये जावें ।

राज्य शासन द्वारा यह निर्णय लिया गया है कि राज्य में पुराने अम्यारण्यों / नेशनल पार्क के क्षेत्रफल में परिवर्तन करने के प्रस्ताव, नये वन क्षेत्रों को हाथी रिजर्व अम्यारण्य अथवा नेशनल पार्क बनाने के प्रस्ताव मंत्रि परिषद में विस्तार से चर्चा के उपरांत ही पारित किये जा सकेंगे । वर्तमान में राज्य शासन अभी किसी नये क्षेत्र को अम्यारण्य/ हाथी रिजर्व/नेशनल पार्क बनाये जाने पर विचार नहीं कर रहा है।

> (कौशलेन्द्र सिंह) सचिव. छ0ग0 शासन, वन विमाप रायपुर दिनांक ..../\_\_\_/2009

पु०कमांक / एफ-5-6 / 10-2 / 2009

प्रतिलिपि:-1/ मुख्य वन संरक्षक, (भू प्रबंध), कार्यालय प्रधान मुख्य वन संरक्षक, छत्तीसगढ, रायपुर को उनके पत्र कमांक मू प्रबंध/ खनिज/ 277/1283, दिनांक 9-6-2009 के संदर्भ में सूचनार्थ प्रेषित ।

2/ वन मण्डलाधिकारी, कोरबा वन मण्डल, कोरबा की ओर सूचनार्थ प्रेषित ।

छत्तीसगढ शासन, वन विमाग

Annexure-X Letter from RVUNL to PCCF (Wildlife) regarding comments/opinion desired by EAC



#### RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD.

(A Govt. Of Rajasthan Undertaking)
Corporate identity Number (CIN)-U40102RJ2000SGC016484
Regd. Office & H.O. Vidyut Bhawan, Janpath, Jyoti Nagar, Jaipur – 302 005.
Tele Fax No. 0141-2744927, 2740006, Email: fuel.rvun@gmail.com



No. RVUN/ Addi. CE (Fuel)/ /D. 1863

Dated: 9 10 1

Principal Chief Conservator of Forests (Wildlife & Chief Wild Life Warden) Government of Chhattisgarh, Aranya Bhawan, North Block, Sector-19, Naya Raipur Raipur (Chhattisgarh)

Sub: Clarifications sought by Expert Appraisal Committee (Thermal & Coal Mining) in its meeting held on 27th September 2018 (Agenda item no. 38.1) for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited in Districts Surguja & Surajpur (Chhattisgarh) – For Environment Clearance

Ref:

- 1. Minutes of meeting of Expert Appraisal Committee held on 15th February 2018
- Letter from RVUNL to Your Office no. RVUN/CE (Fuel)/DyCE(Fuel)/D.902 dated 16th May 2018
- 3. Your Office Letter to MoEF&CC no. 承./可.पा./प्रवंध/18/3029 dated 18th May 2018
- Minutes of meeting of Expert Appraisal Committee held on 27th September 2018
   Dear Sir,

This is in reference of final minutes of the 26th & 38th meeting of Expert Appraisal Committee (EAC) (Thermal & Coal Mining) of Ministry of Environment, Forests & Climate Change (MOEF&CC) for appraisal of Parsa opencast coal mine project of 5 Mtpa and pit head coal washery of 5 Mtpa of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd. held on 15th February 2018 & 27th September 2018 respectively.

EAC in its 26th meeting desired opinion of the State Wildlife Board on impact of existing & proposed mining operations on elephant movement and other wild life species needs to be sought, in view of part of the area proposed for Lemuru Elephant reserve.

Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL) vide letter no. RVUN/CE (Fuel)/DyCE(Fuel)/D.902 dated 16th May 2018 (Copy enclosed as Annexure-I), requested your office to provide comments/opinion for the same.

Comments/opinion has submitted to MoEF&CC vide letter no. क्र./व.प्रा./प्रबंध/18/3029 dated 18<sup>th</sup> May 2018 (*Copy enclosed as Annexure-II*) as compliance of the above mentioned clarifications desired by EAC.

However, Expert Appraisal Committee (EAC) (Thermal & Coal Mining) in its meeting held on 27th September, 2018 (copy enclosed as Annexure-III) regarding proposal for grant of Environmental Clearance for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA (Agenda Item No. 38.1) insisted for compliance of its earlier recommendations in respect of opinion of the State Wild Life Board regarding impact of existing and proposed mining operations on elephant movement and other wild life species needs to be sought, in view of part of the area proposed for Lemru Elephant Reserve."

In view of the above, it is again requested to peruse the matter for comments/opinion for the same.

Thanking you,

Encl. As above

Yours Sincerely,

(Prakash Israni) Addl. Chief Engineer (Fuel) Authorized Signatory RVUN, Jaipur