



# पर्यावरण दर्पण

पर्यावरणीय समाचार पत्रिका



भारत कोकिंग कोल लिमिटेड  
गौरवशाली ५० वर्ष







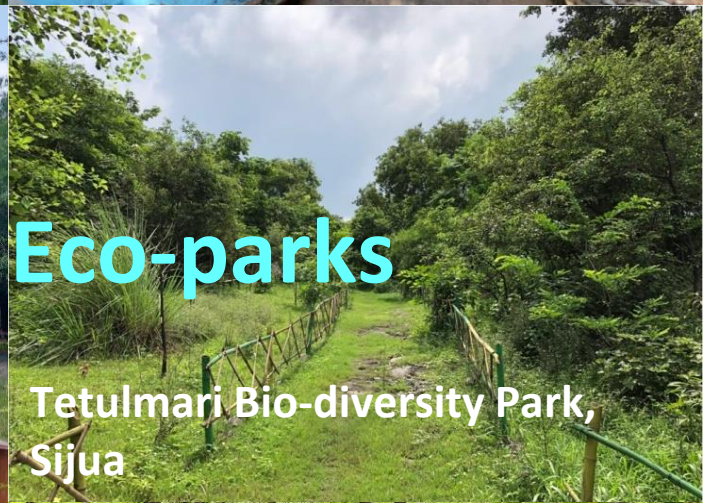
**Gokul Eco-cultural park, Lodna**



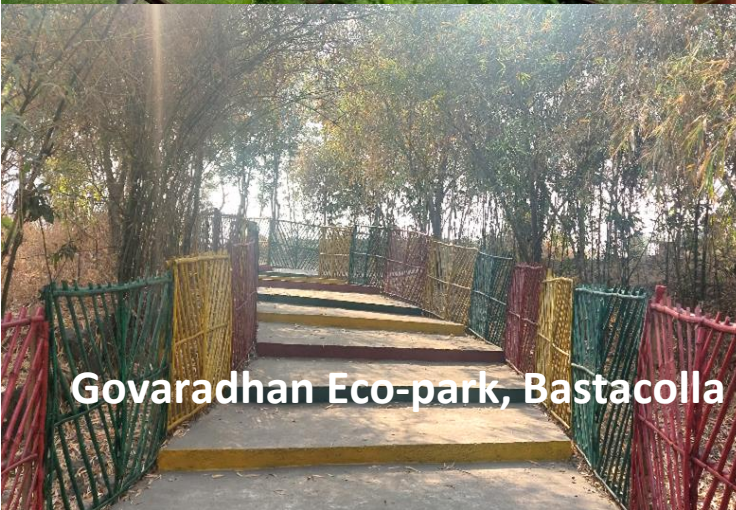
**Parasnath Eco-park, Katras**



**Vrindavan Eco-park, Kusunda**



**Tetulmari Bio-diversity Park,  
Sijua**



**Govaradhan Eco-park, Bastacolla**



**Netaji Subhash Chandra Bose  
Eco-park, Bastacolla**



**Panchvati Eco-Park, Koylanagar**





## MESSAGE

BCCL has reached the landmark of 50 years of existence and I would like to extend heartiest congratulations to everyone who has contributed to this journey. BCCL has witnessed highs and lows alike in these 50 years but what has kept it going is the sheer determination and dedication of our workers to serve the nation. BCCL is the heart of Dhanbad and I would like to thank everyone for making it healthy, thriving and thumping.

BCCL has been fulfilling the coking coal needs of the country and at the same time it has always been firmly committed to protect environment and sustainable development. Reducing Carbon and Ecological Footprint is the mantra for developing a sustainable business and I am glad that BCCL has taken commendable steps towards achieving this feat by converting the mined out areas to green ecosystems, encouraging carbon sinking through roadside plantation and green corridors in mining areas, continuous monitoring of air, water & noise pollution and its abatement measures, promoting ecotourism and promoting renewable energy through installation of solar panels and adoption of Electrical vehicles. A lot has been done for transforming Dhanbad into a cleaner and greener city and to lot needs to be done which will certainly require a proactive participation of all stakeholders.

*The woods are lovely, dark and deep,  
But I have promises to keep,  
And miles to go before I sleep,  
And miles to go before I sleep.*

Environmental awareness is an incredibly important part of our lives. In order to protect the sustainability of the planet, everyone needs to commit to becoming more environmentally aware. BCCL is conscious about environmental concerns & awareness. The aim of publication of this Environmental newsletter “Paryavaran Darpan” is to create awareness for the protection of environment for future generation.

I would like to congratulate the team of Environment department for their continuous efforts to improve the environmental conditions while adopting new technologies and wish the newsletter a grand success on completion of seven years of its publication.

**SAMIRAN DUTTA  
CHAIRMAN CUM MANAGING DIRECTOR  
BHARAT COKING COAL LIMITED**



### MESSAGE

It gives me immense pleasure to see that the Environment Department of Bharat Coking Coal Limited has always realized the importance of restoring our natural environment, for it is our best bet to secure the future of humans and their relationship with their surrounding environment. The United Nations Climate Change Conference, better known as COP 27, was held at the Sharm el-Sheikh (Egypt) in Nov 2022 on the theme of "Together for Implementation" with the key focus on paving the way for future ambition to tackle the global challenges of climate change & BCCL has always been committed to do mining in a sustainable manner to maintain the ecological footprint.

Our country being a Prime Energy supplier, faces an impasse between conserving our abundant biodiversity and moving towards energy sufficiency. The task at hand is not simple, but in spite of all the challenges, we have made an effort to align ourselves as a Sustainable Organisation. One important step that BCCL took in this direction that should be highlighted is creating a reliable self-monitoring system by installing online PM<sub>10</sub> analysers in mines, washery and sidings. Adopting new technology for the most effective dust suppression, BCCL has introduced fog cannons (both trolley and truck mounted) and HEMM based mist sprinkler to its fleet of water sprinklers. Electric vehicles have also been introduced in the company which will further help in reducing the carbon footprint. BCCL has a Five Year Action Plan to become Net Carbon Zero Company by installing 285 MW Solar Power Plant. All these steps will help the Company to move towards the vision of sustainability.

We are making every possible attempt to return the mined-out, degraded land to its original state through ecological restoration. Only with healthy environment, we can enhance people's livelihood, combat climate change and stop the collapse of bio-diversity. For this, BCCL is continuing its plantation drive at reclaimed areas/OB dump/roadside for mitigation of pollution and better environment and the biologically reclaimed areas are also converted into eco parks for recreational purpose of local community. This will help to revitalise our surroundings and will serve as an example of green mining.

I would like to congratulate everyone who has contributed in the journey of 50 years of existence of BCCL. I am delighted to know that the Environment Department has completed 7 years of publication of its newsletter "Paryavaran Darpan" and has been a platform to spread awareness towards environment amongst the public at large.

**SANJAY KUMAR SINGH**  
**DIRECTOR (TECHNICAL), OPERATION**  
**BHARAT COKING COAL LIMITED**





### MESSAGE

Environment Newsletter of BCCL “Paryavaran Darpan” is now into 7th year of its publication and is a valued attempt to bring together the Environmental works being undertaken in Coal Mining Sector on periodic basis and thus, create an exhaustive knowledge bank.

On the occasion of celebrating the 50 years of establishment of BCCL we stand on a very different crossroads from the point where we started. Today the biggest challenge that our growing coal industry faces is Sustainable Growth. Accordingly, the goals are now not only incremental coal production, but also incremental plantation, renewable energy and adoption of state of art technology for protecting the Environment. Accordingly, BCCL has taken several steps, like plantation & grassing over mine-out land and overburden dumps, procurement of Truck & Trolley Mounted Fog Canons, Solar Power and electric vehicles use for energy efficiency. BCCL is also in process to provide continuous data of air quality by installation of Continuous Online Ambient Air Quality Monitoring Systems (COAAQMS).

These initiative undertaken will not only empower the company but also the society residing around the coal mines of BCCL. Once the technological knowledge reaches the individual, process such as Just Transition will be become much easier to be adopted. There is still a long road to be covered and I believe a timeline bound based approach to achieve any target will always bear the results. With this, I Congratulate Environment Department for the Issue of Paryavaran Darpan and wish it all success.

**UDAY ANANT KAOLE**  
**DIRECTOR (TECHNICAL) PROJECT & PLANNING**  
**BHARAT COKING COAL LIMITED**





## संदेश

मुझे यह जानकर बहुत खुशी हुई कि बीसीसीएल के 50 वें स्थापना वर्ष के अवसर पर पर्यावरण समाचार पत्र "पर्यावरण दर्पण" का 19 वा संस्करण प्रकाशित हो रहा है। एक जिम्मेदार खनन कम्पनी के रूप में, बीसीसीएल भूमि और पर्यावरण के संरक्षण के लिए प्रतिबद्ध है और सक्रिय रूप से काम कर रहा है। बीसीसीएल द्वारा खनन किए गए क्षेत्रों को हरित पारिस्थितिक तंत्र में परिवर्तित करना, खनन क्षेत्रों में सड़क के किनारे वृक्षारोपण और हरित गलियारों के माध्यम से कार्बन सिंकिंग को प्रोत्साहित करना, "प्रयास से प्रभाव तक" को चरितार्थ करता है। सघन वृक्षारोपण के साथ साथ स्थानीय लोगों के लिए खदान के जल का प्रबंधन, इलेक्ट्रिकल वाहनों का उपयोग, सौर पैनलों की स्थापना आदि सतत विकास की तरफ बीसीसीएल की प्रतिबद्धता दर्शाता है।

COP 27 (नवंबर 2022) में भारत ने अपनी दीर्घकालिक कमउत्सर्जन विकास की रणनीति प्रस्तुत की है, जो शुद्ध शून्य उत्सर्जन प्राप्त करने के लक्ष्य की दिशा में आगे बढ़ने वाले प्रमुख आर्थिक क्षेत्रों में निम्न कार्बन ट्रांजीशन मार्गों का संकेत देती है और एक वैकल्पिक ऊर्जा स्रोत के रूप में नवीकरणीय ऊर्जा, ई-गतिशीलता, इथेनॉल मिश्रित ईंधन, और हरित हाइड्रोजन में दूरगामी नई पहल की शुरुआत दिखाता है। इसी दिशा में अग्रसर होते हुए, बीसीसीएल को नेट जीरो उत्सर्जन कंपनी बनाने के लिए कम्पनी ने वर्ष 2025-26 तक 285 मेगावाट सौर ऊर्जा संयंत्र लगाने का लक्ष्य निर्धारित किया है।

खनन क्षेत्रों के उत्खनित भूमि और ओबी डंपों पर प्राकृतिक वनों की स्थापना के साथ-साथ, बीसीसीएल कुछ उत्खनित भूमि और ओबी डंप साइटों पर इको-पार्क भी विकसित कर रहा है, जिसका उद्देश्य खनन क्षेत्रों के आसपास रहने वाले स्थानीय समुदायों से जुड़ना और लोगों को मनोरंजन और कार्याकल्प के लिए एक उपयुक्त स्थान प्रदान करना है।

बीसीसीएल कोयला खनन के साथ-साथ अपनी सीएसआर गतिविधियों के माध्यम से कोयला खनन क्षेत्रों में और उसके आसपास रहने वाले लोगों के सामाजिक एवं आर्थिक गुणवत्ता में सुधार लाने पर भी ध्यान केंद्रित करता है। इसी उद्देश्य से खनन क्षेत्रों और उसके आसपास बुनियादी सुविधाओं का विकास, तालाबों का गहरीकरण एवं जीर्णोद्धार तथा कौशल विकास और रोजगार सृजन के लिए समय समय पर स्थानीय लोगों के लिए विभिन्न प्रशिक्षण का आयोजन आदि किया जाता है।

बीसीसीएल का पर्यावरण समाचार पत्र "पर्यावरण दर्पण" बीसीसीएल द्वारा की गई सभी पर्यावरणीय पहलों को साझा करने और अपने हितधारकों के बीच पर्यावरण के प्रति जागरूकता फैलाने के लिए एक मंच प्रदान करने में सफल रहा है। इसी के साथ मैं पर्यावरण दर्पण के 7 साल पुरे होने के लिए पर्यावरण विभाग को बधाई देता हूं और इसकी सफलता की कामना करता हूं।

हर्ष नाथ मिश्र  
निदेशक (कार्मिक), बीसीसीएल





### MESSAGE

Protection of environment, now-a-days, has become central to the development narrative around the globe and holds key to the achievement of sustainable development goals (SDGs). To start with the one, COP-27: the most important global event related to Environment held from 6th November 2022 to 18th November 2022 at Sham El Sheikh, Egypt on food security, vulnerable communities and just transition. The event is concluded with a historic breakthrough to help vulnerable countries deal with losses and damages from the impacts of climate change.

In the journey of protecting our beautiful environment, I would like to quote, "I don't want to protect the environment, I want to create a world where the environment doesn't need protection."

I am delighted to know that the Environment department is releasing the I9th issue of its newsletter "Paryavaran Darpan" on the occasion of Republic Day and wish that they will continue their work in improving the Environment. "Paryavaran Darpan" has been successful in providing a platform to spread awareness towards environment amongst the public at large.

I, on behalf of Team Vigilance BCCL, appeal to all internal stakeholders to actively work towards promoting integrity in all aspects of our life and invite you to join our efforts in creating, nurturing and maintaining a healthy environment in BCCL.

**MUKESH KUMAR MISHRA**  
**CHIEF VIGILANCE OFFICER**  
**BHARAT COKING COAL LIMITED**



# A PEEK INSIDE....

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देश की सेवा में भारत कोकिंग कोल लिमिटेड ने 50 वर्ष पूरे कर लिए हैं। इन 50 वर्षों में इस कंपनी ने कई उतार-चढ़ाव देखे हैं। परंतु देश एवं समाज की सेवा अनवरत जारी है। राष्ट्रीयकरण के पश्चात बनी इस कंपनी ने कोयले के संरक्षण एवं उत्पादन के लिए लगातार प्रयास किए जिसके फलस्वरूप एक बड़े क्षेत्र से कोयले की आग को बुझाया जा सका एवं इस दिशा में कार्रवाई जारी है। खदानों की सुरक्षा के लिए मशीनीकरण लागू किया गया है। क्षेत्र में अच्छे वातावरण के लिए अत्याधुनिक तकनीकों का समावेश किया जा रहा है तथा खनन पश्चात भूमि का पुनरुद्धार कर प्राकृतिक वन अथवा उद्यान की स्थापना की जा रही है। इन प्रयासों को हम पर्यावरण दर्पण के माध्यम से आप तक पहुंचाते रहते हैं एवं यह अंक भी इसी दिशा में प्रस्तुत है।

आप सभी के सहयोग से पर्यावरण दर्पण ने अपने सात वर्ष पूरे कर लिए हैं। हमारा यह सतत प्रयास है कि एक जिम्मेदार संगठन एवं जिम्मेदार समाज के रूप में व्यवहार करने में सभी के सहयोगी बन सके।

ऊर्जा किसी भी अर्थव्यवस्था की मूलभूत आवश्यकता है तथा इसके विकास को तय करती है। इसके साथ ही पर्यावरणीय संतुलन भी सतत विकास के लिए आवश्यक है। इस संतुलन को कायम रखते हुए हम नई तकनीकों को आत्मसात करते हुए आगे बढ़ रहे हैं।

आइये, इस दिशा में अपने कर्तव्यों का पालन करते हुए देश के विकास में अपना योगदान दें।



## JHARIA COAL BED METHANE (CBM) BLOCK I IN BCCL LEASEHOLD

Jharia CBM Block I has been delineated by Central Mine Planning & Design Institute (CMPDI) in Bharat Coking Coalfields Limited (BCCL) leasehold areas in the Jharia Coalfield in accordance to the Gazette Notification dated 8th May, 2018 of MoP&NG, where modification in CBM Policy 1997 has been made that the right/mining lease with Coal India Limited (CIL) and its subsidiaries for extraction of under CBA Act, 1957 or Coal Nationalization Act, 1972, or any other Act so specified, would be deemed to be a mining lease granted under PNG Rules, 1959 for exploration and exploitation of Coal Bed Methane (CBM). CIL and its subsidiaries need not apply for separate grant of licence/lease under the PNG Rules, 1959 for extraction of CBM, for such areas, here BCCL is a subsidiary of the CIL. Jharia CBM Block I consists of Kapuria, Moonidih, Jharmia and Singra coal blocks. It covers an area of about 26.55 Sq. Km, located in the Central part of the Jharia Coalfield in the Dhanbad District of Jharkhand State (India).

As per the CBM Policy of Government of India dated 19th July 1997, the entire set of activities to Coal Bed Methane exploration, market surveys, development, production and marketing have been divided into four phases. In the present project, as per the Model Revenue Sharing Contract for CBM Development different phases to be executed are summarized below in Table

SL No.	Phase	Key Activities	Duration
1	Phase-I (Exploration)	Drilling of 05 Nos. of Core Holes and 05 Nos. of Test Wells and related geological and reservoir studies	02 Years
2	Phase-IIA (Pilot Assessment)	Drilling of Pilot Assessment Wells and Generation of Production profiles, Environment Impact and related studies Technical assessment of Contract area	03 Years
3	Phase-IIB (Market Surveys & Commitment)	Market survey, investigation of potential markets and obtain market commitments Submission of Field Development Plan (FDP)	
4	Phase-III (Development & Production)	Development Operations as per Approved Field Development Plan and Commercial Production of CBM.	30 Years

BCCL (the Owner or Lessee) has awarded the contract to Prabha Energy Private Limited (PEPL) a subsidiary of Deep Energy Resources Limited (DERL), to develop the Jharia CBM Block I, as the CBM Developer (CBMD) under Revenue Sharing Contract for which agreement has been signed on 20th Sept, 2021 at BCCL (H.Q). Central Mine Planning & Design Institute (CMPDI) is the Principal Implementing Agency (PIA) appointed by BCCL under a MoA between BCCL & CMPDI.

EC application for Exploration phase has been submitted online on 31.3.2022 to the state authority (SEIA). Work at site will start as soon as the EC is granted.

**H.Quraishi**  
**AGM (Moonidih)**

## COAL- STILL RELEVANT

Inspite of all hues and cries, coal is to remain a major contributor of Primary Energy and especially in Electricity Generation for coming decades also. To keep pace of the development of the nation, the energy demand is set to increase and hence that of Coal. The other sources of energy has a long way to go before it starts competing with that of coal.

However, to maintain its sustainability, the production of Coal as well as its use need to be environmentally benign. We, Coal Indian, has to shoulder responsibility for that of production. Coal Bed Methane (CBM), washing of Coal, Introduction of Highwall Technology, stress on Underground mining, larger planned Opencast projects, installation of Solar panels, afforestation, development of eco-restoration parks etc are some of the initiatives, which are already under implementation in BCCL. However, much needs to be done.

As more than 70% of our Coal is produced by outsourced agencies, the importance of ‘Contract Management Cell’ is paramount. Hiring of Services, Turnkey works, Global tendering, MDO modes for Greenfield/Brownfield/Abandoned mines are some of the modes used by CMC Department for tendering and award of patches/projects/mines.

BCCL is also leading in the initiative taken by Govt of India towards Asset Monetization scheme. This is nothing but ensuring Investment of capital /participation in management by Private entities. This either creates new public assets or roll on the otherwise idle public assets to generate revenue. BCCL has already tendered 8 abandoned underground mines in revenue sharing mode inviting private entities to invest and join hands with us to produce coal. In this drive old washeries are also being offered for Renovation and operation by private entities. However, many other areas are still left to be unearthed. Eco-mine tourism is another area which can be taken up in Asset Monetization mode in BCCL, which other subsidiaries like WCL has already taken up.

CMC deptt. alongwith P&P department, BCCL is striving hard to further deploy the technologies which are less polluting/more environmentally sensible. In this drive we are identifying suitable areas for deployment of high wall machines, opening mechanised underground projects as well as large planned opencast projects. We have already awarded one Highwall patch in Block-II area in MDO mode, first of its kind in CIL.

Presently, most of the OCP coal is coming from small patches in BCCL. There is already a provision in the contract to transport the coal in covered trucks. Contractors also have to comply the other environmental requirements.

The field which is still untouched in BCCL is deployment of Surface Miner, which not only is environment friendly but also improves quality of Coal produced. This technology has major contribution in Production from open cast projects in other subsidiaries of CIL. Deployment of continuous miners in BCCL is the area, in which we are working upon and expected to tender soon.

Last but not the least, BCCL, being a subsidiary having good coking coal reserve, can save much of our foreign currency through import substitution by improving the washability and washing capacity for coal.

**Anjani Kumar, Chief Manager (M),  
CMC Deptt., BCCL**



## वन (संरक्षण) नियम , 2022 और प्रतिपूरक वनीकरण: एक अवलोकन

### प्रतिपूरक वनीकरण

गैर-वन उपयोग(औद्योगिक गतिविधियां, निर्माण या खनन आदि) के लिए वन भूमि का डायवर्जन के प्रस्तावों के परिणामस्वरूप वन क्षेत्र में कमी आती है। भारत सरकार ने पहले प्रतिपूरक वनीकरण के लिए एक रूपरेखा प्रदान की, जिसमें गैर-वन उद्देश्यों के लिए वन भूमि के उपयोग के कारण वन आवरण के नुकसान के बदले में अन्य भूमि पर वनीकरण किया जाना है।। जब तक प्रतिपूरक वनीकरण की आवश्यकता को पूरा नहीं किया जाता, तब तक केंद्र सरकार वन भूमि के गैर वानिक उपयोग के लिए अंतिम स्वीकृति नहीं दे सकती।

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने वन (संरक्षण) नियम, 2003 को विलोपित कर वन (संरक्षण) नियम, 2022 (FCR-22) को अधिसूचित किया है। यह नियम, वन (संरक्षण) अधिनियम, 1980 (FCA-80) में उद्धृत गैर-वन उद्देश्यों के लिए वन भूमि के उपयोग के लिए संघ सरकार से अनिवार्य रूप से पूर्व अनुमोदन प्राप्त करने के लिए प्रक्रियात्मक रूपरेखा निर्धारित करती है। नियम गैर-वन उद्देश्यों के लिए वन भूमि के उपयोग से जुड़े मामलों में केंद्र सरकार को सलाह देने के लिए संघ और राज्य/संघ राज्य क्षेत्र स्तर पर विभिन्न प्राधिकरणों का गठन करते हैं। ये प्राधिकरण केंद्र और राज्य सरकारों या केंद्र शासित प्रदेश के प्रशासन को ऐसे प्रस्तावों को स्वीकार या अस्वीकार करने की सलाह देंगे। केंद्र सरकार ने कहा है कि इन नियमों का उद्देश्य गैर-वन उद्देश्यों के लिए वन भूमि के उपयोग के लिए पूर्व अनुमोदन प्राप्त करने की प्रक्रिया को सुव्यवस्थित करना और इस प्रक्रिया में शामिल समय और लागत को कम करना है। हालाँकि, विभिन्न आधारों पर पर्यावरण कार्यकर्ताओं और विशेषज्ञों द्वारा नियमों की आलोचना की गई है।

### प्रतिपूरक वनीकरण के लिए नए प्रावधान

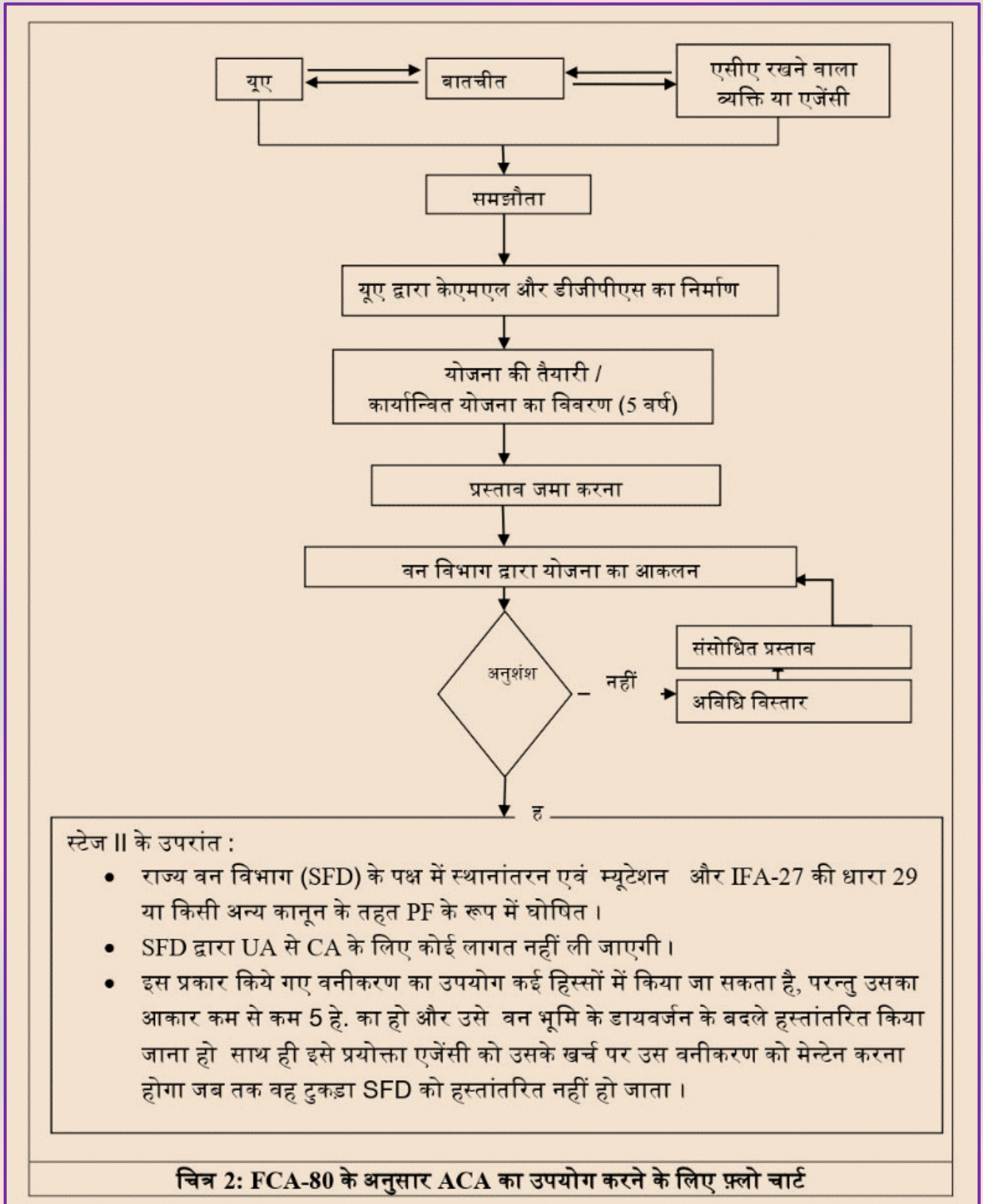
FCR-22 में कई नए प्रावधान जोड़े गए हैं। जिसमें अन्य राज्यों या केंद्र शासित प्रदेशों में प्रतिपूरक वनीकरण आरंभ करना, भूमि बैंक बनाने की अनुमति, प्रत्यायित (मान्यता प्राप्त) प्रतिपूरक वनीकरण, प्रतिपूरक वनीकरण का सृजन आदि सम्मिलित है। प्रतिपूरक वनीकरण भूमि की आवश्यकता FCR-2022 की अनुसूची-1 के अनुसार होगी।

### प्रत्यायित प्रतिपूरक वनीकरण :

प्रत्यायित प्रतिपूरक वनीकरण का अर्थ है सक्रिय वनीकरण की एक प्रणाली जिसका उपयोग प्रतिपूरक वनीकरण के दायित्वों को पूरा करने के बजाय किया जा सकता है। इसका उद्देश्य लोगों को अपनी भूमि पर वनस्पति उगाने और इसे उन व्यक्तियों को बेचने के लिए प्रोत्साहित करना है, जिन्हें अधिनियम के तहत प्रतिपूरक वनीकरण लक्ष्यों को पूरा करने की आवश्यकता है। प्रत्यायित प्रतिपूरक वनीकरण योजना से मिलने वाले लाभ:



चित्र 1: प्रत्यायित प्रतिपूरक वनीकरण योजना के लाभ



मुद्दे : ध्यानाकर्षित किये जाने वाले



प्रतिपूरक भूमि के लिए भूमि की पहचान और योजनाओं की तैयारी के कारण प्रस्तावों के प्रसंस्करण में देरी हो रही है। फारेस्ट गाइडलाइन सह हैंडबुक में प्रतिपूरक भूमि के लिए विशेष प्रावधान है, इसके खंड 2.5 (i) (एफ) के अनुसार - "प्रतिपूरक भूमि को दुगनी मात्रा की अवक्रिस्ट वन भूमि पर उपयोगकर्ता एजेंसी की लागत पर अनुरक्षित और बनाए रखा जाएगा"। और हैंडबुक के खंड 11-1(क) के अनुसार राज्य सरकार द्वारा निर्गत "आवश्यक उपयुक्त भूमि उपलब्ध न होने" के आशय का प्रमाण पत्र प्राप्त करने से उपयोगकर्ता एजेंसी को छूट प्राप्त होती है। यह अपवाद है। यथापि यह स्पष्ट नहीं है कि उपयोगकर्ता एजेंसी ने परियोजना के निष्पादन के लिए अगर किसी गैर वन भूमि का अधिग्रहण किया गया है तो वह छूट मिलेगी कि नहीं।

खनन पूरा होने के बाद, रेक्लैम्ड गैर वन भूमि को प्रतिपूरक भूमि एफसी नियम 2022 के खंड 11(3) के तहत मान्यता प्राप्त प्रतिपूरक वनीकरण के रूप में विचार किया जा सकता है। इस तरह की मान्यता प्राप्त प्रतिपूरक वनीकरण राज्य वन विभाग को हस्तांतरित करने की आवश्यकता नहीं होगी। आगे के रिकॉर्ड के लिए ऐसी भूमि को वन भूमि के रूप में सीमांकित किया जा सकता है।

सीबीए (ए एंड डी) अधिनियम 1957 के तहत अधिग्रहीत भूमि के संबंध में, प्रतिपूरक वनीकरण के लिए मानी जाने वाली जैविक रूप से रेक्लैम्ड गैर-वन भूमि को वन विभाग को हस्तांतरित करने के मुद्दे पर ध्यान देने की आवश्यकता है।

**डॉ मनोज कुमार, वरिष्ठ प्रबंधक (खनन)**  
**अमित कुमार मिश्रा, उप प्रबंधक (पर्यावरण)**  
**भारत कोकिंग कोल लिमिटेड**

#### **Recent Amendment/Modification in Act/Rule/Guideline related to Environment, Forest & Mine Closure**

- ✓ Forest (Conservation) Rules, 2022 (Published on 28.06.2022)
- ✓ E- Waste (Management) Rules, 2022.
- ✓ Environment (Protection) Amendment Rules, 2022.
- ✓ Hazardous Waste (Management, Handling & Trans boundary Movement) Rules, 2016: Fourth Amendments Rules .2019
- ✓ Fly ash notification 2022.
- ✓ Guidelines(2022) for the Management of Mines discontinued/abandoned/closed before the year 2009

## FOR A LIVEABLE CLIMATE: NET-ZERO EFFORTS TO BE BACKED BY GHG REDUCTION PATHWAYS

### What is net zero?

Net zero means cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance. To keep global warming to no more than 1.5°C – as called for in the Paris Agreement – emissions need to be reduced by 45% by 2030 and reach net zero by 2050.

How can net zero be achieved?

Transitioning to a net-zero world is one of the greatest challenges humankind has faced. The energy sector is the source of around three-quarters of greenhouse gas emissions today and holds the key to averting the worst effects of climate change. Replacing polluting coal, gas and oil-fired power with energy from renewable sources, such as wind or solar, would dramatically reduce carbon emissions.

Science-Based Targets Initiative to reduce their emissions in line with climate science is one of the solution. As per UNEP Emissions Gap Report 2022, The top seven emitters (China, the United States of America, India, the European Union, Indonesia, the Russian Federation, and Brazil) accounted for about half of global greenhouse gas emissions in 2020.

The Group of 20 (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union) are responsible for about 75 per cent of global greenhouse gas emissions.

India is reflecting in both sets. The country is having an abundant coal reserves and prime source of energy will continue from coal. But a concerted effort to reach the goals of the Paris Agreement would require a quadrupling of requirements for clean energy technologies. An even faster transition, to hit net zero emission as pointed out by our beloved prime minister in CoP26 and countries stand in COP 27. 'Panchamrit' announced at COP 26 details into enhanced climate targets. A step towards achieving India's long term goal of reaching net-zero by 2070.

There is need to pursue aggressive emission reductions. It's scientifically possible to do that. India has already taken several actions in the direction". Though coal-mining activities shows lower GHG emission but still some activities need attention for reduction in GHG emission. Knowledge of process wise, equipment wise emission factor will help the process. For this emission inventory needs to be pinpointed or flagged. There are possibilities that some equipment used in some processes are emitting little bit GHG but they can be removed or lessened using green initiatives in the coal mining process. The coal mine managers thus will have a crucial role to play in supplying the cleaner and sustainable coal for that are essential for the ongoing global clean energy transition.



## GHG Reduction Pathways:

<b>Table : GHG Reduction Pathways</b>			
<b>Group A</b>			
GA1	Promoting renewable energy	GD2	Replacement of existing tube lights / lamps in office with LED Tube lights
GA2	Monetary reward to employee for GHG reduction initiative.	GD3	Switching off alternate street lights of colony after 11pm
GA3	Distribution of LED tube lights to employees	GD4	Replacement of existing HPSV street light with LED street lights
GA4	Publicity and promotion are essential to create an environment for success of GHG Reduction strategy.	GD5	Installation of meters for residential Quarters
GA5	Regular articles on energy conservation should be included in company newsletter.	GD6	Installation of floating pump house for de-watering
GA6	Posters and pamphlets may be exhibited at strategic locations.	<b>Group E (others)</b>	
GA7	Vehicles plying in the project areas may be painted with signs publicizing GHG Reduction	GE1	Energy Saving measures for HEMMs to achieve benchmark diesel consumption
GA8	Setting one day of the year as "GHG Reduction Day".	GE2	Making separate arrangement of supply of water for (cooking + drinking) and (other rest)
GA9	Carbon audit at regular interval (Energy Audit – ISO 50000)	GE3	Water Supply to community use
<b>Group B (Deployment of equipment)</b>		GE4	Reducing emissions from transport and waste
GB1	Surface miner	GE5	New initiatives are to be launched in areas such as cleaner thermal power generation
GB2	Input crushing & Conveyor	GE6	Afforestation
GB3	Deployment of Silo loading	GE7	Compensatory Afforestation
GB4	Deployment of State of Art Belt Conveyor from mine to siding.	<b>Group F (Biological)</b>	
<b>Group C (Clean technology)</b>		GF1	Afforestation
GC1	New Washery	GF2	Compensatory Afforestation
GC2	Supply of LPG cylinder	<b>Group G (Chemical)</b>	
GC3	Solar Panel at various complexes	GG1	Using serpentine rocks for making floor.
<b>GroupD (Replacement of Electric consumables)</b>		GG1	Creating climate resilient infrastructure
GD1	Replacement of existing fans with super energy fans in colony and offices	GG3	Manufacture of plastics and carbon fibers from CO <sub>2</sub>
		GG4	Chilling the air to drop out CO <sub>2</sub> as snow and burying them under earth crust.
		GG5	Fly ash bricks used

**Shri M S Doot,**  
**GM, Katras Area**

## INDIA AT COP 27: CHALLENGES AND OPPORTUNITIES

From 6 to 18 November, COP27 (Conference of the Parties to the United Nations Framework Convention on Climate Change) that took place in the Egyptian coastal city of Sharm el-Sheikh, held high-level and side events, key negotiations, and press conferences, hosting more than 100 Heads of State and Governments, over 35,000 participants and numerous pavilions showcasing climate action around the world and across different sectors with theme of “together for implementation”.

MoEFCC, UNDP, UN in India and UNEP India organised a session on the side lines of COP 27 at the India Pavilion in Sharm El-Sheikh, Egypt. The session 'Understanding the Concept of LiFE' highlights experiences and best practices to support strategies and action towards sustainable living and climate action. At the side-session, Minister of Environment, Forest and Climate Change Sh. Bhupender Yadav and senior dignitaries from UNEP, UNDP and UNFCCC also released a compendium of best practices, Prayaas Se Prabhaav Tak – From Mindless Consumption to Mindful Utilization.

At the launch of the India Pavilion on November 6, Mr. Bhupender Yadav, Minister of Environment, Forest and Climate Change, Government of India, felicitated winners of the COP27 Young Scholar Programme. The Programme initiated by UNDP India and UNICEF provided a platform to the youth to share their climate action initiatives. More than 350 youth from 27 states across India sent their entries for the programme.

On 15 Nov. 2022, Union Minister Shri Bhupender Yadav delivering National Statement at COP 27. India has submitted its Long-Term Low Emissions Growth Strategy indicating low carbon transition pathways in key economic sectors moving ahead towards aim of achieving net zero emissions by 2070 at Glasgow. India updated its Nationally Determined Contributions in August 2022 and have embarked on far-reaching new initiatives in renewable energy, e-mobility, ethanol blended fuels, and green hydrogen as an alternate energy source. India appealed to foster strong international cooperation through action and solutions-oriented coalitions like International Solar Alliance and Coalition of Disaster Resilience Infrastructure, both of which were launched and nurtured by India.

### Outcomes of the COP27:

- ❖ The Sharm el-Sheikh Implementation Plan: Parties adopted two overarching cover decisions, together called the Sharm El-Sheikh Implementation Plan. Both decisions address science, energy, mitigation, adaptation, loss and damage, finance, and pathways to a just transition. It emphasised that a global transition to a low-carbon economy will require at least \$4-6 trillion in annual spending.
- ❖ Loss and damage (L&D): The highlight of COP27 was the historic decision to provide “loss and damage” funding for vulnerable countries hit hard by climate disasters.
- ❖ Food and Agriculture for Sustainable Transformation (FAST). A key outcome was the launch of the Food and Agriculture for Sustainable Transformation initiative. The initiative



aims to improve the quantity and quality of climate finance contributions to transform agriculture and food systems by 2030.

- ❖ Mitigation work programme: This would begin this year and last until 2030. Governments were requested –
  - ✓ to ramp up efforts to reduce emissions before 2030, calling this “the critical decade.”
  - ✓ to phase down unabated coal power and phase out inefficient fossil fuel subsidies, as adopted in the 2021 Glasgow Climate Pact (Decisions 1/CP26 and 1/CMA.3).
  - ✓ to reduce greenhouse gases (GHGs) in applicable sectors through increased renewable and low-emission energy.
- ❖ Other outcomes:
- ❖ On COP27’s Biodiversity Day, key climate leaders as well as a group of 350 scientists, Indigenous Peoples, businesses and NGOs urged governments to prioritize the UN’s Biodiversity Conference (COP15) and create a Paris Agreement-like treaty to turn the tide on biodiversity loss.
- ❖ The CMA (countries who have signed and ratified the Paris Agreement) also adopted Article 6 of the Paris Agreement, which allows countries to voluntarily cooperate with each other to achieve emission reduction targets set out in their NDCs.
- ❖ World Bank Reforms: recapitalisation of the development banks to allow them to provide far more assistance to the developing world

#### Challenges to be noted:

- No contributions have been pledged to the Loss and damage (L&D) fund.
- Defining the Global Goal on Adaptation. Parties fell short of defining the Global Goal on Adaptation and instead established a framework to guide its formulation, which will be considered and adopted at COP28 next year.
- Extra burden on the developing countries. They have been asked to revise their climate action plans (NDCs), with progressively stronger actions every year.
- Fossil fuels: India wanted to include a commitment to phase down all fossil fuels (and not just coal). But the resolution failed. Debate on the question of whether all fossil fuels, not only coal, should be phased down or out, will be potentially a central issue for COP28.
- Developed countries have failed to meet their commitment. Developed countries’ commitment to provide \$100 billion annually has still not been met, even as the need for finance grows ever-more obvious.

#### Way ahead:

As gaps in emissions reductions persist, countries, especially major emitters, must urgently put forward robust and ambitious climate plans and pursue stronger policies to cut emissions, including through action in sectors and methane, to drive the transformations needed to limit temperature rise to 1.5 degrees C. To provide funding for mitigation and adaptation, the financial system and its structures and processes will need to be transformed, involving governments, central banks, commercial banks, institutional investors and other financial actors.

## BCCL's INITIATIVE TO CONNECT PEOPLE WITH NATURE: ECO-MINING TOURISM

Mining activities in Jharia Coalfield (JCF) started more than 100 years back and it has been extensively exploited in the pre-nationalization era, resulting in large scale degradation of the coalfield which has manifested in haphazard infrastructure development, depletion of green belt and overall ecological and environmental imbalances.

When BCCL took over the region was highly degraded and affected with fire and unstable areas, prone to subsidence. After nationalization of the coal mines in 1972-73, BCCL has been making all efforts to mine the coal resource under all possible means compatible to a clean and safe environment in the region. On account of multi-seam regime of the coalfield the reclamation process has become a challenge.

BCCL recognizes importance of environment management and has taken corrective steps since nationalization and developing better environment management system. In mining sector, BCCL's contribution in introduction of Ecological restoration is well recognized.

Along with establishment of the natural forests over the degraded mined out areas and OB dumps through biological reclamation/ecological restoration, BCCL has also been developing eco-parks over some degraded mined out areas and OB dumps sites, with an aim to connect with the local communities residing nearby the mining areas of BCCL; transform the image of the company among the stakeholders, and provide a suitable place to the people for recreation and rejuvenation. Some of the eco-parks are Gokul Eco-cultural Park at NT-ST-JG, Lodna; Vrindavan Eco-park, GKKC, Kusunda; Parasnath Udhyan, AKWMC, Katras; Ashok Vatika, Kuya, Bastacolla; and Govardan Eco-park, Bera, Bastacolla Area.

The development of eco-parks is a step taken towards the eco-mining tourism in the Coal mining areas.

Taking a step towards bridging the gap between the people and nature, BCCL has started an initiative named "Eco- Mining Tourism" for facilitating the people to come closer to the nature and also experiencing the dark life of miners responsible behind the strengthening and brightening India.

Generally people don't think of coal mines as places to be visited. However this perception of people is being changed by the BCCL enabling people to have a glimpse into the lives of coal miners while showcasing the mining activities with due consideration of safety. The establishment of eco parks at ecological restoration sites of different areas of BCCL are part of efforts to showcase the measures being taken up by BCCL in order to minimize the environmental impact of coal mining operations.

People can visit the depths of underground mines for gaining the experience of miners working in the lap of nature and also watch the operations at the open-cast mine from a distance (view point).

BCCL is promoting ecotourism in order to make a bridge between development (coal mining) and nature, protect environment, generate income and employment opportunities for local communities, and conserve biodiversity. Through ecotourism, BCCL aims to volunteer the honorable prime minister's



Since 2016-17, BCCL has been promoting the Eco-mining tourism in its mines and ecological restoration sites /Eco-Parks for showcasing the mining activities and ecological restoration sites /Eco-Parks. Every year various schools, colleges and professional institutes have been visiting these eco-restoration sites and eco-parks to know about the mining and the suitable method to restore these degraded lands into natural vegetation of the region.

In the year 2021-22, Eco-mining tourism visits of various schools/ institutions are being organized. Students and faculty of IIT-ISM, Dhanbad; DAV, Moonidih; Dhanbad Public School, Dhanbad; Binod Bihari Mahato Koylanchal University (BBMKU) Dhanbad visited eco restoration sites/eco parks at Parasnath Udhyan, Katras; Parasnath Udhyan, Katras; and Gokul Eco-cultural Park, Lodna, respectively in January 2023 for enhancing their knowledge about mining and reclamation works being done in BCCL.



**Eco-tourism visit of students from BBMKU to Vrindavan Eco-park, BCCL**





Eco-tourism visit of Dhanbad Public School to Parasnath Eco-Park, BCCL



Eco-tourism visit of DAV, Moonidih to Parasnath Eco-Park, BCCL



## CELEBRATION OF WORLD ENVIRONMENT DAY ON 5<sup>TH</sup> JUNE 2022

World Environment Day 2022 is hosted by Sweden. "Only One Earth" is the campaign slogan, with the focus on "Living Sustainably in Harmony with Nature". Since 1974, it has been celebrated every year on 5 June. BCCL also celebrated the World Environment day 2022 at Panchavati Eco Park, Koyla Nagar under the chairmanship of Mr. Samiran Dutta, Chairman-cum-Managing Director, Bharat Coking Coal Limited. Mr. Sanjay Kumar Singh, Director (Technical/Operation) administered oath for environmental protection. During the celebration, Shri PVKRM Rao, Director (Personnel), Shri Vinay Kajla, Deputy Inspector General, C.I.S. F., BCCL Unit, Dhanbad, Mr. Vimal Lakra, District Forest Officer, Dhanbad, Mr. Ram Pravesh Kumar, Regional Officer, Jharkhand State Pollution Control Board, Head of Department (Environment) and General Manager of Headquarters, planted trees in the premises of Panchavati Park. On this occasion, "Paryavaran Darpan" with theme of "Only one earth" was released for the awareness of environment.



A plenty of Activities like Taking pledge to protect the environment, 100 nos of sapling distribution to locals public at steel gate, plantation by functional Directors and other Dignitaries present and also 1080 no. of plantation done by all areas, release of 18th Edition of Paryavaran Darpan and various environment related competitions such as quiz competition, Essay writing, drawing, for school children's and essay writing and slogan for employees on world environment day, Distribution of ear plugs among HEMM operators and supervisor, launch of coffee table book of Sijua Area

and T shirt and Cap distribution by Katras Area





Sapling distribution to local public at steel gate



Quiz completion and essay writing for employees of BCCL



Prize distribution to the winners of various competitions



## WELFARE WORK DONE BY BCCL – CSR ON COMPLETION OF 50 YEARS OF BCCL

### Brief outline on CSR of BCCL

In the world's current business scenario, business organizations make their strategies for improving their images as socially responsible business organizations inter alia various profit earning avenues because wellbeing of an organization also depends upon the wellbeing of the society in which it operates its business. BCCL, while carrying out its coal mining activities also focusses on improving the quality of life of the people residing in and around its Coal mining areas through its CSR activities.

Following CIL's CSR Policy, BCCL broadly covers the following areas while executing its CSR activities, which is framed after incorporating the features of the Company Act, 2013 and as per different notifications issued by CIL, Ministry of Corporate Affairs, GoI as well as DPE's guidelines:

- i) Eradicating hunger, poverty and malnutrition; promoting health care including preventive health care and sanitation including contribution to the 'Swachh Bharat Kosh' set-up by the Central Government for the promotion of sanitation and making available safe drinking water.
- ii) Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects.
- iii) Promoting gender equality, empowering women, setting up homes and hostels for women and orphans; setting up old age homes, day care centers and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups.
- iv) Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the 'Clean Ganga Fund' set up by the Central Government for rejuvenation of river Ganga.
- v) Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up public libraries, promotion and development of traditional arts and handicrafts.
- vi) Measures for the benefit of armed forces veterans, war widows and their dependents.
- vii) Training to promote rural sports, nationally recognized sports, Paralympic sports and Olympic sports.
- viii) Contribution to the Prime Minister's National Relief Fund or Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund) or any other fund set up by the Central Government for socio economic development and relief and welfare of the Scheduled Castes, the Scheduled Tribes, Other Backward Classes, minorities and women.
- ix) Contribution to incubators funded by Central Government or State Government or any agency or Public Sector Undertaking of Central Government or State

Government and contributions to public funded Universities, Indian Institute of Technology (IITs), National Laboratories and Autonomous Bodies (established under the auspices of Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), Council of Scientific and Industrial Research (CSIR), Department of Atomic Energy (DAE), Defence Research and Development Organisation (DRDO), Department of Biotechnology (DBT), Department of Science and Technology (DST), Ministry of Electronics and Information Technology engaged in conducting research in science, technology, engineering and medicine aimed at promoting Sustainable Development Goals (SDGs).

- x) Rural development projects.
- xi) Slum area development.
- xii) Disaster Management, including relief, rehabilitation and reconstruction activities.

BCCL has been a responsible corporate striving to benefit the society through its various CSR activities. For the past many years, BCCL has invested in benefitting the society through CSR activities related to education, rural development, health, development of Aspirational District Giridih and one of the major activities, since the onslaught of COVID-19 in the world, was to combat this menace of society.

Some of the major CSR activities undertaken in BCCL are as follows:

- a. **Toilet Complex at SSLNT Mahila Mahavidyalaya, Dhanbad** - A double storied toilet complex has been constructed at SSLNT Mahila Mahavidyalaya, Dhanbad to cater to approximately 10,000 beneficiary girl students. The toilet complex comprises of 11 toilets & 28 urinals.
- b. **Swachhata Drive in Dhanbad** – In view of the Swachh Bharat theme, 30 dustbins were installed at different wards of Dhanbad through Dhanbad Nagar Nigam.
- c. **Toilet Complex in School** – Two toilet complexes has been constructed in RBB High School, Rajganj. The complexes contains 16 nos of boys' toilets and urinals and 16 os of girls' toilet and urinals, a total of 32 nos of toilets and urinals are thus constructed at RBB High School, Rajganj.
- d. **Observance of Swachhata Pakhwada activities** - Various activities have been observed by BCCL during Swachhata Pakhwada such as plantation of saplings, cleaning activities through Shramdaan of employees, drawing competitions in Schools to raise awareness about cleanliness activities, nukkad natak in public locations of Dhanbad to raise awareness amongst public. The employees of BCCL contribution towards Swachhata by contributing Shramdaan to clean their vicinities and planting tree to better the environment. These activities inculcated a sense of responsibility amongst the participants and they pledged to reduce their wastage and spread the word to other regarding the same.



e.



**f. Conservation of Natural Resources -**

Deepening and renovation of 10 numbers of ponds in Tundi, East Tundi and Baliapur Blocks of Dhanbad district. Benefits from this project include conservation of natural resource, enhancement of ground water recharge and water availability round the year to the community for irrigation and household chores.



- g. Rural Infrastructure Development** - BCCL strives to provide facilities to rural areas as a priority and has constructed many infrastructures that will help in the overall development of the areas. For this purpose, BCCL has constructed PCC roads at different locations of Dhanbad, various community centres, etc.



- h. Construction of an auditorium, class rooms, a common room for girls, separate toilet complexes for boys and girls and cycle shed was completed at RBB High School, Rajganj.**



- i. Handloom Weaving Training Project** - The projects were implemented through the implementing Agency JHARCRAFT, a Government of Jharkhand enterprise. As per MoU signed between BCCL and Jharcraft, the implementing Agency, was to impart training through its Master Trainer to a group of 20 women, registered to each of the three projects, hailing from peripheral villages of Mukunda, Alakdiha and Gareria. Accordingly, twenty (20) women from each of the above mentioned Handloom Projects were imparted theoretical and on-the-job training on handloom weaving. All three projects have been completed and handed over to the Swaavlambee Swarojgar Society, Mukunda and Swaavlambee Swarojgar Society, Gareria.



- j. Training on Plastic Engineering** – As a part of imparting skill to youth, an MoU has been entered into between CIL and CIPET for providing training to unemployed youths of operational Areas. Till date 160 youths around BCCL have been trained in CIPET.



- k. Mining Sirdar Training** - A training scheme for preparing trainees for Mining Sirdars has been implemented by BCCL as per directives of CIL for imparting

training to SC/ST candidates for appearing in Sirdarship Examination. As per the scheme, BCCL has provided training to 18 candidates for four years i.e. from 2017 till 2021. The candidates were provided expenses on food and expenses on stipend monthly allowances.



- l. **Pehela Kadam** - Narayana Charitable Trust is running a school in the name of “Pehela Kadam” in Dhanbad where *divyang* children from different backgrounds are encouraged to develop their own talents and skills to flourish in life with special care and attention. BCCL has provided a space for operating the school in order to establish a proper learning and care centre including *divyang* children through medical equipment and other facilities for making better learning environment.



- m. **Sanitising the Surroundings** - Out of total 20 MT of bleaching powder procured for a total amount of ₹ 6.40 Lakhs under CSR, 12.5 MT of bleaching powder was distributed to Municipal Commissioner, Dhanbad towards sanitation and the balance was distributed to Areas/ HQ for sanitation purpose of residential as well as office premises.

- n. **Financial Assistance to District Administration, Dhanbad** - Financial assistance of ₹ 500.00 lakhs was given to District Administration, Dhanbad through depository mode towards tackling various issues under COVID-19.

- o. **Financial Assistance to District Administration, Giridih** – BCCL has provided financial assistance of ₹ 121.82 lakhs through depository mode to District Administration, Giridih for various activities to be undertaken for the development of Aspirational District i.e. Giridih.

- p. **Dry Food Packets Distribution** – In view of outbreak of COVID -19 and lockdown conditions throughout the country declared by GoI, provisions were made to distribute 24,000 Nos. of food packets, amongst peripheral populace.



- q. **Distribution of Face Masks and Hand Sanitiser/ Hand Wash** - In order to curb the spread of global pandemic COVID-19, 7,000 Nos. of masks & liquid hand wash/ hand sanitisers were distributed amongst peripheral populace, through Areas/ HQ.





- r. Distribution of food packets with water/ juice – 16,600**  
Nos. of food packets with water/ juice were distributed to migrant labourers travelling in different Shramik Special Trains through Dhanbad Station.



- s. Installation of ICU beds in Central Hospital Dhanbad –**  
BCCL has dedicated a 100 bedded ward towards COVID-19 in Central Hospital Dhanbad (CHD). For this purpose, BCCL provided financial assistance of ₹ 88.05 Lakhs to District Administration Dhanbad under depository mode for installing 30 Nos. of ICU beds in CHD, Dhanbad.

- t. Providing boarding and lodging facilities to frontline workers –** BCCL arranged boarding and lodging facilities to the frontline workers (i.e. doctors, paramedics, etc.) deployed in COVID-19 wards at CHD, Dhanbad.

- u. Development of Aanganwadi Centres in Dhanbad –** An MoU was signed between BCCL and District Administration, Dhanbad for the development of Aanganwadi Centres in Dhanbad. BCCL has budgeted an amount of ₹ 263.5 lakhs for the Aanganwadi project. A sum of ₹ 75.00 Lakhs has been deposited with the District Administration for the same. Rest of the amount has been kept in “Bharat Coking Coal Limited Unspent CSR Account” and shall be transferred as per the rules of the Company and provisions of the Companies Act, 2013 (as amended upto date).

- v. Azadi Ka Amrut Mahotsav -** The Central Government has launched “Azadi ka Amrut Mahotsav” (AKAM) which is the countdown to the 75<sup>th</sup> year of India’s Independence i.e. 15<sup>th</sup> August, 2022. It started on 12<sup>th</sup> March, 2021 and will be celebrated till 15<sup>th</sup> August, 2023. The idea behind this *Mohatsav* is to create a vision for India@2047. The Mahotsav celebrates each week by highlighting various social and cultural events along with the showcase of technological and scientific achievements. The event also highlights some unknown locations and contributions made by some freedom fighters. Till date BCCL has undertaken 96 weeks of events.

- w. Distribution of Blankets –** Keeping in view of the cold wave, blankets were procured and distributed amongst the needy section of the society.



## IMPLEMENTATION STATUS OF ONGOING AND FUTURE MINING PROJECTS OF BCCL

Coal India Limited has set a target of achieving 1 billion tonnes per annum production of coal by 2025-26 of which Bharat Coking Coal Limited (BCCL) has a share of 45 MT. For producing planned quantity the mines of BCCL has been grouped into 3 categories viz. Completed projects, ongoing projects and future projects.

Table 1.1 : Proposed Share of BCCL (Figures in MT)

22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31
34	38	43	45	47	50	52	54	55

*Different types of project of BCCL includes Ongoing, Future and Completed Projects.*

- 1.1 Ongoing project: The ongoing projects of BCCL are Muraidih UG (2), Moonidih XV Seam (2.5), North Tisra South Tisra Expn OCP (6)
- 1.2 Future Project: The future projects of BCCL are Kapuria UG (1.83 MTPA), Pure Benedih Incline (0.81 MTPA), Block II UG (0.51 MTPA) (Continuous miner).
- 1.3 Completed Projects: BCCL has completed 62 nos. of project. Out of which 22 nos. are UG project and 40 nos. are OC project. Bio-profile of the project indicates that 30 nos. covered as Coking coal project and 32 nos. belongs to non-coking coal projects.

Fig. 1 : Completed projects (62/3748.74 Crs)

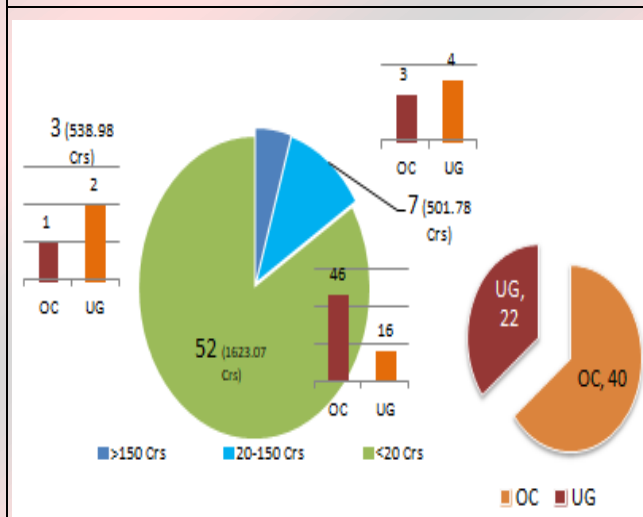
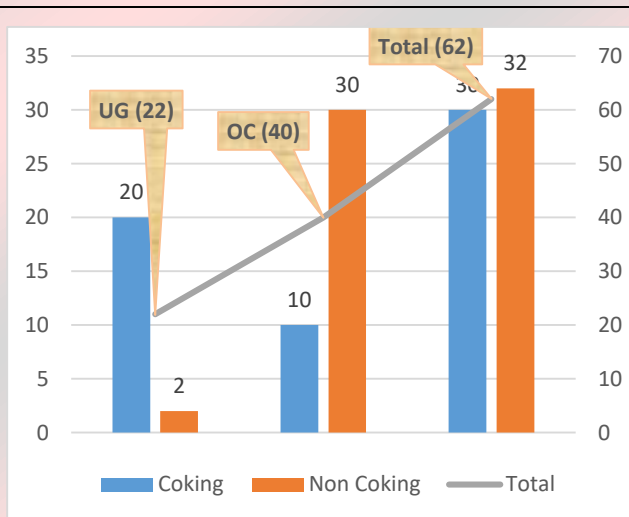


Fig 2 : Spread of Coking & Non Coking



Status of Ongoing Project as on 31<sup>st</sup> Dec'22 are as follows



**STATUS (Up to 31<sup>st</sup> Dec'22):**
**Muraidih UG Turn-Key Project  
(2.0 MTY: Hired)**

Capacity as PR	2.0 MTY
Date of Approval	14.02.2011
Scheduled date of Completion	March 2017
Anticipated date of Completion	March 2027
Sanctioned Capital in "Rs Cr."	Rs. 339.875 Crs
CAPEX in "Rs. Cr" (Till 31.12.2022)	Rs. 144.05 Crs

**INCLINE 1:** 868.8 M (Out of 927.0 M)

**Purpose:** Man & Material Transport, Intake airway

**INCLINE 2:** 848.7 M (Out of 927.0 M)

**Purpose:** Coal Transport, Intake airway

**SHAFT :** 125.0 M (Out of 125 M) (Complete)

**Purpose:** Return airway

**Forest Clearance:**

Application for Stage-I forest clearance submitted online on 09.03.2020 . The proposal at present is at Nodal Officer cum PCCF, GoJ and will be forwarded to GoJ.

**Environment Clearance :** Granted in cluster II on 06.02.2013

**Land acquisition status , R& R status, Land encumbrances & Utility shifting –**

 3.48 Ha of land at the site of incline drivage has been acquired and possessed by BCCL.

 Land at the site of incline drivage, ventilation shaft and other surface structure has been provided.

**STATUS (Up to 31<sup>st</sup> Dec'22):**
**Moonidih XV Seam XV Seam UG  
Project (2.5 MTY): Hired)**

Capacity as PR	2.5 MTY
Date of Approval	12.08.2011
Scheduled date of Completion	Mar'19
Anticipated date of Completion	Sep'2025
Sanctioned Capital in "Rs Cr."	Rs. 1230.74 Crs
CAPEX in "Rs. Cr" (Till 31.12.2022)	Rs. 566.20 Crs

**INCLINE 1 :** Completed

**Purpose :** Man & Material Transport , Intake airway

**INCLINE 2 :** Completed

**Purpose :** Coal Transport , Intake airway

**SHAFT :** Completed (420.9 M)

**Purpose :** Return airway

**DRIFT :** Completed (345.5 M)

**Purpose :** Equipment Transport

**In-seam Drivage for UG Development:** 9538.0 M.

Drivage of both the Inclines completed. In-seam development for preparation of Trunk roads, Longwall panel and sump is going on.

**Environment Clearance :** Granted on 26.08.2013 and amended on 26.07.2019 (4.16 MTPA Peak)

**Land acquisition status , R& R status, Land encumbrances & Utility shifting –**

Total land requirement for the project is 1826.73 Ha. Acquired under CBA.

**STATUS (Up to 31<sup>st</sup> Dec'22):**
**NT & ST Expansion OCP (6.0  
MTY) : Hired)**

Capacity as PR	6 MTY
Scheduled date of Completion	Feb'2014
Anticipated date of Completion	Already Commissioned
Sanctioned Capital in "Rs Cr."	Rs. 555.52 Cr.
CAPEX in "Rs. Cr" (Till 31.12.2022)	Rs. 20.57 Cr. + 206.25 (as advance payment against land)

At present 02 nos. of Hired HEMM patches are working within the Project.

 Reconnaissance & Preliminary Engineering Survey for alignment of rail infrastructure by RITES was completed. Feasibility Study report for new Railway Siding was submitted by RITES. The Revised lay out Plan involves acquisition of entire land from Rakhitpur to Siding involving huge financial outlay.

Jeenagora OCP, NT OCP, ST OCP and NT (U/G) Mines are amalgamated to a single Mine.

**Environment Clearance :** 21<sup>st</sup> May 2013 (Amended on 01.03.2018 for 7.8 MTY peak capacity).

**Land acquisition status , R& R status, Land encumbrances & Utility shifting –**

Land acquisition proposals for acquisition of 53.9 Ha &amp; 40.2 Ha are pending with DLAO.

### Glimpses of Future projects (All in MDO Mode)

Sl No	Item	Pure Benidih Incline Project	Kapuria UG Project	Block-II UG Project
1	Geological Block Area (Ha)	1400	647	960
2	Project Area (Ha)	430.26	Var I(625.50) Var II(596.75)	545
3	Mining Area	392	580.15	530.77
4	Geological Reserve (MT)	48.90	228.549	95.13
5	Mineable Reserve (MT)	36.84	189.191	44.59
6	Extractable Reserve (MT)	15.79 Mt	19.207	9.55
7	Grade of Coal	G5/ G9	W-II	G6
8	Capacity	0.81 MTY	1.832	0.81
9	Year of starting coal Production	2 <sup>nd</sup> Year	4 <sup>th</sup> Year	2 <sup>nd</sup>
10	Year of Achieving target Prodn	3 <sup>rd</sup> Year	11 <sup>th</sup> Year	4 <sup>th</sup> Year
11	Total Mine Life (Yrs):	22		15
12	Land Requirement		Var-1 : 699.35 Var- II : 668.45	

**Nimai Chandra Routh, Manager (Min.)**  
**Sandeep Karn, Asst. Mgr. (Min.)**  
**P&P Deptt., BCCL**

#### पेड़ों का महत्व

बिगड़ा है पर्यावरण, बढ़ता जाता ताप ।  
 जहरीली सारी हवा, कैसा यह अभिशाप ॥

ईंधन खपता रोज़ ही, बिजली जलती खूब ।  
 हरियाली नित रो रही, सूख गई सब दूब ॥

यंत्रों ने दूषित किया, मौसम और समाज ।  
 हमने की है मूर्खता, हम ही भुगतें आज ॥

नगर घिर गये धुंध में, धूमिल सारे गांव ।  
 धुँआ-धुँआ जीवन हुआ, गायब सारी छांव ॥

दिखती नहीं पगडंडियाँ, चारों ओर गुबार ।  
 तिमिर विहँसता नित्य ही, रोता है उजियार ॥

जनजीवन रौने लगा, सिसक रहा इनसान ।  
 हर प्राणी भयभीत है, आफत में है जान ॥

आवाजाही रुक गई, मंद हुआ व्यापार ।  
 शिक्षा, ऑफिस, काम पर, हुई सघनतम् मार ॥

प्रकृति बिलखती आज तो, कारण है अविवेक ।  
 यदि हम चाहें निज भला, तो करनी हो नेक ॥

आत्मचेतना से मिटे, प्रियवर आज कलंक ।  
 सभी करें कुछ अब खरा, क्या राजा, क्या रंक ॥

कोरोना के वेग से, हर जन है भयभीत ।  
 आओ हम मिलकर लड़ें, तब पाएँगे जीत ॥

फिर से अब आबाद हों, नगर, बस्तियाँ-गाँव ।  
 तभी मिलेगी वक्रत को, मनभावन इक छाँव ॥

**-रिंकू दुबे वैष्णवी**  
**राजभाषा विभाग**



## PIEZOMETRIC WELL AND DIGITAL WATER LEVEL RECORDER

A piezometric well is a purpose-built, non-pumping observation bore well that facilitates measurement of vertically averaged piezometric head of an aquifer. Piezometric well taps only the targeted aquifer blinds the rest of drilled strata and finally isolates the aquifer from the rest of the drilled strata and ground by properly placed seals. Piezometric well are also used for sampling groundwater from the tapped aquifer for water quality monitoring.

The purpose of the construction of piezometers is to monitor the groundwater in deeper as well as shallow aquifers in respect to the impact of coal mining or any other activity on groundwater regime, if any. A network of piezometer tapping deeper aquifer (below phreatic aquifer) is necessary to evaluate the impact in the vicinity of active coal mining areas.

BCCL has obtained Environment Clearance of mines under cluster concept from MoEF& CC. In the granted EC of mines, there is general condition which states that:

### QUOTE

**“Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new piezometers.”**

### UNQUOTE

This has also to be complied in accordance to the Notification of MINISTRY OF JAL SHAKTI (Department Of Water Resources, River Development and Ganga Rejuvenation) (CENTRAL GROUND WATER AUTHORITY) Dated 24th September, 2020. For compliance of EC condition & Notification, 23 nos. of Piezometric wells has already been established in the command area of BCCL. The potential aquifers within Gondwana Formations, (i.e. sandstone partings with considerable thickness belongs to Barakar Formation and Raniganj Formations) are tapped in these piezometers. The photographs of piezometric wells established with depths is as below:







Further, in accordance with guidelines issued by Central Ground Water Authority (CGWA), mining projects are required to obtain NOC for the use of ground water and thus, BCCL has already obtained NOC for 15 Clusters under jurisdiction of CGWA.

In the granted NOC from CGWA, it is stated that Digital water level recorder with/without telemetry has to be installed as a Monitoring Mechanism in the 15 Clusters under jurisdiction of CGWA.

Digital Water Level Recorder provides highly accurate water level measurement for a Wide variety of applications, including those in harsh environments. The submersible pressure transducers have a dynamic pressure compensation system, enabling high accuracy measurements over wide measuring equipment, and LCD displays. Digital Ground Water Level Recorder is used to monitor continuous water-level measurement in ground water elevations, wells, bore wells, etc.

BCCL has also installed Digital water level recorder with/without telemetry. The Photographs of DWLR installed are given below:



Quarterly Monitoring of groundwater levels of shallow/deep aquifer through established 23 nos. of piezometric wells is being done by CMPDI.

Thus, BCCL is always committed to operate all its mines with fulfillment of statutory requirement.



## EXHIBITION AT NATIONAL COAL CONCLAVE -2022

Under the patronage of the Ministry of Coal, Indian National Committee World Mining Congress organized the first ever National Coal Conclave & Exhibition - 2022 on the theme “Indian coal sector-sustainable mining towards Aatmanirbhar Bharat” in New Delhi on 16th & 17th October, 2022.

Shri Pralhad Joshi, Union Minister of Coal, Mines and Parliamentary Affairs and Shri Raoshab Patil Danve, Union Minister of State for Coal, Mines and & Railways addressed the conclave and visited the exhibition where coal companies across the nation participated and showcased their best practices and new technologies being deployed in the Coal Mining industry for future readiness and sustainability.

In the conclave, Shri Samiran Dutta, CMD, BCCL also addressed the conclave in which he spoke about the importance of the coking coal, roadmap for the atmanirbharta in coking coal supply through sustainability and conservation of the ecology and environment.

BCCL also participated in the exhibition by means of A delegation of participants attended the conclave and a team of officials along with Environment officials organized the exhibition at the event, where, by means of audio-visuals and pictorial modes, BCCL showcased its one of the biggest challenges and efforts being made to resolve it, i.e mine fires in Jharia Coalfield, fire extant and its efficient evacuation efforts along with its biological reclamation by the company were showcased.

Hon’ble Minister, Shri Pralhad Joshi visited BCCL exhibition at the event and viewed the complete audio-visuals of fire dealing and restoration of the fire affected degraded land. He asked various queries regarding the initiatives of BCCL for sustainability. He acknowledged and appreciated the efforts of BCCL in restoring the fire affected areas ecologically and congratulated CMD, BCCL for evacuating precious natural resource from the fires.

The two- day event provided the platform for policy makers, public and private sector mining companies, researchers, academicians and other stake holders to interact and prepare the road map needed for Indian coal sector to align it with National Mission of Aatmanirbhar Bharat and make the industry more sustainable.

The focus area of the conclave were three major subjects of fuel self-reliance in power sector, Aatmanirbharta in steel making for coal and technology & sustainability.

Besides senior functionaries of the ministries of Coal, Mines, Power, Steel, NITI Aayog, Disaster Management, coal mining companies, academicians, researchers and students of Mining Engineering sector visited the exhibition.

The exhibition showcased the initiatives of coal mining sector for induction of technology, sustainable development, IT initiative, best practices in mining safety etc. Latest technologies and IT –enabled tools used by Indian coal mining sector will also be on display.





Glimpse of National Coal Conclave and Exhibition -2022 at New Delhi



## "पृथ्वी"

अतल,वितल,तल,सुतल,महातल,  
 अरु पाताल,रसातल है।  
 भुव,जन,तप,मह,सत्य,लोक भू  
 सर्व सुरूप धरातल है।  
 सबको महत्व समझाएँगे।  
 हम पर्यावरण बचाएँगे।  
 जैव विविधता हुई प्रभावित,  
 लुप्त हो रहीं कई प्रजाति ।  
 शक्ति उर्वरा नष्ट हो रही,  
 कई फसल न हो पाती।  
 फसल-चक्र अपनाएँगे।  
 हम पर्यावरण बचाएँगे।  
 भूमंडली तापक्रम की,  
 मानव ही है जिम्मेदार।  
 देशी खाद से खाद्य वस्तुएँ,  
 होती हैं अच्छी तैयार।  
 कम्पोस्ट खाद अपनाएँगे।  
 हम पर्यावरण बचाएँगे।  
 प्रकृति हुई क्षुब्ध-सी देखो  
 मचा ताण्डव-हाहाकार है।  
 उष्मा के तीव्र त्वरण से जल रहा  
 सारा नभ-संसार है।।  
 पर्यावरण का संतुलन बिगड़ा,  
 आहत घर-संसार है।

पानी ऊँचे भावों में बिकता ,  
 विकास का यह आकार है।।  
 दुषित वायु स्वसन तंत्र पर हावी,  
 अत्यन्त भारी होगा।  
 मानव दुर्बल-कृषकाय,  
 महामारीग्रस्त, मृतप्राय होगा।।  
 अन्न होगा शेष यहाँ पर  
 प्राणी शर्मसार होंगे  
 तब मानव की बोटी मानव  
 नोच नोच कर खाएगा  
 अमिरो की महा नगरियां बनेगी श्मशान,  
 सन्नाटा ही हो जाएगा ।।  
 भाई भाई का शत्रू बनकर  
 लूट पाट मचाएगा  
 दिन-दहाड़े होगा मातम  
 खुशियाँ सभी लूट जाएगा  
 चेत जाओ, सम्हलो अब तो  
 महाविनाश से देश बचाओ।।  
 बचाओ प्रकृति प्रकोप से  
 धरा-धाम को उबार बचाओ।  
 वृक्षारोपण और स्वच्छता  
 अभियान चला कर दीर्घायु बन जाओ।।

-रिंकू दुबे वैष्णवी  
 राजभाषा विभाग

## पर्यावरण गीत

इस धरती का एक है, सुन्दर आवरण  
 जिसका सुन्दर सा नाम है , पर्यावरण  
 बिगड़ता है, जब इस सुन्दर आवरण का  
 संतुलन  
 तो धरती पर होता है ,भयानक हलचल  
 और दोलन  
 और नहीं कर पाता मानव बर्बादी का  
 सही आकलन

समय है ,महामानवो सुधारो अपना चाल-  
 चलन

विकास के कदम को न रोक करो इसका  
 भी मनन

जिसका सुन्दर सा नाम है , पर्यावरण  
 खूब बढ़ा रहे हो तुम अपनी आबादी  
 कर रहे हो खूब वृक्षों की बरबादी  
 किसने दिया है ,तुम्हे इसकी आजादी  
 नहीं काम आएगी, आधुनिकता कि  
 शहजादी

यदि रोकना चाहते हो अपना और अपनो  
 का बरबादी

तो आ जाओ निश्छल मन से इसके शरण  
 जिसका सुन्दर सा नाम है , पर्यावरण  
 न बढ़ाओ तुम सुन्दरता काट कर हरे  
 वृक्ष

सुन्दरता बढ़ाना है ,तो बढ़ाओ लगाकर  
 वृक्ष



यदि रखोगे सदा तुम इससे दोस्ती  
 तो तुम्हारे जीवन में रहेगा सदा मस्ती  
 यदि करोगे तुम इससे दगावाजी और  
 कुस्ती  
 निश्चित डूबेगी तुम्हारा और तुम्हारो का  
 किस्ती  
 धरा पर नहीं दिखेगा तुम्हारा यह  
 भरापूरा बस्ती

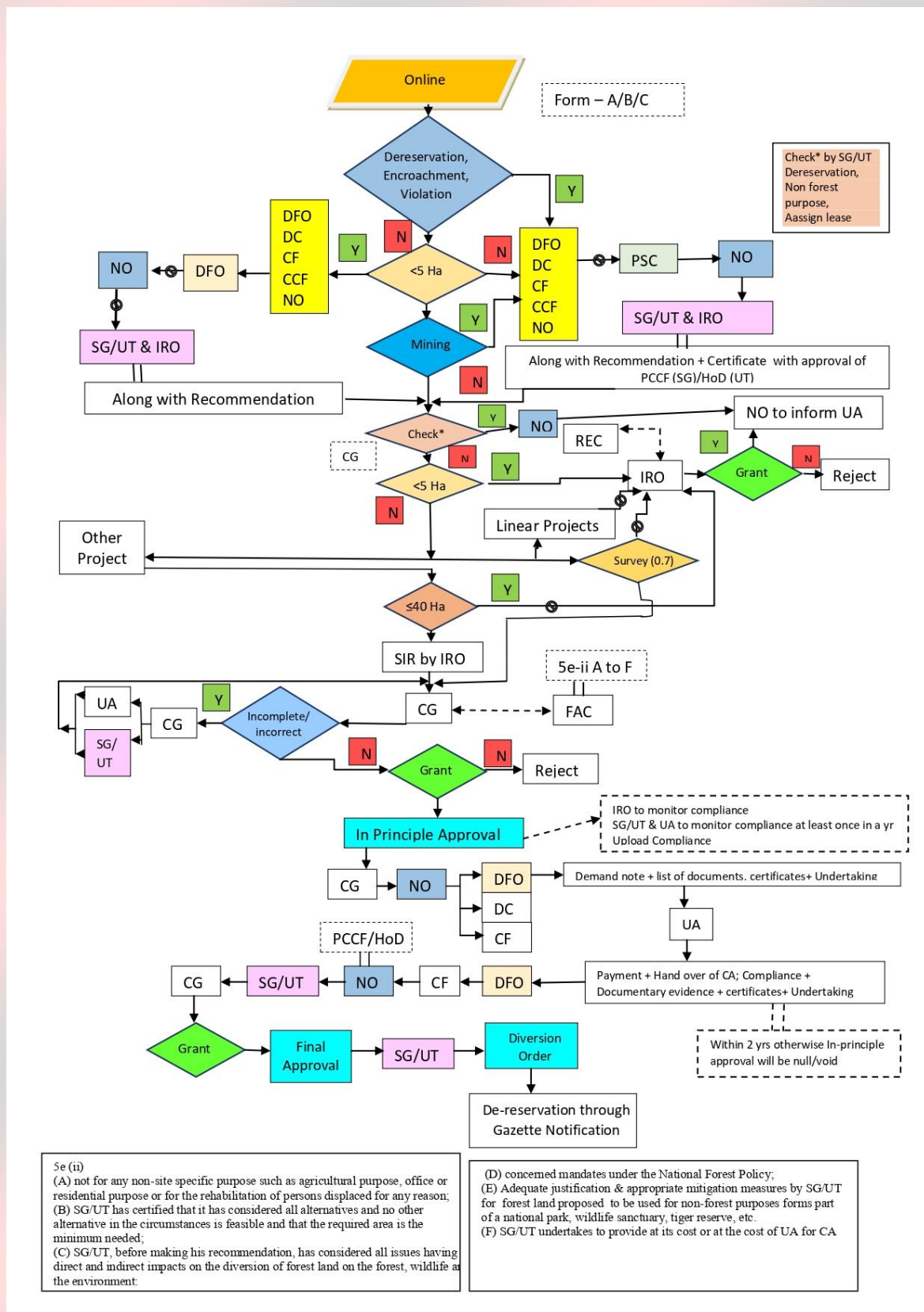
यही टाल सकता है ,तुम्हारा और तुम्हारो  
 का मरण

जिसका सुन्दर सा नाम है , पर्यावरण  
 खूब निकालो कोयला ,  
 लेकिन ध्यान रखो यही घटाएगा कार्बन  
 इसको बचा कर करो खूब जनन व खनन  
 जिसका सुन्दर सा नाम है , पर्यावरण

नरेश राय  
 सहायक प्रबंधक (सर्वे)  
 सुरक्षा एवं बचाव बिभाग  
 कोयला भवन



## FLOWCHART SHOWING FOREST CLEARANCE PROCESS



## SUSTAINABLE DEVELOPMENT VIS-À-VIS TRANSFORMING OUR WORLD

Prosperity of economy, society and environment dwells in the core concept of Sustainable development which guides the world leaders and policy makers to act in this direction for ensuring wellbeing of the present generation without compromising the ability of the future generations with due regards for economy and environment. It is a pious duty of ours to hand over this lovely planet to the future generations equipped with a liveable environment. Task is gigantic and very vulnerable, in fact. Serious efforts and actions are the imperative need of the time for our generations to come who have yet not seen the rays of the sun.

With existing 8.012 billion worlds' population, the world leaders and policy makers are destined to face greater challenges – some are well known unto now but some are still in the womb of time to come. The greatest known challenge is the widespread hunger and poor quality of life prevailing among the existing world's population, and the devastating environmental degradation caused by insensible human activities began with the advent of industrial age during the last two centuries and are continuing yet.

World's temperature is increasing day by day due to uncontrolled emission of greenhouse gases and depleting forest resources. Land mass is transforming into the concrete jungles by leaps and bounds. Consequences of this uncontrolled rise in temperature are of immense concern not only for developing countries but for developed countries too. Most of the prosperous mega cities of the world including Shanghai and Tokyo, and many more names are still to be added, may be consumed by the rising sea level vast waves in current scenario of this rise in temperature. Once the glaciers of the mountain peaks melt at higher pace due to the continuing rising temperature everything will be finished before our eyesight amidst our utter regrets. With these big concerns of wide spread hunger throughout the globe, especially in African countries, and the devastating environmental degradation throughout the globe in mind, the world leaders' high power committee, during UN World summit for sustainable development held at New York from 25-27<sup>th</sup> September 2015, adopted the Agenda 2030 and announced 17 Sustainable Development Goals(SDGs) and 169 targets in view of fostering the three dimensions of Sustainable development: the economic, social and environmental in the next 15 years to come by the year 2030. Serious actions were envisaged to be undertaken to achieve the above goals and targets in coming one and half decade period to witness the success of World Agenda 2030 but the wheels are running at slower pace. Seven and half years have gone since the announcement of the SDGs but result is not satisfactory.

Presently, we are in the midway of collective journey of achieving the targets of Agenda 2030 since its inception in the year 2015. But, Decade of Action resolution taken in September 2019 during UN Summit sums up clearly that world is not meeting the standards for achieving the targets of sustainable development goals in right tunes. Equitable attention is needed to be enhanced on capacity building on various dimensions of the societies with more concern for financial empowerment of the people dwelling throughout the globe irrespective of their dwellings. Now, time demands for serious introspection and recommitment of the governments and parliaments of the world land masses towards meeting the target of sustainable development. Millennium goals for transforming this world into a better one are to be achieved by all means and efforts for handing over this world to



the generations to come in an honest manner. The highest priority dwells to ensuring 'Harmony with Nature' which needs greater coordination among the five Ps: People, Planet, Prosperity, Peace and partnership.

Agenda 2030 envisages a new world with universal respect for human rights and human dignity, rule of law, equality and non-discrimination of respect for race, ethnicity and cultural diversity. We envisage a world in which humans live in harmony with nature and in which wildlife and other living species are protected.

In the present scenario, our highest priority task of the Agenda 2030 is to tackle the prevailing and growing poverty as well as increasing gaps between the poor and the riches, and to focus attention on empowering women and girls, and importantly addressing the climate emergency. In our new world, there must be no space for violence and exploitation. The world envisages the award which invests in its children in which every child grows up free of violence and exploitation. Everybody should be bestowed with the opportunity for development and prosperity in the new rising era. Poverty of any kind is a curse for humanity and it has to be eradicated in all forms and at all levels - at government level, at local level and at the level of the people. As such, there is an imperative need of the partnership of the government, private and people trio. True happy picture of the world would be visible only when each and every girl child would avail equal opportunity for development and prosperity. We want to see an equitable world where there is no any kind of gender inequality because we cannot imagine a happy world without prosperity of the custodian of the half of the world- the respectable women.

Climate change is a greater threat for humanity and for the survival of this planet fostering myriad of the living beings including humans on this lovely planet. Natural resource depletion and adverse impact of environmental degradation, including drought, land degradation, fresh water scarcity and loss of biodiversity are the major challenges before the policy makers and the world leadership, rather people as a whole.

Mere enactment of rules and announcement of charters are not sufficient to meet the millennium goals as envisaged as above but inclusive involvement of the world citizens to save the planet is the demand of the time. We owe to our coming generations for handing over them a liveable world what we have inherited from our forefathers. All possible measures are to be exercised to mitigate the environmental degradations and to stoop the emission of greenhouse gases for ameliorating the adverse impacts of global warming on sea levels inter alia other such vulnerable issues including the endangered biodiversity. It is an evident fact that the land mass cannot be increased and it is too difficult to stop the increasing human population on the earth. Therefore, it is an urgent need for making sustainable land management to feed the increasing human population on the earth. Otherwise, the millennium goal of eradicating hunger and all forms of poverty from the world will be extremely difficult and providing them a quality life will be a farfetched dream only. Every possible effort is required to be made so that no one should remain outside the ambit of sustainable development goals.

International financial institutions need to play greater and resilient role in developing infrastructures for enabling the common mass to resolve their financial problems, at least to meet their needs. Common facility centres are to be developed by the governmental institutions for enabling people, especially the youth community, to earn them better

qualification for winning their bread and butter, and for meeting their other needs to lead a quality life. Non-governmental institutions may play key roles in meeting the sustainable development goals set by United Nations Organization. Therefore, NGOs should come forward for this noble cause and they should be supported by local and international financial institutions.

Academia may play abysmal role in this direction by leveraging their invaluable knowledge including technological one to harness best capabilities of all stakeholders for transforming the world into a new one which would foster the planet in an eco-friendly manner. Partnership of all the stakeholders of the world populace would ensure speedy fulfilment of the requisites for meeting the goals of the Agenda 2030. Information technology may play very important role in capacity building of the people, especially the youths, who are the future role player and the prime mover of the societies. They need necessary momentum torque from various organisations to roll down the wheel of development and then task would be easier than thought. Once the youths including the girls and women are facilitated to get involved in reaching out the goals of Ageda2030, this will become a movement and nothing will remained unturned. Hope will turn into reality.

Greater dedication is required to eradicate the poverty of all forms from the world's population with a notion that no one should be left. We want a world with no hunger at all. For that, we have to resort to harnessing the advantage of technological leverages. Needful and affordable vocational education need to be reached out to all, especially vulnerable section of the society, so that they may be capable of fostering the world economy and to be self-reliant in a resilient way.

Here, at this juncture, when the world is eagerly waiting for avoidance of probable third world war in reference to the current Russia and Ukraine war, blame cannot be put on deforestation and land degradation only towards environmental degradation but to these wars also which are going on off and on in different parts of the globe. This scenario is not only polluting the physical environment but the minds of the people especially the youths. Serious hatred is being spread to the minds of the people throughout the globe which poses a great threat to the sustainable development of the world. Conflicts add only hatreds. We want peace at larger pace. It is the peace which can ensure better harmony among us and with the nature. A polluted mind cannot restore peace and harmony. Therefore, it is the need of the time that world leaders should focus more on the development of people in the greater interest of humanity not on their territorial enlargement and enrichment.

In the present scenario, where there is uncertainty in the world, there is a need of setting up a mind-set which is resilient towards humanity and restoring harmony towards nature in the greater interest of the wellbeing of the humans and myriad of species, flora and fauna dwelling on this planet. We should remember always that this planet we owe to our coming generations which we have inherited from our ancestors in worthy conditions. Let us join our hands to transform this world into a new and an equitable one before the year 2030. Let us resolve not to degrade this planet but to foster it. Let us resolve not to pollute the physical environment around us as well as the eternal environment within us but to enshrine good will into the hearts of all of us. Let us resolve not to inflict pain to anyone but to ping a happy note to every one's life. Let us resolve not to chase others but to support all for a better and resilient tomorrow. Let us join hands to transform this world and to meet the all 17 SDGs



and the 169 targets announced during Word Summit 2015 by UN. Live long! World citizenship. May God help dwell love and affection in the hearts of all.

Dr. S.C.Prasad  
Retired Ex-CM (Excavation) &  
Ex-HoD (Sustainable Development)  
Bharat Coking Coal Limited

### माटी तेरे रंग हजार

माटी तेरे रंग हजार, कण कण से तू करती प्यार।  
बीज डाल के देखे कोई पौधा हो जाता तैयार।  
हलधर के हर सपने को हे माटी तुम करती साकार।

माटी तेरे रंग हजार, कण कण में खुशियां हैं अपार।  
नभ ने तुमको जलवृष्टि दिया,  
तुमने हमको नव दृष्टि दिया।  
देख सपूत पाता गोदी में तेरी खुशियां अपरंपार।

माटी तेरे रंग हजार, कण कण में खुशियां हैं अपार।  
देश देश को छाया देती, मानव को नव काया देती।  
मेरी ये माटी की काया तेरा मान रही साभार।

माटी तेरे रंग हजार, कण कण में खुशियां हैं अपार।  
यह माटी जो सब कुछ देती,  
तुम भी इसको सींचते रहना।  
खून पसीना देकर प्यार।

माटी तेरे रंग हजार, कण कण में खुशियां हैं अपार।

-पवन कुमार पाण्डेय









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