



MINEIACP

IIT(ISM) EIACP Newsletter on Environmental Problems of Mining

(Sponsored by Ministry of Environment, Forest and Climate Change, Govt. of India)

Department of Environmental Science & Engineering

Indian Institute of Technology (Indian School of Mines), Dhanbad



No. 122

Quarterly Publication

Sept. 2024

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Published by

IIT (ISM) EIACP Programme Centre
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 Indian Institute of Technology (ISM), Dhanbad,
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EDITORIAL



The mining industry is globally recognized for its high-risk and hazardous working conditions. Health and safety have long been critical aspects of the industry, gaining even greater importance with the advent of mechanization. Among the environmental challenges, dust pollution stands out as a major concern and a leading cause of occupational health hazards in mining. Mine dust, the most significant air pollutant in mining, poses severe health risks and adversely impacts surrounding environments, endangering public health. During mineral extraction and processing, which involves crushing, grinding, cleaning, and drying, large volumes of particulate matter are generated due to highly mechanized operations. If control measures are inadequate, these activities can release hazardous levels of respirable dust into the workplace, putting workers at risk. Modern mining practices must adopt effective strategies to minimize the adverse effects of dust on health, safety, and the environment.

This review examines the various sources of air pollution generated during mining operations and outlines best practices for planning, identifying, and controlling mine dust. The focus is on accurately identifying pollution sources to ensure that control measures implemented at the source achieve maximum efficiency. Identification methods include direct observation, emission rate calculations, and computer-generated predictive models to pinpoint major contributors. Effective control practices involve wet dust suppression using water or chemical agents, stabilization of haul roads and surfaces, equipping mining machinery with automated dust collection systems, establishing green belts along haul roads and around mining areas, and enforcing robust legislative and regulatory standards to protect the environment in mining regions.

The current issue of the IIT(ISM) EIACP Newsletter features gazette notifications (MOEFCC, MOC & MOM), news of the mining environment, important parliament questions (MOC, MOM & MOEFCC), environmental clearance accorded to mining projects and a glimpses of few events conducted by IIT(ISM) EIACP during July to September, 2024.

Editor

Environmental Management of Air Pollution (Dust Pollution) in Mining Area: A Review

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Abstract

The mining industry is known worldwide for its high-risk and hazardous working environment. Health safety has been an integral part of the mining industry for a long time; however, its importance has grown with the developments of mechanization. Dust pollution is a major environmental problem and the leading cause of mining-related occupational health hazards. Mine dust is the most significant air pollutant during mining that causes injurious health effects. It permeates the surrounding environment, threatening public health. The mined ore undergoes crushing, grinding, cleaning, and drying throughout the mining and processing of minerals. These mining operations are highly mechanized, and both individually and collectively, these operations can generate large amounts of particulates. During mining operations, if control technologies are inadequate, hazardous levels of respirable dust may be liberated into the work environment, potentially exposing workers. Steps are to be taken in modern mining operations to minimize the impacts of dust on all aspects. This review describes the control of dust in mines, which will provide beneficial direction for engineers and scholars who are engaging in mine dust control research and practices.

Keywords: Health safety, Mine dust, Control technologies, Mining operations.

Introduction

Dust is one of the significant air pollutants and is a major concern of the mining industry because mining operations in opencast and underground mines lead to the generation of large quantities of dust (Sastry et al., 2015; Duarte et al., 2022; Wang et al., 2022; Wang et al., 2023). Mineral like coal is the most abundant fossil fuel, with almost 900 billion tons of proven coal reserves (of varying grades and qualities) in 70 countries, enough for 112 years at current rates of consumption (Connor, 2016; Colvin & Przybyszewski, 2023). The expansion of the coal mining industry has caused negative effects on the ecosystem (Larkin et al., 2023). This is reflected in erosion, destruction of water resources, land subsidence, air pollution, declining biodiversity, landscape fragmentation, the release of contaminated water, generation of solid waste, and the loss of agricultural land, among other problems (Chu & Karr, 2017; Bhatt, 2020; Guo et al., 2021).

At the global level, several studies have shown that coal dust exposure in the biota, like human beings living near coal mining areas, causes many diseases due to inhalation (Gallardo & Verbal, 2016; Singh et al., 2022). Dust related to mining operations usually occurs as a result of the disruption of fine particles coming from rock or soil (Steward & Denis, 2018; Duarte et al., 2022). In regions of dust emission sources, its coarser fractions precipitate in the lower parts of the mining excavations, while the smallest grains give rise to accumulations of dust in the upper parts (Puławska et al., 2021). Often, small dust grains carried with the air contribute to dustiness in the regions distant from the sources of their formation (Cybulski et al., 2015; Shi et al., 2020). The level of risk associated with dust particles depends on chemical composition and particle size (Speight et al., 2020; Ciurana et al., 2023). Depending on the specific nature of the mining site, tailings may contain toxic contaminants, such as arsenic and lead (Gonzales et al., 2014; Tureková & Marková, 2019). Dust control in mining and mineral processing operations; can also have a significant impact on operating and production costs (Roe, 2003; Cecala et al., 2019; Wang et al., 2022; Kissell, 2023).

Proper application of water spray systems, ventilation, and mechanical equipment (scrubbers) provides the best means of respirable dust control (Colinet et al., 2021; Anlimah et al., 2023). Suppression of dust is the most effective means of dust control. Suppression is achieved by the direct application of water, usually at the point of attack, to wet the minerals before and as they are broken to prevent dust from becoming airborne (Parvej et al., 2021). Other methods of control must be applied to dilute it,

direct it away from workers, or remove it from the work environment (Jay et al., 2010; Briffa et al., 2020). For a long time, water injection and sprinkling water for dust elimination or a combination of both measures have been widely used (Organiscak, 2013; Ding, 2022). The suppression of dust or suspended particulate matter is suppressed by water spraying from the loading or transfer points. Experiments show that the dust-proof efficiency of respiratory dust is only about 30–50% when the sprinkling water technique is employed (Han et al., 2016; Organiscak et al., 2018). Wetting of coal dust with water can be significantly increased by using the so-called wetting agents, whose main components are surface-active compounds, i.e., substances that, due to their molecular structure, reduce the surface tension of water (Wang et al., 2019; Jiang et al., 2020; Wang et al., 2020). This phenomenon occurs when the attractive forces of water molecules interaction are greater than the forces acting between the water molecules and the molecules of wetting agents (Cybulski et al., 2015; Gao et al., 2019).

Mine Dust and its generation

Dust is a generic word used to explain fine particles that are floating in the atmosphere (Adebiyi et al., 2023; Yan et al., 2023). According to the "Glossary of Atmospheric Chemistry Terms" (IUPAC, 1990), "Dust is Small, dry, solid particles projected into the air by natural forces, such as wind, volcanic eruption, and by mechanical or man-made processes such as crushing, grinding, milling, drilling, demolition, shovelling, conveying, screening, bagging, and sweeping. The activities responsible for pollution sources (Fig. 1) in and around coal mine areas are drilling, blasting, overburden loading and unloading, coal loading and unloading, haul roads, transport roads, stockyards, exposed overburden dumps, coal handling plants, exposed pit faces, presence of fire, exhausts from heavy earth moving machinery, crushing of coal to a convenient size in the feeder breaker and workshop (Pandey et al., 2014).

Dust particles are usually in the size range from about 1 to 100 μm in diameter, and they settle slowly under the influence of gravity (WHO, 1999). The vast majority of dust from mining activities consists of PM_{10} (around 40%) and particles larger than PM_{10} (around 60%) (Geng et al., 2022). These dusts are generated from activities such as mechanical disturbance of rock and soil materials by dragline or shovel, bulldozing, blasting, and vehicles on dirt roads (Hendryx et al., 2020). When the wind blows over bare ground with different types of stockpiles, it also generates dust (Yen et al., 2021). Dust particles as small as a few nanometers and as large as a hundred micrometers have been evaluated in the atmosphere and are nonspecific with respect to the chemical composition and shape constitution of the particles (Waza et al., 2023). Dust is formed when fine particulate matter becomes entrained in the atmospheric environment by the disruptive action of wind, through the release of particulate-rich gaseous emissions or by the mechanical disturbance of fine materials (Steward & Denis, 2018; Bazarbayev et al., 2022).

Dust linked with mining activity (overburden removal, drilling, blasting, loading of material, transport, unloading of material) normally occurs as an outcome of the disturbance of fine particles derived from rock and soil (Entwistle et al., 2019; da Silva-Rêgo et al., 2022; Nishita Hara et al., 2023). Drilling was often pointed to as a task leading to higher levels of dust exposure, although every activity related to rock processing (blasting and loading, for instance) also had a positive association with high dust levels (Duarte et al., 2022). The dust generated by the unloading operation of the primary crushing station in open-pit mines is one of the important sources of dust pollution in open-pit mines. Dust control of crushing stations is also a key and difficult point in green mining (Wua et al., 2023; Liu et al., 2023). In all sources of dust emission in opencast mining, haul road transportation systems play a significant role in dust emission (Kashi et al., 2020).



Fig. 1: Different sources of mine dust



Fig. 2: Observation of different mining activities that show the sources of mine dust

In highly polluted mining areas, the concentration of particulates can range from a few micrograms to hundreds of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (Briffa et al., 2020). In general, dust produced by mining activities is chemically inert (Entwistle et al., 2019; Su et al., 2020), although exceptions may occur where dust emitted from cement industries that contain phytotoxic substances such as fluorides (Ciobanu et al., 2021). Mine particulates are generated from ore containing radioactive materials, asbestos, or heavy metals (Steward & Denis, 2018; Das et al., 2023). Dusts from coal mines contain metal species and organic pollutants that settle down to the nearby soils and other structures (Su et al., 2020). Soil is an important natural resource that supports plant growth and other human needs. However, the presence of pollutants can affect soil quality and impair its life-sustaining capacity (NRC, 2012; Rout et al., 2014; Abdelrahman, 2023).

Best practice principle in planning, identifying, and controlling mine dust

1. Planning

Best practice planning includes a systematic identification of the potential sources of dust particles (NASEM, 2018); anticipation of the dust particle levels likely to occur near the mine land site; evaluating the potential for dust particles to affect the mine environment and the human health (Gopinathan et al., 2023); and incorporating dust provisions and control measures into mine planning and design (Liu & Hou, 2023). Mine planning has an especially crucial role to play in dust control. The covering of dust controls after problems arise is often difficult, impractical, or costly (Sivacoumar et al., 2009; Kovacs et al., 2014; Rind & Jones, 2015; Patnaik & Baral, 2023). At the initial or planning stage of mining, the location of items such as process plants or haul roads may be flexible (Choi et al., 2020). Once established at the wrong place in terms of prevailing winds and neighbour's residences, a dust problem may be very unmanageable to rectify (Laurence, 2011). Models that will provide predictive configurations of dust levels around the mine can be built and run. To the level that it is possible, changes to the mine layout at the planning stage will deflect future problems (Li et al., 2021).

2. Identifying

Best practice identification of sources includes:

a) Observation: Dust sources, in particular point sources, can be promptly distinguished by visual reflection (Fig. 2). In many conditions, this is all that is expected to confirm the existence of problems that require attention (Schepanski, 2018; Bolorani et al., 2021; Bolorani et al., 2021; Kok et al., 2021).

b) Dust emission rates: The recognition of the spread of dust sources, and the task of evaluating the relative shares of all sources to total dust levels, are more problematic (Ginoux et al., 2012; Wang et al., 2022). Still, techniques exist that make a quantitative appraisal of dust emission rates from different categories of mining activity and land surface types, e.g., haul road traffic, blasting, waste dump surfaces, etc. (Kok et al., 2021; Wang et al., 2022). The attraction of this approach lies in the ability to rank the different dust sources objectively and, using that knowledge, apply control efforts in an orderly manner (Lashgari et al., 2016; Lai et al., 2021).

c) Prediction models: Prediction of ambient particulate concentrations or deposition rates of particulate are commonly used in mine planning using different Models (Patra et al., 2016; Zmijková et al., 2018). The models use source dust emission rates in conjugation with meteorological data to produce form maps of dust concentrations (Bullard et al., 2011; Chen et al., 2022).

3. Controlling

Best principles and practices applied to confining dust involve: workforce awareness; incorporating dust control provisions into operations planning, e.g., topsoil stripping, construction, blasting, and rehabilitation programs; monitoring and feedback mechanisms; using observational and quantitative appraisals to guide control efforts; cognizance of current methods and technology (Wu & Wu, 2016; Zuo et al., 2017; Kaluarachchi et al., 2021; Parvej et al., 2021; Liu et al., 2023).



Fig. 3: Dust suppression using water

a) Wet dust suppression using water: Water is commonly used to control dust on roads and in crushing, handling, and storage/reclaim operations (Fig. 3). Assuming the substrate is easily wetted by water, the wetted material will have a lower propensity for generating dust (Cecala et al., 2019). This is accomplished by making use of water sprinklers, foggers, or foam generation systems. The most common, convenient, and cost-effective way of controlling fugitive dust is sprinkling water on the coal stock, haul roads, and railway sidings. This prevents dust particles from getting airborne (Fig. 4) and also helps in settling airborne dust back on the ground (Panicker et al., 2023).

b) Chemical dust suppression: Chemical dust suppressants enhance the ability of water to provide the desired dust control effects with the least amount of moisture (Omane et al., 2018). While the use of chemicals adds to the cost of controlling dust, careful analysis shows that the benefits of chemical dust suppressants typically reduce overall dust suppression costs when compared to mechanical collectors and/or water alone (Li et al., 2022; Anlimah et al., 2023). A chemical suppressant as a control agent is formed by mixing water with an optimal volumetric concentration of surfactant (Omane et al., 2018). To date, the mining industry has used various chemical suppressants such as lignosulphonates products, salts, petroleum products, polymer emulsion products, and foaming agents to control fugitive dust on haul roads (Wang et al., 2021; Parvej et al., 2021)

c) Haul road and surface stabilization: A number of surface stabilization chemicals are available. Road dust chemicals are typically wetting and/or binding agents that minimize dusting and reduce the need for watering.

Common chemistries include:

- 1) Chloride salts: It acts as a humectant to maintain moisture in roadbeds. They are relatively inexpensive, but chloride corrosion of vehicles and the environmental impact of chloride run-off is a concern (Wang et al., 2021).
- 2) Lignosulfonates: They act as humectants and binders. They are also relatively inexpensive but do not work well in hot, arid environments (Kunz et al., 2021).
- 3) Petroleum-based binders: These act as binders. They are moderately priced and effective under maximum conditions. They are not environmentally friendly because they are typically formed as oils, asphalt emulsions, or based on other residual petroleum products (Aziz et al., 2015).
- 4) Surfactants: They act as wetting agents to improve the penetration of water in roadbeds. They are very inexpensive (Wang et al., 2019).
- 5) Biodegradable polyacrylamide (PAM): Used to suppress dust generation from haul road of mine (Kashi et al., 2020).



Fig 4. Dust generation a. before and b. after wet dust suppression and haul road stabilization

d) Automated equipment and chemicals for controlling dust:

In the future, mines will start with intelligent dust prevention, achieve high-precision dust sensing-transmission-assessment and early warning, and develop a combined dust collector that integrates the functions of atomization dust removal, miniaturization, dry and wet mixing, and large air suction capacity (Zhang et al., 2021). The combined dust collector realizes the efficient ventilation control and dust removal of the fine dust in wide-area complex spaces such as fully mechanized mining face and fully mechanized mining face (Yu et al., 2023). At the same time, breakthroughs have been achieved in low-permeability coal seams, such

as strong hydraulic permeability-enhancing technology, intelligent dust-proof robots, and chemical dust suppression (Hu et al., 2023). Current dust suppression is accomplished using mechanical dust collectors, water sprays, and traditional chemical wetting and binding agents (Liu et al., 2021; Paluchamy et al., 2021). Laboratory studies were conducted to identify a chemical treatment with the following characteristics (Lee et al., 2020; Mingyue et al., 2020):

- 1) Environment friendly
- 2) Low treatment cost compared to current technologies
- 3) Low moisture addition, i.e., optimum spread and capillary wetting characteristics
- 4) No oils or other components that could negatively impact the Bayer Process
- 5) Long-term.

e) Development of green plant belts on the roadside in and around mining areas: A green plant belt is a plantation of trees to reduce pollution as they absorb both gaseous and particulate pollutants, thus removing them from the atmosphere (Kayet et al., 2019; Wróblewska & Jeong, 2021). Green plants form a surface capable of absorbing air pollutants and forming sinks for pollutants, which improves the aesthetic value of the local environment (Arbid et al., 2015). Green plant belts are planned open spaces safeguarded from developmental activities such as mining, construction of buildings, factories, and any other infrastructural activities; these areas are used only for growing vegetation cover. Green plant belts in and around these areas are important for maintaining the ecological health of the region (Monteiro et al., 2020). A green plant belt should be established in mining areas to prevent dust pollution in the mining area, haul roads, and mine processing plants (Xia et al., 2022).

f) Legislation and regulatory standards: Mining of various major and minor minerals is regulated by various legislations related to mining and the environment (Raza & Dwivedi, 2017). The actions within the mines are regulated by the mining legislation, while those outside the mines are governed by environmental and other legislations (Johnson et al., 2017). In the Mining Sector, the following Legislations (Acts, Rules, and Notifications) are applicable in India (IBM, 2015):

- 1) The Mines Act, 1952, and the Mines Rules, 1955
- 2) The Metalliferous Mines Regulations, 1961
- 3) The Mines and Minerals (Development and Regulation) (MMRD) Act, 2015, 16, 17, 21 & 23
- 4) The Mineral Conservation and Development Rules (MCDR), 1988 and rules 2023
- 5) The Mineral Concession Rules (MCR), 1960.
- 6) The Air (Prevention and Control of Pollution) Act, 1981

Conclusion

The nature of mining involves disturbing the earth's crust, removing and handling crustal soil or rock, and the subsequent other operations related to mining activities such as loading and unloading operations, transport, dumping, crushing, and processing of this material. At all stages of mining, there is some potential to produce dust particles. Best practice environmental management requires considering this issue during mine planning, operations, and mine closure. Intelligent dust prevention techniques achieve high-precision dust sensing-transmission assessment and early warning and develop a combined dust collector that integrates the functions of atomization dust removal, miniaturization, dry and wet mixing, and large air suction capacity. Comprehensive dust-proofing methods, including wetting agents, can help improve dust control and proofing efficiency. Biodegradable polyacrylamide solution shows better efficiency than water in reducing dust emission by enhancing the moisture-carrying capacity of haul road of opencast mining. Green belt minimizes the build-up of pollution levels in mining areas by acting as pollution sinks.

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Web Links

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NOTIFICATIONS

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA, NEW DELHI

S.O. 4262 (E) [30.9.2024] Draft Notification of ESZ around Kappathagudda Wildlife Sanctuary Karnataka was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 30th Sept., 2024.

S.O. 4242 (E) [27.9.2024] Final notification Eco sensitive Zone around Tal Chhappar Wildlife Sanctuary Rajasthan was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 27th Sept., 2024.



S.O. 4233 (E) [20.9.2024] Notification of members of NTCA Committee under the Wild Life (Protection) Act, 1972 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 20th Sept., 2024.

S.O. 4219 (E) [25.9.2024] Notification with regard to reconstitution of SEIAA and SEAC of Punjab was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 25th Sept., 2024.

S.O. 4218 (E) [25.9.2024] Notification for amending S.O 2276 (E) dated 11.06.2021 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 25th Sept., 2024.

S.O. 3997 (E) [18.9.2024] Draft notification of Gir National Park in the state of Gujarat was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 18th Sept., 2024.

S.O. 3956 (E) [6.9.2024] Amendment in notification of Tipeswar Wildlife Sanctuary Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Sept., 2024.

S.O. 3943 (E) [13.9.2024] Amendment in ESZ around Gandhi Sagar Wildlife Sanctuary Madhya Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 11th Sept., 2024.

S.O. 3895 (E) [11.9.2024] Reconstitution of SEIAA, Gujarat was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 11th Sept., 2024.

S.O. 3880 (E) [10.9.2024] Amendment in ESZ around Zeilad Wildlife Sanctuary Manipur was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th Sept., 2024.

S.O. 3864 (E) [9.9.2024] Amendment to Standards for Discharge norms of CETP was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Sept., 2024.

S.O. 3832 (E) [6.9.2024] Draft notification of Mahananda Wildlife Sanctuary in Darjeeling, Kalimpong and Jalpaiguri, West Bengal was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Sept., 2024.

S.O. 3831 (E) [6.9.2024] Amendment Final notification of Bhimbandh Wildlife Sanctuary Bihar was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Sept., 2024.

S.O. 3819 (E) [5.9.2024] Amendment in Final Notification of ESZ around Gautala Autramghat Wildlife Sanctuary Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 5th Sept., 2024.

S.O. 3754 (E) [3.9.2024] Amendment in Final Notification of ESZ around Madei Wildlife Sanctuary Goa was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 3rd Sept., 2024.

S.O. 3740 (E) [2.9.2024] Amendment in ESZ around Dr Salim Ali Bird Sanctuary Goa was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Sept., 2024.

S.O. 3739 (E) [2.9.2024] Amendment in Final Notification of ESZ around Melghat Tiger Reserve Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Sept., 2024.

S.O. 3738 (E) [2.9.2024] Amendment in ESZ around Madhav National Park Madhya Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Sept., 2024.

S.O. 3736 (E) [2.9.2024] Amendment in ESZ around Kaimur Wildlife Sanctuary Bihar was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Sept., 2024.

S.O. 3591 (E) [23.8.2024] Amendment of Chandaka Dampara Wildlife Sanctuary Odisha was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd Aug., 2024.

S.O. 3584 (E) [22.8.2024] Amendment in final Notification of ESZ around Son Ghariyal Wildlife Sanctuary Madhya Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 22nd Aug., 2024.

S.O. 3550 (E) [21.8.2024] Draft Rules on Remediation of Contaminated Sites was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 21st Aug., 2024.

S.O. 3549 (E) [21.8.2024] Amendment in ESZ notification around Ghugua Fossil National Park Madhya Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 21st Aug., 2024.

S.O. 3548 (E) [21.8.2024] Amendment in ESZ notification around Bhagwan Mahaveer Wildlife Sanctuary Goa was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 21st Aug., 2024.

S.O. 3456 (E) [13.8.2024] Amendment in Painganga Wildlife Sanctuary Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 13th Aug., 2024.

S.O. 3452 (E) [13.8.2024] Amendment in Final Notification of ESZ around Balukhanda Konark Wildlife Sanctuary Odisha was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 13th Aug., 2024.

S.O. 3445 (E) [13.8.2024] Amendment in final Notification of ESZ Around Jaikawadi Bird Sanctuary Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 13th Aug., 2024.

S.O. 3249 (E) [12.8.2024] Amendment of the ESZ around Daranghati Wildlife Sanctuary Himachal Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th Aug., 2024.

S.O. 3243 (E) [9.8.2024] Final Notification ESZ around Kamlang Tiger Reserve and Namdapha Tiger Reserve Arunachal Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Aug., 2024.

S.O. 3201 (E) [5.8.2024] To notify CZA under Rule 10(4) of the Official Languages Rules, 1976 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 5th Aug., 2024.

S.O. 3184 (E) [6.8.2024] Amendment in final notification ESZ around Rajgir Wildlife Sanctuary Bihar was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Aug., 2024.

S.O. 3183 (E) [6.8.2024] Amendment in final Notification of ESZ around Kuldiah Wildlife Sanctuary Odisha was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Aug., 2024.

S.O. 3126 (E) [5.8.2024] Amendment of the ESZ around Keibul Lamjao National Park Manipur was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 5th Aug., 2024.

S.O. 3099 (E) [2.8.2024] Draft Notification with regard to amendment in EIA Notification, 2006 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Aug., 2024.

S.O. 3060 (E) [31.7.2024] Draft Notification Western Ghats Ecologically Sensitive Area spread across six States namely, Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 31st July, 2024.

S.O. 3039 (E) [30.7.2024] Amendment in final Notification of the ESZ around Nugu Wildlife Sanctuary Karnataka was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 30th July, 2024.



S.O. 3026 (E) [29.7.2024] Amendment notification of the ESZ around Nugu Wildlife Sanctuary Karnataka was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 29th July, 2024.

S.O. 3019 (E) [23.7.2024] To notify under Rule 10(4) of the Official Languages Rules, 1976 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd July, 2024.

S.O. 2984 (E) [26.7.2024] Amendment in final Notification of ESZ around Karera Wildlife Sanctuary Madhya Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 26th July, 2024.

S.O. 2958 (E) [19.7.2024] To notify NAEB under Rule 10(4) of the Official Languages (Use for official purposes of the Union) Rules, 1976 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 19th July, 2024.

S.O. 2920 (E) [23.7.2024] To notify under Rule 10(4) of the Official Languages Rules, 1976 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd July, 2024.

S.O. 2919 (E) [19.7.2024] Draft Notification regarding Environmental Relief Fund (Amendment) Scheme, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 19th July, 2024.

S.O. 2872 (E) [19.7.2024] Draft Notification regarding Public Liability Insurance (Amendment) Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 19th July, 2024.

S.O. 2783 (E) [16.7.2024] Amendment Kapilash Wildlife Sanctuary Odisha was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 16th July, 2024.

S.O. 2782 (E) [16.7.2024] Amendment in Cotigao Wildlife Sanctuary Goa was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 16th July, 2024.

S.O. 2772 (E) [15.7.2024] Amendment in the final Notification of the ESZ around Jiri Makru Wildlife Sanctuary Manipur was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 15th July, 2024.

S.O. 2715 (E) [11.7.2024] Amendment in the final Notification of the ESZ around Amchang Wildlife Sanctuary Assam was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 11th July, 2024.

S.O. 2707 (E) [11.7.2024] Amendment in the final Notification of the ESZ around Kailam Wildlife Sanctuary Manipur was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 11th July, 2024.

S.O. 2704 (E) [10.7.2024] Amendment in final Notification of ESZ around Debrigarh Wildlife Sanctuary Odisha was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th July, 2024.

S.O. 2681 (E) [10.7.2024] Amendment in final notification of ESZ around Mahavir Harina Vanasthali National Park Telangana was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th July, 2024.

S.O. 2680 (E) [10.7.2024] Amendment of final notification of the ESZ around Majathal Wildlife Sanctuary Himachal Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th July, 2024.

S.O. 2651 (E) [5.7.2024] Amendment Netravali Wildlife Sanctuary Goa was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 8th July, 2024.

S.O. 2630 (E) [5.7.2024] Amendment final notification of the ESZ around Jaldapara National Park West Bengal was published in the Gazette of

India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 5th July, 2024.

S.O. 2629 (E) [5.7.2024] Amendment Final Notification of the ESZ around Shimla Water Catchment Wildlife Sanctuary Himachal Pradesh was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 5th July, 2024.

S.O. 2579 (E) [3.7.2024] Amendment in final notification of ESZ around KalsubaiHarishchandragad Wildlife Sanctuary Maharashtra was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 3rd July, 2024.

G.S.R. 596(E) [26.9.2024] Notification of Ecomark Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 26th Sept., 2024.

G.S.R. 595(E) [26.9.2024] Notification rescinding the current notification GSR 85(E) dated 21.02.1991 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 26th Sept., 2024.

G.S.R. 582(E) [20.9.2024] Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 20th Sept., 2024.

G.S.R. 561(E) [11.9.2024] Recruitment Rules for the post of Junior Administrative Officer in BSI was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 11th Sept., 2024.

G.S.R. 499(E) [14.8.2024] Draft Hazardous and Other Wastes (Management and Transboundary Movement) Second Amendment Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 14th Aug., 2024.

G.S.R. 469(E) [30.7.2024] Notification to declare the 20 inhabited islands of UT of Andaman and Nicobar as Air Pollution Control Area was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 30th July, 2024.

G.S.R. 458(E) [29.7.2024] Draft Notification on Construction and Demolition Waste Management Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 29th July, 2024.

G.S.R. 425(E) [19.7.2024] Draft Notification of Water Act Exemption was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 424(E) [19.7.2024] Draft Notification of Water Amendment Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 423(E) [19.7.2024] Notification of Uniform consent guideline was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 422(E) [19.7.2024] Draft Notification of Chairman SPCB Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 421(E) [19.7.2024] Draft Notification of Air Act exemption was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 420(E) [19.7.2024] Draft Notification of Air (Prevention and Control of Pollution) (Amendment) Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 19th July, 2024.

G.S.R. 418(E) [18.7.2024] Draft Environment (Protection) (Amendment) Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 18th July, 2024.

MINISTRY OF MINES, GOVT. OF INDIA, NEW DELHI

S.O. 3929 (E) [13.9.2024] Notification under second proviso to sub section 1 of section 4 of the MMDR Act was published in the Gazette of



India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 11th Sept., 2024.

S.O. 3847 (E) [9.9.2024] Notification under clause (a) of sub section (1) of section 26 of MMDR Act was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Sept., 2024.

F. No. M.II-4/1/2024-Mines. II [4.9.2024] Publication of Combined Geo Scientist Examination 2025 Rules was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 4th Sept., 2024.

S.O. 3648 (E) [28.8.2024] Notification in exercise of the powers conferred by clause (a) of section 4 of the OAMDR Act 2002 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 28th Aug., 2024.

S.O. 3246 (E) [9.8.2024] Establishment of Offshore Areas Mineral Trust was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Aug., 2024.

S.O. 3054 (E) [31.7.2024] Notification under Section 17 of MMDR Act was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 31st July, 2024.

F. No. T-43010/2/2024-TS-IBM-HQ [24.7.2024] Publication of Notification for Territorial Jurisdiction of Vijayawada Regional Office was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - III, Section - 1 on 24th July, 2024.

S.O. 2936 (E) [24.7.2024] Notification under second proviso to sub section 1 of section 4 of MMDR Act was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 24th July, 2024.

S.O. 2628 (E) [4.7.2024] Notification of administering authority for OAMDR Act was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 4th July, 2024.

G.S.R. 551(E) [5.9.2024] Deputy Director General (Personnel and Administration) Recruitment Rules 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 5th Sept., 2024.

G.S.R. 502(E) [14.8.2024] Offshore Areas Mineral (Auction) Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 14th Aug., 2024.

G.S.R. 490(E) [9.8.2024] Offshore Areas Mineral Trust Rules, 2024 was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 9th Aug., 2024.

MINISTRY OF COAL, GOVT. OF INDIA, NEW DELHI

S.O. 4264 (E) [30.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule Amalgamated Gauri Pauni Expansion Open Cast Mine, Ballarpur Area, District Chandrapur (Maharashtra) [Plan bearing number C-I(E)/III/JJR/0724/1018, dated the 18th July, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 30th Sept., 2024.

S.O. 4263 (E) [30.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: Gauri Central Open Cast Mine, Ballarpur Area, District Chandrapur, Maharashtra [Plan bearing number: C-I(E)/III/JJR/0724/1019 dated the 24th July, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 30th Sept., 2024.

S.O. 4245 (E) [27.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: North Dhadu (Eastern Part) Coal Mining Block, North Karanpura Coal field, (District Latehar, State Jharkhand) [Plan bearing number HQS and DN24080, Dated 12th June, 2024] was published in the Gazette of India, Registered. No. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 27th Sept., 2024.

S.O. 4247 (E) [20.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: Name of the Coal Mining Block: North and Central Bankola Block and Konardihi Block, District: Paschim

Bardhaman, State: West Bengal, [Plan bearing number GM/JNR/LAND/2024-25/CBA(SEC 9)/205 dated the 11th June, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 20th Sept., 2024.

S.O. 4231 (E) [25.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: Tokisud North Coal Mine, Circle-Barkagaon, District Hazaribagh, Jharkhand, [Plan bearing number NMDC/CD/TOKISUD/CBA SEC(7)/24/01 dated 18.05.2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 25th Sept., 2024.

S.O. 4198 (E) [25.9.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: Tokisud North Coal Mine, Circle-Barkagaon, District Hazaribagh, Jharkhand [Plan bearing number NMDC/CD/TOKISUD/CBA SEC(7)/24/01 dated 18.05.2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 25th Sept., 2024.

S.O. 3715 (E) [30.8.2024] Coal Bearing Areas (Acquisition and Development) Act, 1957, Schedule: Name of the Coal Mining Block: SonepurBazari Expansion, Open cast Project, Raniganj Coalfields District Paschim Bardhaman, State West Bengal [Plan bearing Number: ECL/SBP/SURVEY/2024/225, dated the 25th April, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 30th Aug., 2024.

S.O. 3622 (E) [27.8.2024] Publication of notification was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 27th Aug., 2024.

S.O. 3619 (E) [27.8.2024] Publication of notification was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 27th Aug., 2024.

S.O. 3593 (E) [23.8.2024] Publiion of notification was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd Aug., 2024.

S.O. 3592 (E) [23.8.2024] Publication of notification was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd Aug., 2024.

S.O. 3515 (E) [19.8.2024] Publication of notification was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 19th Aug., 2024.

S.O. 3101 (E) [2.8.2024] Coal Bearing Areas (Acquisition and Development) Act, Schedule: Chitra East Opencast Project, Saharjori Coalfields under S P Mines Area, ECL, District Deoghar, State Jharkhand. [Plan bearing number ECL/SPM/GM/SUR/LAND/24-25/01 dated 24th April, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Aug., 2024.

S.O. 3100 (E) [2.8.2024] Coal Bearing Areas (Acquisition and Development) Act, Schedule: Rohne Coal Block, Circle- Barkagaon, District- Hazaribagh (Jharkhand) [Plan bearing number NMDC/CD/ROHNE/CBA SEC (7)/24/01, dated 08.05.2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 2nd Aug., 2024.

S.O. 3057 (E) [31.7.2024] Coal Bearing Areas (Acquisition and Development) Act, Schedule: Kolgaon Expansion Open Cast Mine, Wani Area, District Yavatmal (Maharashtra) [Plan Bearing Number: C-I(E)/III/JJR/0624/1017, dated the 7th June, 2024] was published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 31st July, 2024.

CURRENT NEWS

Coal India introduces uniform interest rates on delayed receivables

Sept. 30, 2024: Coal India (CIL), effective 1 October 2024, will be applying uniform interest rates on delayed amounts of receivables, adjustments and recoverable sums that remain outstanding after the due date. Earlier, the interest rates were skewed with wide variances even for the same generating company that had different Fuel Supply Agreements (FSAs) with CIL. The policy tweak is for coal sold under different FSAs



and schemes. This is yet another consumer friendly approach by CIL enabling ease of business.

(Source: <https://www.business-standard.com/>)

NLC India eyes critical mineral mining capacity of 1 MTPA by FY30

PTI, Sept. 29, 2024: State-owned NLC India is preparing to participate in upcoming auctions for critical mineral resources, aiming to achieve an annual mining capacity of one million tonnes by 2029-30. The company plans to leverage its mining expertise and increase its renewable energy capacity from 1,431 MW to 10,110 MW by 2030, aligning with the Union Budget's Critical Mineral Mission.

(Source: <https://economictimes.indiatimes.com/>)

Govt delegation to leave for Mongolia next month to discuss coking coal imports

PTI, Sept. 29, 2024: An Indian delegation, including senior government officials, will visit Mongolia next month to discuss importing coking coal. This move aims to diversify raw material sources and optimize steel production costs. Currently, India relies heavily on Australia for coking coal, but imports from Mongolia could offer cost benefits and improve availability.

(Source: <https://economictimes.indiatimes.com/>)

India's illegal coal mining problem | Explained

Sept. 26, 2024: On July 13, three workers died of asphyxiation inside an illegal coal mine in Gujarat's Surendranagar district. The officials said that the workers were working in a mine near Bhet village in Thangadh taluka without helmets, masks, or other safety equipment. The first information report (FIR) indicated that the accused failed to provide essential safety gear to the labourers, who died after inhaling toxic gas in the mine. The police have registered a case of culpable homicide not amounting to murder against four people.

(Source: <https://www.thehindu.com/>)

Industrial waste circularity is the way forward for waste & pollution management, decarbonisation

Sept. 26, 2024: The concept is based on the principle that 'waste is not only waste but a resource' and is a major focus area worldwide. The circularity gap report, however, estimated that only 7.2 per cent of the global economy is circular.

Read more <https://www.downtoearth.org.in/pollution/industrial-waste-circularity-is-the-way-forward-for-waste-pollution-management-decarbonisation>

(Source: <http://ptimes.cmsvatavaran.org/>)

Coal India's arm strides to reduce reliance on coal import

Sept. 26, 2024: Bharat Coking Coal Limited (BCCL), a subsidiary of Coal India Limited (CIL) and India's largest producer of coking coal, has made significant strides in reducing the country's reliance on imported coal through its active role in the "Mission Coking Coal" initiative under the Atmanirbhar Bharat vision. The import of coking coal puts a burden on India's valuable foreign reserve, and to cutting down on these imports, BCCL has undertaken substantial reforms to make its coking coal auction processes more flexible, transparent, and attractive for the country's steel producers.

(Source: <https://www.psuconnect.in/>)

Coal India, Rajasthan Rajya Vidyut ink JV for thermal and renewable energy projects

Sept. 24, 1984: Coal India Ltd (CIL) has entered into a joint venture agreement (JVA) with Rajasthan Rajya Vidyut Utpadan Nigam Ltd (RRVUNL) to establish a 2x800 MW brownfield thermal power project at RRVUNL's existing Kalisindh Thermal Power Station in Rajasthan. The agreement also allows for the exploration of other thermal power-related projects, including renewable generation obligations. Under the JVA, CIL will hold a 74% stake, with RRVUNL holding the remaining 26%.

(Source: <https://www.psuconnect.in/>)

UK set to close its last coal plant this month, only clean energy from October

BATHINDA, Sept. 22, 2024: The energy think tank Ember in its new analysis released on Friday has revealed a rapid shift from coal in the UK,

as the last remaining coal plant Ratcliffe-on-Soar is set to close on September 30. Coal, which accounted for 39% of the UK's total generation in 2012, falling to 0% in October 2024. Power sector emissions plummeted by 74% over that time, as coal's share of power was largely replaced by wind and solar. "The era of coal-free power begins. The UK has achieved something massive, shifting its power system from a huge polluter to one where renewables are thriving, in an astonishingly short period of time", said Ember analyst Frankie Mayo.

(Source: <https://timesofindia.indiatimes.com/>)

At least 51 killed in coal mine blast in Iran's Tabas

Sept. 22, 2024: A catastrophic explosion at a coal mine in Tabas, eastern Iran, resulted in at least 51 deaths and 20 injuries. The methane gas blast impacted two blocks operated by the Madanjoo Company. Rescue efforts continue amid high methane levels. President Masoud Pezeshkian assured families of government support following the tragedy.

(Source: <https://timesofindia.indiatimes.com/>)

Coal India eyeing Argentina, Chile for critical minerals, says official

Sept. 18, 2024: Coal India is exploring critical minerals in Argentina and is in discussions with Chile for lithium, according to India's federal mines secretary. The move aims to secure supplies of lithium, essential for electric vehicle batteries. India has listed 30 minerals as critical for clean energy adoption and is pursuing overseas pacts to secure these resources.

(Source: <https://economictimes.indiatimes.com/>)

30 coal blocks in state awaiting clearances: State mines director

RANCHI, Sept. 17, 2024: State mines director Shashi Ranjan on Monday said 30 coal blocks in Jharkhand are in the pipeline, awaiting various stages of clearances. Speaking at the third Jharkhand Mining Summit, organized by the Jharkhand chapter of PHD Chamber of Commerce and Industries at a city hotel, Ranjan said, "Jharkhand has roughly 40% of the country's mineral reserves. You name any mineral and we have it here. There are 30 coal blocks in the pipeline and awaiting various stages of clearances. New coal reserves are emerging. We have come to know that Asia's thickest coal seam is in Latehar and Chatra. Coal reserves have been found in Pakur and Dumka. In the coming years, Dumka and Pakur would become the next Dhanbad."

(Source: <https://timesofindia.indiatimes.com/>)

India should use mining proceeds to train workforce and raise productivity: Mining Skill Council Chief

Sept. 17, 2024: India's mining sector faces challenges due to low productivity and outdated practices. Pankaj Satija, Chairman of the Skill Council for Mining Sector, highlights the need for skilled workforce development. The Union Mines Ministry has a plan to upgrade training facilities and engage private players, utilizing District Mineral Foundation funds for skill enhancement.

(Source: <https://economictimes.indiatimes.com/>)

EOI floated for coal gasification tech for Rs 13,000cr project by CIL-GAIL JV

PTI, Sept. 16, 2024: GAIL and Coal India Limited have floated an Expression of Interest for shortlisting licensors of coal gasification technology for a proposed synthetic natural gas plant in West Bengal. The project, valued at Rs 13,052 crore, aims to use coal from Eastern Coalfields Ltd. The last date for EOI submission is October 15.

(Source: <https://economictimes.indiatimes.com/>)

Hindustan Zinc's all-women mine rescue team to represent India at international competition

PTI, Sept. 14, 2024: Hindustan Zinc Limited's all-women mine rescue team will represent India at the XIII International Mine Rescue Competition in Colombia. This marks a historic milestone as the first Indian all-women team to compete globally, showcasing their exceptional skills in various rescue drills and tests. The event highlights the company's commitment to gender diversity and parity.

(Source: <https://economictimes.indiatimes.com/>)

Coal Ministry says 71 coal blocks are in various stages of obtaining regulatory clearances



Sept. 12, 2024: Coal Ministry yesterday conducted a meeting to review the status of mines which have been auctioned in different tranches and are in varying stages of process completion. The comprehensive review focused on highlighting the government's commitment to enhancing domestic coal production. The Additional Secretary impressed upon the allottees to take necessary steps to operationalize the coal blocks that are in advanced stages of operationalization. The 71 coal blocks are in various stages of obtaining regulatory clearances. These blocks are distributed across nine states: Arunachal Pradesh, Assam, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, and West Bengal.

(Source: <https://www.business-standard.com/>)

Coal production from April to August up 6.4% to 384.07 MT

NEW DELHI, Sept. 11, 2024: India's coal production from April to August grew by 6.4% to 384.07 million tonnes compared to the same period last year. However, August saw a slight decrease in production due to above-normal precipitation. Coal supply also increased by 5.2% during the same with a minor drop in August.

(Source: <https://economictimes.indiatimes.com/>)

Coal India to spend \$8 billion on coal-fired plants near mines

Sept. 10, 2024: Coal India Ltd. plans to invest about 670 billion rupees to build coal-fired power plants near its mines, primarily in Odisha. The state-owned miner has approval for 4.7 gigawatts of generation over the next six to seven years, with an additional 2 gigawatts under discussion.

(Source: <https://economictimes.indiatimes.com/>)

Officer removes shoes, fixes Union minister's pyjamas, video goes viral

DHANBAD, Sept. 9, 2024: A viral video shows a BCCL official assisting Union minister Satish Chandra Dubey by removing his shoes and adjusting his pajamas before entering an underground mine in Munidhi, sparking controversy. Dhanbad district Congress president Santosh Singh criticized the incident, demanding an apology from the minister for demeaning the officer.

(Source: <https://timesofindia.indiatimes.com/>)

State Coal Minister inaugurates new solar plant at CCL's Piparwar Area

Sept. 7, 2024: Shri Satish Chandra Dubey, Hon'ble Minister of State for Coal & Mines, Govt. of India visited our subsidiary Central Coalfields (CCL) at Ranchi, Jharkhand. During his visit, he reviewed CCL's operations. He also inaugurated the new 20MW solar plant at the Piparwar Area of CCL. This significant step underscores our commitment to sustainable energy and a greener future.

(Source: <https://www.psuconnect.in/>)

NLC India aims to start mining of Machhakata coal block in Odisha ahead of schedule

PTI, Sept. 6, 2024: NLC India Ltd plans to start mining the Machhakata coal block in Odisha ahead of schedule. With reserves of 1.4 billion tonnes and a capacity of 30 MTPA, it is set to be one of India's largest mines. This aligns with NLCIL's goal to exceed 100 MTPA by 2030.

(Source: <https://economictimes.indiatimes.com/>)

Govt issues allocation orders for three coal mines; expect to generate employment to nearly 40,560 people

Sept. 5, 2024: The Ministry of Coal has issued Allocation Orders for three coal mines to NLC India Limited, Gujarat Mineral Development Corporation Limited, and TANGEDCO. These mines have a cumulative Peak Rated Capacity of 30 MTPA and are expected to generate annual revenue of Rs. 2,991.20 crores and provide employment to approximately 40,560 people.

(Source: <https://economictimes.indiatimes.com/>)

Madhya Pradesh farmer tries to stop illegal mining on his land, mowed down by tractor

BHOPAL, Sept. 3, 2024: A 35-year-old farmer in Madhya Pradesh's Singrauli was allegedly killed by the sand mining mafia when he attempted to prevent them from driving through his paddy fields. Villagers protested outside the district hospital, demanding a murder case be filed. Police are waiting for the autopsy report to provide further clarity on the

incident.

(Source: <https://timesofindia.indiatimes.com/>)

Coal India and IIT ISM signs MoU to establish Centre of Excellence for Mining 4.0

Aug. 31, 2024: A MoU was signed between Coal India and IIT-ISM, Dhanbad, at our corporate office in Kolkata in the presence of our Chairman, Shri P.M. Prasad. Director Technical, Dr. B. Veera Reddy, and Prof. Sukumar Mishra, Director of IIT (ISM), were the signatories on behalf of Coal India and IIT ISM, respectively. Prof. Dheeraj Kumar, Dy. Director, IIT(ISM) & Project Director, TexMiN, and Shri Alok Kumar, ED (Coordination) were present on the occasion. Shri Achyut Ghatak, Director (RD&T), CMPDI and Prof R.M. Bhattacharjee, Addl. Director Texmin, IIT(ISM) joined virtually. The key objectives of the MoU are to establish a robust foundation for research and technological development in the coal and energy sectors, develop a center of excellence, foster collaboration in training and research, to propel the mining and energy sector towards a more innovative and sustainable future.

(Source: <https://www.psuconnect.in/>)

Enforcement of new mining cess may increase cost pressure for steel makers: Iera

NEW DELHI, Aug. 26, 2024: Following the Supreme Court's ruling, states may impose a mining cess, potentially raising costs in the domestic steel industry. This change could compress margins for both primary and secondary producers. The power sector and primary aluminium producers, dependent on coal, may also face increased supply costs, Iera noted

(Source: <https://economictimes.indiatimes.com/>)

Ministry of Coal launches national safety portal, targets zero accidents in coal mines

NEW DELHI, Aug. 24, 2024: On Friday, Amrit Lal Meena, Secretary of the Ministry of Coal, reviewed the progress of the National Coal Mines Safety Report Portal. The portal aims for comprehensive safety audits and zero accidents. It includes an Accident Module for prompt reporting and a Safety Audit Module to strengthen processes, highlighting the ministry's commitment to enhancing safety in coal mines.

(Source: <https://timesofindia.indiatimes.com/>)

Coal Secretary Helm over SSRC meet for Research and Advisory projects in coal sector

Aug. 22, 2024: A special meeting of the Standing Scientific Research Committee (SSRC) was convened on August 21, 2024, under the chairmanship of the Secretary, Ministry of Coal, Shri Amrit Lal Meena, in hybrid mode. The meeting was attended by the Additional Secretary (Coal), Ms. Rupinder Brar, Additional Secretary (Coal), Ms. Vismita Tej, JS&FA, Ms. Nirupama Kotru, Advisor (Projects), Shri Anandji Prasad, and other senior officers of the ministry, along with members of the SSRC, and representatives from various academic institutions, research organizations, and leading mining companies. The meeting was exclusively focused on Research and Development (R&D) projects within the coal sector. Advancing exploration techniques, enhancing coal production, improving safety measures, & safeguarding the environment.

(Source: <https://www.psuconnect.in/>)

Coal India actively pursuing acquisition of critical minerals in India, abroad: Chairman

PTI, Aug. 21, 2024: Coal India is actively pursuing the acquisition of critical minerals, such as lithium, domestically and overseas to reduce import dependence. These minerals are essential for clean energy technologies, particularly in the production of batteries for electric vehicles. The company has successfully secured its first non-coal mineral mining venture in India and plans to continue participating in auctions for critical mineral blocks. Coal India aims to ensure self-reliance in coal production and provide quality coal for power generation at a fair price.

(Source: <https://economictimes.indiatimes.com/>)

Centre can lower royalties to minimise impact on mining companies post Supreme Court ruling: Ambit Capital

NEW DELHI, Aug. 20, 2024: "Interestingly, since West Bengal has been



collecting mining tax all these years, it's the only state that is deprived of enhanced royalty rate that was allowed in 1991. That's as clear a precedent as one needs. Therefore, net impact to companies from prospective dues would most likely be minimal," Ambit Capital said.

(Source: <https://economictimes.indiatimes.com/>)

How Tata Steel and JSW Steel will be impacted by SC ruling on mining royalty

Aug. 19, 2024: Tata Steel, JSW Steel, and other mining companies might face increased costs due to additional state-imposed mining taxes, as per a Supreme Court decision. This could reduce profitability and impact the value chain, causing inflation. States are now authorized to levy taxes and claim backdated royalties, significantly affecting the financial status of impacted companies.

(Source: <https://economictimes.indiatimes.com/>)

Coal Ministry Unveils initiatives to boost Coal Production via Global Mining Operators

Aug. 14, 2024: The Ministry of Coal has embarked on a transformative initiative to revolutionize coal mining by engaging Mining Developers cum Operators (MDOs) for major coal mine projects under Coal India Limited (CIL) to significantly enhance coal production, reduce reliance on imported coal, and introduce cutting-edge technology into the mining sector. The primary goal of engaging Mining Developers cum Operators (MDOs) is to significantly increase coal production by streamlining operations, enhancing productivity, and reducing mining costs.

(Source: <https://www.psuconnect.in/>)

Chhattisgarh leads India's charge with first Lithium mine in Korba

RAIPUR, Aug. 13, 2024: India's first lithium mine is set to open in Katghora, Chhattisgarh, following confirmation by the Geological Survey of India on significant deposits. The National Mineral Exploration Trust announced the decision, with state officials highlighting the mine's potential to drive development. Preliminary surveys indicate lithium concentrations from 10 to 2,000 parts per million across 250 hectares, also containing rare earth elements.

(Source: <https://timesofindia.indiatimes.com/>)

Ministry of Coal takes initiative for Coal Evacuation Infrastructure projects

Aug. 10, 2024: The Ministry of Coal has announced comprehensive strategies to enhance India's coal evacuation infrastructure. This initiative aligns with the Hon'ble Prime Minister's vision for "integrated planning & synchronized time-bound implementation" to achieve the ambitious goal of Viksit Bharat 2047. Recognizing the crucial role of coal in India's energy sector, the Ministry is dedicated to addressing current logistical constraints that impede efficient coal transportation. To this end, the Ministry is working closely with Ministry of Railways, State Governments and various agencies to address and resolve issues that affect the timely progress of infrastructure projects. This collaborative approach is expected to streamline processes and foster a more conducive environment for development.

(Source: <https://www.psuconnect.in/>)

Cabinet meeting: Sukhu govt nod to mining on pvt land

KULLU, Aug 9, 2024: The state cabinet on Thursday decided to permit mining on private land in Himachal Pradesh and increase the allowed depth of riverbed mining from one metre to two metre. The cabinet — presided by chief minister Sukhvinder Singh Sukhu — during its meeting on Thursday decided to amend the Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015.

(Source: <https://timesofindia.indiatimes.com/>)

Mines ministry working on rolling out Critical Mineral Mission this year: Official

PTI, Aug. 7, 2024: The Mines Ministry planned to launch the Critical Mineral Mission targeting domestic production, recycling, and overseas acquisition of vital minerals like cobalt, lithium, and rare earths. The initiative aimed to bolster technology development and a skilled workforce. The government successfully auctioned 14 critical mineral

mines and intended to conduct the first offshore mineral block auction.

(Source: <https://economictimes.indiatimes.com/>)

Coal India signs pacts with global firms for potential investment in critical minerals projects

PTI, Aug. 5, 2024: Coal India Ltd signed non-disclosure agreements with international companies to explore investments in critical mineral projects, including lithium extraction in Chile. KABIL, a joint venture of three PSUs, also signed an agreement for joint due diligence and investment in lithium and cobalt mining in Australia, aimed at ensuring a sustainable supply for India.

(Source: <https://economictimes.indiatimes.com/>)

Coal Minister issues Vesting Orders for 10 Mines

Aug. 1, 2024: Hon'ble Minister of Coal, Shri G Kishan Reddy, has issued vesting orders for ten strategically important mines, marking a significant advancement in the nation's coal production capabilities. This initiative, which includes one fully explored and nine partially explored mines, is set to enhance energy security and drive economic growth across the states of Jharkhand, Chhattisgarh, West Bengal, and Madhya Pradesh. These ten mines have potential to substantially contribute to the nation's energy security and industrial growth. Furthermore, these mines hold a substantial 2395 MT geological reserve, indicating a robust foundation for sustained coal production. These mines are expected to generate an annual revenue of Rs.166.36 crores and will attract a capital investment of Rs.150 crores. They will provide employment to about ~1352 people, both directly and indirectly.

(Source: <https://www.psuconnect.in/>)

Retro or prospective? SC reserves order on states' power to tax mining companies

July 31, 2024: A nine-judge Supreme Court bench reserved its decision on applying last week's judgment on states' power to tax mines and minerals rights retrospectively or prospectively. The Solicitor General Tushar Mehta warning of potential economic impact amounting to Rs 70,000-80,000 crore on public sector undertakings. He argued against mineral-rich states seeking refunds, highlighting the broad impact on various sectors and the potential burden on consumers if payments are made retrospectively.

(Source: <https://economictimes.indiatimes.com/>)

Five killed in coal mine collapse in Vietnam

July 30, 2024: Five coal miners were killed when a mine collapsed in Quang Ninh province, northern Vietnam, as reported by local authorities on Tuesday. The tragic incident occurred on Monday at a coal mine operated by a subsidiary of Vinacomin, a state-owned coal mining company, according to state media reports released on Tuesday. The victims, all male, ranged in age from 23 to 47 years old.

(Source: <https://timesofindia.indiatimes.com/>)

Mines Safety Award 2024 organized by Coal India for promoting safety mining operations

July 30, 2024: An all-India maiden national-level Mines Safety Awards (MSA) 2024, aimed at promoting best practices and enhancing safety in mining operations across India, was held on 28th July 2024 at the Biswa Bangla Convention Centre in Kolkata. Shri Prabhat Kumar, Director General of Mines Safety has gracefully envisioned, and organized by the All India Mines Safety Association (AIMSA) under the aegis of the Directorate General of Mines Safety (DGMS), this landmark event is hosted by Coal India Limited. The Gua Ore Mines, part of the Jharkhand Group of Mines under SAIL-Bokaro Steel Plant, has secured the first prize in the Open Cast Medium Categories Mines at the Mines Safety Awards 2024.

(Source: <https://www.psuconnect.in/>)

Booming Indonesian nickel industry faces challenges ahead

July 29, 2024: The Indonesian government's policy to ban raw nickel ore exports from January 2020 was a game changer, driving significant investments in downstream processing industries. The industry is now seen as a cornerstone of Indonesia's economic growth. The mining sector contributed 9.2 per cent to GDP in 2022 up from 4.3 per cent in 2020, with



nickel playing a substantial role in that increase. Read more about it <https://www.downtoearth.org.in/mining/booming-indonesian-nickel-industry-faces-challenges-ahead>

(Source: <https://www.downtoearth.org.in/>)

SECL official swept away to death in torrential downpour at Kusbunda coal mine

RAIPUR, July 28, 2024: A South Eastern Coalfield Limited (SECL) official drowned after being swept into a sump by a strong flow of water following three hours of downpour at the Kusbunda opencast coal mines in the Korba district of Chhattisgarh on Saturday evening. Read more about it <https://timesofindia.indiatimes.com/city/raipur/secl-official-swept-away-to-death-in-torrential-downpour-at-kusbunda-coal-mine/articleshow/112082254.cms>

(Source: <https://timesofindia.indiatimes.com/>)

Advancing 119 projects with sanctioned capital of Rs 1.33 lakh cr to boost output: Coal India

PTI, July 28, 2024: Coal India Ltd (CIL) is advancing 119 projects with a capacity of 896 million tonne per year and a sanctioned capital of Rs 1,33,576 crore. These projects are part of CIL's proactive strategy to increase production capacity and meet future coal demands. The company has set an ambitious target of achieving 1 billion tonne of production by 2025-26 to meet the nation's coal demand and support the goal of 'Atmanirbhar Bharat'.

(Source: <https://economictimes.indiatimes.com/>)

Western Coalfields signs MoU with CIPET to create job opportunity

July 25, 2024: WCL signed a Memorandum of Understanding (MoU) with CIPET for the financial years 2024-25 and 2025-26 on 24th July 2024. The Key highlights of the MoU include CIPET providing skill development training to youth in plastic engineering trades in WCL-affected areas, such as Chandrapur, Yavatmal, and Nagpur districts in Maharashtra and Chhindwara and Betul districts of Madhya Pradesh. The goal is to attract 225 participants, per the company's official sources.

(Source: <https://www.psuconnect.in/>)

Coal and Mines Minister G. Kishan Reddy launched visionary tree plantation campaign 'Ek Ped Maa Ke Naam'

NEW DELHI, July 25, 2024: Hon'ble Union Minister of Coal and Mines Shri G. Kishan Reddy today on 25th July 2024 launched the Tree Plantation Campaign- 2024 under the visionary campaign 'Ek Ped Maa Ke Naam' at BCCL, Dhanbad. Secretary, Ministry of Coal, Government of India, Shri Amrit Lal Meena and Chairman, Coal India Limited, Shri P.M. Prasad were prominently present on the occasion. Read more about it <https://www.psuconnect.in/news/coal-and-mines-minister-g-kishan-reddy-launched-visionary-tree-plantation-campaign-ek-ped-maa-ke-naam/43576>

(Source: <https://www.psuconnect.in/>)

NLCIL undertakes mass tree plantation drive to commemorate vriksharopanabhiyan- 2024

NEW DELHI, July 25, 2024: A novel Tree plantation programme initiative by the Ministry of Coal as part of Vriksharopan Abhiyan was celebrated by NLCIL in 14 places/sites in 5 Districts and involving 5 states (Tamil Nadu, Rajasthan, Odisha, Jharkhand and UP) today on 25.07.24. About 4200 people comprising Executives, Employees, Indoserve and Contract workmen and around 100 School Children had participated in the event. The CMD, Functional Directors and CVO of NLCIL, DIG /CISF and Deputy Director Medical, Cuddalore actively participated in this program and encouraged the participants. During this event, 42,500 saplings were planted in 14 sites while 92,500 saplings were distributed to Executives, Employees, Indoserve & Contract workmen of NLCIL and to the students and the general public in Neyveli. Read more about it <https://www.psuconnect.in/news/nlcil-undertakes-mass-tree-plantation-drive-to-commemorate-vriksharopan-abhiyan---2024/43578>

(Source: <https://www.psuconnect.in/>)

NTPC Coal Mining Headquarters distributes desktop computers at Blind School

NEW DELHI, July 23, 2024: As part of promoting computer skill training

among young and specially challenged, NTPC Coal Mining Headquarters, Ranchi under its CSR initiative in association with Swayamsiddha Ladies Club distributed two nos. of desktop computers to St Michael Blind School Ranchi, residential school for specially challenged children with visual impairment.

(Source: <https://www.psuconnect.in/>)

Coal India forays into non-coal mineral mining project with Ministry of Mines

July 22, 2024: Coal India Limited has received an order from the Ministry of Mines, Govt of India for a Composite license (prospecting and mining). In alignment with the government's Atmanirbharta vision, Coal India has formed a special team to focus on other critical minerals both globally and within India. The project is held for the Prospecting and mining of the Khattali Chhoti Graphite Block located in Alirajpur, Madhya Pradesh. The tenure is 1 year for the grant of composite license and 3 years for execution of mining Lease deed. Currently, the project is in a very preliminary phase, necessitating further exploration.

(Source: <https://www.psuconnect.in/>)

Coal India ventures into non-coal mineral mining with graphite project

PTI, July 21, 2024: Coal India Limited (CIL) has been granted a composite license for prospecting and mining at the Khattali Chhoti Graphite Block in Alirajpur, Madhya Pradesh. The company is required to pay a mining premium of 150.05% of the value of minerals dispatched to the state government.

(Source: <https://economictimes.indiatimes.com/>)

Union Mines Minister Kishan Reddy launches District Mineral Foundation portal

PTI, July 20, 2024: Reddy also launched the Mineral Exploration Hackathon focused on innovative mineral hunt techniques. The hackathon is aimed at promoting use of emerging technologies like Artificial Intelligence (AI) and Machine Learning (ML) for geophysical data, integration of multiple mineral exploration data sets such as baseline data, available exploration data, etc., to identify new mineral targets, particularly for deep seated/concealed ore bodies.

(Source: <https://economictimes.indiatimes.com/>)

ONGC shares surged over 2% amid commencement of Coal Bed Methane Block production

July 18, 2024: The shares of the Oil PSU ONGC surged over 2.4% after the company announced that it had commenced production from Coal Bed Methane Block (CBM) in Bokaro, Jharkhand. In an exchange filing, ONGC said, "It is hereby informed that the Company has commenced its production from the Coal Bed Methane (CBM) block in Bokaro, Jharkhand." CBM is an unconventional source of natural gas and an alternative source for augmenting India's energy resources.

(Source: <https://www.psuconnect.in/>)

Deputy Director General of Coal Ministry, Smt. Santosh was on two-day visit to WCL

July 16, 2024: Deputy Director General of Ministry of Coal, Smt. Santosh was on a two-day visit to Western Coalfields Limited (WCL). On the first day of her visit, dated 15.07.2024, she visited the Vani area. Here she inspected the work of boom barriers and IT undertakings of Niljai sub-area and gave her important suggestions in this direction. On the second day of her visit, dated 16.07.2024, she reviewed the performance, CSR activities and vigilance-related issues of Western Coalfields Limited at the headquarters. Mrs. Santosh met and interacted with the children undergoing training under Project-TARAASH (Talent Amplification of Rural Youth through Aggressive Skill Hunt) implemented under the CSR of WCL. These children are undergoing training for IIT-JEE and NEET examinations for a period of two years at the Aakash-Byju Center in Nagpur under Project-TARAASH. Mrs. Santosh praised Project-TARAASH and motivated the students to keep working towards their goals. On this occasion, she also visited the students' hostel and reviewed the facilities being provided to them.

(Source: <https://www.psuconnect.in/>)



Coal Ministry Signs Agreements for three Coal Mines

July 15, 2024: The Ministry of Coal today successfully executed Coal Mining Development and Production Agreements for three coal mines auctioned under the Second Attempt of the 7th Round. This event marks a significant milestone in success of commercial coal mining. Among the three mines, two are partially explored, while one is fully explored. The mines for which agreements were executed are Machhakata (Revised) coal mine, KudanaliLubri coal mine, and Sakhigopal-B Kakurhi coal mine. The successful bidders are NLC India Limited, Gujarat Mineral Development Corporation Limited, and Tamil Nadu Generation and Distribution Corporation Limited, respectively.

(Source: <https://www.psuconnect.in/>)

Centre asks Jharkhand to auction 10 mineral blocks, warns it will go ahead if state fails to do so

PTI, July 14, 2024: The Mines Ministry has instructed the Jharkhand government to sell 10 mineral blocks, including a gold mine, warning of potential federal auction if the state fails to comply. It cited exploration levels of G2 and G3. These blocks encompass a copper mine, limestone mine, and graphite mine. The Centre's 2021 mining rule amendment empowers it to sell blocks if states do not conduct auctions within agreed timelines. Jharkhand is currently behind in this regard.

(Source: <https://economictimes.indiatimes.com/>)

Coal India to ease e-auction norms; plans to tweak auction, allocation methodology

PTI, July 12, 2024: Coal India Limited (CIL) has lowered earnest money deposit and increased dry fuel quantity in e-auctions to encourage increased participation. The company has asked all its arms, except Northern Coalfields Ltd, to increase their offer quantity under e-auction to 40% of their total production for the second and third quarters of this financial year.

(Source: <https://economictimes.indiatimes.com/>)

WCL concludes Workshop on 'Sustainable Initiatives in Coal India Limited'

NAGPUR, July 11, 2024: The workshop on "Sustainable Initiatives In Coal India Limited" organized by Western Coalfields Limited (WECOL) was concluded on 10.07.2024 at Hotel Centre Point, Nagpur. The Chief Guest at the inaugural ceremony of the workshop was Shri D.K. Solanki, Deputy Secretary (SDC/JT/LA&IR), Ministry of Coal, Government of India and Shri J.P. Dwivedi, Chairman-cum-Managing Director, WCL. Shri Bikram Ghosh, Director Finance, WCL, Shri Ajay Madhukar Mhetre, CVO, WCL and C. Jayadev, General Manager (Environment), CIL were present as special guests. The Chief Guest, Shri D.K. Solanki, in his address said that environmental protection will be possible only through collective efforts of all. He appreciated the environmental conservation work being done by WCL.

(Source: <https://www.psuconnect.in/>)

Delhi court seeks complainants' response on CBI's closure report in coal case

July 10, 2024: The complainants in the case included Union minister of state for railways and food processing industries, Ravneet Singh Bittu, and six other political leaders a Delhi court on Wednesday sought response of Bharatiya Janata Party (BJP) leader and Union minister of state for railways and food processing industries, Ravneet Singh Bittu, and six other political leaders, who are the complainants in a case related to the irregularities in the allocation of coal blocks, before considering a closure report filed by the Central Bureau of Investigation (CBI).

(Source: <https://www.hindustantimes.com/>)

Centre says 19 coal mines allocated to 13 thermal power plants for fly ash disposal

PTI, July 9, 2024: In 2023, 19 coal mines were allocated to 13 TPPs for responsible fly ash disposal. Overseen by the Central Level Working Group and Additional Secretary, with the Central Electricity Authority, the initiative promotes sustainability. Fly ash's valuable composition allows for various applications, reducing the carbon footprint and

addressing environmental concerns in the coal sector.

(Source: <https://economictimes.indiatimes.com/>)

India to get coking coal from Mongolia on trial basis in July

July 8, 2024: India is set to trial coking coal imports from Mongolia later this month, aiming to reduce its reliance on Australian supplies. Major steel producers like JSW Steel and SAIL will receive initial shipments, exploring alternative routes beyond Chinese ports. This strategic move addresses volatile supply issues and diversifies sources amid geopolitical tensions with China.

(Source: <https://economictimes.indiatimes.com/>)

DVC to invest Rs 20,000 cr in solar energy projects by 2030

PTI, July 5, 2024: The Kolkata-headquartered corporation now has only 14 MW installed solar capacity and is executing a 348 MW project in association with NTPC. A 250MW/hour capacity of battery storage is also under consideration, he said. DVC also plans to ramp up its captive coal mining from its Tubed block in Jharkhand with a separate railway siding for smoother evacuation.

(Source: <https://economictimes.indiatimes.com/>)

Coal Ministry seeks view on draft coal, lignite mining plan norms

NEW DELHI, July 3, 2024: In a groundbreaking move, draft guidelines propose transitioning to advanced technologies for sustainable coal mining, focusing on land restoration and mechanized mining over manual methods. The industry is poised for a transformative shift towards more efficient and environmentally friendly practices.

(Source: <https://economictimes.indiatimes.com/>)

Coal India organises workshop on new technologies in mining machinery

NEW DELHI, July 2, 2024: Coal India organised a seminar on "New Technologies in Mining Machinery" at its corporate office in Kolkata. Shri P.M. Prasad, Chairman, Coal India, inaugurated the workshop. Speaking on the occasion, Shri Prasad said that "coal will remain the primary fuel source in India for the foreseeable future, however, it is imperative that all measures should be taken to increase productivity with utmost care of maintaining environmental sustainability."

(Source: <https://www.psuconnect.in/>)

NTPC looks to set up waste-to-charcoal plants in Haryana

July 01, 2024: Haryana govt to set up waste-to-charcoal plants in Gurugram-Manesar & Faridabad with NVVNL. Green coal plants to be expanded to other cities in Haryana. Haryana government on Sunday said the state will soon set up waste-to-charcoal plants also known as green coal plants in Gurugram-Manesar and Faridabad. An agreement will be signed between NTPC Vidyut Vyapar Nigam Limited (NVVNL) and the Haryana government. After setting up the plants in Gurugram-Manesar and Faridabad, this initiative will be expanded to other cities in Haryana and the NVVNL officers will soon visit a few sites for establishing green coal plants, an official spokesperson said.

(Source: <https://www.hindustantimes.com/>)

Important Parliamentary Questions

LOK SABHA UNSTARRED QUESTION

• **Question No. 2705 answered on 07.08.2024**

Acquisition of land for Coal Mining Projects

2705. SMT. DHANORKAR PRATIBHA SURESH

Will the Minister of Coal be pleased to state:

- (a) whether Coal India and its associate companies are facing hurdles in acquisition of land for their new coal mining projects and extended projects;
- (b) if so, the details of the hurdles being faced by CIL and its associate companies for acquisition of land;
- (c) whether demands are being raised to amend the Coal Bearing Areas Act (Acquisition and Development), 1957 with regard to acquisition of land, commensurate with present times;
- (d) if so, whether the Government has taken decision to amend the said Act commensurate with the present times; and
- (e) if so, the details thereof and if not, the reasons therefor?



ANSWER: MINISTER OF COAL AND MINES (SHRI G. KISHAN REDDY)

(a) to (b): Subsidiary companies of Coal India Limited (CIL) are undertaking land acquisition as per requirement of new coal mining projects and expansion of existing mines. Coal companies are able to acquire land with support of State Governments. In some cases, land acquisition process takes longer time due to lack of updated records, apportionment disputes, demand for higher compensation and Rehabilitation & resettlement benefits.

(c), (d) & (e): Some suggestions received in the Ministry are under examination.

• **Question No. 2224 answered on 05.08.2024**

Forest Clearance to Iron Ore Mine

2224. SMT. JOBA MAJHI:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state.

(a) whether the matter of stage-2 forest clearance of 274.50 hectares of the central block and southern block of the iron-ore mine of Steel Authority of India located at Meghahatuburu-Kiriburu is pending since 2010;

(b) whether the Government proposes to issue said clearance as without stage-2 forest clearance the said mine will be on the verge of closure in the next 1-2 years due to which there is a danger for about forty thousand workers to become unemployed; and

(c) if so, the time by which the said proposal is likely to be cleared and if not, the reasons therefor?

ANSWER: MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI KIRTI VARDHAN SINGH)

(a) to (c) the proposal for diversion of 247.50 hectares of forest land from already leased 1936.06 ha of Kiriburu- Meghahatuburu group of iron-ore mines in favour of the Steel Authority of India Limited (SAIL) in West Singhbhum district of Jharkhand was granted 'in-principle' approval vide this Ministry's letter dated 18.10.2010 read with letter dated 07.05.2014 subject to fulfilment of certain conditions prescribed therein. In this regard, the complete information as sought by the Ministry has not been submitted by the State Government so far.

• **Question No. 1148 answered on 29.07.2024**

Single Use Plastic

1148. SHRI MANICKAM TAGORE B:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) whether it is a fact that the Government is in favour of regulating and not eliminating Single Use Plastic;

(b) whether it is also true that the Government has agreed to science based criteria for identifying such plastics in the week long negotiations involving 192 countries held in Canada recently;

(c) whether many other countries have also took the same stand that no outright stoppage of single use and avoidable plastics; and

(d) if so, the details thereof?

ANSWER: MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI KIRTI VARDHAN SINGH)

(a) Ministry of Environment, Forest and Climate Change has notified the Plastic Waste Management Amendment Rules, 2021, on 12th August 2021, prohibiting manufacture, import, stocking, distribution, sale and use of the identified Single Use Plastic (SUP) items, which have low utility and high littering potential with effect from the 1st July, 2022. The notification also prohibits manufacture, import, stocking, distribution, sale and use of plastic carry bags having thickness less than one hundred and twenty microns with effect from the 31st December, 2022. Non-woven plastic carry bags of less than 60 gram per sqm (GSM) are also prohibited from 30th September 2021. Separately, States/UTs have issued notifications/orders introducing regulations pertaining to complete or

partial ban on plastic carry bags and/or identified single-use plastic items, over and above the Plastic Waste Management Rules.

(b) to (d): Indian delegation participated in the negotiations at fourth session of the Intergovernmental Negotiating Committee (INC 4) held in Canada from 23rd April 2024 to 29th April 2024. INC 4 deliberated and negotiated on revised draft of the international legally binding instrument to address plastic pollution. The revised draft will serve as the starting point of negotiations during INC 5. The INC 4 decided to establish ad hoc intersessional open-ended expert groups on the following topics:

(i) to develop an analysis of potential sources, and means that could be mobilized, for implementation of the objectives of the instrument, including options for the establishment of a financial mechanism, alignment of financial flows, and catalyzing finance, and

(ii) to identify and analyse criteria and non-criteria based approaches regarding plastic products and chemicals of concern in plastic products, and product design focusing on recyclability and reusability of plastic products, considering their uses and applications.

The two expert groups have been established to inform and help advance the work of the Committee and their meetings are only of a technical and expert nature. These are not negotiating nor decision-making meetings and are not part of an INC session.

• **Question No. 284 answered on 24.07.2024**

Dumping of Mine Waste

284. SMT. MALVIKA DEVI:

Will the Minister of MINES be pleased to state:

(a) the steps being taken to make the dumping of mine waste more economic friendly;

(b) whether any steps are being taken to make the transfer and leasing of mines more streamlined; and

(c) the details of the number of mine operators recognised by the Government for sustainable mining practices?

ANSWER: THE MINISTER OF COAL AND MINES (SHRI G. KISHAN REDDY)

(a): The Central Government has taken adequate steps by making provisions under the Mineral Conservation and Development Rules, 2017 [MCDR, 2017] to ensure environment friendly dumping of mine waste to minimise impact on the environment and society. Under the existing law, the miners are mandated to store the waste material on non-mineralized area of Mining lease to avoid its mixing with useful mineral content as well as on impervious ground to avoid any degradation of ground water. Further, materials such as waste rock and overburden are required to be back-filled into the mine excavations with a view to restore the land to its original form as far as possible.

(b). The MMDR Act, 1957 was amended through the MMDR Amendment Act, 2021 with effect from 28.03.2021 whereby all restrictions on transfer of mineral concessions have been removed. Thus, the process for leasing and transfer of mines has been streamlined.

(c): As per existing law, sustainable mining practices are required to be adopted by all mining lease holders according to Chapter-V of Mineral Conservation and Development Rules (MCDR), 2017 which provides for precaution against air pollution and noise, prevention of discharge of toxic liquid, control of surface subsidence etc.

Further, as per Rule 35(4) of MCDR, 2017 every holder of a mining lease shall achieve at least three-star rating within a period of four years from the date of commencement of mining operations and thereafter maintain the same on year-on-year basis.

The year wise number of 3 star and above rated mines for the last three years and the 5 star rated mines felicitated is given below:

Year	No. of 3 star and above rated mines (a)	No. of 5 star rated mines out of (a)
2020-21	922	40
2021-22	1040	76
2022-23	1129	68



Question No. 235 answered on 24.07.2024

Mission Life

235. SHRI K. RADHAKRISHNAN; SHRI SUKHDEO BHAGAT

Will the Minister of Coal be pleased to state:

- (a) the measures taken by the Government under Mission Life to promote sustainable and environmental-friendly coal mining practices;
- (b) the details of the budgetary outlay to fund Research and Development (R&D) in the coal sector since the year 2019;
- (c) the number of coal mines abandoned, closed or discontinued by Coal India Limited (CIL) during the last five years; and
- (d) the technologies being adopted by CIL in its underground and opencast mines to enhance their sustainability and efficiency?

ANSWER: MINISTER OF COAL AND MINES (SHRI G. KISHAN REDDY)

(a): Coal companies under the guidance of the Ministry of Coal have implemented 10 Actions items under various categories of Mission Life action to promote sustainable and environment-friendly coal mining practices in the Coal Sector as indicated in the Annexure.

(b): The budgetary outlay to fund Research and Development (R&D) in the coal sector since the year 2019 is given table below:

Year	Budgetary Outlay (Rs. in Crores)	Actual Released (Rs. in Crores)
2019-20	22.00	18.78
2020-21	12.00	9.97
2021-22	11.50	8.35
2022-23	8.35	6.94
2023-24	18.00	18.00

(c): During the last five years, 24 coal mines have been abandoned, 20 coal mines have been discontinued and no coal mine has been closed in Coal India Limited (CIL).

(d): The technologies adopted by CIL in its underground and opencast mines to enhance their sustainability and efficiency are as under:

- Surface Miner to eliminate the drilling, blasting, and crushing operations.
- Xcentric rippers for blast-less overburden removal.
- Continuous miner and High wall mining for blast-free clean coal technology in underground mines
- 'First Mile Connectivity' projects to minimize road transportation.
- Water sprinklers and Fog canons to mitigate air pollution.
- Drills fitted with wet drilling and dust extractors to control the generation of dust.
- Dedicated coal corridors for coal transportation.
- Effluent treatment plants for the treatment of workshop effluent & Coal Handling Plant.

Annexure

S. No.	Category of Mission Life Action	Action Items
1.	Energy Saved	Use of LED bulbs/ tube-lights Prefer CNG/ EV vehicle over petrol/ diesel vehicles Install a solar systems on rooftops
2.	Water Saved	Participate in recharge of rural water bodies including development of Mining voids for water conservation. Create rainwater harvesting infrastructure in home/ schools/ offices
3.	Single Use Plastic Reduced	Use cloth bag for shopping instead of plastic bags Participate in and mobilize participation for clean-up drives of coal mining townships/ villages and water bodies
4.	Healthy Lifestyles Adopted	Start biodiversity conservation at community level by developing of Eco-Parks and mining tourism sites. Plant trees to reduce the impact of pollution
5.	E-Waste Reduced	Discard gadgets in nearest e-recycling units

Environmental Clearance accorded to Mining & Industrial Projects

Project Details	Date of EC Submission	Date of EC Granted
State: Andhra Pradesh (Category: Non-Coal Mining)		
Project No : J-11015/443/2014-IA.II (M), Project Name: Ramco Budawada Limestone Mine The Ramco Cements Ltd. (Formerly Madras Cements Ltd.), District: Krishna, Tehsil: Jaggayyapeta, Company: M/s.The Ramco Cements Ltd., Type of project: Expansion.	10.8.2016	9.7.2024
State: Jharkhand (Category: Coal Mining)		
Project No:IA-J-11015/18/2020-IA-II(M), Project Name: Pachwara South Coal Mine Project, District :Dumka, Tehsil: Gopikandar, Company: M/s. Neyveli Uttar Pradesh Power Limited, Type of project: New.	10.10.2022	23.9.2024
State: Orissa (Category: Industrial Projects)		
Project No:J-11011/38/2021-IA.II(I), Project Name: Installation of 2X7 MTPA Greenfield Iron Ore Pellet Plant At Paradip, Jagatsinghpur district, Odisha, District: Jagatsinghapur, Tehsil: Kujang, Company: M/s. Essar Minmet Ltd, Type of project: New.	27.7.2022	27.9.2024
State: Tamil Nadu (Category: Non-Coal Mining)		
Project No: 23-227/2018-IA.III(V), Project Name: Chettichavadi Jaghir Magnesite & Dunite Mines, District: Salem, Tehsil: Salem, Company: M/s. Dalmia Bharat Sugar and Industries Ltd., Type of project: New.	29.11.2021	3.9.2024
State: Telangana (Category: Coal Mining)		
Project No: 23-253/2018-IA.III (V), Project Name: Vakilpalli Mine, District: Peddapalli, Tehsil: Peddapalle, Company: M/s. The Singareni Collieries Company Ltd., Type of project: Expansion.	25.2.2022	25.6.2024
State: Uttar Pradesh (Category: Industrial Projects)		
Project No: 0, Project Name: Subham Polychem Pvt. Ltd., District: Lucknow, Tehsil: Bakshi Ka Talab, Company: M/s. Subham Polychem Private Limited, Type of project: Expansion.	25.1.2023	30.7.2024
State: West Bengal (Category: Industrial Projects)		
Project No: IA-J-11011/1/2020-IA-II(I), Project Name: Establishment of new natural and synthetic surfactant chemical manufacturing unit Mouza Kulepairi, P.S. Bagnan, Dist-Howrah, West Bengal by M/s Deterge Chem (EAST) Private Ltd. (DCEPL), District: Howrah, Tehsil: Bagnan - I, Company: M/s.Deterge Chem (East) Pvt. Ltd. (DCEPL), Type of project: New.	9.3.2024	30.7.2024

EIACP Query Form

1. Name :

3. Organisation and Address :

4. E-mail :

5. Literature will be used for :

6. Date :

I would like to search your database in the following areas: (tick appropriate subjects)

Subject

1. Sand Mining
2. Fly Ash
3. Ecorestoration
4. Mine Fires
5. Land Subsidence
6. Noise and Vibration

Subject

7. Ergonomics
8. Land Use
9. Policy and Planning
10. Bioprocessing of Fuel
11. Hydrogeology
12. Acid Mine Drainage

13. Waste Water Treatment
14. Water Pollution
15. Air Pollution
16. Land Reclamation
17. Environmental Management
18. Socio Economic Environment

2. Designation :

7. Signature :

19. Solid Waste Management
20. Impact Assessment
21. Health and Toxicology
22. Mine Closure
23. Remote Sensing and GIS

Please mail to the attention of **Prof. Alok Sinha**, Coordinator & **Prof. Suresh Pandian E.**, Co-coordinator

IIT(ISM) EIACP Programme Centre, Dept. of Environmental Science & Engineering, Indian Institute of Technology (IISM), Dhanbad- 826004 (Jharkhand)

Phone: 7707018493; (0326)2235285; EPABX: (0326) 2235001 to 2235004, e-mail: ism-env@envs.nic.in, envis@iitism.ac.in, Website: www.ismenvs.nic.in

Various Activities of IIT(ISM) EIACP Programme Centre, Dept. of ESE

➤ Intellectual Property Awareness Session conducted by the DPIIT IPR Chair Team at Dept. of ESE, IIT(ISM) on 25.09.2024



Glimpses of Intellectual Property Awareness

➤ Workshop by Bureau of Indian Standards at Department of Environmental Science & Engineering, IIT (ISM) on 20.09.2024



Glimpse of Workshop by Bureau of Indian Standards at Department of Environmental Science & Engineering, IIT (ISM)

➤ Plantation Drive to create “Matri Van” using the Miyawaki Technique Under the “Ek Ped Maa Ke Naam” Campaign at IIT(ISM) on 19.9.2024



Glimpses of Plantation Drive to create “Matri Van” using the Miyawaki Technique under the “Ek ped Maa Ke Naam” Campaign.

➤ **IT(ISM) EIACP (PC-RP) celebrated World Ozone Day 2024 on 16.09.2024**



Dignitaries at the Dais (L to R): Prof. Suresh Pandian - AP, Dept. of ESE & Co-Coordinator, EIACP, IIT(ISM); Prof. Dheeraj Kumar – Dy. DT, IIT(ISM); Prof. Sukumar Mishra - DT, IIT(ISM); and Prof. Alok Sinha – HOD, Dept. of ESE & Coordinator, EIACP, IIT(ISM)



Lighting of the lamp by Prof. Alok Sinha – HOD, Dept. of ESE & Coordinator, EIACP (PC-RP), IIT(ISM)



Welcome address by Prof. Alok Sinha – HOD, Dept. of ESE & Coordinator, EIACP (PC-RP), IIT(ISM)



Invited Keynote Speaker Prof. Mukesh Sharma, Dept. of Civil Engg., IIT Kanpur delivered a Keynote Lecture virtually on "Ozone: Basics to its Stratospheric Resurrection".



Prof. Alok Sinha & Prof. Sukumar Mishra, DT IIT(ISM) to Prof. Mukesh Sharma for his valuable time and delivered a highly informative lecture.



Prof. Alok Sinha & Prof. Sukumar Mishra, DT IIT(ISM) felicitated Prof. Mukesh Sharma with memento.

➤ **IIT(ISM) EIACP Programme Centre (RP) awarded the Best EIACP Centre in the East - Zone during the All India EIACP Coordinator's Meet held in New Delhi on Sept. 7th, 2024**



Ms. Nameeta Prasad, JS, MoEFCC, & **Dr. Unmana Sarangi**, Director, MoEF&CC, presented the Best Performing EIACP Centre Award in the East Zone under the Regional category to IIT(ISM) EIACP (PC-RP). The award was received by **Prof. Alok Sinha**, HOD, Dept. of ESE & Coordinator, EIACP (PC-RP), along with **Mr. Bishwajit Das**, Programme Officer, IIT(ISM) EIACP (PC-RP).

➤ **EIACP (PC-RP) at Dept. of ESE in association with the Horticulture Section, IIT(ISM) organized Plantation Drive using Seed ball technique under "Ek Ped Maa Ke Naam" Campaign, on 29.8.2024**



Glimpses of Plantation Drive using Seed ball technique (natural farming) under the "Ek Ped Maa Ke Naam"

➤ EIACP (PC-RP) at Dept. of ESE in collaboration with the Horticulture Section, IIT(ISM) organized a plantation drive under the "Ek Ped Maa Ke Naam" Campaign on 28.7.2024



Glimpses of Plantation Drive under "EK Ped Maa Ke Naam" Campaign by Faculty, Officer & Students of ESE, IIT(ISM)

➤ EIACP PC-RP), Dept. of ESE an awarded prize distribution ceremony on Independence Day, 15th Aug. 2024 for event recognized the outstanding talents of students who excelled in sit-and-draw competition and essay writing competitions held on the occasion of World Environment Day, 5th June 2024



Glimpses of winners awarded prize distribution

➤ National Service Scheme (NSS) and Centre of Societal Mission (CSM), IIT(ISM), in association with EIACP (PC-RP), Dept. of ESE, IIT(ISM) organized a plantation drive of 100 plants using the Miyawaki Technique to create a "Matri Van" on 17.08.2024 at Rajkiya Anusuchit Jati Uchcha Vidyalaya, Bhelatand, Dhanbad, Jharkhand under the "Ek Ped Maa Ke Naam" Campaign.



Glimpses of Plantation Drive under "EK Ped Maa Ke Naam" Campaign to create "Matri Van"



Group Photo

- EIACP (PC-RP), Dept. of ESE, IIT(ISM), organized Keynote Lecture on "Smart Solutions for Environmental Applications" delivered by Prof. S.K. Gupta, Dept. of ESE, IIT(ISM) under Mission LiFE Keynote Lecture Series on 05.08.2024



Glimpses of Keynote Lecture delivered by Prof. S.K. Gupta under Mission LiFE Keynote Lecture Series

- EIACP (PC-RP) at Dept. of ESE Celebration World Nature Conservation Day by Bonding with Nature: Mothers and Children Plant Trees for a Greener Tomorrow at IIT(ISM) Dhanbad on 28.7.2024



Glimpses of Plantation Drive under the campaign "Ek Ped Maa Ke Naam" at IIT(ISM)

- EIACP (PC-RP), Dept. of ESE, IIT(ISM), organized a virtual Keynote Lecture as part of the Mission LiFE Keynote Lecture Series on "Fabrication of Electroconductive Surfaces and Membranes for Environmental Application" delivered by Prof. Swatantra Pratap Singh, Associate Professor, Dept. of Envntl. Sc. & Engg., IIT Bombay on 19.07.2024.



Glimpses of Keynote Lecture delivered by Prof. Swatantra Pratap Singh under Mission LiFE Keynote Lecture Series

- EIACP (PC-RP) at Dept. of ESE in collaboration with the Horticulture Section, IIT(ISM), organized a large-scale plantation drive. The event, part of the "Ek Ped Maa Ke Naam" campaign, took place on 13.07.2024, at IIT (ISM) Nirsa Campus, where 1,000 saplings were planted using the innovative Matka Plantation Recharge Technique (MPRT).



Glimpses of Plantation Drive using MPRT under the campaign "Ek Ped Maa Ke Naam"



Group Photo

From:
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Indian Institute of Technology (Indian School of Mines),
Dhanbad – 826 004 (INDIA)
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