

# Measures in place to Ensure Coal Mines Safety

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The details of fund allocated under Conservation and Safety in coal mines in the last three years are as under:

(Rs. in crore)

Name of Sub Schemes	2022-23		2021-22		2020-21	
	BE	RE	BE	RE	BE	RE
Conservation and Safety	4.00	4.00	6.00	4.50	10.00	6.00

Rs 20 Cr has been allocated during BE-2023-24. As per approved outlay, Rs. 20 Cr has been provisioned for 2024-25 and Rs. 20 Cr for 2025-26.

Details of accidents at coal mining sites, including injuries and casualties reported in the last three years, are as under:

S. No.	Year	No. of Fatal accidents	No. of fatalities/ Causalities	No. of serious accidents	No. of persons seriously injured
1	2020	48	53	1 18	139
2	2021	43	51	193	195
3	2022	24	28	179	189

The steps taken to reduce the occurrence of such accidents at coal mining sites, are as under:

(i) Occupational safety & health of workers employed in mines including coal mines is governed by Mines Act, 1952 and rules and regulation framed thereunder. The Mines Act, 1952 is administered by Directorate General of Mines Safety (DGMS) by way of development of suitable legislations, rules, regulations, standards and guidelines, inspection, investigations of accidents, awareness activities and formulating risk management plan and SoPs.

(ii) Apart from compliance of the statutory provisions under the Mines Act, 1952, the Mines Rules- 1955, the Coal Mine Regulations- 2017 and Bye-laws & Standing Order framed there under, the following steps are taken to reduce occurrence of accidents and to ensure safety in coal miners -

- o Preparation and implementation of Site Specific Risk Assessment based Safety Management Plans (SMPs).
- o Preparation and implementation of Principal Hazards Management Plans (PHMPs).
- o Formulation and compliance of Site-specific Risk Assessment based Standard Operating Procedures (SOPs).
- o Conducting Safety Audit of mines through multi-disciplinary Safety Audit teams.
- o Adoption of the state-of-the art mechanism for Strata Management such as Scientifically determined

Rock Mass Rating (RMR) based Support System.

- o Strata Control Cell for monitoring efficacy of strata support system.
- Roof bolting by using mechanized Drilling for Roof Bolting with Resin and Cement capsules and use modern Strata Monitoring Instruments.

(iii) Mechanism for monitoring of mine environment:

- o Detection of mine gases by Methanometer, CO-detector, Multi-gas detector etc.
- o Continuous monitoring of mine environment by installing Environmental Tele Monitoring System (ETMS) & Local Methane Detectors (LMD) etc.
- o Application of Gas Chromatograph for mine air sample analysis with better accuracy.
- o Use of Personal Dust Sampler (PDS).
- o Use of Continuous Ambient Air Quality Monitoring System (CAAQMS) in large OCPs to assess the ambient dust concentration.

(iv) Specific Safety measures for OC mines:

- o Use of eco-friendly Surface Miners for blast free safe mining.
- o Formulation and implementation of Mine-specific Traffic Rules.
- o Training on Simulators to HEMM operators.
- o Dumpers fitted with Proximity Warning Devices, Rear view mirrors and camera, Audio-Visual Alarm (AVA), Automatic Fire Detection & Suppression system etc.
- o Ergonomically designed seats & AC Cabins for operators' comfort.
- o GPS based Operator Independent Truck Dispatch System (OITDS) and Geo-fencing in some large OCPs for tracking movement of HEMMs inside OC mine.
- o Lighting arrangement using high mast towers for increasing level of illumination.

(v) Training on Mine Safety:

- o Initial and Refresher training & On-the-Job Training as per statute.
- o Training on Simulators to HEMM operators.
- o Skill up-gradation of frontline mine officials on continual basis on various topics.
- o Sensitization of all employees including Members of Safety Committees and contractual workmen on regular basis.
- o Various training programme for enhancement of knowledge of mine executives.
- o Training on Risk Management by SIMTARS accredited executives.

(vi) Mine Safety Inspection:

- o Round-the-clock Supervision of all mining operations by adequate number of competent & statutory Supervisors and mine Officials.
- o Regular Inspection by Workmen Inspectors appointed in each mine.
- o Surprise back shift mine Inspections by mine and area level officials.
- o Regular mine Inspection by officials of Internal Safety Organization of respective subsidiary and CIL.

- o Periodic mine Inspections by senior officials of CIL & Subsidiaries.
- o Regular safety awareness programs are conducted in every mine to increase safety awareness amongst grass root level workmen for ensuring compliance of safety norms.
- Online Centralized Safety Monitoring System “CIL Safety Information System (CSIS)” for monitoring different safety parameters.

This information was given by Union Minister of Coal, Mines and Parliamentary Affairs Shri Pralhad Joshi in a written reply in Rajya Sabha today.

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**BY/RKP**

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