GOVERNMENT OF INDIA
MINISTRY OF COAL

RAJYA SABHA
UNSTARRED QUESTION NO. 3390
ANSWERED ON- 23.03.2026

OCCUPATIONAL SAFETY AND SOCIAL CHALLENGES

3390 SHRI SANT BALBIR SINGH:

Will the Minister of COAL be pleased to state:

(a) actions taken to improve safety standards and reduce occupational hazards for coal miners;

(b) programs initiated to provide healthcare, education and basic infrastructure to communities living near coal mining areas; and

(c) measures to reduce noise pollution and other social impacts on local residents?

ANSWER

MINISTER OF STATE FOR COAL & MINES
(SHRI SATISH CHANDRA DUBEY)

(a): The following actions are taken to improve safety standards and reduce occupational hazards for coal miners:

- Adequate resources and manpower to ensure safe mining operations.
- Framing and implementation of a comprehensive Occupational Health and Safety Policy.
- Establishment of a multi-disciplinary Internal Safety Organization to support line management.
- Formulation and implementation of Safety Management Plans and Principal Hazard Management Plans based on Hazard Identification and Risk Assessment.
- Development and compliance with Codes of Practice and Standard Operating Procedures.
- Transport Rules for controlling traffic movement inside mines.
- Conducting Annual Mine Safety Audits.
- Root Cause Analysis based accident investigations by trained and certified executives.
- Adoption of Strata Control and Management Plan (SCAMP) based advanced strata management systems to ensure systematic monitoring, support design, and safe roof control in underground mines.
- Implementation of advanced slope and bench monitoring systems in opencast (OC) mines to detect instability, prevent slope failures, and enhance overall operational safety.
- Monitoring of mine environment is done by using multi-gas detectors, Environmental Tele Monitoring Systems, Local Methane Detectors, gas chromatographs, Personal Dust Samplers, and Continuous Ambient Air Quality Monitoring Systems in large opencast projects.
- Scientific pit slope and dump design.

- Deployment of blast-free mining technologies (Surface Miners, Vibro Rippers).
- Mine-specific traffic rules and simulator training for HEMM operators.
- Safety devices in dumpers e.g. Proximity Warning Devices, AVA, rear-view cameras, Automatic Fire Detection and Suppression System, Fatigue Monitoring.
- GPS-based Operator Independent Truck Dispatch Systems, Geo-fencing, improved lighting, and ergonomic operator cabins.
- Initial, refresher, and specialised programs as per Mine Vocational Training Rules-1966.
- Simulator-based training for HEMM operators.
- Virtual Reality (VR)-based training.
- Personnel and Family Counselling and awareness campaigns.
- Accident-based animation films for learning.
- Regular pre-shift safety briefings and Toolbox Safety Talks.

(b): Coal PSUs undertake various initiatives to ensure welfare of their employees, and many of these facilities are also extended to communities residing in and around coal mining areas. With regard to basic infrastructure, initiatives include the development of roads, drinking water supply systems, sanitation facilities, electrification, and community assets in villages located in and around coal mining areas.

In the field of education, coal companies support the construction and upgradation of schools, distribution of educational materials, and operation of skill development and vocational training centres for local youth.

In the field of health, key measures include establishment and strengthening of hospitals, dispensaries, and mobile medical unit; organisation of regular health camps; and provision of ambulance and emergency medical services in mining-affected regions. In addition, health camps are regularly organised in surrounding areas for routine health check-ups and essential medicines are distributed to local residents.

Apart from that, initiative have also been taken to promote sports facilities and community well-being through various initiatives under CSR.

(c): For any coal mining project operations (new as well as expansion), Environment Clearances are obtained for which an Environmental Impact Assessment and Environmental Management Plan is prepared and implemented.

To reduce noise pollution, Coal companies implement the following measures across mining operations:

- Deployment of blast-less technology in mining.
- Maximising coal production through surface miner technology, which substitutes drilling, blasting, and crushing operations.
- Black-topping or paving of coal transportation roads
- First Mile Connectivity (FMC) through covered conveyor transportation & mechanised loading through SILO.
- Promoting Underground Coal Mining.
- Avenue plantation, green belt development and afforestation in and around mining areas.

The following measures are taken to reduce social impacts on local residents:-

- Implementation of R&R policies, including compensation, alternative housing, livelihood support and skill development trainings to project-affected families.
- Implementation of CSR initiatives focusing on health care, education, drinking water supply, sanitation, skill development and community infrastructure such as recreation clubs, playgrounds and community halls, enhances social well-being and a better standard of living for nearby communities.
- Organisation of medical camps and measures to address occupational health and safety of workers and nearby residents.
- Implementing dust suppression measures such as water sprinkling, mist spraying and asphalting of coal transportation roads.
- In addition, green belt development along transport corridors and large-scale plantation programs help improve the local climate conditions.

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