



Health & Safety

HEALTH & SAFETY

(GRI 403-103, 403-8, 403-9, 403-10)

As per WHO/ILO joint estimates, every year more than 2 million deaths occur due to work related events. Failure to ensure health and safety at workplace could result in increased litigation cost, reduced availability of manpower, reduced employee morale, loss of organization image or even threaten the viability of operations in worst-case scenarios. Every accident has both direct and indirect costs and indirect costs are much higher than direct costs. Organization needs to ensure OHS for following reasons

1. Ethical responsibility i.e demonstrating duty of care
2. Financial cost i.e cost of accidents
3. Legal compliance

HZL is integrated mining and smelting operation flag ship company and we fully recognize that our operations are hazardous in nature i.e use of HEMM in underground mining, handling bulk material and chemicals which can impact health and safety of our employees, environment, and communities in which operate, and organization is committed to ensure elimination of risks in our operations and with aim to ensure 'Zero Harm' to people.

We firmly believe that all workplace injuries and diseases are preventable. Occupational Health and Safety influences all our business decision and one of the non-negotiable aspects in our day-to-day operations.

The OHS Organization is top driven with CEO chairing our Corporate Occupational Health & Safety Council, which is a strategic body to develop, guide and steer OHS management system. To provide direction to organization right set of standards, Health and Safety policy, operating procedure and system were developed for business wide implementation.

As a part of benchmarking all our sites are certified with ISO 45001: 2018 "Management System" which has been developed in consultation with workers and their representatives. Compliance with the Management System is applicable to HZL's entire operations/ employees as well as contractors or individuals under the company's supervision.

In line with our commitment to ensure zero harm, we have embarked upon several initiatives at work place Our safety excellence journey – **Aarohan** – is a significant initiative on this regard and has been running successfully since 2013. The journey was initiated in partnership with DuPont with aim to improve safety culture. To develop Safety system in the organization at corporate OHS Council was created which is highest decision making body in safety assisted by 10 corporate sub-committees and eight zonal apex committees.

All these initiatives contribute towards enhancing our safety standards and processes to minimize health and safety risks in all our operations.

One of our Sustainability Goals for 2025 is Zero Fatality at worksite as well as 50% reduction in Total Recordable Injury Frequency Rate. Every year we strive towards improving our health and safety performance. HZL's overall Lost Time Injury Frequency rate (LTIFR) for FY 22-23 marked a year-on-year decrease to stand at 0.70, as compared to 0.81 in FY 2021-22 and we remain committed to its further reduction in the coming years. No cases of occupational health illness were reported during the mentioned year.

To augment emergency preparedness and in UG Mines initiatives have been taken

1. Rampura Agucha Mine developed India's first underground First Aid Room & Underground Ambulance Station.
2. Developing the first made-in-India emergency escape route (staircase type) at Rajpura Dariba Underground Mine.
3. 10 days of capacity building training programme on disaster management conducted by National Disaster Response Force (NDRF) emergency response.

Both these initiatives will help us to significantly improve the response time amid emergency scenarios.

Other key highlights and accomplishments in our SMS includes:-

1. Chanderiya CPP and Debari both received the prestigious 'Sword of Honour' from British Safety Council for showing excellence in the management of health and safety risks at work.
2. Kayad Mine was also awarded the National Safety Award from the Government of India for the longest accident-free operations in the metal and mining sector as well as for the lowest injury frequency rate.

GOVERNANCE

Health and Safety is one of the top 3 materiality issues identified in HZL with direct and indirect impact on our ability to create value for ourselves and our stakeholders. Our Occupational Health & Safety Management System (OH&S) has been developed in accordance with ISO 45001:2018 standard. In addition, our sustainability framework is aligned with International Finance Corporation (IFC), International Council on Mining and Metals (ICMM), United Nations Global Compact (UNGC) principles, standards, and guidelines to confirm congruence.

We have Vedanta Sustainability Framework, which covers Occupational health, and safety management system broadly. The governance model mainly works on risk monitoring, accessing and performance optimization. There are Management and Technical Standards which are implemented at all our locations.

Corporate OHS Council, chaired by CEO abetted by Chief HSE Officer and other senior business leaders, oversees the implementation of our safety standards . This council is responsible for:

- Developing safety policy and committee charters
- Deploying resources efficiently
- Laying out the strategic safety roadmap for the organization

Ten corporate sub-committees and eight zone apex committees that are in place provides support to the Council in terms of identifying and establishing various systems, standards, rules, and protocols, to help achieve overall goal of HZL, i.e., Zero Harm.

Safety sub-committee	Function
1 Safety Interaction and Audit Committee	Safety observation is a structured and planned pro-active two way safety conversation process with people at their work place to achieve positive change in people's behaviour towards safety through: <ul style="list-style-type: none"> • Recognizing and reinforcing positive safety behavior • Identifying and correcting behavior at risk • Engaging in conversation regarding safety concerns or issues This Stream helped organization to improve Safety culture
2 Incident Management Committee	To ensure the timely reporting and investigations of incidents and ensuring quality of incident investigation focusing on systemic causes and horizontal deployment of learning and prevent reoccurrence of incident
3 Contractor Safety Management Committee	Standardizes, implements, and improves Contractor Safety Management selection and management system
4 Process Safety Management Committee	Implements and maintains risk management systems and processes to eliminate process safety incident and injuries, and process critical equipment and parameter management
5 Standards, Rules and Procedures Committee	Ensures that adequate rules and procedures are available for all employees and contractors at Hindustan Zinc to work safely and effectively
6 Fatality and Serious Incident Prevention Plan (FSIPP) Committee	Ensures that all the identified high-risk activities are analysed for risks, and control measures are defined, implemented, and monitored; also drives fatality and serious injury prevention program across all locations
7 Logistics Safety Committee	To ensure safety issues related with vehicle movement, with the aim of achieving the goal of zero logistics incident
8 Safety Innovation Committee	Strives to bring more focus on safety innovation and reduce the risk of LTI / Medical Treatment Injuries (MTI)/High Potential Incident (HIPO)through technology and innovation. Exploring and implementing globally available best engineering solutions, bringing technological interventions to reduce manual activities and hence prevent injuries.
9 Training Management Committee	Responsible for drafting and maintaining the organisation's core curriculum for induction, re-skilling, upskilling and development of its employee and contractual workforce.
10 Occupational Health & Industrial Hygiene Committee	To drive the occupational health and industrial hygiene programme at HZL

In addition, we also have in place a Joint Management-Worker Health and Safety committee, which acts as the governing body for monitoring the implementation of the organization's occupational health and safety programs and campaigns in all areas of operation. There is equal representation of both management and workers in this committee.

VISION

Achieving “Zero Harm” To people with a firm belief that all workplace injuries are preventable.

STRATEGY

Regarding health and safety, HZL’s strategic priorities are the following:

- Zero Fatalities
- Zero Occupational Health Illnesses
- Improvement in Occupational Health and Hygiene
- Critical Risk Management
- Critical review and audit of safety and standard implementation

Zero Fatalities:

Our major focus is to eliminate fatalities in the workplace and ensure Zero Harm. Our Fatality and Serious Injury Prevention Programme (FSIPP) committee plays a vital role in driving our goal of Zero Harm. It has identified top 10 fatality risks in mines and the top 10 fatality risks in smelters and developed fatality prevention plan for all business units. Also, we believe in leading by example, and in line with this philosophy, our ‘Visible Felt Leadership’ encapsulates the management’s actions in helping people across the hierarchy understand our high standards of safety. We have launched VFL (Visible Felt Leadership) scorecard for our senior and top leaders, including our CEO, with the objective of assessing and enhancing their participation in securing our working culture. The scorecard measures the performance of senior leadership on 10 aspects (i.e., Safety Interaction, Gemba Walk, Employee Mass Communication, One Safety Project in Each Quarter, Monthly Safety Tests, and Personal Safety Action Plan) and reviews the same monthly at the Corporate OH & Safety Council meeting.

Zero Occupational Health Illnesses:

Employees safety includes prevention of occupational diseases and facilitates a hygienic working environment as well. We involve hi-tech processes and provide lifestyle management trainings to workers while regularly monitoring and controlling exposure to hazardous substances. The company has established occupational health centres at all locations for regular health examination of both permanent and contract employees.

Improvement in Occupational Health and Hygiene:

At Hindustan Zinc, we prioritize the provision of a secure work environment for each individual. This involves promoting a hygienic workplace and proactively preventing any occupational disorders. By encouraging healthier lifestyle practices, we not only enhance productivity but also reduce absenteeism and improve employee retention.

To achieve these goals, we leverage state-of-the-art technologies to continually enhance our processes. Additionally, we conduct various employee sensitization programs to promote healthy lifestyle practices while minimizing exposure to potential health hazards during operations.

Throughout our organization, we have implemented comprehensive industrial hygiene and occupational health standards. Our sites have undergone thorough exposure assessments, allowing us to develop strategies aimed at reducing exposure levels. We have established in-house occupational health centers at all locations to conduct routine health examinations for both contractual and permanent employees. These centers are equipped with a centralized health management system that ensures effective coordination of activities such as patient registration, treatment, and discharge.

Our dedicated on-site medical professionals oversee the delivery of other health benefits, including pre-employment medical check-ups and periodic medical examinations to monitor exposure limits. Occupational health assessment is seamlessly integrated into our on-site industrial hygiene practices, including business partner evaluation. We remain committed to upholding the highest standards of occupational health and hygiene to safeguard our employees’ well-being and drive our business forward.

In order to establish a sustainable industrial hygiene program aimed at mitigating potential health risks, the company forged a partnership with globally recognized industrial hygiene service providers. Through these collaboration, the program focused on identifying, assessing, and managing occupational health hazards and exposures.

As part of our continuous improvement efforts, Hindustan Zinc Limited (HZL) places a strong emphasis on digitalizing processes to enhance the working environment. By leveraging digital technologies, we aim to streamline operations and create a safer and more efficient workplace for our employees.

Critical Risk Management:

We strictly adhere to the Indian Standard 15656 for Hazard Identification & Risk Assessment (HIRA) and the Vedanta standard (GN 07: Risk Assessment). We conduct regular internal audits of our operations. These audits identify the need for qualitative, semi-quantitative, and quantitative risk assessments, which we carry out using techniques like HAZAN, HAZOP, QRA, PHA, SIL, and others. At Hindustan Zinc, we maintain updated HIRA registers at all our locations, and our staff members receive comprehensive training on risk assessment methods. Additionally, we have incorporated OHS standards into our contract and procurement requirements.

For regular tasks, we have developed Safe Operating Procedures (SOPs) including the results of risk assessments which also undergoes periodic review. Non-routine tasks are covered under the Permit to Work (PTW) system, which mandates risk assessments before commencing any work. Prior to issuing work permits for non-routine tasks, we identify and implement controls using task Safety Analysis (JSA), Take 5, and other control measures.

To ensure effective risk management, we have identified 28 high-risk activities and created SOPs for each of them. We regularly update and monitor the implementation of these SOPs. We investigate and analyze the root causes of previous incidents, near-misses reported by employees and workers, work area inspections, and contractor field safety audits. Any identified potential risks are included in the HIRA, and we define, implement, and monitor control measures to mitigate health hazards.

At Hindustan Zinc, we have a formal process in place for hazard identification, risk assessment, and control, which effectively manages workplace and safety hazards across our units. We employ the '5*5' Risk Matrix for risk assessment, categorizing risks based on impact and probability and developing mitigation plans accordingly. We prioritize and integrate action plans with quantified targets to address those risks.

We provide training to our employees and business partners on identifying and assessing risks. Additionally, we utilize techniques such as Hazard and Operability Study (HAZOP) and Process Hazard Analysis (PHA) to identify process risks and develop mitigation plans. The effectiveness of these techniques is evaluated through regular audits.

Our internal audit system ensures the proper implementation of SOPs and safety and environment standards. First Party and Second Party EHS audits are conducted every six months and annually, respectively, at all our sites. This ensures consistent and effective implementation of safety controls for high-risk activities. Furthermore, all sites undergo yearly assessments as part of the Vedanta Sustainability Assurance Programme. Regular risk barriers and control checks further strengthen our system in mitigating workplace risks.

As a responsible employer we assess the risk and deal with it in the following order of priority:

1. Eliminate the risk, i.e., physically removing the hazard
2. Control the risk at source, i.e., by engineering controls

3. Minimize the risk by means that include the design of safe work systems i.e., by administrative controls
4. As the last resort in hierarchy of safety controls, provision for Personal Protective Equipment (PPE) including instructions for PPE utilization and maintenance

Some of the major initiatives deployed for efficient critical risk management are as follows:

- Implementation of critical control management as per ICMM guidelines with support of DuPont.
- Digitalization of fatal and serious injury prevention plan.
- Mining mate competency enhancement programme.
- Deploying IoT-based solutions.
- Implementation of learnings from fatalities in past 10 years.
- Emergency response plan at all locations that describe the preventative measures to be taken and the procedures and actions to be followed in the event of an emergency.
- Launched Vihan, The programme focusses on identification of the early warning signs and implementation of critical controls.
- Safety Pause - across all our operational units under the theme 'stop work if it's not safe.'

Critical review and audit of safety and standard implementation

Our internal audit system ensures effective implementation of the SOPs, safety & environment standards. First Party and Second Party EHS audits are conducted every six months & yearly, respectively, at all sites to ensure that standards for high-risk activities are consistently and effectively implemented. All sites are also assessed yearly under the Vedanta Sustainability Assurance Programme. In case of Emergency procedures, these are reviewed at least annually and tested while conducting mock drills monthly at every business unit. Regular risk barriers and control checks also make our system more robust towards mitigating the associated workplace risks.

Health and safety form an important part of Vedanta Sustainability Assurance Programme (VSAP) Module assessment, and all unit are participating in VSAP which is organised through third Party.

GOALS & METRICS

Sustainability Goals 2025: Zero Work related fatalities and 50% reduction in Total Recordable Injury Frequency Rate (TRIFR)

Safety Incident/Number	Category	FY 2023	FY 2022	FY 2021
Process Safety Events - Tier 1 (per one million-person hours worked)	Employees	0.09	0.08	0.08
Lost Time Injury Frequency Rate (LTIFR) (per one million-person hoursworked)	Employees	0.83	0.94	0.25
	Contract employees	0.68	0.79	1.1
Total Recordable Injury Frequency Rate (TRIFR) (per one million-person hours worked)	Employees	1.39	1.42	1.38
	Contract employees	2	2.34	2.78
No. of fatalities	Employees	1	0	0
	Contract employees	6	4	0
High consequence work-related injury or ill-health (excluding fatalities)	Employees	0	0	0
	Contract employees	0	0	0