AIR EMISSIONS MANAGEMENT

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PURPOSE OF THE DOCUMENT

This position statement sets out HZL's approach to Air quality management and outlines the requirements to avoid (or if not possible), minimise, the adverse impact of our operations on the air quality. Alongside the emission of greenhouse gases, mining and mineral processing can result in other air emissions such as Particulate Matter (PM), Nitrogen oxide (NOx) emissions, and Sulphur oxide (SOx) emissions. The discourse around air quality has grown substantially in the recent years with renewed engagement from various stakeholders. With more and more studies pointing out that air pollution increases the risk of a variety of adverse health outcomes, we realize how air quality deterioration is more harmful than previously understood. Air quality which does not meet the stipulatory discharge standards leads to detrimental impacts on the environment and human health, eventually resulting in financial losses. At HZL, we continuously strive towards ensuring that all our projects and operations implement management measures to avoid or minimise potential adverse impacts on ambient air quality.

OUR IMPACTS

Large-scale air emissions can cause serious impact on the environment as well as well-being of our workers and local communities. Emissions caused by crushing, collection, storage, and transportation from mining, smelting and captive power plants (CPP) activity can negatively impact the air quality, if they are not properly managed. With increasing government regulations, failure to comply with emission norms and minimise air emissions could lead to regulatory actions such as imposition of levies/fines, escalation in costs related to monitoring and reporting, among others.

GOVERNANCE

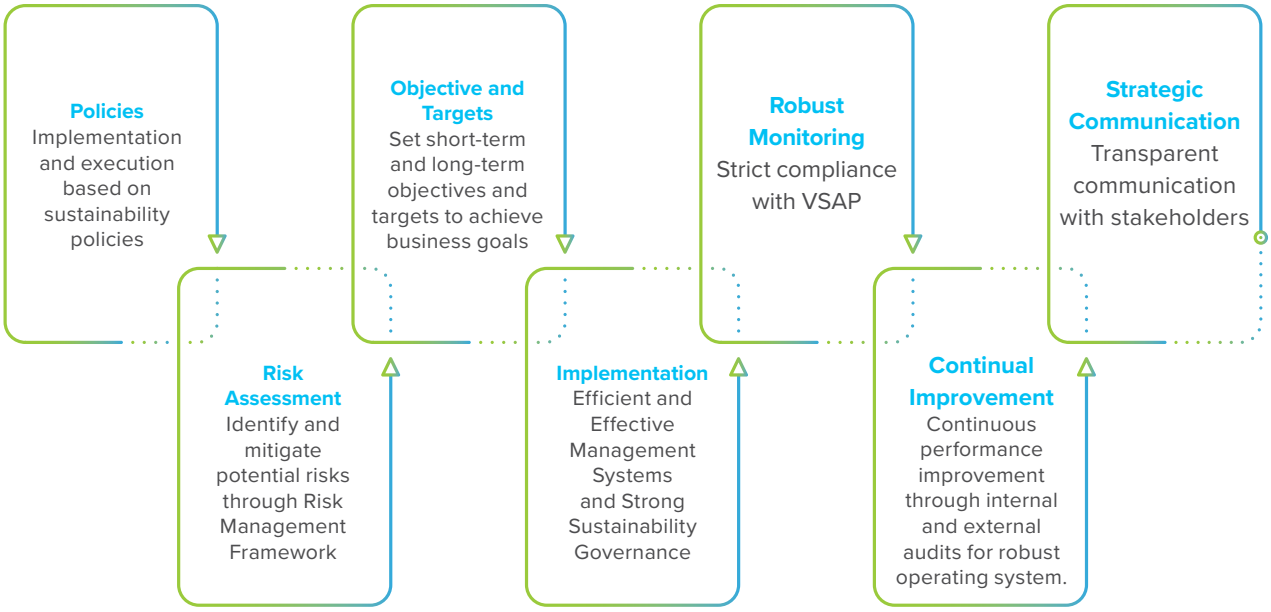
The constitution of a separate Sustainability and ESG Committee at the Board level has helped to scale our sustainability focus and efforts. The four-member committee holds its meetings on a half-yearly basis.

The committee is led by an independent director as the chairperson of the committee. The role of the Sustainability and ESG Committee is to assist the Board in meeting its responsibilities in ESG matters and to ensure a strong governance on sustainability matters. It is also responsible for providing oversight on sustainability strategy, setting long-term goals & targets, ensuring continual improvement of our sustainability related performance as well as implementation of appropriate processes and policies across the Company. It also plays a key strategic role in eliminating potential damage to the environment and enhance our commitment towards stakeholders. This committee is supported by Executive level sustainability committee , which is chaired by our CEO. The Committee is to assist the Board in meeting its responsibilities in ESG matters including air quality-related issues . It also provides oversight on our air quality management strategy, goals & targets set, and ensuring adherence of our operating sites to the minimum requirements to monitor, assess and manage emissions of common air pollutants to be protective of human health and the environment. To drive localized execution of air quality initiatives and embed environmental stewardship into daily operations, SBU-level ESG Committees have been established at all plant locations and Strategic Business Units (SBUs). These committees are primarily responsible for the onsite implementation and continuous improvement of air quality management practices, tailored to the specific needs and conditions of each location.

Aligned with the strategic direction and guidance from the higher tiers of ESG governance, these SBU-level committees play a pivotal role in achieving our 2030 air quality and sustainability goals. They are actively engaged in identifying, monitoring, and mitigating site-specific air quality risks, ensuring adherence to regulatory and internal standards. By doing so, they help ensure that all site-level operations contribute effectively to the Company's broader commitment to protecting human health and the environment through responsible air emissions management.

SUSTAINABILITY MANAGEMENT FRAMEWORK

Our Sustainability Management Framework is aligned with both, the Vedanta Sustainability Framework (VSF) and the Integrated Management System (IMS).



POLICIES AND STANDARDS

Our commitment to responsible environmental stewardship is guided by a robust Technical Standard on Environment & Social Impact Assessment (ESIA), with a dedicated Environmental Management Policy. Together, these frameworks ensure that we systematically identify, assess, and manage our environmental impacts—particularly those related to air quality—through well-defined processes and effective management systems.

The ESIA Technical Standard is aligned with leading international frameworks, including the IFC Performance Standards, International Council on Mining and Metals (ICMM) principles, IFC Environmental, Health and Safety (EHS) Guidelines, and relevant sector-specific guidance. This ensures that our practices are benchmarked against global sustainability expectations.

These standards and policies are applicable across the entire operational lifecycle—from exploration and planning through evaluation, active operations, and eventual closure. They are instrumental in driving continuous improvement in our environmental performance and ensuring that air quality management is integrated at every stage of our operations.

OUR STRATEGY

By exploring various technological and process improvement options, we have shaped our emission management strategy. This strategy is focused on investing in environmental abatement technologies such as air emission control equipment, maintaining process integrity and active engagement with key stakeholders.

At HZL, we are committed to reduce our non-GHG air emissions and are actively engaged in various measures to manage and monitor air quality parameters such as particulate matter (PM), SO_x and NO_x. Our emphasis is on prevention and management of air quality through operational discipline and process improvement. Broadly, our strategy to manage and monitor the air emissions involves the following:

- Usage of well-designed state of art air pollution control devices (APCD)
- Periodical inspection and maintenance of APCD
- Effective fugitive emission management
- Continuous emission monitoring and reporting

Identification of emission sources is a very crucial step in strategy formulation. With all our mines being underground, we have identified smelting process, acid plants and captive power plants (CPP) as our major sources of emission. For instance, two major sources of SO_x emission in our operations include sulphuric acid plant (controlled activity) and captive power plant (emission depends on coal quality). Continuous Emission Monitoring System (CEMS) has been installed at various source emissions and data is being sent to a central server as well as reported to statutory bodies like the State and Central Pollution Control Boards. The measured emission parameters are then compared with the regulatory and industry standards for identifying abnormalities, if any. In case any deviation is found in our performance, immediate corrective and preventive actions are taken.

Type	Emission Management Measures

PM Emissions	• High efficiency (99.875%) electrostatic precipitator (ESP) for CPP
	• Flue gas cleaning techniques, like ammonia dosing before letting out air through stack, used in power plant to achieve maximum cleaning of flue gas to:
	  • Reduce stack emissions
	  • Conform to statutory requirements
	  • Fulfill moral obligation and civic responsibility
	  • Reduce wear on ID fans
	• Zinc and Lead Smelters are equipped with bag filters, ESPs, and scrubbers, to effectively maintain PM emission within 50 mg/Nm^3

SO_x emissions	• Double Conversion Double Absorption (DCDA) installed in acid plant to maintain SO_2 emissions within stipulated norms • TGT installed in Pyro Smelter CLZS, Lead Smelter Dariba and Roaster -2 of Debari Zinc Smelter to further cut down on SO_2 emission from stack (Calcine-based scrubbing); It is further proposed to install TGT in acid plants of five other roasters to further minimise the SO_2 emission and keep the stack emission at 0.5 kg/ tonne of acid • Cesium dotted V_2O_5 catalyst for efficient conversion of SO_2 to SO_3 • Adequate stack height for better dispersion
NO_x emissions	• Installation of NO_x Control Solutions to maintain emissions below permissible limits
Other measures for fugitive dust emissions	• Water sprinkling at raw material handling for dust suppression • Dust extraction system in conveyors at each transfer point and in fly ash/ calcine silo to minimise emissions • Cement concrete internal roads to control fugitive dust generation • Vacuum road sweeping and water sprinkling to minimise fugitive dust emissions due to traffic
Air quality monitoring	• Online stack monitoring and Continuous Ambient Air Quality Monitoring Stations for real time monitoring • Continuous Emission Monitoring System (CEMS) to measure particulate matter, Sulphur dioxide, Oxides of nitrogen, mercury, temperature, and oxygen content of flue gas etc.

DEFINING & MEASURING OUR IMPACT

General Requirements

The following general requirements regarding air quality management are applicable to all the HZL operations:

Implementation of environmental programmes and operational controls:

- Establish an inventory of air emissions from all point sources, fugitive sources, mobile sources and from process activities associated with combustion, materials storage and other sources relating to HZL's operations.
- Install, operate, and maintain air emission abatement technologies required to manage the emissions generated.
- Develop management measures that incorporate, as a minimum, controls to reduce air quality risks/impacts to as low as reasonably practicable; and
- Record this process in an Air Quality Management Plan.

Regulatory requirements:

- Identify, assess, and comply with applicable laws and regulations, permits, licenses, external standards and other applicable requirements for source air emissions, fugitive dust emissions and ambient air quality. Ensure compliance with National Ambient Air Quality Standards (NAAQS) 2009, for criteria pollutants such as SO_x, NO_x, and PM.

Objectives and Targets

- Set targets and deadlines for emission reduction of pollutants including SO_x, NO_x, and PM to improve the air quality across all the sites.

Monitoring and Performance Management

- Conduct advanced dispersion modelling using the real emission data, if there are measurable point sources emitting significant pollutants.
- Establish a regular and up-to-date monitoring programme for air emissions (point and fugitive) arising from the operations.
- Where there is the potential for the internal air quality targets to be compromised, record:
    - the relevant ambient air quality parameters;
    - meteorological conditions affecting air emission dispersion;
    - changes to the receiving environment (e.g. location of residences, decrease in cumulative capacity, etc); and
    - other notable off-site emission sources in the vicinity.
- Quantify annual emissions of relevant pollutants for regulatory and other reporting purposes.
- Perform and document planned & corrective maintenance, calibration, and inspections of emissions control and monitoring equipment.
- Verify the air quality compliance with the help of qualified persons and using any valid/accepted methods.

Communication and Stakeholder Engagement:

- Communicate with relevant stakeholders especially local community in case of any potential impact on air quality and generate awareness on significant pollutants emitted from the operation (including their concentration and distribution).

Review:

- Revise the Air quality management strategy in case of any changes to the emission inventory as determined for the original project plan annually or as and when required.
- Ensure alignment of the strategy with achieving sustainable mine closure, especially in the case of air emissions which that would continue into closure.

Additional Requirements for Project phase

In case of construction of new mining/ smelting operations and facilities, apart from the general requirements listed above, HZL shall:

- Establish the baseline for the local region surrounding the operation, i.e., baseline concentrations of ambient air pollutants including SO_x, NO_x, $PM_{2.5}$ and PM_{10}.
- Conduct screening-level dispersion modelling during the Pre-feasibility phase based on the monitoring data received from the exploration/prospecting stage. Identify pollutants which may be significant by having a detailed understanding of the chemistry and constituents of the materials which will be processed.
- Conduct advanced dispersion modelling during the Feasibility phase, for pollutants that the screening-level dispersion model indicated have the potential for significant adverse impacts on air quality or receiving soil and water bodies.