Hindustan Zinc Limited

2024 CDP Corporate Questionnaire 2024

Word version

Important: this export excludes unanswered questions
This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.
Terms of disclosure for corporate questionnaire 2024 - CDP

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10/02/2024, 05:50 am

Contents

C1. Introduction

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Privately owned organization

(1.3.3) Description of organization

Hindustan Zinc Limited (HZL), India's largest mining and metal production company, stands as the world's second-largest integrated zinc producer and the third-largest silver producer globally. Established in 1966, HZL is headquartered in Udaipur, Rajasthan, India, and boasts over 50 years of operational experience. The company prioritizes the safety of its personnel and the conservation of scarce natural resources. HZL operates mines located in Rampura Agucha, Sindesar Khurd, Rajpura Dariba, Zawar, and Kayad, all situated in Rajasthan. The current ore production capacity is 16.34 million tonnes per annum. The company is expanding its mining capacities with six ongoing major projects, all utilizing underground mining processes. Notably, FY 2023-24 recorded the lowest zinc production cost in three years at US 1,117 per metric tonne, attributed to five consecutive quarters of cost reduction. In FY 2023-24, HZL was granted two patents: "Method for production of lead by performing dross removal procedures" and "Method for production of zinc by utilising lead plant slag." These patents introduce novel and efficient methods for lead production and zinc extraction from lead plant slag, a waste material from the lead smelting process. Major ESG related awards and recognition in FY 2023-24: a. Became the first metal and mining company in India to have validated Science Based Targets in line with1.5degree C, with approved targets of 50% reduction in scope 1 & 2 and 25% reduction in scope 3 GHG emissions by 2030, and net zero by 2050 from base year 2020 b.Ranked 1st globally in the S&P Global Corporate Sustainability Assessment (CSA) 2023, with a score of 85 out of 100 under the metals and mining sector c. 7 business units of Hindustan Zinc were recognised by the British Safety Council at International Safety Awards 2024, in the distinction, merit and pass categories d. Rajpura Dariba Complex's rescue team received international acclamation as a certified member of the International Mines Rescue Body (IMRB) e. HZL is selected as the winner in large industry category in the 2nd FICCI Sustainable Industry Practice Awards f. Won Apex India Occupational Health and Safety Awards 2023 in the topmost platinum category under metal and mining sector

[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

(1.4.1) End date of reporting year

03/30/2024

(1.4.2) Alignment of this reporting period with your financial reporting period

Select from:

☑ Yes

(1.4.3) Indicate if you are providing emissions data for past reporting years

Select from:

☑ Yes

(1.4.4) Number of past reporting years you will be providing Scope 1 emissions data for

Select from:

☑ 5 years

(1.4.5) Number of past reporting years you will be providing Scope 2 emissions data for

Select from:

☑ 5 years

(1.4.6) Number of past reporting years you will be providing Scope 3 emissions data for

Select from:

☑ 4 years

[Fixed row]

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	Select from: ☑ Yes

[Fixed row]

(1.6) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

ISIN code - bond

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

ISIN code - equity

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

INE267A01025

CUSIP number

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

Ticker symbol

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

SEDOL code

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

LEI number

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

D-U-N-S number

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

Other unique identifier

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No
[Add row]

(1.7) Select the countries/areas in which you operate.

Select all that apply
☑ India

(1.18) Provide details on the mining projects covered by this disclosure, by specifying your project(s) type, location and mining method(s) used.

Row 1

(1.18.1) Mining project ID

Select from:
☑ Project 1

(1.18.2) Name

Rampura Agucha Mine (RAM)

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:
☑ India

(1.18.5) Latitude

24.83

(1.18.6) Longitude

74.82

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Underground

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

1991

(1.18.11) Year of closure

2040

(1.18.12) Description of project

Rampura Agucha Mine (RAM), located in the Bhilwara district of Rajasthan, is an ISO 9001, ISO 14001, ISO 45001, ISO 50001, and SA-8000 certified underground zinc and lead mine. RAM holds the distinction of being the largest and richest lead-zinc deposit in India, and one of the largest globally, with 44.4 million tonnes of ore reserves and resources (R&R) featuring an in situ average grade of 11.0% zinc and 1.2% lead as of the end of FY 2023-24. During FY 2023-24, lead recovery at

RAM improved from 63.6% to 64.3%, and silver recovery increased from 36.15% to 38.45%. Notably, RAM became the first mine in India to receive the GreenCo Rating, while Zawar Mines received the Silver rating.

Row 2

(1.18.1) Mining project ID

Select from:

☑ Project 2

(1.18.2) Name

Rajpura Dariba Mine

(1.18.3) Share (%)

100.0

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

24.57

(1.18.6) Longitude

74.08

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Underground

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

1983

(1.18.11) Year of closure

2040

(1.18.12) Description of project

The Rajpura Dariba (RD) Mine, one of our oldest and most established underground mines, has recently seen significant enhancements. A new mill was commissioned at the Rajpura Dariba Complex, increasing the ore treatment capacity from 0.9 million tonnes per annum (Mtpa) to 1.1 Mtpa. This strategic upgrade aligns with our goal of scaling the ore production capacity to 1.75 Mtpa in FY 2024-25, reinforcing our commitment to operational growth and efficiency.

Row 5

(1.18.1) Mining project ID

Select from:

☑ Project 3

(1.18.2) Name

Sindesar Khurd Mines

(1.18.3) Share (%)

100.0

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

25.0

(1.18.6) Longitude

74.16

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Underground

(1.18.9) Raw material(s)

Select all that apply

☑ Silver

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

2006.0

(1.18.11) Year of closure

2040.0

(1.18.12) Description of project

In FY 2023-24, Sindeswar Khurd Mines (SKM) reported a 1% increase in ore production over the previous fiscal, forging ahead on its strategic agenda to deliver responsible growth and value creation for the Company.

Row 6

(1.18.1) Mining project ID

Select from:

☑ Project 4

(1.18.2) Name

Zawar Mines

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

24.35

(1.18.6) Longitude

73.71

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Underground

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

1942

(1.18.11) Year of closure

2040

(1.18.12) Description of project

Zawar Mines (ZM) is located 40 kilometres south of Udaipur. ZM has achieved a significant milestone by surpassing the 4 Mt ore production mark. Inaugurated phase 1 of 4,000 KLD zero liquid discharge (ZLD) plant at ZM, deploying advanced technology to help in water conservation. Furthermore in FY 2023-24, ZM received CII National Award in the Innovation Project category for Environment Best Practices.

Row 7

(1.18.1) Mining project ID

Select from:

☑ Project 5

(1.18.2) Name

Kayad Mines

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

26.53

(1.18.6) Longitude

74.69

(1.18.7) Project stage

Select from:

☑ Other, please specify **:**Mining only

(1.18.8) Mining method

Select from:

☑ Underground

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

2013

(1.18.11) Year of closure

2025

(1.18.12) Description of project

The underground Kayad Mine (KM) in Ajmer, Rajasthan, continued to forge ahead on the path of performance excellence during the year under review. The mine, which started operations in 2011 and commenced ore production in FY 2012-13, produced 564 kt of ore with 37.06 kt of metal content in FY 2023-24.

Row 8

(1.18.1) Mining project ID

Select from:

☑ Project 6

(1.18.2) Name

Chanderiya Lead Zinc Smelter (CLZS)

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

24.83

(1.18.6) Longitude

74.82

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Other, please specify :Smelter

(1.18.9) Raw material(s)

Select all that apply

☑ Silver

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

1991

(1.18.11) Year of closure

2090

(1.18.12) Description of project

HZL's Chanderiya Lead-Zinc Smelter (CLZS) becomes the largest single-location smelter globally with a capacity of 680 kt, demonstrating its prominent position in the global market. In FY 2023-24, CLZS completed the commissioning of the 1st fuming furnace to avoid generation of Jarosite.

Row 9

(1.18.1) Mining project ID

Select from:

☑ Project 7

(1.18.2) Name

Dariba Smelting Complex

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

24.94

(1.18.6) Longitude

74.13

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Other, please specify :Smelter

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

2010

(1.18.11) Year of closure

2090

(1.18.12) Description of project

This complex stands out for its self-sufficiency, benefitting from nearby lead-zinc mines at Sindesar Khurd and Rajpura Dariba. With a capacity of 240,000 MT for zinc and 120,000 MT for lead, it achieved 234,000 MT of zinc and 112,000 MT of lead in the fiscal year ending March 2023. A significant portion of the facility's power needs is met by the coal-based captive power plant in Dariba. The Dariba Smelting Complex employs Roast Leach Electro-winning technology in its hydrometallurgical zinc smelter, featuring two roasting facilities, a leaching and purification section, and a cell house. The lead smelter employs SKS bottom blowing technology. The plant consists of SKS Furnace – bottom blowing, blast furnace, electric arc furnace & fuming furnace, and electro – refining. Furthermore, a fuming furnace is installed to produce zinc Oxide from blast furnace slag. In FY 2023-24, implemented online overpotential measurement method for Dariba Smelting Complex (DSC) lead cell house and analyse relation to process parameters to guide process uniformity.

Row 10

(1.18.1) Mining project ID

Select from:

☑ Project 8

(1.18.2) Name

Zinc Smelter Debari

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:
☑ India

(1.18.5) Latitude

24.6

(1.18.6) Longitude

73.83

(1.18.7) Project stage

Select from:
☑ Production

(1.18.8) Mining method

Select from:
☑ Other, please specify :Smelter

(1.18.9) Raw material(s)

Select all that apply

☑ Zinc

☑ Lead

(1.18.10) Year extraction started/is planned to start

1968

(1.18.11) Year of closure

2090

(1.18.12) Description of project

Debari Smelter primarily produces High-Grade (HG) zinc while also recovering cadmium as a by-product. With a zinc production capacity of 88,000 MT per annum, it achieved 82,517 MT of zinc in the financial year ending March 2023. The smelter's journey began with an initial capacity of 18,000 tonnes per annum of zinc. Over the years, it has undergone significant expansion, growing fivefold to its current production capacity. The Debari Zinc Smelter adopts Roast Leach Electro-winning Technology in its Hydro metallurgical zinc smelter, featuring two Roasting facilities, a Leaching and Purification section, Electrolysis, and Melting-Casting sections. Additionally, it generates surplus calcine, an intermediate product supplied to other Hydro metallurgical zinc smelters. An innovative idea led to an increase in cathode production from 260 MT/day in FY 2022-23 to 273 MT/day in FY 2023-24 at Zinc Smelter Debari (ZSD). The initiative majorly involved the replacement of the 15.5 kA rectifier with a 20 kA rectifier, and increment in cell height in circuit 1 by 150 mm in 240 cells. Circuit 2 will increase cell height in FY 2024-25 to achieve the target cathode production of 283 MT/day.

Row 11

(1.18.1) Mining project ID

Select from:

☑ Project 9

(1.18.2) Name

Pantnagar Metal Plant

(1.18.3) Share (%)

100

(1.18.4) Country/Area

Select from:

☑ India

(1.18.5) Latitude

29.04

(1.18.6) Longitude

79.4

(1.18.7) Project stage

Select from:

☑ Production

(1.18.8) Mining method

Select from:

☑ Other, please specify :Refinery

(1.18.9) Raw material(s)

Select all that apply

☑ Silver

☑ Zinc

(1.18.10) Year extraction started/is planned to start

2011

(1.18.11) Year of closure

2090

(1.18.12) Description of project

The Pantnagar Metal Plant stands as a testament to Hindustan Zinc's commitment to excellence in metal production. It made significant strides towards achieving carbon neutrality and reducing greenhouse gas emissions in the fiscal year 2022-23. A pivotal achievement was the transition to 100% green power sourced from Uttarakhand Power Corporation Limited (UPCL) for our operational needs. Notably, our finished goods are now labelled environmentally friendly, marking a critical milestone in achieving net-zero carbon emissions by 2050. The recognition of our Pantnagar silver refinery by the London Bullion Market Association (LBMA) and inclusion in the 'London Good Delivery' list underscores the adherence to our silver refinery at Pantnagar Metal Plant (PMP) to international quality standards, marked by LBMA certification of 99.99% pure silver. Operating on 100% renewable power, our silver refinery aligns seamlessly with the Company's pledge towards achieving net-zero emissions by 2050 or sooner.
[Add row]

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ Yes, we have mapped or are currently in the process of mapping our value chain

(1.24.2) Value chain stages covered in mapping

Select all that apply

☑ Upstream value chain

☑ Downstream value chain

(1.24.3) Highest supplier tier mapped

Select from:

☑ Tier 1 suppliers

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ Tier 2 suppliers

(1.24.7) Description of mapping process and coverage

HZL classifies its business partners based on their impact on operations, sustainability, unique business partner dependency, and the irreplaceability of their solutions. This classification helps HZL manage its supply chain risk profile and identify dependencies critical for operational sustainability. Tier-1 Suppliers: These partners directly supply goods or services, including intellectual property and patents, to HZL. Their performance is monitored through contract-defined metrics, including quality and safety. All Tier-1 suppliers undergo thorough screening and third-party due diligence assessments during onboarding, with a focus on sustainability. Critical Tier-1 Suppliers: Includes high-volume suppliers, suppliers of critical components, and non-substitutable suppliers. These partners have a significant impact on HZL's operations and sustainability. They play a crucial role in operations, making their replacement highly challenging without a detailed plan and extensive processes Climate and nature Risk assessment of following suppliers from critical tier-1 suppliers who provide: materials that are consumed in the production processes, such as explosives, soda ash, lime, and cement, to create intermediate or first-use products. Total of 55 suppliers were assessed during the year for climate and nature risks to evaluate their impact, dependencies and risks.
[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

	Plastics mapping	Value chain stages covered in mapping
	Select from: ☑ Yes, we have mapped or are currently in the process of mapping plastics in our value chain	*Select all that apply* ☑ Upstream value chain ☑ Other, please specify **:**Direct operations

[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

5

(2.1.4) How this time horizon is linked to strategic and/or financial planning

The climate-related risks and opportunities identified to have an immediate impact on the Company's business i.e., within 5 years, are categorised under short-term horizon. At HZL, the business risk assessment is aligned with the climate-related risks and opportunities, hence the timeline remains the same for both.

Medium-term

(2.1.1) From (years)

6

(2.1.3) To (years)

20

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Potential climate-related risks and opportunities that may impact the company's business in the future (6-20 years) are categorised into the medium-term.

Long-term

(2.1.1) From (years)

21

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ No

(2.1.3) To (years)

30

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Long-term business risks and opportunities are usually anticipated and identified based on scenario analysis, IEA guidelines market predictions, etc. Therefore, the climate risks and opportunities identified to have an impact beyond 20 years duration are termed as long-term. Our definition for long-term coincides with our Net-Zero Goal 2050.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process	Biodiversity impacts evaluated before the mining project development stage
	Select from: ☑ Yes	*Select from:* ☑ Both dependencies and impacts	*Select from:* ☑ Yes, in all cases

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

☑ Water

☑ Biodiversity

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.6) Mining projects covered

Select all that apply

☑ All disclosed mining projects

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

(2.2.2.12) Tools and methods used

Commercially/publicly available tools

☑ Encore tool

☑ WRI Aqueduct

☑ WWF Biodiversity Risk Filter

☑ IBAT – Integrated Biodiversity Assessment Tool

☑ TNFD – Taskforce on Nature-related Financial Disclosures

☑ LEAP (Locate, Evaluate, Assess and Prepare) approach, TNFD

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Drought

☑ Landslide

☑ Heat waves

☑ Subsidence

☑ Cyclones, hurricanes, typhoons

☑ Heavy precipitation (rain, hail, snow/ice)

☑ Flood (coastal, fluvial, pluvial, ground water)

Chronic physical

☑ Heat stress
☑ Water stress
☑ Changing wind patterns
☑ Temperature variability
☑ Increased severity of extreme weather events
☑ Water availability at a basin/catchment level
☑ Changing temperature (air, freshwater, marine water)
☑ Changing precipitation patterns and types (rain, hail, snow/ice)

Policy

☑ Carbon pricing mechanisms
☑ Increased pricing of water
☑ Protected area designation
☑ Changes to national legislation
☑ Regulation of discharge quality/volumes
☑ Lack of mature certification and sustainability standards
☑ Increased difficulty in obtaining water withdrawals permit
☑ Statutory water withdrawal limits/changes to water allocation
☑ Mandatory water efficiency, conservation, recycling, or process standards
☑ Uncertainty and/or conflicts involving land tenure rights and water rights
☑ Limited or lack of river basin management
☑ Poor coordination between regulatory bodies
☑ Poor enforcement of environmental regulation
☑ Limited or lack of transboundary water management
☑ Changes to international law and bilateral agreements
☑ Introduction of regulatory standards for previously unregulated contaminants

Market

☑ Availability and/or increased cost of certified sustainable material
☑ Availability and/or increased cost of raw materials
☑ Changing customer behavior
☑ Inadequate access to water, sanitation, and hygiene services (WASH)

Reputation

☑ Impact on human health
☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback
☑ Negative press coverage related to support of projects or activities with negative impacts on the environment (e.g. GHG emissions, deforestation & conversion, water stress)
☑ Stakeholder conflicts concerning water resources at a basin/catchment level

☑ Stigmatization of sector

Technology

☑ Unsuccessful investment in new technologies products

☑ Dependency on water-intensive energy sources

☑ Data access/availability or monitoring systems

☑ Transition to lower emissions technology and products

☑ Transition to water intensive, low carbon energy sources

☑ Transition to water efficient and low water intensity technologies and

Liability

☑ Exposure to litigation

☑ Moratoria and voluntary agreement

☑ Non-compliance with regulations

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ NGOs

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

☑ Water utilities at a local level

☑ Other water users at the basin/catchment level

☑ Other commodity users/producers at a local level

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ Yes

(2.2.2.16) Further details of process

We continuously monitor and assess short (0-5 years), medium (6-20 years) and long-term (21-30 years) risks to the enterprise, including nature/biodiversity-related risks. Our board-level Sustainability Committee along with the Audit & Risk Management Committee conducts quarterly reviews biodiversity related risks and annually updates enterprise risk assessment in our value chain- direct operations, upstream and downstream. In FY 2023-24, HZL conducted its nature risk assessment using the LEAP approach and released its inaugural TNFD report. The assessment included its direct operations, comprising smelters, mines, power plants, and refinery units, with a total assessment of nine operational units. HZL used the WWF's Biodiversity risk filter to identify climate-related impacts and dependencies of our suppliers (55) and key customer sites (44) based on Optimistic (SSP 1), Current (SSP 2) and SSP 5 (Pessimistic). Using the said filter, we sorted the suppliers and customers based on different risk factors on overall very high-risk, high-risk, medium-risk, low-risk and very low-risk. We analysed our key customers basis the available list of sites where our products are supplied

Row 2

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

☑ Local

☑ Sub-national
☑ National

(2.2.2.12) Tools and methods used

Enterprise Risk Management
☑ COSO Enterprise Risk Management Framework
☑ Enterprise Risk Management

International methodologies and standards
☑ IPCC Climate Change Projections

Databases
☑ Nation-specific databases, tools, or standards

Other
☑ Scenario analysis
☑ Other, please specify **:**IFRS-S2 Requirements and TCFD alignment

(2.2.2.13) Risk types and criteria considered

Acute physical
☑ Drought
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Heat waves
☑ Heavy precipitation (rain, hail, snow/ice)

Chronic physical
☑ Heat stress
☑ Increased severity of extreme weather events
☑ Temperature variability

Market

☑ Availability and/or increased cost of certified sustainable material

☑ Availability and/or increased cost of raw materials

☑ Changing customer behavior

☑ Uncertainty in the market signals

Reputation

☑ Impact on human health

☑ Increased partner and stakeholder concern and partner and stakeholder negative feedback

☑ Negative press coverage related to support of projects or activities with negative impacts on the environment (e.g. GHG emissions, deforestation & conversion, water stress)

☑ Stakeholder conflicts concerning water resources at a basin/catchment level

Technology

☑ Dependency on water-intensive energy sources

☑ Data access/availability or monitoring systems

☑ Transition to lower emissions technology and products

☑ Transition to water intensive, low carbon energy sources

☑ Unsuccessful investment in new technologies

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Local communities

☑ Regulators

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ Yes

(2.2.2.16) Further details of process

We conduct annual enterprise risk assessments including climate change risk assessment. HZL has identified and categorised climate-related risks and opportunities over the short, medium, and long-term concerning both physical risks (Increase in temperature, drought, flood, extreme weather, wind speed etc.) and transitions risks (risks due to change in policy, technological change, market change, reputational etc.) According to the IFRS S2 guidelines, we have identified our climate-related risks using scenario analysis. Moreover, we conducted a baseline assessment of our business units by using the ThinkHazard tool to assess potential baseline water stress, drought, riverine flood, heatwave, and seasonal variability risks. HZL, being a responsible producer has assessed the risks associated with several commodities such as lime, soda ash, cement, chemicals etc. 55 Suppliers associated with the most relevant materials that are consumed in the production processes of our industrial assets to create intermediate products were assessed. HZL used the WWF's Biodiversity risk filter to identify climate-related impacts and dependencies of our suppliers and key customer sites (44) based on Optimistic (SSP 1), Current (SSP 2)and SSP 5 (Pessimistic). Using the said filter, we were able to sort the suppliers and customers based in terms of different risk factors on overall very high-risk, high-risk, medium-risk, low-risk and very low-risk. We analysed our key customers basis the available list of sites where our products are supplied In developing our strategy, we have considered a wide range of opportunities and risks across two discrete time horizons 2030 and 2050 for mapping physical and transition risks. • Physical risks, we used Advanced Climate Modelling and Representative Concentration Pathway (RCP) 2.6, 4.5, 6.0, 7.0 and 8.5. • Transition risks, we used IEA's Stated Policies Scenario (STEPS), Announced Pledges Scenario (APS) & Net Zero Emissions by 2050 Scenario (NZE) scenarios. Physical Risk Assessment. Furthermore, the Sustainability and ESG Committee at the board level meets at least twice per year to discuss risks and opportunities, identify new climate-related aspects in our direct operations, and upstream and downstream value chain, assess their relative significance, and create action plans to address risks and opportunities.

Row 3

(2.2.2.1) Environmental issue

Select all that apply

☑ Water

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

☑ Local

☑ Sub-national

☑ National

(2.2.2.12) Tools and methods used

Commercially/publicly available tools

☑ TNFD – Taskforce on Nature-related Financial Disclosures

☑ WRI Aqueduct

Enterprise Risk Management

☑ Enterprise Risk Management

International methodologies and standards

☑ IPCC Climate Change Projections

Databases

☑ Regional government databases

Other

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Cyclones, hurricanes, typhoons
☑ Drought
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Heat waves

Chronic physical

☑ Temperature variability
☑ Water availability at a basin/catchment level
☑ Water stress
☑ Water quality at a basin/catchment level

Policy

☑ Increased pricing of water
☑ Changes to national legislation
☑ Limited or lack of transboundary water management
☑ Increased difficulty in obtaining operations permits
☑ Changes to international law and bilateral agreements
☑ Increased difficulty in obtaining water withdrawals permit
☑ Mandatory water efficiency, conservation, recycling, or process standards
☑ Introduction of regulatory standards for previously unregulated contaminants

Market

☑ Availability and/or increased cost of certified sustainable material
☑ Availability and/or increased cost of raw materials
☑ Changing customer behavior
☑ Inadequate access to water, sanitation, and hygiene services (WASH)
☑ Uncertainty in the market signals

Reputation

☑ Negative press coverage related to support of projects or activities with negative impacts on the environment (e.g. GHG emissions, deforestation & conversion, water stress)
☑ Stakeholder conflicts concerning water resources at a basin/catchment level

Technology

☑ Dependency on water-intensive energy sources

☑ Data access/availability or monitoring systems

☑ Transition to water efficient and low water intensity technologies and products

☑ Transition to water intensive, low carbon energy sources

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Suppliers

☑ Regulators

☑ Local communities

☑ Water utilities at a local level

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

We continuously monitor and assess short (0-5 years), medium (6-20 years) and long-term (21-30 years) risks to the enterprise, including climate and water-related risks. Our board-level Sustainability Committee along with the Audit & Risk Management Committee conducts quarterly reviews climate and water-related related risks and annually updates enterprise risk assessment in our value chain- direct operations, upstream and downstream. According to the IFRS S2 guidelines, we have identified our climate-related risks using scenario analysis. The Baseline Water Risk Analysis was conducted using the WRI Aqueduct Water Risk Atlas and Aqueduct. The Internal Risk Assessment was conducted for the identified business units to identify and compare the Incoming Risk Likelihood Score obtained from the Internal Assessment with the results from the Water Risk Monitizer tool. Basin-level value chain water risk assessments helped to quantify inherent water risks as well as local/operational assessments to quantify residual water risks. The results were a combination of basin and operation risk data to identify the highest risk facilities, and residual risk and prioritise shared water challenges. Moreover, we conducted a baseline assessment of our business units by using the ThinkHazard tool to assess potential baseline water stress, drought, riverine flood, heatwave, and seasonal variability risks. HZL, being a responsible producer has assessed the risks associated with several commodities such as lime, soda ash, cement, chemicals etc. 55 Suppliers associated with the most relevant materials that are consumed in the production processes of our industrial assets to create intermediate products were assessed. HZL used the WWF's Biodiversity risk filter to identify water-related impacts and dependencies of our suppliers and key customers sites (44) based on Optimistic (SSP 1), Current (SSP 2)and SSP 5 (Pessimistic) for

2030 & 2050. Using the said filter, we were able to sort the suppliers and customers based in terms of different risk factors on overall very high-risk, high-risk, medium-risk, low-risk and very low-risk. In developing our strategy, we have considered a wide range of opportunities and risks across two discrete time horizons 2030 and 2050 for mapping physical and transition risks. • Physical risks, we used Advanced Climate Modelling and Representative Concentration Pathway (RCP) 2.6, 4.5, 6.0, 7.0 and 8.5. Furthermore, the Sustainability and ESG Committee at the board level meets at least twice per year to discuss risks and opportunities, identify new climate-related aspects in our direct operations, and upstream and downstream value chain, assess their relative significance, and create action plans to address risks and opportunities.
[Add row]

(2.2.3) Provide mining-specific details of your organization's process for identifying, assessing, and managing biodiversity impacts.

Row 1

(2.2.3.1) Mining project ID

Select from:
☑ Project 1

(2.2.3.2) Extent of assessment

Select from:
☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply
☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply
☑ Governmental agency requirements
☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Threatened species

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 2

(2.2.3.1) Mining project ID

Select from:

☑ Project 2

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Migratory species

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 3

(2.2.3.1) Mining project ID

Select from:

☑ Project 3

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 4

(2.2.3.1) Mining project ID

Select from:

☑ Project 4

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Endemic species

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 5

(2.2.3.1) Mining project ID

Select from:

☑ Project 5

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 6

(2.2.3.1) Mining project ID

Select from:

☑ Project 6

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 7

(2.2.3.1) Mining project ID

Select from:

☑ Project 7

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken

against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 8

(2.2.3.1) Mining project ID

Select from:

☑ Project 8

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment, conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.

Row 9

(2.2.3.1) Mining project ID

Select from:

☑ Project 9

(2.2.3.2) Extent of assessment

Select from:

☑ Full-scale environmental and social impact assessment

(2.2.3.3) Impacts considered

Select all that apply

☑ Direct impacts

(2.2.3.4) Scope defined by

Select all that apply

☑ Governmental agency requirements

☑ Company own standards and/or policies

(2.2.3.5) Aspects considered

Select from:

☑ Protected habitats

(2.2.3.6) Baseline biodiversity data available

Select from:

☑ Yes

(2.2.3.7) Environmental Impact Statement publicly available

Select from:

☑ Yes

(2.2.3.8) Please explain

HZL utilises Vedanta's Technical Standard and Guidance Note on Biodiversity Management to assess biodiversity risk and develop site-specific Biodiversity Management Plans. The process comprises the following stages: Stage 1: Biodiversity Risk Screening HZL conducts biodiversity risk screening for each site using the Integrated Biodiversity Assessment Tool (IBAT). This database provides information on significant biodiversity areas, including protected regions and those critical for certain species, helping to identify potential risks. The results categorise sites as follows: Low Risk: Located outside a 15 km radius of important biodiversity areas. Medium Risk: Situated within a 5-15 km radius of such areas. High Risk: Within a 5 km radius of important biodiversity areas or critical habitats. Stage 2: Biodiversity Assessment and Ecosystem Services Review Following the risk screening, comprehensive studies on biodiversity and ecosystem services are conducted: Biodiversity Assessment: This study provides a qualitative and quantitative description of local flora and fauna, along with insights into trends and drivers. Ecosystem Services Review: This analysis identifies priority ecosystem service dependencies and the impacts of HZL's operations, covering their status, trends, risks, and opportunities to enhance benefits and mitigate impacts. Stage 3: Biodiversity Risk Assessment In this stage, experts carry out a biodiversity risk assessment based on the data gathered in Stage 2. This detailed evaluation ensures that each site is assigned the appropriate biodiversity risk level. A comprehensive assessment,

conducted over three seasons at all operating sites by IUCN, provides critical insights. Stage 4: Development of Biodiversity Management Plan The final stage focuses on determining the level of biodiversity management needed based on the risk assessment. The principles of the mitigation hierarchy guide the actions taken against each identified impact. The severity of these impacts helps define the necessary management level, and the Biodiversity Management Plan is currently under revision to incorporate these findings.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:
☑ Yes

(2.2.7.2) Description of how interconnections are assessed

Interdependencies related to risks and opportunities are assessed and evaluated for both tangible and intangible impacts, for example, non-availability of water (water scarcity- physical risk) can have a direct impact on power generation in our captive power plants (transitional risk), thus impacting our business operations.
[Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:
☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply
☑ Direct operations

(2.3.3) Types of priority locations identified

Sensitive locations

☑ Areas important for biodiversity

☑ Areas of high ecosystem integrity

(2.3.4) Description of process to identify priority locations

Biodiversity risk screening is undertaken for each site by the company, using IBAT. IBAT is a central database of globally recognized biodiversity information that can be used to map out the locations of important biodiversity areas, protected areas, and areas categorized by IUCN as significant for species of plants or animals. IBAT uses global-level data sets that cannot always take into account the detail of local conditions at a specific site. However, in general, the IBAT information provides a good indication of where Critical Habitats are located. Using the IBAT maps, Hindustan Zinc Limited can determine if a site is located in or near an area of biodiversity importance. Based on the results, the company determines biodiversity risk category for their sites, which are as below: • Low Risk: The site is located outside the 15 km radius of any important biodiversity area. • Medium Risk: The site is located within the 5-15 km radius of any important biodiversity area. • High Risk: The site is located within the 5 km radius of any important biodiversity area or critical habitat.

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ Yes, we will be disclosing the list/geospatial map of priority locations

(2.3.6) Provide a list and/or spatial map of priority locations

Final-HZL_TNFD-Report_2024.pdf
[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ EBITDA

(2.4.3) Change to indicator

Select from:

☑ % increase

(2.4.4) % change to indicator

Select from:

☑ 1-10

(2.4.6) Metrics considered in definition

Select all that apply

☑ Frequency of effect occurring

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

We have clearly defined our risk appetite and tolerance limits to objectively evaluate our risk-taking ability, facilitating assessment and measurement of the identified risks. The risk appetite, determined by the Board, outlines the risks the Company is willing to take to pursue its business strategy. Risk tolerance puts risk appetite into practice, using quantitative metrics. The impact of any risk is assessed on a 5-point scale. A risk impact of 10% on projected EBITDA (breach of risk tolerance) corresponds to the maximum risk impact score of 'Very High' or '5'. HZL defines substantive financial or strategic impact on its business, when any of the following triggering (4 points on a scale of 5,) is observed, anything beyond the below points will be of level 5: a. Reduction of targeted EBIDTA by 7.5% & 7.5% and 15% and 10 and 9 and

Opportunities

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ EBITDA

(2.4.3) Change to indicator

Select from:

☑ % increase

(2.4.4) % change to indicator

Select from:

☑ 1-10

(2.4.6) Metrics considered in definition

Select all that apply

☑ Frequency of effect occurring

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

HZL considers any issue to be an opportunity, if it meets the following criteria: 1. Any project that results in potential savings from reduced energy consumption, lower waste disposal costs, and enhanced resource efficiency. Savings can often offset initial investments over time. 2. Increased % of EBITDA by 0% from new products or services that meet sustainability standards or from premium pricing for environmentally friendly products.).
[Add row]

(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

(2.5.1) Identification and classification of potential water pollutants

Select from:

☑ Yes, we identify and classify our potential water pollutants

(2.5.2) How potential water pollutants are identified and classified

We have a Water Policy, a Technical Standard and a Guidance Note for water management including impacts related to water pollution. These are aligned with the IFC PS & CEO Water Mandate. We conduct internal and external audits to identify pollutants in our operations & assess their impacts through stakeholder consultations. This helps us to understand risks and implement measures to minimize them. We maintain an inventory and map identified sources of pollution & implement standard containment protocols around identified sources of pollution. Sources of pollution: a) Point sources: chemicals & their storage area, waste disposal facilities, oil leaks or chemical leaks, maintenance facilities (where oils and chemicals are used) electrical transformers (a potential source of oils and PCBs) etc. b) Non-point sources: site drainage channels, stormwater runoff, wash water etc. Classification: i) We consider characteristics of pollution such as source, nature, toxicity, persistence & potential for bioaccumulation. This classification helps us to categorise pollutants based on their potential impacts. ii) We follow regulatory guidelines that provide limits for discharging pollutants. These guidelines help us to identify and categorise pollutants based on adverse effects on water ecosystems & human health. It is important to note that all our processing sites adhere to the Zero Liquid Discharge (ZLD) principle, meaning we aim to recycle & reuse all water within our operations.
[Fixed row]

(2.5.1) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Row 1

(2.5.1.1) Water pollutant category

Select from:

☑ Other nutrients and oxygen demanding pollutants

(2.5.1.2) Description of water pollutant and potential impacts

HZL doesn't discharge any effluents outside its boundary. Effluents generated in our smelting process which have Oxygen demanding pollutants, when are discharged to a water source may lead to eutrophication. This has serious implications on natural ecosystems, flora & fauna.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

☑ Beyond compliance with regulatory requirements

☑ Water recycling

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

(2.5.1.5) Please explain

We have Technical Standard and Guidance Note on wastewater management and site contamination which specify requirement on reducing possible sources of water pollutants, which go beyond regulatory requirements. These are aligned to IFC Performance Standards, CEO Water Standard and International Standards. We frequently monitor and assess critical infrastructure to ensure that there is no leakage or spillage. In addition, we take several measures internally to prevent any potential hazards from occurring like: We have installed state of the art Effluent Treatment Plant (ETP) followed by an Effluent Recovery System (ERS) with Reverse Osmosis (RO) and MEE/MVR. Storm Water Ponds of designed capacity are provided to store contaminated water if any and for further reuse after treatment. To avoid contamination of stormwater raw materials, products and byproducts are stored within a shed on an impervious base and effluent from generating plants is sent to ETP through pipelines only. We have established in-house water monitoring labs and online analyzers to analyze water and wastewater quality regularly and take corrective and preventive actions immediately. Our Consent to Operate under section 21(4) of Water Act 1974, is dependent upon our ability to maintain zero discharge status from premises, meaning no trade effluent shall be discharged outside operations. Sucess Metrics: No Category IV and V environmental incidents, Zero regulatory violations and fines and Zero Liquid Discharged
[Add row]

(2.6) By river basin, what number of active and inactive tailings dams are within your control?

Row 1

(2.6.1) Country/area & River basin

India

☑ Mahi River

(2.6.2) Number of tailings dams in operation

1

(2.6.3) Number of inactive tailings dams

0

(2.6.4) Comment

At our Zawar mining and beneficiation site, we have implemented a dry tailing disposal plant that recirculates over 80% of process water, effectively reducing water losses due to seepage and evaporation. This approach significantly mitigates the risk of groundwater contamination and enhances safety protocols. Additionally, it accelerates the rehabilitation and restoration of the storage site during mine closure. The introduction of filtration plants allows for the extraction of excess water from tailings, which is then recirculated for mill operations. This technology reduces the moisture content of solid fractions to just 16%, making it an efficient method for tailing treatment while conserving water. To further support this system, we have installed an additional pump and constructed a new 5,000 m³ water reclamation storage facility at our tailing storage site. These initiatives have greatly improved the efficiency and sustainability of our tailing management practices.

Row 2

(2.6.1) Country/area & River basin

Afghanistan

☑ Other, please specify **:**Banas River Basin

(2.6.2) Number of tailings dams in operation

2.0

(2.6.3) Number of inactive tailings dams

0.0

(2.6.4) Comment

To improve the monitoring and management of tailing storage facilities at our RAM and RDM operations, we constructed a water collection reservoir and installed real-time monitoring instruments, including vibrating wire piezometers and inclinometers, within the embankments. We also introduced a structured organogram for regular reviews of TSF performance and safety. In FY2021, HZL implemented InSAR, a satellite-based monitoring technique, at 13 sites for high-precision monitoring of surface displacement. These measures significantly improve safety, environmental protection, and operational integrity at our tailing storage facilities. During the year, we commissioned a dry tailing plant and a paste-fill plant at Rajpura Dariba Complex (RDC) to save 3,000 KLD of water with improved recovery and recycling rates. Key outcomes of Commissioning of Paste-Fill Plant to Improve Flow: a. Flow rate increased from 70 m3/hour to 130 m3/hour b. Increase in solid percentage from 60% to 80% Reduction in plug curing time from 7 days to 3 days c. Water consumption reduced by 62% d. Eliminated the need for additional infrastructure for tailing dilution for hydro-fill At SKM, we have commissioned 100 metres incline hole (75 metres vertical) for backfilling the SK area to employ more tailings in the mine instead of sending the same to the tailing dam. This cost-effective and environment-positive initiative is a milestone in the mine's sustainable growth journey.
[Add row]

(2.6.1) Do you evaluate and classify the tailings dams under your control according to the consequences of their failure to human health and ecosystems?

(2.6.1.1) Evaluation of the consequences of tailings dam failure

Select from:

☑ Yes, we evaluate the consequences of tailings dam failure

(2.6.1.2) Evaluation/Classification guideline(s)

Select all that apply

☑ Australian National Committee on Large Dams (ANCOLD)

☑ Canadian Dam Association (CDA)

☑ Other, please specify **:**International Commission on Large dams (ICOLD)

(2.6.1.3) Tailings dams have been classified as 'hazardous' or 'highly hazardous'

Select from:

☑ Yes, tailings dams have been classified as 'hazardous' or 'highly hazardous' (or equivalent)

(2.6.1.4) Please explain

HZL conducted a dam break assessment for its three Tailing Storage Facilities (TSFs) during construction. The assessment followed international guidelines from ICOLD, CDA, and ANCOLD to determine consequence categories. These guidelines provide standards for dam safety and risk management, categorising potential dam failure consequences into levels from low to extreme, considering factors such as people at risk, environmental impact, and economic losses. Each dam is classified into seven categories: Very Low (negligible risk), Low, Significant, High (A, B, C), and Extreme (severe failure risk). Monitoring and surveillance requirements increase with the severity of the classification, with independent evaluations conducted every three years. Facilities classified as 'High' are considered hazardous, and 'Major' as highly hazardous. HZL follows Vedanta's TFS Standard and Tailing Management Policy, aligned with the Global Industry Standard on Tailings Management (GISTM), applicable to all current and future TSFs. Management strategies and inspections are based on each TSF's status, with a monthly Tailing Committee meeting to ensure compliance. A third-party audit was also conducted to identify any gaps with GISTM requirements, supporting the goal of full GISTM implementation by FY 2024-25.
[Fixed row]

(2.6.2) Provide details for all dams classified as 'hazardous' or 'highly hazardous'.

Row 1

(2.6.2.1) Tailings dam name/identifier

Rampura Agucha Mines Tailing Dam

(2.6.2.2) Country/Area & River basin

Zimbabwe
☑ Other, please specify :India

(2.6.2.3) Latitude

20

(2.6.2.4) Longitude

74.44

(2.6.2.5) Hazard classification

ICOLD 'IV': Extreme and ANCOLD: Extreme

(2.6.2.6) Guidelines used

Select all that apply

☑ Australian National Committee on Large Dams (ANCOLD)

☑ Other, please specify **:**International Commission on Large dams (ICOLD)

(2.6.2.7) Tailings dam's activity

Select from:

☑ Active

(2.6.2.8) Current tailings storage impoundment volume (Mm3)

57.8

(2.6.2.9) Planned tailings storage impoundment volume in 5 years (Mm3)

7.8

(2.6.2.10) Please explain

In 2017, we conducted dam break modelling at the Agucha Tailings Storage Facility (TSF) to assess downstream risks. The modelling provided key data on flood wave arrival times and depths, which were used to create inundation maps. The TSF was classified as 'IV (Extreme)' under ICOLD hazard ratings and 'Extreme' under ANCOLD guidelines, mainly due to the high population at risk (PAR). To mitigate these risks, we recommended constructing mitigation structures, identifying safe evacuation areas, and marking risk zones to prevent new settlements. A Secondary Containment (Diversion Structure) was built downstream to protect the PAR.

Row 2

(2.6.2.1) Tailings dam name/identifier

Rajpura Dariba Complex Tailing Dam

(2.6.2.2) Country/Area & River basin

United States Virgin Islands

☑ Other, please specify **:**Banas Basin

(2.6.2.3) Latitude

63.9

(2.6.2.4) Longitude

74.08

(2.6.2.5) Hazard classification

ANCOLD (2012a,b) Guidelines: Category of High A CDA (2013) Guidelines: Category of Very High.

(2.6.2.6) Guidelines used

Select all that apply

☑ Australian National Committee on Large Dams (ANCOLD)

☑ Canadian Dam Association (CDA)

(2.6.2.7) Tailings dam's activity

Select from:

☑ Active

(2.6.2.8) Current tailings storage impoundment volume (Mm3)

20

(2.6.2.9) Planned tailings storage impoundment volume in 5 years (Mm3)

8

(2.6.2.10) Please explain

In FY 2019-20, a dam failure impact assessment was conducted for the Tailings Storage Facility (TSF) at Rajpura Dariba, considering overtopping and piping failure modes for various breach locations. A Consequence Category Assessment, based on both ANCOLD and CDA guidelines, determined that the TSF has a "High A" consequence category according to ANCOLD and a "Very High" consequence category according to CDA. The assessment also considered mitigation options to reduce the impact of a potential TSF breach on surrounding populations. Engineered levees, in the form of protection or diversion berms along the inundated perimeter of settlements, were identified as potential measures to lessen flood impacts. Further studies are recommended for planning, design, modeling, and the installation of a warning system.

Row 3

(2.6.2.1) Tailings dam name/identifier

Zawar Tailing Storage Facility

(2.6.2.2) Country/Area & River basin

India

☑ Mahi River

(2.6.2.3) Latitude

35.85

(2.6.2.4) Longitude

73.42

(2.6.2.5) Hazard classification

"Very high" dam classification according to Canadian Dam Association (CDA) guidelines.

(2.6.2.6) Guidelines used

Select all that apply

☑ Canadian Dam Association (CDA)

(2.6.2.7) Tailings dam's activity

Select from:

☑ Active

(2.6.2.8) Current tailings storage impoundment volume (Mm3)

33.83

(2.6.2.9) Planned tailings storage impoundment volume in 5 years (Mm3)

13.1

(2.6.2.10) Please explain

In February 2021, a Dam Break analysis was conducted for the Zawar Tailings Storage Facility (TSF) to evaluate the potential impact of a hypothetical failure of its main dams. The study classified the current consequential risk of the structure as "Very High." Due to the significant downstream community and limited warning time, the facility would fall under the "Extreme" dam classification according to CDA guidelines. The findings from this analysis will guide the development of an Emergency Response Plan and inform future design adjustments, including the dry stacking of 12 million MT.
[Add row]

(2.6.3) To manage the potential impacts to human health or water ecosystems associated with the tailings dams in your control, what procedures are in place for all of your dams?

Row 1

(2.6.3.1) Procedure

Select from:

☑ Acceptable risk levels

(2.6.3.2) Detail of the procedure

Acceptable risk levels

☑ Establishment of site-level guidance and standards for acceptable risk levels based on an evaluation of potential chemical and physical risks

☑ Establishment of site-level guidance and standards for acceptable risk levels for third party safety in consultation with potentially affected communities, employees and relevant government bodies

☑ Establishment of site-level guidance and standards for acceptable risk levels across all life stages including post-closure

☑ Establishment of company-wide standards for acceptable risk levels that follow a company policy to eliminate or minimize water-related risks associated with tailings dams

(2.6.3.3) Please explain

a. HZL has established a Tailings Management Facility Standard (TMFS) to assess and manage the impacts of Tailings Storage Facilities (TSFs) on human health and ecosystems, applying uniformly across all mining practices. The TMF Policy and Standard are updated every two years or as needed. b. TSF waste management includes (i) minimizing material storage to reduce land disturbance, (ii) ensuring storage sites are safe and well-engineered, and (iii) undertaking progressive rehabilitation. The TSF outlines a closing methodology that informs site-specific strategies, reviewed annually for compliance. c. HZL quantifies acceptable risk levels as part of the TSF framework, detailing individual Closure Plans. Quarterly and annual reports are compiled based on status, with monthly inspections conducted. These reports are submitted to HZL's board and the operating team, while site-specific procedures are reviewed annually. d. Daily inspections of all TSFs are conducted to ensure proactive management and minimize spill or flood risks. HZL's framework for managing mine deposits extends beyond closure, maintaining adherence to health, safety, and environmental (HSE) standards and prioritizing the safety of employees and communities. e. All tailings storage facilities are verified by a certified agency and are in good standing. f. We implement extensive measures for construction, operation, maintenance, and closure to mitigate tailing dam failure risks. We repurpose tailings and waste rock as backfill for underground operations, placing the remaining tailings in specially designed storage to minimize ESG risks. Dry tailing dams are also under construction.

Row 2

(2.6.3.1) Procedure

Select from:

☑ Operating plan

(2.6.3.2) Detail of the procedure

Operating plan

☑ An operating plan that is aligned with your established acceptable risk levels and critical controls framework

☑ An operating plan that includes the operating constraints of the dam and its construction method

☑ An operating plan that considers the consequences of breaching the operating constraints of the dam.

☑ An operating plan that includes periodic review of the foundations and slope materials

☑ An operating plan that evaluates the effectiveness of the risk management measures and whether performance objectives are being met

(2.6.3.3) Please explain

a. We implement extensive measures for the construction, operation, maintenance, and closure of facilities to mitigate tailing dam failure risks. We repurpose tailings and waste rock as backfill for underground operations, placing the remaining tailings in specially designed storage to minimize environmental, social, and economic risks. b. The potential impacts of HZL's tailings dam facilities on human health and water ecosystems are managed through the TMF. HZL applies the TMF across its operations in India to develop site-specific operating plans that consider design limitations and safety principles. Each plan is reviewed annually for compliance. c. We aim to rehabilitate land concurrently with tailings deposition to facilitate effective post-mining land use. HZL's TSFs are built with specific volume constraints, and we adhere to design specifications to manage impacts on human health and water ecosystems. TSFs are monitored frequently, and in FY 2023-24, none operated beyond the design threshold. d. A Tailings Storage Facility (TSF) committee, comprising experts from various functions, oversees operations. We are proactively installing dry tailing facilities to reduce the risk of dam failures. The dry tailing technology minimizes landfill land requirements and recovers water. In FY 2021-22, we commissioned a dry tailing plant at Zawar Mine, enhancing process water recovery by over 80%, improving dam stability, and reducing water footprint. The commissioning of the Dry Tailing Plant at RDC is also nearing completion.

Row 3

(2.6.3.1) Procedure

Select from:

☑ Life of facility plan

(2.6.3.2) Detail of the procedure

Life of facility plan

☑ A life of facility plan that identifies minimum specifications and performance objectives for the operating and closure phases

☑ A life of facility plan that includes an identification of potential chemical and physical risks from the design and construction phases

☑ A life of facility plan that considers post-closure land and water use

☑ A life of facility plan that details the financial and human resources needed

(2.6.3.3) Please explain

At HZL, we've established a strong governance structure for our Tailings Storage Facilities (TSF) with committees at both the Group corporate level and across all three mining sites and this meets every month. The committee at the site level helping us enhance accountability and oversight. As part of this structure, there is one TSF chairman, Engineer of record and members from various departments like civil, mill, environment, geotech and E&I as per the requirement of GISTM. These committees are responsible for raising awareness about our tailings management policy, strict adherence to the Operations, Maintenance, and Surveillance (OMS) Manual, ensure the effectiveness of reclaim water systems and are responsible for continuous monitoring, reporting, and ensuring that all necessary resources are available to maintain safe and sustainable TSF management.

Row 4

(2.6.3.1) Procedure

Select from:

☑ Approval

(2.6.3.2) Detail of the procedure

Approval

☑ A policy to eliminate or minimize water-related risks associated with tailings dams is approved by a C-suite officer

☑ The operating plan and the life of facility plan are approved by the EHS manager

☑ The operating plan and the life of facility plan are approved by a C-suite officer

☑ The results of the assurance program and the change management process are approved by the EHS manager

☑ The results of the assurance program and the change management process are approved by a C-suite officer

(2.6.3.3) Please explain

With the assistance of international specialists, we conduct stability tests for each of our three tailing storage facilities. Additionally, thorough internal audits are carried out by cross-functional teams, and the suggestions from these audits are followed up on as a matter of priority. Global experts Golder Associates and ATC Williams conducted an independent examination of our storage facilities' integrity and stability as well as the management procedures that go along with them. The COO (C-suite officer) oversees overseeing the execution of plans; however, HZL oversees overseeing any potential effects of tailings dams on human health or aquatic environments (EMS). This is the main management document for the TSFs that HZL oversees. COO Mines keeps track of operational KPI's including water & tailing dams monthly which includes KPI's like water quantity at tailing dam. The CoP for MRD is created by a multi-sectoral committee with representatives from HZL,

national and regional authorities, labour unions and tailings storage facility specialists. This assurance programme document and associated procedures are signed off by HZL's Executive sustainability Committee.The main goals of this document are to:• Provide a plan for managing all relevant design assumptions and principles throughout the life of the deposits; and• Ensure the health and safety of mine workers and anybody else who may be impacted by the deposits.This document summarises all operations and serves as a framework for site-specific Closing plans at each tailings storage facility. Based on the TMF and Closing Plans, quarterly and annual reports are created, and daily monitoring also takes place. The operations team of HZL receive the reports. Every year, it is determined whether the policy, operational plans and procedures, closure technique, and assurance programmes are still relevant, useful, and in line with the law.

Row 5

(2.6.3.1) Procedure

Select from:

☑ Assurance program

(2.6.3.2) Detail of the procedure

Assurance program

☑ An assurance program for the operating phase of the facility that details the procedures for the inspections, audits and reviews

☑ An assurance program for each phase of the facilities´ life that includes the frequency of the various levels of inspections, audits and reviews

☑ An assurance program for each phase of the facilities´ life that includes the scope of the various levels of inspections, audits and reviews

☑ An assurance program that details the competence requirements for the persons undertaking the inspections, audits and reviews

☑ An assurance program that includes an external audit covering the life of facility or the operating plans

(2.6.3.3) Please explain

HZL collaborates with international specialists to conduct stability assessments for its three tailings storage facilities. Comprehensive internal audits by cross-functional teams prioritize the implementation of their recommendations. Independent evaluations of facility integrity and management procedures are carried out by Golder Associates and ATC Williams. The Chief Operating Officer (COO) oversees operational plans and monthly monitoring of KPIs, including water quantity at the tailings dams. The CoP for MRD is formulated by a multi-sectoral committee comprising representatives from HZL, national and regional authorities, labour unions, and tailings storage facility specialists. This assurance program document, approved by HZL's Executive Sustainability Committee, manages design assumptions throughout the lifecycle of the deposits and ensures the health and safety of mine workers and nearby communities. This document serves as a framework for site-specific closure plans and summarizes all operational activities. Quarterly and annual reports are generated based on the Tailings Management Facility (TMF) and closure plans, with daily monitoring in place. Annually, we review our policies, operational plans, procedures, closure methodologies, and assurance programs to maintain their relevance and compliance with regulatory standards.

Row 6

(2.6.3.1) Procedure

Select from:

☑ Change management process

(2.6.3.2) Detail of the procedure

Change management process

☑ Inclusion of a formal change management process for the construction phase of the facility

☑ Inclusion of a formal change management process for the operating phase of the facility

☑ Inclusion of a formal change management process for the closure and decommissioning phase of the facility

☑ Inclusion of a change management process in the assurance program

☑ Inclusion of the results from external audits of operating plans or life of facility plans into the change management process

(2.6.3.3) Please explain

At HZL, we have established a strong governance structure for our Tailings Storage Facilities (TSF) with committees at both the Group corporate level and across all three mining sites and this meets on a monthly basis. The committee at site level helping us enhance accountability and oversight. As part of this structure, there is one TSF chairman, Engineer of record and members from various departments like civil, mill, environment, geotech and E&I as per the requirement of GISTM. These committees are responsible for raising awareness about our tailings management policy, strict adherence to the Operations, Maintenance, and Surveillance (OMS) Manual, ensure effectiveness of reclaim water systems and are responsible for continuous monitoring, reporting, and ensuring that all necessary resources are available to maintain safe and sustainable TSF management.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Water

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Plastics

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Not an immediate strategic priority

(3.1.3) Please explain

Not applicable, as we are primarily the manufacturer of non-ferrous metals which are sold as an intermediate product in the form of an ingot without any plastic packaging. Our goal is to eliminate the use of single-use plastic items within our premises, aligning with the latest Plastic Waste Management (Amendment) Rules, 2021 set forth by the Ministry of Environment, Forest and Climate Change (MoEF&CC). This initiative targets zero usage of single-use plastics across our entire value chain. We have prohibited both single-use plastic items and the use of plastic bags with a thickness of less than 100 microns from FY 2021-22 onwards, and we continue to ensure strict compliance with the same. All our business partners (suppliers) are required to share an undertaking acknowledging their responsibility towards HZL's ESG commitments with 'no usage of single-use plastics' during packaging as a part of the tendering process. As an alternative, biodegradable packaging or use of plastic complying with established rules is preferred across the supply chain.

Biodiversity

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Policy

☑ Carbon pricing mechanisms

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ India

(3.1.1.9) Organization-specific description of risk

Zinc being a carbon-intensive industry, carbon tax mechanisms have the potential to increase imported zinc prices in destination countries which will impact our revenue from Zinc export. According to the International Energy Agency's Global Energy and Climate Model Documentation (2023), HZL anticipates a CO2 price of 40 USD per tonne of CO2 equivalent (TCO2e), i.e., INR 3,311.38 per TCO2e (40 X USD to INR conversion rate: INR 82.7845), in emerging markets and developing economies under the APS scenario. This is expected to result in a 3.1% decline in zinc export revenue due to the impact of emerging carbon-related regulations and pricing in these economies.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Other, please specify **:**Negative impact on export revenue.

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Medium

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The decrease in revenue from zinc export due to CO2 price in the medium term, i.e., till 2030 will be 3.1 %

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

1553200000

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

1553200000

(3.1.1.25) Explanation of financial effect figure

Parameters considered: a: HZL's total revenue from export in FY 2024: INR 5,0540,000,000. b: Zinc export portfolio in FY2024: 2,38,000 MT (Total Zinc production volume 8,17,000 MT) c: Expected GHG emission Intensity in FY2030 basis our commitment to SBTi: 1.97 TCO2e/MT d: Total emissions related to export: 4,69,058 TCO2e (a X b) e: USD to INR conversion rate in FY2024: 82.7845 f: Expected CO2 price: 40 USD/TCO2e g: Expected total cost due to CO2 price:(d X e X f) (4,69,058 X 82.7845 X 40) INR 1,553,200,000 We assume that the revenue from the export and USD to INR conversion rate will remain similar to FY 2024 in FY 2030. Therefore, the anticipated financial impact in the medium term will be INR 1,553,200,000

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase environment-related capital expenditure

(3.1.1.27) Cost of response to risk

7880000000

(3.1.1.28) Explanation of cost calculation

In line with HZL's SBTi commitment to reduce Scope 1 & Scope 2 emissions by 50% by 2030, we have already started receiving RE power from 180 MW RE (partial deployment of 450 MW RE-RTC), when deployed completely, this will help reduce GHG emissions by 2.7 million TCOP2e also making HZL's power portfolio 50% RE based. This will eventually reduce emissions by 50%, mitigating any impact we might face due to carbon prices on our products. We have assumed there is no cap/ threshold on GHG emissions and the entire GHG emission is under the carbon tax. Therefore, the total CAPEX to be invested in 450 MW RE-RTC is INR 7,880,000,000. Therefore, INR 7,880,000,000 is the cost of the response to risk.

(3.1.1.29) Description of response

HZL having signed PDA for 450 MW RE-RTC will reduce CoP (along with other factors) due to reduced dependency on coal and grid power along with other factors (Power & fuel comprise 18% of HZL's total expenses). However, due to RE power, we will run CPP's at a lower PLF, which will not just reduce GHG emissions but also reduce water consumption. GHG emissions from coal and grid power are responsible for 90% of HZL's total Scope 1 & Scope 2 emissions. With RE-RTC projects we will be able to move towards 50% power consumption from RE, thus reducing our Scope 1 & Scope 2 GHG emissions by 50% by 2030. Therefore, this will decrease the negative impact of revenue by approximately 70%.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.3) Risk types and primary environmental risk driver

Acute physical

☑ Drought

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ India

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Banas river basin

(3.1.1.8) Mining project ID

Select all that apply

☑ Project 6

(3.1.1.9) Organization-specific description of risk

According to the climate-related physical risk assessment under RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5 scenarios, drought is identified as the most significant acute physical risk in all timeframes. Over 90% of HZL operations are located in Rajasthan, a region facing severe water stress. As water is essential for our smelting operations, any disruption in the availability of water from captive sources could severely impact our operations. In such a scenario, we would need to procure water from alternative sources at a significantly higher cost, leading to an increase in direct operational expenses. For instance, Chanderiya Lead Zinc Smelter (CLZS) procures water from Gosunda Dam, when there is water in plenty and there is no cap on water sourcing from Gosunda (surface water), costing only INR 1.5/KL. However, during drought-like conditions, when water extraction from Gosunda (surface water) is limited, the cost of sourcing water from the Chittorgarh and Udaipur STPs rises significantly—by 28 and 159 times, respectively. This leads to a substantial increase in overall costs and negatively impacts HZL's expected EBITDA. Moreover, as our local community is also dependent on Gosunda Dam, it hinders social license to operate during the lean period.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased direct costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Low

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Reduced EBITDA by 0.5% in the medium-term.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

851660000

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

851660000

(3.1.1.25) Explanation of financial effect figure

Parameters: a. Water required by CLZS from March to June (Water Scarce months: 4 months:): 4,390,000 KL b. Cost of Sourcing water from Gosunda: 1.5 INR/KL c. Cost of transporting water by rail from Udaipur STP to CLZS: 241 INR/KL d. Cost of treatment and transport of water from Chittorgarh STP to CLZS: 44 INR/KL Forecasting: e. Total cost if water is entirely sourced from the captive dam (Gosunda): INR 6,600,000. (A X B) f. Total cost if entire water sourced from alternate sourced: INR 859,079,100 (a X 77% X c a X 23% X d) (4,390,000 X 0.77 X 241 4,390,000 X 0.23 X 44) INR 859,079,100 g. Cost of water per KL when sourced from alternate sources: 196 INR/KL (f / a) h. Difference per KL between sourcing from captive dam & alternate source: 194 INR/KL (g-b) Result: k. Total Additional cost for CLZS is scarce (4) months: (h X a) 194 X 4,390,000 INR 851,660,000 Assumption: In water abundance months 100% of water is sourced from the captive dam

(Gosunda) and in scarce months the entire water is sourced from alternate sources namely Udaipur STP (77%) & Chittorgarh STP (23%). Therefore, the anticipated financial impact in the medium term will be INR 851,660,000

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Adopt water efficiency, water reuse, recycling and conservation practices

(3.1.1.27) Cost of response to risk

8130000000

(3.1.1.28) Explanation of cost calculation

To mitigate this risk, we have implemented/are in the process of implementing the following initiatives: a. Commissioned ZLD Plant at CLZS (600 KLD): INR 250,000,000 b. CAPEX to be invested in 450 MW RE-RTC is INR 7,880,000,000. Therefore, the cost of the response to risk: INR (250,000,000 7,880,000,000) INR 8,13,00,00,000

(3.1.1.29) Description of response

On average 52% of water consumed by CLZS is consumed by CLZS CPP only. With the onset of RE power from 450 MW RE-RTC and reduced dependency on conventional power the risk due to water scarcity can be mitigated. Sourcing power from RE-RTC will help run CPP at lower PLF which in turn will reduce water consumption.

Biodiversity

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Declining ecosystem services

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ India

(3.1.1.8) Mining project ID

Select all that apply

☑ All disclosed mining projects

(3.1.1.9) Organization-specific description of risk

Scenario analysis reveals that external factors, including overexploitation and urbanization, are likely to significantly degrade ecosystem services in the medium to long term. This decline poses significant risks to Hindustan Zinc Limited's (HZL) operations, as our business relies heavily on essential ecosystem services such as Land availability and Water resources. Direct consequences of ecosystem degradation: 1. Increased resource conflicts, thereby impacting Social License to operate Indirect consequences due to ecological degradation: 1. Rising resource costs 2. Delays in getting operational licenses 3. Regulatory fines and reputational damage Additionally, unmanaged stormwater accumulation near mines may cause potential destruction of life and property. Proactive management of ecosystem services is crucial to mitigate these risks and ensure the sustainability of HZL's operations."

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Upfront costs to adopt/deploy new practices and processes

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Likely

(3.1.1.14) Magnitude

Select from:

☑ Low

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact will be on Increased Expenses to maintain social license to operate.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ No

(3.1.1.26) Primary response to risk

Nature based solutions, restoration and conservation

☑ Implement ecosystem restoration and long-term protection

(3.1.1.27) Cost of response to risk

2000000

(3.1.1.28) Explanation of cost calculation

To expand storm water pond: INR 20,00,000 To Implement Community programmes: To build community water structures:

(3.1.1.29) Description of response

To handle larger volumes of runoff during heavy rainfall events, reducing the risk of flooding. Therefore, we are expanding the size of our stormwater ponds across our operations.
[Add row]

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

(3.1.2.1) Financial metric

Select from:
☑ CAPEX

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.6) Amount of CAPEX in the reporting year deployed towards risks related to this environmental issue

0

(3.1.2.7) Explanation of financial figures

In FY 2023-24, HZL did not encounter any significant climate-related transition risks, as India has yet to implement carbon pricing. Furthermore, the company effectively mitigated physical risks through proactive measures, such as achieving ZLD across all its locations and utilizing treated water from the Udaipur 7 Chittorgarh Sewage treatment plant. HZL also reduced its reliance on conventional power sources, which are subject to price fluctuations and availability risks, by increasing the use of renewable energy.

Water

(3.1.2.1) Financial metric

Select from:

☑ CAPEX

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

☑ Less than 1%

(3.1.2.6) Amount of CAPEX in the reporting year deployed towards risks related to this environmental issue

0

(3.1.2.7) Explanation of financial figures

In FY 2023-24, HZL did not experience any water-related physical or transition risks, as the company enhanced its use of sewage-treated water from both the Chittorgarh and Udaipur STPs, thereby reducing its reliance on freshwater resources. For instance, at Zawar mines, HZL installed a 4,000 m³/day effluent treatment plant with ZLD technology, allowing the treatment and recycling of poor-quality excess water. This has reduced the company's daily freshwater intake from Tidi Dam by approximately 3,800 m³, supporting its commitment to environmental compliance. HZL has also implemented paste fill technology, replacing conventional hydraulic filling. This technology, which uses a high solids content of 77-79%, conserves water, improves stope stability, enhances surface integrity in the mines, and increases the recycling of tailings.
[Add row]

(3.2) Within each river basin, how many facilities are exposed to substantive effects of water-related risks, and what percentage of your total number of facilities does this represent?

Row 1

(3.2.1) Country/Area & River basin

India

☑ Other, please specify **:**Banas

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

6

(3.2.4) % of your organization’s total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 51-75%

(3.2.7) Production value for the metals and mining activities associated with these facilities (currency)

300060000

(3.2.10) % organization’s total global revenue that could be affected

Select from:

☑ 100%

(3.2.11) Please explain

The production value considered is the revenue figures from the facility/(ies). As an integrated producer of Lead, Zinc, and Silver, all our smelters are situated in the Banas Basin which makes it of strategic importance and water as a resource is of strategic importance in our smelters as compared to mines. Aggregated data for 3 smelters and 3 mines have been provided for Banas basin.

Row 2

(3.2.1) Country/Area & River basin

India

☑ Mahi River

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

1

(3.2.4) % of your organization's total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 1-25%

(3.2.7) Production value for the metals and mining activities associated with these facilities (currency)

0

(3.2.10) % organization's total global revenue that could be affected

Select from:

☑ Less than 1%

(3.2.11) Please explain

HZL produces lead, zinc, and silver, but is unable to provide basin-wise financial production values. Therefore, the total financial production value has been attributed to the Banas River basin.

Row 3

(3.2.1) Country/Area & River basin

India

☑ Other, please specify **:**Luni

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

1

(3.2.4) % of your organization’s total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 1-25%

(3.2.7) Production value for the metals and mining activities associated with these facilities (currency)

0

(3.2.10) % organization’s total global revenue that could be affected

Select from:

☑ Less than 1%

(3.2.11) Please explain

HZL produces lead, zinc, and silver, but is unable to provide basin-wise financial production values. Therefore, the total financial production value has been attributed to the Banas River basin.
[Add row]

(3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Comment
	Select from: ☑ No	*During FY 2023-24, HZL did not pay any fines related to water/environment violations.*

[Fixed row]

(3.4) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for violation of biodiversity-related regulation?

(3.4.1) Any penalties for violation of biodiversity-related regulation?

Select from:

☑ No

(3.4.2) Comment

We adhered to all regulatory requirements without incurring fines, enforcement orders, or any penalties for contravening biodiversity-related regulations. Safeguarding and enriching biodiversity stands as a fundamental facet of Hindustan Zinc's dedication to sustainable progress.
[Fixed row]

(3.5) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Select from:

☑ No, but we anticipate being regulated in the next three years

(3.5.4) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Presently, HZL is not regulated by any regulatory carbon pricing systems. However, we anticipate the future applicability of such schemes in the next three years. To prepare for the applicability of possible future regulations on carbon pricing, shadow pricing has been implemented. Shadow pricing is used when we want to embed the climate change impact of a particular project into its investment-related decisions. A theoretical price is finalized for per tonne of CO2 emissions. This theoretical CO2 price (also known as 'carbon price' or 'Internal Carbon Price') applies to 100% of our operations covering scope 1 and 2 emissions, the internal carbon price is INR 1241.77/tCo2e.

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Water	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Biodiversity	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Development of new products or services through R&D and innovation

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ India

(3.6.1.8) Organization specific description

In recent years demand for low-carbon products has been on the rise due to emerging carbon regulations as well as net-zero commitments being taken by companies/countries. In response to the demand, HZL has developed low-carbon products which have the potential to draw premium in emerging markets such as the Middle East. This opportunity occurs in our direct operations as low-carbon products are developed using renewable energy in our operations. In the current year, HZL has produced 8% of the Average Low Carbon SHG Zinc product of total SHG Zinc production for the baseline year FY 2023-24 and is expected to reach 16.89% of Low Carbon SHG Zinc production by the end of FY 2025 and 30.30% of Low Carbon SHG Zinc production by the end of FY 2026. Therefore, this opportunity is expected to have a direct positive impact on our revenues due to the premium.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenue resulting from price premiums

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Increase in EBITDA by 1% in the short-term

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

1695800733

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

1695800733

(3.6.1.23) Explanation of financial effect figures

Parameters: a. Expected Low-carbon Zinc in 2026: 2,76,324 MT b. Emission intensity for Zinc (inclusive of Scope 1,2 & 3): 5.88 TCO2e/MT Zinc c. Emission intensity for EcoZen (Low carbon Zinc): 0.940 TCO2e/ MT Zinc d. HZL's Internal carbon price: 15 USD/TCO2e e. Assumed minimum premium on Low carbon Zinc: 74 USD/MT ((b – c) X d)) f. USD to INR conversion rate: 82.7845 INR Result: g. Expected increase in revenue due to premium on Zinc: (a X e X f) INR 1695800733 Therefore, the anticipated financial effect will be INR 1695800733.

(3.6.1.24) Cost to realize opportunity

7880000000

(3.6.1.25) Explanation of cost calculation

Cost for setting Renewable Energy Round the Clock (RE-RTC) INR 7,880,000,000 This is in addition to Waste Heat Recovery Boiler 48.46 MW Capacity & Solar Power 40.70 MW Capacity

(3.6.1.26) Strategy to realize opportunity

Low-carbon transition is the core of our business strategy and is further helping us in setting a clear pathway to deliver long-term value as well as ambitious targets to decarbonize our business. This product will allow our customers to access low carbon Zinc & essentially reduce their Scope 3 upstream emissions. We have recently started receiving the first flow of round-the-clock renewable energy as part of its 450 MW power delivery agreement. This is in addition to its existing 40.7 MW of captive solar power. Our proactive approach and commitment to net zero ambition is in-line with our commitment to sustainable future for all. This strategy aligns with growing consumer demand for sustainable options, enhances brand reputation, and addresses regulatory pressures. We undertook Product Carbon Footprint of Average Low Carbon SHGZ product based on mass balance approach as per ISO 14067 Standards along with Third Party Verification by an Independent International Reviewer. As per the latest verification carried out for Low carbon Zinc, the total emissions associated with our zinc produced is 5.882 TCO2e/ tonne of Zinc & emissions associated with low carbon Zinc is 0.939 TCO2e/Tonne of Zn, which is less than 1 tonne. Production projection of Average Low Carbon Special High Grade Zinc Product is calculated based on based mass balance approach of renewable electricity and total electricity consumption mix. Therefore, as per mass balance approach HZL has 8.37% of Average Low Carbon SHG Zinc product of total SHG Zinc production for baseline year 2023-24 (FY 2024), will reach 16.89% of Low Carbon SHG Zinc production at end of FY 2025 and 30.30% of Low Carbon SHG Zinc production at end of FY 2026.

Water

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Water recovery from sewage treatment

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ India

(3.6.1.6) River basin where the opportunity occurs

Select all that apply

☑ Other, please specify **:**Banas river basin

(3.6.1.8) Organization specific description

As per the Central Ground Water Board (CGWB), all our operational sites, except Pantnagar in Uttarakhand, are situated in high-water stress areas. Local regulations strictly prohibit water withdrawal from the captive dam during the lean season, which will have a direct impact on plant operations, especially the Captive (Thermal) Power Plant (CPP), which depends heavily on this water source. This, in turn, could affect production levels. However, we see this as an opportunity, as sourcing power from renewable energy (RE) on a round-the-clock (RTC) basis will enable our CPP to operate at a lower plant load factor (PLF), thereby reducing water usage and lowering water procurement costs.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Virtually certain (99–100%)

(3.6.1.12) Magnitude

Select from:

☑ High

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Increase in EBITDA by 0.16% in the short-term

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

275000000

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

275000000

(3.6.1.23) Explanation of financial effect figures

A: Power requirement by CLZS CPP: 250 MW / (21,90,000,000 kWh) B: Average cost of water at CLZS: 78 INR/KL C: Specific Water consumption by CPP: 2.3 KL/MWh Result: D: Expected power from CPP due to incoming RE power: 65,70,00,000 kWh (A X 30%) E: Expected power saved in CPP due to RE power: 15,33,000,000 kWh (D – A) F: Water saved due to reduced power consumption from CPP: 35,25,900 KL (C X D / 103) G: Total monetary savings due to lower water consumption/ treatment: INR 275,000,000. (E X A)

(3.6.1.24) Cost to realize opportunity

7880000000

(3.6.1.25) Explanation of cost calculation

The cost for setting Renewable Energy Round the Clock (RE-RTC) INR 7,880,000,000. Therefore, the cost of realizing the opportunity is INR 7,880,000,000

(3.6.1.26) Strategy to realize opportunity

In line with SBTi's commitment, HZL is to reduce its total Scope 1 & Scope 2 emissions by 50% by 2030. This will be done with the help of 450 MW RE-RTC. RE power will also allow us to save water with reduced dependency on conventional power from CPP. DSC CPP's not being considered in the calculation since it is significantly using Udaipur STP water.

Biodiversity

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp3

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Energy source

☑ Use of low-carbon energy sources

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ India

(3.6.1.7) Mining project ID

Select all that apply

☑ Project 1

(3.6.1.8) Organization specific description

Natural restoration of biodiversity by reduction of Lantana Camara and using it as an alternate source of energy in business requirements. •Promotion of Lantana free blocks by reduction of the same. •Restoring Biodiversity in the vicinity of the business area •Ensuring business linkages for biomass and reducing coal consumption. •Improvement of land quality and development of green belt areas.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

No financial impact.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.24) Cost to realize opportunity

0

(3.6.1.26) Strategy to realize opportunity

The reduction of Lantana Camara will contribute positively to the reduction of the coal consumption target of HZL. Expected Impact FY 2025 – •Support & Supply of 500 ton Alternate Fuel and Raw Materials to the business •Removal of Lantana from 100 acres •Plantation and pastureland development in 100 acres
[Add row]

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

(3.6.2.1) Financial metric

Select from:

☑ CAPEX

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

4110000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 1-10%

(3.6.2.4) Explanation of financial figures

HZL has made investments towards renewable power and innovative technologies like the Fumer plant to reduce jarosite generation and increase metal recovery and hence reduce scope 1 emissions for jarosite transportation. LNG vehicle deployment for interunit and finished goods transportation Electric vehicles for interunit transportation 450 MW RE-RTC deployment for round-the-clock renewable energy.

Water

(3.6.2.1) Financial metric

Select from:

☑ CAPEX

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

170000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ Less than 1%

(3.6.2.4) Explanation of financial figures

HZL has taken the following water-efficiency initiatives to realise water-related opportunity: a. In Udaipur, HZL commissioned a 20 MLD STP in 2014 under a public-private partnership, the first of its kind in Rajasthan. In 2017, HZL signed an agreement with Udaipur Smart City Limited to increase sewage treatment capacity by 40 MLD. As of FY 2020-21, the total capacity reached 60 MLD. The replacement of fresh water with treated STP water for operations has allowed nearly 36% of the company's total water withdrawal to be satisfied with treated sewage, freeing up freshwater resources for the community. b. In addition, HZL has executed a rainwater harvesting and groundwater recharge project across Hurda, Shahpura, Kotri, and Jahazpur blocks in the Bhilwara district. The project involved desilting ponds, repairing and reinforcing embankments, and constructing 358 recharge shafts. These efforts have created a total groundwater recharge potential of over 8.7 million cubic meters per year, further bolstering sustainable water management in the region.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ Quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

☑ Non-executive directors or equivalent

☑ Independent non-executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

The purpose of this Board Diversity Policy is to ensure an inclusive and diverse membership of the board of directors of HZL (the "Board") resulting in optimal decision-making & assisting in the development and execution of a strategy which promotes the success of HZL for the collective benefit of its stakeholders. HZL is committed to promoting diversity & inclusion within the organization and in larger communities who we partner with. Our objective is to achieve gender parity across all levels starting from our Board.

(4.1.6) Attach the policy (optional)

HZL-Board-Diversity-Policy-final-19.04.2024.pdf
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply
☑ Chief Executive Officer (CEO)
☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Board Terms of Reference

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing and guiding scenario analysis

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

☑ Approving corporate policies and/or commitments

☑ Overseeing and guiding the development of a business strategy

☑ Monitoring compliance with corporate policies and/or commitments

☑ Overseeing and guiding the development of a climate transition plan

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

☑ Approving and/or overseeing employee incentives

☑ Overseeing and guiding major capital expenditures

☑ Monitoring the implementation of the business strategy

☑ Overseeing reporting, audit, and verification processes

☑ Monitoring the implementation of a climate transition plan

(4.1.2.7) Please explain

The CEO bears ultimate responsibility for addressing issues related to climate change, water and biodiversity. The CEO chairs the Sustainability Committee at the executive level, tasked with formulating the company's sustainability strategy and establishing its long-term goals and targets. The CEO provides updates to the board on climate-related issues, including annual targets and site-specific performance, and manages the allocation of budgets for climate adaptation and mitigation efforts whenever there is a board meeting. ESG-related issues Climate change, water and biodiversity. Additionally, the CEO serves as a member of the Board-level

Sustainability & ESG Committee, convening biannually to update the board on the progress of the company's decarbonization roadmap. The CEO's oversight extends across procurement, human resources, finance, R&D, legal, and operations, ensuring that all areas align with and support the implementation of the company's climate strategy. During FY 2023-24, the following initiatives have been carried out under the realm of our CEO: a. Signing of Power Delivery Agreement (PDA) of 450 MW renewable energy project b. Adoption of 31 EVs across the company c. India's 1st UG BEV at Sindesar Khurd Mine (SKM) d. 76,035 tCO2e GHG emission reduced due to firing/power generation using biomass e. Pilot study as per Niti Aayog's Water Neutrality standard at Rajpura Dariba Complex (RDC) f. 0.67 million trees planted as part of a commitment to plant 1 million trees by 2025, 122,755 planted this year g. Implementation of Schedule 1 conservation plan in progress at Chanderiya Lead-Zinc Smelter (CLZS), Rajpura Dariba Mine (RDM), SKM & Zawar Mine (ZM) On the other hand, the Sustainability and ESG Committee at the Board level serves as Tier-1 of our governance framework, guiding the company in achieving its sustainability goals and Net Zero commitment. It consists of an Independent Director (Chair), an Executive Director, and two Non-Executive Nominee Directors. The committee provides oversight and shapes our sustainability strategy on key issues such as climate change, environmental protection, safety, transparency, and long-term goal setting. Climate-related risks and opportunities are central to the committee's responsibility for the company's long-term stewardship. The committee plays a critical role in shaping business decisions to prevent environmental harm, strengthen stakeholder engagement, achieve climate targets, and uphold the company's reputation as a leader in sustainable metals and mining. During FY 2023-24, the following initiatives were undertaken under the realm of the CEO: a. Third party certification for Low-carbon Zinc "EcoZen" b. 100% Renewable Energy at Pant Nagar Metal Plant, Uttarakhand c. Commitment to Electric mobility at Smelters and Underground mining d. Commitment to install Tail Gas Treatment (TGT) plant across all roaster e. To implement IFRS S2 recommendations including scenario analysis

Water

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Chief Executive Officer (CEO)

☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Board Terms of Reference

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing and guiding scenario analysis

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

☑ Approving corporate policies and/or commitments

☑ Approving and/or overseeing employee incentives

☑ Overseeing and guiding major capital expenditures

☑ Monitoring the implementation of the business strategy

☑ Overseeing reporting, audit, and verification processes

☑ Overseeing and guiding the development of a business strategy

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

(4.1.2.7) Please explain

The CEO holds ultimate responsibility for water-related issues, possessing the highest decision-making authority within the company. As a member of HZL's Board of Directors and the Board Level Sustainability & ESG Committee, the CEO provides overall guidance on all key ESG matters. Key responsibilities of the CEO include: a. Reviewing the company's progress toward its 2025 sustainability goals. b. Regularly briefing the Board on climate-related issues, including water risk, mitigation strategies, annual targets, site performance, and target progress. c. Authorizing CAPEX and OPEX budgets, along with other resources necessary for implementing climate adaptation and mitigation actions. d. Making decisions related to Procurement, Human Resources, Finance, Legal, and Operations, which support the implementation of our water-related strategy. HZL is certified as a 2.41 times water-positive company, with a long-term goal to achieve 5 times water positivity and reduce freshwater consumption by 25% by 2025, using 2020 as the base year. During FY 2023-24, key water-related initiatives led by the CEO include: a. Recycling 18.41 million m³ of water. b. Inaugurating a zero liquid discharge plant with a 4,000 KLD capacity at Zawar mines to enhance water recovery and reduce freshwater dependency, aligning with the vision of zero discharge and achieving 5x water positivity by 2025. c. Enhancing the effluent treatment plant (ETP)/ZLD capacity and securing low-quality water for the Chanderiya location. On the other hand, the Sustainability and ESG Committee, chaired by an Independent Director, is part of our Board-level governance framework, guiding sustainability goals and water-related commitments. It includes an Independent Director, an Executive Director, and two Non-Executive Nominee Directors. The committee oversees water management, environmental protection, safety, and transparent reporting. Its primary focus is achieving five-time water positivity and a 25% reduction in freshwater use by 2025. The committee also drives continuous improvement in water performance and ensures progress toward long-term sustainability targets.

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Chief Executive Officer (CEO)

☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Board Terms of Reference

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

☑ Approving corporate policies and/or commitments

☑ Monitoring compliance with corporate policies and/or commitments

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

(4.1.2.7) Please explain

Sustainability and ESG Committee: This committee is responsible for overseeing strategy implementation, policy development, and the establishment and review of goals and targets aimed at enhancing stakeholder commitment, convenes semi-annually. The CEO, also a member of the Sustainability and ESG Committee has the ultimate responsibility who provides quarterly briefings to the board. The primary responsibilities of the Sustainability and ESG Committee include: • Assisting the Board in meeting its ESG responsibilities and ensuring strong governance for sustainability. • Guiding to ensure continual improvement in the company's sustainability performance and the implementation of appropriate processes and policies. • Guiding and reviewing the company's sustainability strategy, goals, and targets. • Playing a key strategic role in business decisions to ensure workplace safety, prevent environmental damage, enhance stakeholder commitment, and

maintain the company's reputation as a leader in the sustainable metal and mining sector. In FY 2023-24, the CEO released HZL's first report on Taskforce on Nature-related financial disclosures.
[Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:
☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply
☑ Consulting regularly with an internal, permanent, subject-expert working group
☑ Engaging regularly with external stakeholders and experts on environmental issues
☑ Integrating knowledge of environmental issues into board nominating process
☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)
☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Additional training
☑ Training in an environmental subject by a certified organization, please specify :Independent Directors attended awareness sessions conducted on Cybersecurity, Risk Management and ESG including climate and water during the year imparted through an external agency.

Experience
☑ Executive-level experience in a role focused on environmental issues
☑ Active member of an environmental committee or organization

Water

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Integrating knowledge of environmental issues into board nominating process

☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Additional training

☑ Training in an environmental subject by a certified organization, please specify :Independent Directors attended awareness sessions conducted on Cybersecurity, Risk Management and ESG including climate and water during the year imparted through an external agency.

Experience

☑ Executive-level experience in a role focused on environmental issues

☑ Active member of an environmental committee or organization

[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets
☑ Setting corporate environmental policies and/or commitments
☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a climate transition plan
☑ Implementing a climate transition plan
☑ Conducting environmental scenario analysis
environmental issues
☑ Managing annual budgets related to environmental issues
☑ Implementing the business strategy related to environmental issues
☑ Developing a business strategy which considers environmental issues
☑ Managing environmental reporting, audit, and verification processes
☑ Managing major capital and/or operational expenditures relating to

Other

☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:
☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:
☑ Quarterly

(4.3.1.6) Please explain

The CEO holds the highest management position and bears responsibility for decision-making on climate change issues, including the authorisation of CAPEX and OPEX budgets and other resources necessary for climate adaptation and mitigation efforts. Additionally, our CEO serves on the Board of Directors and as a member of the Board-level Sustainability & ESG Committee (Tier 1), which provides strategic direction on essential ESG matters and monitors HZL's progress towards achieving sustainability goals by 2025. Furthermore, the CEO chairs the Executive Sustainability Committee (Tier 2), comprising the CFO, functional heads, plant heads, community chairmen, and SBU Directors. This committee convenes monthly to review the status and advancement of sustainability goals 2025 and key projects. The committee's management representative monthly presents performance updates and future strategies to the Board-level Sustainability & ESG Committee. Under the CEO's guidance, the Executive Committee oversees sustainability, health and safety, climate change, water and biodiversity.

Water

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Measuring progress towards environmental corporate targets

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Conducting environmental scenario analysis

☑ Managing major capital and/or operational expenditures relating to environmental issues

☑ Managing annual budgets related to environmental issues

☑ Implementing the business strategy related to environmental issues

☑ Developing a business strategy which considers environmental issues

☑ Managing environmental reporting, audit, and verification processes

Other

☑ Providing employee incentives related to environmental performance

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

The CEO holds the highest management position and bears responsibility for decision-making on climate change issues, including the authorization of CAPEX and OPEX budgets and other resources necessary for climate adaptation and mitigation efforts. Additionally, our CEO serves on the Board of Directors and as a member of the Board-level Sustainability & ESG Committee (Tier 1), which provides strategic direction on essential ESG matters and monitors HZL's progress towards achieving sustainability goals by 2025. Furthermore, the CEO chairs the Executive Sustainability Committee (Tier 2), comprising the CFO, functional heads, plant heads, community chairmen, and SBU Directors. This committee convenes monthly to review the status and advancement of sustainability goals and key projects. The committee's management representative presents performance updates and future strategies to the Board-level Sustainability & ESG Committee monthly. Under the CEO's guidance, the Executive Committee oversees sustainability, health and safety, climate change, water and biodiversity.

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

The CEO holds the highest management position and bears responsibility for decision-making on climate change issues, including the authorisation of CAPEX and OPEX budgets and other resources necessary for climate adaptation and mitigation efforts. Additionally, our CEO serves on the Board of Directors and as a member of the Board-level Sustainability & ESG Committee (Tier 1), which provides strategic direction on essential ESG matters and monitors HZL's progress towards achieving sustainability goals by 2025. Furthermore, the CEO chairs the Executive Sustainability Committee (Tier 2), comprising the CFO, functional heads, plant heads, community chairmen, and SBU Directors. This committee convenes monthly to review the status and advancement of sustainability goals and key projects. The committee's management representative monthly presents performance updates and future strategies to the Board-level Sustainability & ESG Committee. Under the CEO's guidance, the Executive Committee oversees sustainability, health and safety, climate change, water and biodiversity.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

10

(4.5.3) Please explain

The Short-term Incentive Plan (STIP) links the variable annual pay of all employees, including the CEO, executive members, and senior management, to sustainability performance, comprising 10% of the annual bonus. This includes climate-related goals and KPIs such as reductions in absolute emissions, energy and water consumption, waste generation, sustainability-related training, climate targets, and Sustainability Goals 2025. The Long-term Incentive Plan (LTIP), through the Employee Stock Option Scheme (ESOS), rewards performance based on sustainability and climate and water-related goals, focusing on ESG, carbon footprint, energy efficiency, emissions reduction, supply chain engagement, GHG transition, and water positivity. Climate change factors make up 15% of ESOS. Performance metrics include emissions reduction, innovative technologies for non-renewable energy, energy efficiency, and the company's performance in climate-related sustainability indexes.

Water

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

10

(4.5.3) Please explain

The Short-term Incentive Plan (STIP) links the variable annual pay of all employees, including the CEO, executive members, and senior management, to sustainability performance, comprising 10% of the annual bonus. This includes climate-related goals and KPIs such as reductions in absolute emissions, energy and water consumption, waste generation, sustainability-related training, climate targets, and Sustainability Goals 2025. The Long-term Incentive Plan (LTIP), through the Employee Stock Option Scheme (ESOS), rewards performance based on sustainability and climate and water-related goals, focusing on ESG, carbon footprint, energy efficiency, emissions reduction, supply chain engagement, GHG transition, and water positivity. Climate change factors make up 15% of ESOS. Performance metrics include emissions reduction, innovative technologies for non-renewable energy, energy efficiency, and the company's performance in climate-related sustainability indexes.

Biodiversity

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

10

(4.5.3) Please explain

The Short-term Incentive Plan (STIP) links the variable annual pay of all employees, including the CEO, executive members, and senior management, to sustainability performance, comprising 10% of the annual bonus. This includes climate-related goals and KPIs such as reductions in absolute emissions, energy and water consumption, waste generation, sustainability-related training, climate targets, and Sustainability Goals 2025. The Long-term Incentive Plan (LTIP), through the Employee Stock Option Scheme (ESOS), rewards performance based on sustainability and climate, water and biodiversity-related goals, focusing on ESG, carbon footprint, energy efficiency, emissions reduction, supply chain engagement, GHG transition, and water positivity. Climate change factors make up 15% of ESOS. Performance metrics include emissions reduction, innovative technologies for non-renewable energy, energy efficiency, and the company's performance in climate-related sustainability indexes.
[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Executive Officer (CEO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Shares

☑ Other, please specify :Awards & recognition

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Organization performance against an environmental sustainability index

☑ Reduction in absolute emissions in line with net-zero target

Strategy and financial planning

☑ Achievement of climate transition plan

☑ Board approval of climate transition plan

☑ Shareholder approval of climate transition plan

☑ Increased investment in environmental R&D and innovation

☑ Shift to a business model compatible with a net-zero carbon future

☑ Increased proportion of revenue from low environmental impact products or services

☑ Increased alignment of capex with transition plan and/or sustainable finance taxonomy

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in emissions intensity

☑ Increased share of renewable energy in total energy consumption

☑ Reduction in absolute emissions

Resource use and efficiency

☑ Improvements in emissions data, reporting, and third-party verification

☑ Improvements in water accounting, reporting, and third-party verification

☑ Energy efficiency improvement

☑ Reduction in total energy consumption

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The Short-Term Incentive Plan (STIP) aligned with the Vedanta Sustainability Assurance Programme links 10% of all employees' annual bonuses, including those of the CEO and senior management, to sustainability performance. This includes climate-related goals and KPIs, such as reducing absolute emissions, energy and water consumption, and waste generation. It also factors in employee sustainability training, progress toward 2025 climate targets, advancements in low-carbon zinc production, and performance on climate-related indices. The Long-Term Incentive Plan (LTIP), in the form of the Employee Stock Option Scheme (ESOS), rewards employees based on pre-determined criteria, including sustainability, climate goals, ESG, and carbon footprint, with a 36-month vesting period. Climate change considerations constitute 15% of ESOS, focused on emission reduction, innovative technologies, and increasing energy efficiency to reduce emissions and biodiversity management. Awards & Recognition: HZL rewards employees, including business managers, through competitions like Kaizen (FIP) for contributions to sustainability. Champions with innovative ideas for reducing emissions and energy are recognised at monthly "Sampark" town halls, with top teams receiving INR 50,000.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

By linking the CEO's incentives to specific sustainability and transition goals, HZL ensures alignment between the CEO's objectives and the company's broader targets. This alignment enables effective progress toward Net Zero emissions and sustainability. The CEO's incentives focus on key areas such as reducing greenhouse gas emissions, water and waste management, and energy efficiency, driving immediate action and fostering innovation in achieving these goals. Overall, these incentives play a crucial role in advancing HZL's climate transition plan and ensuring its successful implementation.

Water

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Executive Officer (CEO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Shares

☑ Other, please specify :Awards & recognition

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Organization performance against an environmental sustainability index

☑ Reduction in absolute emissions in line with net-zero target

Strategy and financial planning

☑ Achievement of climate transition plan

☑ Board approval of climate transition plan

☑ Shareholder approval of climate transition plan

☑ Increased investment in environmental R&D and innovation

☑ Shift to a business model compatible with a net-zero carbon future

☑ Increased proportion of revenue from low environmental impact products or services

☑ Increased alignment of capex with transition plan and/or sustainable finance taxonomy

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in emissions intensity

☑ Increased share of renewable energy in total energy consumption

☑ Reduction in absolute emissions

Resource use and efficiency

☑ Energy efficiency improvement

☑ Reduction in total energy consumption

☑ Reduction of water withdrawals – direct operations

☑ Improvements in water efficiency – direct operations

☑ Reduction in water consumption volumes – direct operations

☑ Improvements in emissions data, reporting, and third-party verification

☑ Improvements in water accounting, reporting, and third-party verification

☑ Improvements in water efficiency – upstream value chain (excluding direct operations)

☑ Reduction of water withdrawal and/or consumption volumes – upstream value chain (excluding direct operations)

☑ Reduction of water withdrawal and/or consumption volumes – downstream value chain (excluding direct operations)

Pollution

☑ Reduction of water pollution incidents

☑ Reduction or phase out of hazardous substances

☑ Improvements in wastewater quality – direct operations

☑ Increase in substitution of listed environmental contaminants

☑ Improvements in wastewater quality – upstream value chain (excluding direct operations)

☑ Improvements in wastewater quality – downstream value chain (excluding direct operations)

☑ Reduction/elimination of environmental incidents and/or environmental notices (notices of violation)

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The Short-Term Incentive Plan (STIP) aligned with the Vedanta Sustainability Assurance Programme links 10% of all employees' annual bonuses, including those of the CEO and senior management, to sustainability performance. This includes climate and water-related goals and KPIs, such as reducing absolute emissions, energy and water consumption, and waste generation. It also factors in employee sustainability training, progress toward 2025 climate targets, advancements in low-carbon zinc production, and performance on climate-related indices. The Long-Term Incentive Plan (LTIP), in the form of the Employee Stock Option Scheme (ESOS), rewards employees based on pre-determined criteria, including sustainability, climate goals, ESG, and carbon footprint, with a 36-month vesting period. Climate change considerations constitute 15% of ESOS, focused on emission reduction, innovative technologies, and increasing energy efficiency to reduce emissions and increase water efficiencies. Awards & Recognition: HZL rewards employees, including the CEO, through competitions like Kaizen (FIP) for contributions to sustainability. Champions with innovative ideas for reducing freshwater consumption and increasing water recycling rate are recognized at monthly "Sampark" town halls, with top teams receiving INR 50,000.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

By linking the CEO's incentives to specific sustainability and transition goals, HZL ensures alignment between the CEO's objectives and the company's broader targets. This alignment enables effective progress toward water positivity and sustainability. The CEO's incentives focus on key areas such as reduction in freshwater consumption, increase in water recycling rate, driving immediate action and fostering innovation in achieving these goals. Overall, these incentives play a crucial role in advancing HZL's water positivity plan and ensuring its successful implementation.

Biodiversity

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Executive Officer (CEO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Shares

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Organization performance against an environmental sustainability index

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The Short-Term Incentive Plan (STIP) aligned with the Vedanta Sustainability Assurance Programme links 10% of all employees' annual bonuses, including those of the CEO and senior management, to sustainability performance. This includes climate-related goals and KPIs, such as reducing absolute emissions, energy, water consumption, waste generation and biodiversity management. It also factors in employee sustainability training, progress toward 2025 climate targets, advancements in low-carbon zinc production, and performance on climate-related indices. The Long-Term Incentive Plan (LTIP), in the form of the Employee Stock Option Scheme (ESOS), rewards employees based on pre-determined criteria, including sustainability, climate goals, ESG, and carbon footprint, with a 36-month vesting period.

Climate change considerations constitute 15% of ESOS, focused on emission reduction, innovative technologies, increasing energy efficiency to reduce emissions and biodiversity management.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

By linking the CEO's incentives to specific sustainability and transition goals, HZL ensures alignment between the CEO's objectives and the company's broader targets. This alignment enables effective progress toward no net loss and biodiversity management implementation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Facility/Unit/Site management

☑ Business unit manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Shares

☑ Other, please specify **:**Recognition

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Achievement of environmental targets

☑ Organization performance against an environmental sustainability index

☑ Reduction in absolute emissions in line with net-zero target

Strategy and financial planning

☑ Achievement of climate transition plan

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in emissions intensity

☑ Increased share of renewable energy in total energy consumption

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The Short-Term Incentive Plan (STIP) aligned with the Vedanta Sustainability Assurance Programme links 10% of all employees' annual bonuses, including business unit managers, to sustainability performance. This includes climate-related goals and KPIs, such as reducing absolute emissions, energy and water consumption, and waste generation. It also considers employee training on sustainability, achieving 2025 climate targets, driving low-carbon zinc production, and performance on climate-related indices. The Long-Term Incentive Plan (LTIP), in the form of the Employee Stock Option Scheme (ESOS), rewards employees based on pre-determined criteria, including sustainability, climate goals, ESG, and carbon footprint, with a 36-month vesting period. Climate change considerations constitute 15% of ESOS, focused on emission reduction, innovative technologies, and increasing energy efficiency to reduce emissions and biodiversity management. Awards & Recognition: HZL rewards employees, including business managers, through competitions like Kaizen (FIP) for contributions to sustainability. Champions with innovative ideas for reducing emissions and energy are recognised at monthly "Sampark" town halls, with top teams receiving INR 50,000.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

HZL encourages greater employee engagement and commitment to its sustainability goals by offering incentives to those who actively contribute to these efforts. This approach motivates employees including business managers to take proactive steps in reducing their carbon footprint, improving energy efficiency, and adopting sustainable practices. Monetary rewards, in particular, inspire innovation and creativity, driving employees to develop greener solutions and processes. Additionally, climate change incentives foster a culture of responsibility and accountability, positively impacting the company's environmental footprint. With this collective commitment, HZL is better positioned to meet its climate transition goals and reduce its overall climate-related impact.

Water

(4.5.1.1) Position entitled to monetary incentive

Facility/Unit/Site management

☑ Business unit manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

☑ Shares

☑ Other, please specify **:**Recognition

(4.5.1.3) Performance metrics

Pollution

☑ Improvements in wastewater quality – direct operations

☑ Improvements in wastewater quality – upstream value chain (excluding direct operations)

☑ Reduction of water pollution incidents

☑ Increase in discharge treatment compliance and meeting regulatory requirements – downstream value chain (excluding direct operations)

☑ Reduction/elimination of environmental incidents and/or environmental notices (notices of violation)

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The Short-Term Incentive Plan (STIP) aligned with the Vedanta Sustainability Assurance Programme links 10% of all employees' annual bonuses, including business unit managers, to sustainability performance. This includes climate and water-related goals and KPIs, such as reducing absolute emissions, energy and water consumption, and waste generation. It also considers employee training on sustainability, achieving 2025 climate and water targets, driving low-carbon zinc production, and performance on climate-related indices. The Long-Term Incentive Plan (LTIP), in the form of the Employee Stock Option Scheme (ESOS), rewards employees based on pre-determined criteria, including sustainability, climate goals, ESG, and carbon footprint, with a 36-month vesting period. Climate change considerations constitute 15% of ESOS, focused on emission reduction, innovative technologies, and increasing energy efficiency to reduce emissions and increase water efficiencies. Rewards & recognition: HZL rewards employees, including business unit managers, through competitions like Kaizen (FIP) for contributions to

sustainability. Champions with innovative ideas for reducing freshwater consumption and increasing water recycling rate are recognized at monthly "Sampark" town halls, with top teams receiving INR 50,000.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

HZL encourages greater employee engagement and commitment to its sustainability goals by offering incentives to those who actively contribute to water conservation efforts. This approach motivates employees including business managers to take proactive steps in reducing water usage, improving water efficiency, and adopting sustainable water management practices. Monetary rewards, in particular, inspire innovation and creativity, driving employees to develop solutions and processes that promote water sustainability. Additionally, water conservation incentives foster a culture of responsibility and accountability, positively impacting the company's water footprint. With this collective commitment, HZL is better positioned to meet its water management goals and reduce its overall water-related impact. [Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(4.6.1.4) Explain the coverage

This policy applies to all Hindustan Zinc Limited business units, including subsidiaries, joint ventures, acquisitions, managed sites, licensees, outsourcing partners, corporate offices, and research facilities. It also covers all Hindustan Zinc Limited employees, contractor employees, business partners, suppliers, and others engaged in business with Hindustan Zinc. Additionally, this policy is applicable throughout the entire operational lifecycle of projects and mines, encompassing stages from exploration and planning to evaluation, operation, and closure. It further extends to activities in our upstream and downstream value chain, including distribution, logistics, and the sale of products and services to customers.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to stakeholder engagement and capacity building on environmental issues

☑ Other environmental commitment, please specify **:**No deforestation

Climate-specific commitments

☑ Commitment to net-zero emissions

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with the Paris Agreement

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

HZL_Energy-and-Climate-Change-Management-Policy-English.pdf

Row 2

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Water

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(4.6.1.4) Explain the coverage

This policy applies to all Hindustan Zinc Limited business units, including subsidiaries, joint ventures, acquisitions, managed sites, licensees, outsourcing partners, corporate offices, and research facilities. It also covers all Hindustan Zinc Limited employees, contractor employees, business partners, suppliers, and others engaged in business with Hindustan Zinc. Additionally, this policy is applicable throughout the entire operational lifecycle of projects and mines, encompassing stages from exploration and planning to evaluation, operation, and closure. It further extends to activities in our upstream and downstream value chain, including distribution, logistics, and the sale of products and services to customers

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to take environmental action beyond regulatory compliance

Water-specific commitments

☑ Commitment to reduce water consumption volumes

☑ Commitment to reduce water withdrawal volumes

☑ Commitment to safely managed WASH in local communities

☑ Commitment to the conservation of freshwater ecosystems

☑ Commitment to water stewardship and/or collective action

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with Sustainable Development Goal 6 on Clean Water and Sanitation

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

HZL_Water_Management_Policy.pdf

Row 3

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Biodiversity

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(4.6.1.4) Explain the coverage

Protecting and enhancing biodiversity is an integral part of Hindustan Zinc's commitment to sustainable development. We are conscious of the potential impacts and dependencies of our business on the environment in general and on biodiversity. By understanding the interfaces between our activities and biodiversity, we commit to integrating biodiversity conservation into the operational decision-making process and taking measures to minimize impacts across the company to align with our vision of Nature Positive. We are conscious that biodiversity is a complex phenomenon that needs to be identified, understood and valued from a biological and societal (i.e. in terms of ecosystem services) perspective. We believe that our performance and contribution to biodiversity conservation will create long-term value for our business and society.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

☑ Commitment to Net Positive Gain

☑ Commitment to No Net Loss

☑ Commitment to stakeholder engagement and capacity building on environmental issues

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ No, but we plan to align in the next two years

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

HZL_Biodiversity-Policy-2.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:

☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply

☑ Science-Based Targets for Nature (SBTN)

☑ Science-Based Targets Initiative (SBTi)

☑ Task Force on Climate-related Financial Disclosures (TCFD)

☑ Task Force on Nature-related Financial Disclosures (TNFD)

☑ UN Global Compact

(4.10.3) Describe your organization's role within each framework or initiative

• UN Global Compact: We are a signatory member of UN Global Compact. Keeping in view the ten principles of UNGC, we have developed a performance matrix which was incorporated in all our strategic business functions and regularly reviewed from shop floor to board room level. • Task Force on Climate-related Financial Disclosures (TCFD): We have embraced the TCFD framework aligned with IFRS-S2 requirement as part of our commitment to sustainability. We have strategically decided to align our reporting process with the global best practices for climate reporting. By adopting the TCFD framework, we aim to effectively manage climate change risks and identify opportunities that contribute to our sustainability objectives. • Science Based Target for Nature SBTN: 'Protecting' in order to advance global collective ambition on enhancement of biodiversity. We are also part of official initial target Validation group of SBTN. • Task Force on Nature-related Financial Disclosures (TNFD): We have collaborated with TNFD members to establish a market-driven framework that enables organizations to disclose and address emerging nature-related risks. Our aim is to facilitate a transition in global financial investments, redirecting them from activities that harm nature to those that have positive impacts on nature. We are the only one in India and the only metal and mining company amongst the member companies to become a piloting member for Science

Based Target for Nature target setting. Moreover, we have submitted Taskforce on Nature-related Financial Disclosure (TNFD) piloting for the LEAP approach in collaboration with ICMM.
[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply

☑ Yes, we engaged directly with policy makers

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

(4.11.3) Global environmental treaties or policy goals in line with public commitment or position statement

Select all that apply

☑ Paris Agreement

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

(4.11.4) Attach commitment or position statement

HZL_Business Commitment CII.pdf

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ No

(4.11.8) Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan

Partnered with CII: HZL collaborated with the Confederation of Indian Industry (CII) to promote the RACE TO ZERO campaign through various events leading up to COP26. Additionally, HZL joined CII's Working Group on Driving Accelerated Climate Action by Indian Businesses, actively participating in COP 27's Business Working Group. We continue our engagement as members of this working group, collaborating with other Indian company CEOs to shape the agenda for COP28. Joined International Zinc Association (IZA) Climate Change Task Force: HZL is actively involved in the IZA Climate Change Task Force, working on characterising the carbon footprint of recycled content in SHG zinc production and highlighting the societal benefits of increased resource recovery within a circular economy. Scope 3 methodology developed in line with the International Zinc Association's (IZA) Scope 3 Emissions Accounting and Reporting Guidance ZINC for the value chain. Global Mining Guideline Group (GMG): HZL has partnered with GMG to support industry-wide initiatives aimed at aligning, advancing, and innovating the global mining industry from a digital technology perspective, with a focus on emerging digital technologies and innovation. NITI Aayog: HZL engaged with NITI Aayog on preparing Water Neutrality/Positivity Guidelines & Approach. The engagement was on the promotion of water credit systems in Industries and Urban Local bodies to achieve water neutrality.
[Fixed row]

(4.11.1) On what policies, laws, or regulations that may (positively or negatively) impact the environment has your organization been engaging directly with policy makers in the reporting year?

Row 1

(4.11.1.1) Specify the policy, law, or regulation on which your organization is engaging with policy makers

Green Credit- Ministry of Environment, Forest and Climate Change

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply

☑ Climate change

☑ Water

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Environmental impacts and pressures

☑ Emissions – CO2

☑ Emissions – other GHGs

☑ Water availability

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:

☑ National

(4.11.1.5) Country/area/region the policy, law, or regulation applies to

Select all that apply

☑ India

(4.11.1.6) Your organization's position on the policy, law, or regulation

Select from:

☑ Support with no exceptions

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Discussion in public forums

☑ Participation in working groups organized by policy makers

☑ Responding to consultations

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

In July 2023 we submitted comments aligned with the Paris Agreement and UN SDG 6 on the draft Green Credit Programme Implementation Rules, 2023, released by the Ministry of Environment, Forest and Climate Change, wherein we suggested that, credits granted may be determined based on the different types of lands restored and different climatic and geographical area, e.g., higher credit can be awarded for utilisation of barren land; innovative approaches in water stress areas, or for innovation-driven programmes which would help reduce environmental footprints related to both GHG and Non-GHG emissions, water and waste.

(4.11.1.11) Indicate if you have evaluated whether your organization's engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.1.12) Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

Select all that apply

☑ Paris Agreement

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

[Add row]

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

Asia and Pacific

☑ Confederation of Indian Industries (CII)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

Confederation of Indian Industries (CII): CII works to create and sustain an environment conducive to the development of India, partnering industry, Government and civil society, through advisory and consultative processes. HZL is a member of CII Working Group on Driving Accelerated Climate Action by Indian Businesses. As a member of the working group, we acknowledge our responsibility and urgency to address climate change risks and our role in accelerating action on climate change. Five specific sessions on EP 100, SME Climate Hub, RE 100, EV 100, Technology Transfer, and one session with CEOs of top Indian companies on their views on Race to Zero have been conducted in 2022 in association with HZL. In FY 2023-24, we have also participated in their programs such as the Climate Action Programme (CAP 2.0), which allows to sharing of industry best practices and is in line with the Paris Agreement. Our company actively participated in NITI Aayog's water neutrality initiative, collaborating closely with the Confederation of Indian Industry (CII). This engagement underscores our commitment to sustainable water management practices. By aligning with this strategic framework, we aim to contribute to broader water conservation goals and enhance our environmental stewardship

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

3914

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Membership fees, fund awards, recognition programmes

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

Row 2

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

Asia and Pacific

☑ Confederation of Indian Industries (CII)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Water

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

NITI Aayog in collaboration with CII Triveni Water Institute published a new guideline and standard for the Indian Industrial segment to achieve water neutrality/positivity. HZL engaged with CII on preparing Water Neutrality/Positivity Guidelines & Approach. The engagement was on the promotion of water credit systems in Industries and Urban Local bodies to achieve water neutrality.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

55204

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Membership fees, fund awards, recognition programmes

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Sustainable Development Goal 6 on Clean Water and Sanitation

[Add row]

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply

☑ Other, please specify **:**Integrated Report <IR> and Business Responsibility and Sustainability Report (BRSR)

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Value chain engagement

☑ Biodiversity indicators

☑ Public policy engagement

☑ Water accounting figures

☑ Content of environmental policies

(4.12.1.6) Page/section reference

45-199

(4.12.1.7) Attach the relevant publication

HZL_Integrated-Annual-Report-2023-24.pdf

(4.12.1.8) Comment

This is the fifth Integrated Report of Hindustan Zinc Limited (Hindustan Zinc). It has been developed in line with the guiding principles of the Integrated Reporting framework of the International Integrated Reporting Council (IIRC), now part of the IFRS Foundation. It serves as a window for our stakeholders to get a complete understanding of the Company's value creation process, which is driven by the six capitals and our sustained investments in the same.

Row 3

(4.12.1.1) Publication

Select from:

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply

☑ IFRS

☑ TCFD

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Value chain engagement

☑ Dependencies & Impacts

☑ Public policy engagement

☑ Water accounting figures

☑ Other, please specify **:Climate and water-related incentives: Short-term and long-term.**

(4.12.1.6) Page/section reference

Climate Action Report-All

(4.12.1.7) Attach the relevant publication

(4.12.1.8) Comment

This report is aligned with TCFD and IFRS-S2 requirements.

Row 4

(4.12.1.1) Publication

Select from:

☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply

☑ TNFD

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Dependencies & Impacts

☑ Biodiversity indicators

☑ Risks & Opportunities
☑ Value chain engagement

(4.12.1.6) Page/section reference

TNFD: All

(4.12.1.7) Attach the relevant publication

Final-TNFD-Report.pdf

(4.12.1.8) Comment

This TNFD report provides the details of the Nature- related Dependencies, Impacts, Risks and Opportunities of Hindustan Zinc Limited.

Row 5

(4.12.1.1) Publication

Select from:
☑ In mainstream reports, in line with environmental disclosure standards or frameworks

(4.12.1.2) Standard or framework the report is in line with

Select all that apply
☑ GRI

(4.12.1.3) Environmental issues covered in publication

Select all that apply
☑ Climate change
☑ Water
☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Content of environmental policies

☑ Value chain engagement

☑ Dependencies & Impacts

☑ Biodiversity indicators

☑ Public policy engagement

☑ Water accounting figures

(4.12.1.6) Page/section reference

Sustainability Report FY 2023-24: All

(4.12.1.7) Attach the relevant publication

HZL_Sustainability-report-FY-2023-24.pdf

(4.12.1.8) Comment

Our reporting emphasises transparency and accountability, adhering to GRI Standards and the GRI 14: Mining Sector Standard. As a signatory to the United Nations Global Compact (UNGC), we align our disclosures with its principles, alongside those of the Federation of Indian Mineral Industries (FIMI). Safety indicators are reported by the ICMM Sustainable Development Framework. This report underscores our commitment to the UN Sustainable Development Goals (SDGs) and highlights initiatives such as the CEO Water Mandate and the UNGC Women Empowerment Principles, reflecting our dedication to global sustainability and empowerment.

[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:
☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Annually

Water

(5.1.1) Use of scenario analysis

Select from:
☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Annually
[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization’s scenario analysis.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 2.6

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ SSP1

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.5°C or lower

(5.1.1.7) Reference year

2006

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

Regulators, legal and policy regimes

☑ Global targets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: We have conducted a climate risk assessment to understand the relative changes in Mean Air Temperature and Labour Productivity due to Heat Stress that would play out over time in the province of Rajasthan & Uttarakhand of India at different global warming levels compared to the reference period 1986-2006, based on the RCP 2.6 for the period 2025-2050. Each risk was considered in isolation/ independently and trade-offs between risks were not considered. Limitations: a. Dependence on Emission Scenarios: Climate projections are sensitive to different greenhouse gas emission scenarios. If future emissions deviate from the scenarios used, the actual climate outcomes may differ significantly from the projections. b. Scale Issues: Climate models often operate at a coarse spatial resolution. This can limit their ability to accurately represent local climate conditions and extreme events, which are important for local planning and adaptation. c. Static Nature of Scenarios: Scenarios are often based on static assumptions about future developments (e.g., technological progress, socio-economic changes). In reality, these factors can change in unpredictable ways, affecting the outcomes of the scenarios.

(5.1.1.11) Rationale for choice of scenario

To align with our SBTi commitment to limit the temperature rise to 1.5 degrees Celsius going beyond the Paris Agreement.

Water

(5.1.1.1) Scenario used

Water scenarios

☑ WRI Aqueduct

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Policy

☑ Market

☑ Technology

(5.1.1.7) Reference year

2006

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Regulators, legal and policy regimes

☑ Global regulation

☑ Global targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

To assess water-related risks under different scenarios for the years 2030 and 2050, while formulating a comprehensive water pricing mechanism. Basin-level value chain water risk assessments helped to quantify inherently water risks while local/operational assessments were utilised to quantify residual water risks. By combining basin and operational risk data, the results were generated to identify the facilities with the highest level of risk, assess residual risks, and prioritise shared water challenges. Climate risk assessment is studied as per the IPCC Emission Scenario RCP 2.6, RCP 4.5, RCP 6.0 & RCP 8.5 (medium-low emission, global average CO2 concentration of about 600 ppm) for all operational sites (Mining and Smelters). We applied possible future impact on our business, to test strategic resilience. We identified options for increasing our strategic and business resiliency to plausible water-related risks and opportunities through adjustments to strategic and financial plans.

(5.1.1.11) Rationale for choice of scenario

1. Comprehensive Water Risk Assessment Multidimensional Analysis: The Aqueduct provides a multidimensional view of water risks by integrating various factors such as water availability, water quality, and water-related hazards. This holistic approach helps organizations understand not only the quantity of water but also its quality and related risks. Global Coverage: It offers global coverage, allowing users to assess water risks across different regions and countries, making it a valuable tool for multinational organizations with operations or supply chains in multiple locations. 2. Data-Driven Insights High-Resolution Data: Aqueduct uses high-resolution data and sophisticated modeling to provide detailed insights into water risks. This includes data on water stress, drought, flood risk, and water quality, helping users make informed decisions based on robust evidence. Scenario Analysis: The tool allows users to explore various scenarios, including future projections of water risk under different climate and socio-economic conditions. This helps in understanding potential future challenges and planning accordingly. 3. Risk Management and Strategic Planning Risk Identification: By identifying areas with high water risk, Aqueduct helps organizations prioritize their water management strategies and focus resources on the most critical areas. Strategic Decision-Making: The insights gained from Aqueduct can inform strategic planning, including site selection, investment decisions, and the development of water management and conservation strategies.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 4.5

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ SSP2

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.0ºC - 2.4ºC

(5.1.1.7) Reference year

2006

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: This scenario assumes moderate mitigation efforts. It projects stabilisation of GHG concentrations by the mid-21st century and a subsequent decline. Each risk was considered in isolation/ independently and trade-offs between risks were not considered. Limitations: a. Dependence on Emission Scenarios: Climate projections are sensitive to different greenhouse gas emission scenarios. If future emissions deviate from the scenarios used, the actual climate outcomes may differ significantly from the projections. b. Scale Issues: Climate models often operate at a coarse spatial resolution. This can limit their ability to accurately represent local climate conditions and extreme events, which are important for local planning and adaptation. c. Static Nature of Scenarios: Scenarios are often based on static assumptions about future developments (e.g., technological progress, socio-economic changes). In reality, these factors can change in unpredictable ways, affecting the outcomes of the scenarios.

(5.1.1.11) Rationale for choice of scenario

It's often helpful to compare RCP 4.5 with other RCPs, like RCP 2.6 (a lower-emission pathway) and RCP 8.5 (a higher-emission pathway), to understand the spectrum of possible future climates and to make more robust plans that account for varying levels of climate change.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 6.0

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ SSP2

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 3.0ºC - 3.4ºC

(5.1.1.7) Reference year

2006

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: HZL has conducted the climate assessment through RCP 6.0 to predict risks arising due to physical risks. The assessment has been conducted for 100% of operations in Rajasthan and Uttarakhand. During the assessment, we assessed the following parameters to understand the magnitude of climate change impact on our business and operations. The following are the parameters considered: a. Average Temperature Increase: (Projected Change in Hot Day; Tmax 40 degrees), Heat Wave (Heat Index 35, Ensemble Median Range) b. Drought: Ensemble Median Range (Projected change in Annual Mean Drought Index; SPEI c. Severe Drought (Ensemble Median Range (Probability) d. Annual flooding: Projected Change in Days with Rainfall 50mm e. Extreme Events: Cyclone Limitations: a. Dependence on Emission Scenarios: Climate projections are sensitive to different greenhouse gas emission scenarios. If future emissions deviate from the scenarios used, the actual climate outcomes may differ significantly from the projections. b. Scale Issues: Climate models often operate at a coarse spatial resolution. This can limit their ability to accurately represent local climate conditions and extreme events, which are important for local planning and adaptation. c. Static Nature of Scenarios: Scenarios are often based on static assumptions about future developments (e.g., technological progress, socio-economic changes). In reality, these factors can change in unpredictable ways, affecting the outcomes of the scenarios.

(5.1.1.11) Rationale for choice of scenario

It's often helpful to compare RCP 6.0 with other RCPs, like RCP 2.6 (a lower-emission pathway) and RCP 8.5 (a higher-emission pathway), to understand the spectrum of possible future climates and to make more robust plans that account for varying levels of climate change.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ RCP 8.5

(5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

☑ SSP5

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 4.0°C and above

(5.1.1.7) Reference year

2006

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: This assessment has focused on impacts from extreme weather events including extreme temperature, water stress and heat waves. Extreme weather affects Labour productivity. The baseline scenario in the case of NGFS scenario analysis was 1986-2006. Site-wise risk was identified using the World Bank's Think Hazard Tool. Limitations: a. Dependence on Emission Scenarios: Climate projections are sensitive to different greenhouse gas emission scenarios. If future emissions deviate from the scenarios used, the actual climate outcomes may differ significantly from the projections. b. Scale Issues: Climate models often operate at a coarse spatial resolution. This can limit their ability to accurately represent local climate conditions and extreme events, which are important for local planning and adaptation. c. Static Nature of Scenarios: Scenarios are often based on static assumptions about future developments (e.g., technological progress, socio-economic changes). In reality, these factors can change in unpredictable ways, affecting the outcomes of the scenarios.

(5.1.1.11) Rationale for choice of scenario

It's often helpful to compare RCP 8.5 with other RCPs, like RCP 2.6, 4.0 (a lower-emission pathway) (a higher-emission pathway), to understand the spectrum of possible future climates and to make more robust plans that account for varying levels of climate change.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA NZE 2050

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Reputation

☑ Technology

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.5°C or lower

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

Regulators, legal and policy regimes

☑ Global regulation

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: HZL has assessed transition risk induced by climate change using the IEA NZE 2050 scenario which is aligned to 23 Gt in 2030 and to zero in 2050, a trajectory consistent with limiting the temperature increase to less than 1.5 C in 2100. 1. Global energy demand is 8% less than today in 2050. 2. Energy Intensity improvement averaging 4% to 2030. 3. Electricity as a part of Total Energy is 28% in 2030& 52% in 2050. 4. Electricity demand increase by 150% in 2050. 5. Electricity generation increases 3.2% y-o-y- to 2030 & then by 3.4% per year (2030-2050). 6. Share of Solar PV Wind, 40% in 2030 & 70% in 2050. Annual Solar PV quadruple from 150 GW in 2021 to 650 GW by 2030. 7. Solar PV equivalent to 35% of global silver production in 2030. 8. Demand for critical materials rises by 200-300% by 2030 compared to 2021 9. Coal Consumption decline by 45% to 2030. 10. End of unabated coal use for electricity generation worldwide by 2040. Unabated coal use drops by 99% b/w 2021 & 2050. 11. The share of unabated coal in global Ambitious Targets: Feasibility Challenges: Achieving net-zero emissions by 2050 is highly ambitious and may face significant technological, economic, and political challenges. The scenario assumes rapid advancements and widespread adoption of technologies like carbon capture and storage (CCS) and renewable energy, which may not materialize as expected. Uncertainty in Technological Development: Technological Assumptions: The scenario relies on the development and deployment of specific technologies that may not evolve as projected. If these technologies face delays or fail to achieve expected performance, the scenario's projections may be overly optimistic. Policy and Social Dynamics: Policy Implementation: The NZE scenario assumes strong and consistent policy support across all regions and sectors. Political changes, policy reversals, or varying levels of commitment across countries can impact the feasibility of reaching net-zero emissions. Social Acceptance: There are uncertainties regarding public acceptance and social readiness for some of the changes proposed in the scenario, such as major shifts in consumption patterns or lifestyle changes. Economic Assumptions: Cost

Projections: The scenario's cost estimates for achieving net-zero may not fully account for economic volatility or unforeseen financial challenges. Economic conditions can affect the ability to invest in and implement required technologies and infrastructure.

(5.1.1.11) Rationale for choice of scenario

1. Alignment with Global Climate Goals Paris Agreement Targets: The NZE 2050 scenario aligns with the Paris Agreement's goal of limiting global warming to 1.5C above pre-industrial levels. It provides a roadmap to achieve net-zero greenhouse gas emissions by 2050, which is necessary to meet this target. Climate Ambition: The scenario represents one of the most ambitious pathways available, reflecting the effort required to avoid the worst impacts of climate change. 2. Comprehensive and Sectoral Approach Detailed Pathways: The IEA NZE 2050 scenario offers a detailed and sector-specific approach to achieving net-zero emissions, including transitions in energy production, transportation, industry, and buildings. 3. Technological Solutions: It incorporates a range of technological solutions and strategies, such as renewable energy expansion, energy efficiency improvements, carbon capture and storage (CCS), and electrification. 4. Progress Monitoring: Using the IEA NZE 2050 scenario as a benchmark allows for tracking progress towards net-zero emissions. It helps in assessing whether current policies and actions are sufficient or if additional measures are needed. 5. Strategic Planning and Risk Management Long-Term Planning: The scenario assists governments and organizations in long-term strategic planning by outlining the necessary steps to achieve net-zero emissions by 2050. Risk Management: By identifying potential risks and opportunities associated with the transition to a net-zero economy, the scenario helps in managing risks related to climate change and energy transitions.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA STEPS (previously IEA NPS)

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Reputation

☑ Technology

☑ Liability

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.0ºC - 2.4ºC

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

Regulators, legal and policy regimes

☑ Global regulation

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: HZL has assessed Transition Risk induced by climate change using the IEA STEPS scenario which conforms to 500 GW of non-fossil-based power generation capacity which is part of India's NDCs. The following parameters and assumptions were considered: 1. Global Energy demand increases 0.8% to 2030. 2. Energy Intensity improve by 2.4% between 2021-2030. 3. Electricity as a part of total Energy is 22% in 2030 & 28% in 2050. 4. Electricity demand increase by 75% in 2050. 5. Share of Solar PV Wind 45% in electricity mix by 2050. 6. Low-emissions sources now account for around 40% of electricity generation, with 30% coming from renewables and another 10% from nuclear. 7. Coal Consumption decline by 10% to 2030. 8. Coal still meets 1/3rd of energy demand by 2030. India sees a rise in coal demand by 2030. 9. In India coal supply increases to 550 MTce in 2030. 10. Global coal supply falls by about 25% from 2030 to 2050. 11. Coal generated electricity to fall from 75% to 55%. 12. Coal-fired power capacity increases from 240 GW in 2021 to 275 GW in 2030, while there is limited use of electric arc furnaces in industry. 13. Around 65% of the coal used globally in 2021 and 40% of the natural gas were for power generation Limitations of IEA Announced Pledges Scenario (APS) Pledge Ambiguity: Vague Commitments: APS includes the impact of announced pledges, which may be vague or lack detailed implementation plans. This can lead to uncertainties regarding the actual effectiveness of these commitments. Assumptions about Implementation: Pledge Fulfillment: The scenario assumes that all announced pledges will be fully implemented as planned. In reality, there can be significant variations in the commitment levels and effectiveness of these pledges. Varied National Ambitions: Differences Across Regions: The scenario may not fully account for differences in the ambition and stringency of pledges across different countries and regions. This can lead to an uneven impact on global emissions and temperature outcomes. Impact of Unannounced Policies: Unaccounted Policies: APS does not include potential future policies or pledges that may be announced after the scenario is developed. These could significantly alter the projections.

(5.1.1.11) Rationale for choice of scenario

1. Evaluation of Existing Policies Policy Impact Assessment: STEPS reflects the impact of existing and announced energy and climate policies that are not yet fully implemented. It provides insights into how these policies will shape future energy systems and emissions trends based on their current status. Realistic Forecasting: By using STEPS, stakeholders can assess the likely outcomes based on the policies that are actively in place or are expected to be implemented in the near term, giving a realistic projection of future trends. 2. Understanding Policy Effectiveness Policy Analysis: STEPS helps evaluate how effectively current policies will meet their stated goals. It provides a benchmark for assessing whether existing policies are sufficient to address climate and energy challenges or if more ambitious measures are needed. Gap Identification: The scenario highlights the gap between the outcomes of existing policies and longer-term climate targets, such as those outlined in the Paris Agreement. This helps in identifying areas where policy enhancements or additional measures are necessary. 3. Guiding Strategic Planning

Energy and Climate Planning: For governments, businesses, and organizations, STEPS offers a framework for strategic planning by showing the likely evolution of energy systems and emissions under current policy settings. Scenario Comparison: STEPS allows for comparison with other scenarios, such as the IEA's Net Zero Emissions (NZE) scenario, to evaluate how different policy choices could influence future outcomes. Monitoring Progress Tracking Policy Implementation: STEPS serves as a benchmark to track the implementation and effectiveness of stated policies over time. It helps in monitoring whether policies are achieving their intended goals and making adjustments as needed. Progress Evaluation: By comparing actual progress against the STEPS projections, policymakers can evaluate the success of their policies and adjust strategies to better meet climate and energy targets.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA APS

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Reputation

☑ Technology

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.6ºC - 1.9ºC

(5.1.1.7) Reference year

2021

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2025

☑ 2030

☑ 2040

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Cost of capital

Stakeholder and customer demands

☑ Consumer sentiment

☑ Consumer attention to impact

Regulators, legal and policy regimes

☑ Global regulation

☑ Global targets

☑ Methodologies and expectations for science-based targets

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Assumptions: The assessment considered the following parameters and assumptions: 1. Global Energy demand increases 0.2% to 2030, contributed mainly by energy efficiency. 2. Energy Intensity improve by 3% per year 2021- 2030. 3. Electricity as a part of Total Energy is 24% in 2030 & 39% in 2050. 4. Electricity demand increase by 120% in 2050. 5. Share of Solar PV Wind 60% in electricity mix by 2050. 6. Coal Consumption decline by 20% to 2030. 7. Coal demand peaks in late 2020s. Coal demand falls by 20% in 2030 & 70% in 2050. In India coal demand increase by just under 15% b/w 2021- 30. 8. In India coal supply increases by just over 500 MTce in 2030. 9. Global coal supply declines by 65% between 2030 and 2050. 10. The increase in coal demand in the industry sector is around half of that seen in STEPS. Limitations of IEA Stated Policies Scenario (STEPS) Current Policies May Be Insufficient: Policy Effectiveness: STEPS is based on current and announced policies, which may not be sufficient to meet long-term climate goals. The scenario does not account for the need for additional policies or the potential for policy strengthening. Implementation Gaps: Policy Gaps: Not all announced policies are implemented effectively or on time. There may be delays, reductions in ambition, or non-compliance, leading to outcomes that differ from those projected in STEPS. Dynamic Policy Landscape: Changes in Policies: STEPS relies on the current policy landscape, which can change due to new political developments, economic pressures, or shifts in public opinion. This can lead to significant deviations from the scenario projections. Limited Consideration of Emerging Technologies: Technological Progress: The scenario may not fully incorporate the potential for emerging technologies or innovations that could impact future energy systems and emissions. Conversely, it may overestimate the potential of existing technologies.

(5.1.1.11) Rationale for choice of scenario

1. Assessment of Current Commitments Policy Evaluation: APS provides an assessment of how far current and announced climate policies and pledges can take us towards climate goals. It reflects the impact of existing commitments from governments, businesses, and organizations. Gap Analysis: By using APS, stakeholders can identify the gap between current policy trajectories and the more ambitious climate targets, such as limiting warming to 1.5C or 2C. This helps in understanding where additional efforts are needed. 2. Realistic Projection of Future Trends Current Policies: APS is grounded in the reality of what is being promised and planned, rather than hypothetical or aspirational scenarios. It provides a more realistic view of future emissions and energy use based on announced policies. Intermediate Target: The APS often projects a temperature rise that is more moderate compared to scenarios with no policies but still above the more stringent targets. This helps in understanding the effects of incremental policy changes. 3. Guiding Policy and Strategy Policy Adjustments: By examining the APS, policymakers and stakeholders can assess the effectiveness of current policies and identify areas where additional or enhanced measures are necessary to meet climate goals. Strategic Planning: APS helps in strategic planning by providing a projection of future emissions and energy use based on existing pledges, allowing for adjustments to ensure alignment with long-term climate objectives. Benchmark for Progress Tracking Progress: APS serves as a benchmark to track progress against announced climate pledges. It allows for the evaluation of whether the current policies are sufficient to meet climate targets or if more ambitious actions are needed. Scenario Comparison: It provides a basis for comparing other scenarios, such as the IEA Net Zero Emissions (NZE) scenario, to evaluate the differences between current policy trajectories and more ambitious goals.

Water

(5.1.1.1) Scenario used

Climate transition scenarios

☑ Customized publicly available climate transition scenario, please specify :Central Groundwater Board (CGWB-India)

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ Unknown

(5.1.1.7) Reference year

2023

(5.1.1.8) Timeframes covered

Select all that apply

☑ Other, please specify :Annual data published by CGW-India. Hence, there is timeframe projection.

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

CGWB data may focus primarily on groundwater levels and usage, potentially neglecting other important factors like water quality, surface water interactions, and climatic influences.

(5.1.1.11) Rationale for choice of scenario

Comprehensive Coverage: CGWB provides extensive data on groundwater resources across India, covering a wide range of regions and states. This helps in managing water resources at both national and regional levels. Identifying Stress Areas: The data highlights areas experiencing groundwater stress, enabling targeted interventions and management strategies to address water shortages and over-extraction issues.
[Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

☑ Capacity building

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

Physical Risk: Acute physical: According to our climate risk scenario analysis based on RCP 2.6, RCP 4.5, RCP 6.0, RCP 8.5, HZL's eight operations in Rajasthan are highly vulnerable to drought and extreme heat waves. These risks have the potential to significantly impact our operations and workers in the medium term 2030 & long term 2050. In addition, sudden weather events such as excessive precipitation, could disrupt operations and impact our logistics, assets, and transportation infrastructure. For instance, drought in Chanderiya Lead Zinc Smelter (as in FY 2022) led decrease in production owing to non-availability of water. Chronic physical: Our risk assessment has identified physical chronic risks, such as rising temperatures & labor productivity loss, as significant factors for HZL's operations. We have conducted a two-time period analysis for the years 2030 and 2050, with severe drought being a potential issue in the post-2030 scenario due to operational disruption in the supply of fresh water and STP water shortage. As per our physical risk assessment, all basin water stress is extremely high for all our locations. Riverine flood risk is high for Pantnagar, whereas Low to Medium for all other locations Urban Floods, Landslides and Cyclones are very low to low for all our locations Seasonal variability measures the average within-year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations of available supply within a year. Beyond 2039, heat waves, drought and high temperatures could affect all sites. This could affect our operations in multiple ways, such as decreased employee productivity, increased probability of vector-borne diseases, operational disruptions, increased electricity costs, and faster equipment operating thresholds. To manage these risks, we have implemented the following mitigation measures in the short term: a. Implement heat stress management programmes checking (operational actions) b. Heat stress awareness campaigns and monitoring (informational actions) Transition Risk: In the IEA STEPS, APS & NZE 2050 scenario we find that the Carbon price has a high impact in both 2030 & 2050. However local regulations and policies such as Renewable purchase obligations have impact on our business strategy. As the share of renewable energy in the energy mix rises, the requirement for a flexibility system will see an increase too, and the non-availability of desired technology at an economical cost will directly impact the business. Though our metals, Zinc and Silver are slated to play a pivotal role in energy transition we expect a decrease in demand for lead because lead-acid batteries becoming obsolete in electric vehicles. However, lead will play a frontal role in being a cheap & easily available component of energy storage systems. Any negative impact on the cost of coal due to a decrease in supply from international suppliers to increase our cost of operations. Market regulations like CBAM, will directly have an impact on expansion plans. Consumer activism will lead to a loss of revenue and impact the social license to operate. With the increase in consumer demand for low-carbon products, there can be a loss of market share to competitors producing cleaner and greener products.

Water

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

☑ Strategy and financial planning

☑ Resilience of business model and strategy

☑ Capacity building

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

WRI Aqueduct: Our analysis is based on the WRI Aqueduct Water Risk Assessment indicates that all nine of our operational sites are categorised as falling within the 'Extremely High' 'Overall Water Risk' classification. It is worth noting that a significant portion of these locations are situated in regions that experience water stress. To gain a comprehensive understanding of water level patterns over the long term, we conducted a comparative assessment by comparing the water levels with seasonal variability measured during each period with the average water levels recorded between 2025 and 2050, spanning ten years. Over a long-term analysis, we have observed a decline in pre-monsoon water levels, while the remaining periods have shown an increase in water levels. In our assessment, we have defined the following risks: • WATER STRESS -Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and no consumptive use. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users. CGWB: According to CGWB, all our eight operational sites except our refinery in Pantnagar, Uttarakhand are in a high water-stressed region.
[Fixed row]

(5.2) Does your organization’s strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

(5.2.3) Publicly available climate transition plan

Select from:

☑ Yes

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ No, and we do not plan to add an explicit commitment within the next two years

(5.2.6) Explain why your organization does not explicitly commit to cease all spending on and revenue generation from activities that contribute to fossil fuel expansion

The Company's strategy consists of mitigation and adaptation measures and is committed to reducing its carbon footprint by limiting its exposure to coal-based projects and reducing its GHG emissions through high-impact initiatives such as investment in Renewable Energy (450 MW Power delivery agreement ('PDA') signed on a group captive basis, fuel switch, electrification of vehicles and mining fleet and energy efficiency opportunities. However, renewable sources have limitations in supplying round the clock power, so existing power plants would support transition and fleet replacement is part of normal lifecycle renewal.

(5.2.7) Mechanism by which feedback is collected from shareholders on your climate transition plan

Select from:

☑ We have a different feedback mechanism in place

(5.2.8) Description of feedback mechanism

HZL presents the company's targets, performance against the targets and its plan to achieve the targets (e.g. Sustainability Goals by 2025, Net-zero target by 2050 and Science-Based Targets Initiative by 2026). The net-zero transition plan is one of the goals to which HZL has committed under the 1.5 degree Business ambition plan of SBTi. HZL has also taken the ambitious target of reducing the scope 1 and 2 emissions by 50 % by 2030 and 25% reduction in scope 3 by 2030 and an overall long-term target to achieve net zero by 2050 which is validated by SBTI. The strategy was approved by the leadership and is used for strategic and financial planning. These plans and performance are discussed during the quarterly investor calls as well as at the Annual General Meetings, which is attended by all majority and minority shareholders. Shareholders are encouraged to openly share their feedback during the AGMs. The investors provide feedback for improvement during these calls which is then integrated back into the processes for improving the performance. We have ESG committee at board level which reviews the progress against these targets semi-annually and provides the feedback to leadership on climate transition plan.

(5.2.9) Frequency of feedback collection

Select from:

☑ More frequently than annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

a. 50% electricity from renewable energy. b. 100% Firm 24x7 renewable electricity at all sites c. 100% shift towards Electric or hydrogen-driven vehicles c. 100% hydrogen use to substitute Coke as reducing agent d. Recycled scrap in production e. Plantation of 5 million trees (cumulative) f. Offsetting of the remaining GHG emission g. Direct Air capture (DAC) & CCUS technology are use to capture residue emissions h. Engage value chain partner with Net Zero commitment

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

a. EcoZen: Low carbon Zinc with

(5.2.12) Attach any relevant documents which detail your climate transition plan (optional)

HZL Climate Report 30-09-2024.pdf

(5.2.13) Other environmental issues that your climate transition plan considers

Select all that apply

☑ Water

(5.2.14) Explain how the other environmental issues are considered in your climate transition plan

Water: We are already 2.41 times water positive however we aspire to become 5X water positive by 2025 a. Installation of ZLD across our operational sites, and augmenting water recycling across the operations. b. Exploring alternatives to freshwater. Rainwater harvesting via localised watershed management. c. Water risk assessment using WRI Aqueduct Water Risk Atlas & CGWB. d. We have commissioned Zero Liquid Discharge at multiple locations and have committed to induct Zero liquid discharge at all our Business Units. Commissioned & upcoming Zero Liquid Discharge will together contribute to 19500 KLD freshwater saving by 2025. d. Dry Stack Tailing at our mining locations will help water recovery to the tune of 4500 m3/day. e. Rainwater harvesting at Rampura Agucha Mines leading to 87 lacs m3 groundwater augmentation.
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:

☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply

☑ Products and services

☑ Upstream/downstream value chain

☑ Investment in R&D

☑ Operations

[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

HZL's commitment lies in product diversification and enhancing its market competitiveness. In response to customer demand, we have significantly expanded our value-added product (VAP) production. Low-carbon transition is the core of our business strategy and is further helping us set a clear pathway to deliver long-term value as well as ambitious targets to decarbonize our business. a. EcoZen will allow our customers to access low carbon Zinc and essentially reduce our customers' Scope 3 upstream emissions. We have recently started receiving the first flow of round-the-clock renewable energy as part of its 450 MW power delivery agreement. This is in addition to its existing 40.7 MW of captive solar power. Our proactive approach and commitment to net zero ambition is in-line with our commitment to a sustainable future for all. This strategy aligns with growing consumer demand for sustainable options, enhances brand reputation, and addresses regulatory pressures. We undertook the Carbon Footprint of Average Low Carbon Special High Grid Zinc (SHGZ) product based on mass balance approach as per ISO 14067 Standards along with third-party verification by an Independent International Reviewer. As per the latest verification carried out for Low carbon Zinc, the total emissions associated with our zinc produced is 5.882 TCO2e/ tonne of Zinc & emissions associated with low carbon Zinc is 0.939 TCO2e/Tonne of Zn, which is less than 1 tonne. Production projection of Average Low Carbon Special High Grade Zinc Product is calculated based on based mass balance approach of renewable electricity and total electricity consumption mix. Therefore, as per mass balance approach HZL has 8.37% of Average Low Carbon SHG Zinc product of total SHG Zinc production for baseline year 2023-24 (FY 2024), will reach 16.89% of Low Carbon SHG Zinc production at end of FY 2025 and 30.30% of Low Carbon SHG Zinc production at end of FY 2026. b. Value Added Products (VAP): Continuous Galvanising Grade (CGG) Zinc Alloy and Hindustan Zinc Die Casting Alloy (HZDA). CGG can be used directly by customers without the need for conversion into an alloy, resulting in resource savings of up to 5-10% in terms of water, energy, and cost, as well as improved bath management during galvanizing. In FY 2023-24, the Company augmented its VAP portfolio by 34 kt, reaching a total of 161 kt. In FY 2023-24, the share of value-added products increased to 20%, up from 15% in FY 2022-23. Looking ahead, a focused approach is expected to raise the share of value-added products to 23% in FY 2024-25.

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Climate-related risks and opportunities have a significant impact on HZL's supply chain. HZL recognizes that its supply chain plays a critical role in achieving its sustainability goals and transitioning towards a circular economy. As such, HZL has implemented several measures to address climate-related risks and capitalize on opportunities in its supply chain. For instance, we have integrated ESG considerations into our supply chain process to help in better assessment of business risks and opportunities. Through collaboration, empowerment and engagement with our business partners, we have: • Conducted supplier assessment for critical suppliers using tools like WWF Water Risk Filter & Biodiversity Risk filter. The suppliers identified in high-risk areas were further requested to submit their climate related resilience plan. • Suppliers were identified as critical to business through a robust screening process. The nature risks associated with our 55 critical suppliers were identified. We have considered emissions from consumables sourced from A & B category suppliers as per Vedanta's Critical supplier identification policy. Three types of risks were assessed: Climate, Water and Biodiversity related risks. • The Climate Risk assessment of critical suppliers was carried out using the Think Hazard tool. • In process of implementing ISO 20400 standard for sustainable procurement. • Introduced ESG expectations in our procurement process via the ARIBA platform. • Comprehensive strategy and tools developed for product-level life cycle assessment for our critical machines & commodities for scope 3 calculations. • Launched a vendor grievance portal for sharing feedback on ESG risks and other business aspects and fair and unbiased resolution of disputes. • Identified opportunities for reduction of Scope 3 emissions wherein we can engage with suppliers to reduce their emissions. • Identified the key ESG, HSE and quality criteria in supply chain, and working closely with our supply chain partners on risk mitigation. • Implemented a structured framework for integration of ESG performance of supply chain partners in procurement decision-making. • Developed a framework that supports various policies, procedures and guidelines - from pre-check assessment till vendor performance evaluation. Furthermore, HZL prioritises suppliers that have a strong commitment to sustainability and climate action and incorporates sustainability criteria into its procurement processes. This ensures that HZL's supply chain is aligned with its sustainability goals and helps to mitigate climate-related risks. Customer: In FY 2023-24 we assessed some of our key customers and identified that 9 of them had Climate-related targets in public domain. We have had consultations with our customers on how they plan to reduce their GHG emissions and what support we can provide, EcoZen being one such product to help our customers to reduce their scope 3 emissions.

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

HZL recognizes that developing innovative sustainable technologies is essential for transitioning towards a low-carbon economy and achieving its net-zero target. During FY 2023-24, HZL has invested INR 104.87 to address ESG risks including climate-related risks and capitalize on opportunities. All R&D Investments are focused on sustainable technologies development, metal recovery and waste utilisation. Among the various investments we have initiated in this regard is in the development of technology for mill tailings and various waste recycling projects to reduce our environmental footprint. We have also identified and replaced one of the hazardous reagent used in mineral flotation by non-hazardous environment-friendly reagent. In an endorsement of its progress on its circularity goal, the Company has been granted US patents for two of its sustainability technologies, developed in-house by our R&D centre – ZnTech (formerly known as Central Research and Development Laboratory): US10844551B2 for manufacturing Paver Blocks from process waste and US10919924B2 for the method of production of Potassium Antimony Tartrate (PAT) by utilising Antimony bearing residues. Both these technologies are aimed at creating value from waste, that can be utilised within Company's operations and support local entrepreneurs and communities.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Based on our climate-related assessment of physical risks, more than 90% of HZL's operations are situated in Rajasthan, where there is a high likelihood of drought and extreme heat waves. Given that water is a crucial input for our smelting operations, these conditions could potentially increase our direct costs. To mitigate these risks, we are implementing measures to maximize the recycling and reuse of water across all our operations, as well as developing rainwater-harvesting systems to replenish groundwater sources. As part of our commitment to sustainability, we have set a target to become a 5 times water-positive company from a baseline of 2.41 times and reduce our water consumption by 25% from the base year of 2020 by 2025. Furthermore, in August 2024, we have signed a MoU with Aesir Technologies, Inc., under this MoU, we will be the preferred supplier of zinc, a critical raw material for these cutting-edge next-generation zinc battery technologies.
[Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Direct costs

☑ Capital expenditures

☑ Capital allocation

(5.3.2.2) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

☑ Water

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

HZL has incorporated climate risks as key risks into its Enterprise Risk Management (ERM) and financial planning processes. To address these climate-related risks and opportunities, HZL has developed a separate budget allocation and improved financial cost estimates, with approval from the Board. This has led to a clear direction for allocating capital expenditures, increasing CAPEX and direct costs towards low-carbon solutions, renewable energy, and mine installations. We involve sustainability, functional heads, plant heads, and finance departments to ensure cross-functional insights on climate-related investments, including Opex, Capex, and other investments. This approach helps HZL to understand the types of investments needed to achieve climate goals and transition towards a NetZero. Additionally, it allows senior management to anticipate which investments are viable and prioritize areas requiring short-term, medium-term, and long-term investments. HZL has committed to investing 1 billion over the next few years to decarbonize operations and mitigate climate change risks. Moreover, HZL has implemented a carbon pricing mechanism as part of its capital allocation strategy for addressing climate-related risks and opportunities. This involves assigning a monetary value to the carbon emissions associated with its operations, products, and supply chain, which is then factored into investment decision-making processes. By incorporating carbon pricing, HZL is able to better assess the financial implications of its climate-related investments and prioritize low-carbon solutions and renewable energy projects. This approach also supports HZL's commitment to reducing its carbon footprint and achieving its net-zero target. The internal carbon price considered for estimation of IRR is INR 1,241.77 (USD15)

[Add row]

(5.4) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization’s climate transition	Methodology or framework used to assess alignment with your organization’s climate transition
	Select from: ☑ Yes	*Select all that apply* ☑ Other methodology or framework

[Fixed row]

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

Select from:

☑ Other, please specify :Alignment with HZL's climate transition plan

(5.4.1.5) Financial metric

Select from:

☑ CAPEX

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

4110000000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

9.76

(5.4.1.8) Percentage share of selected financial metric planned to align in 2025 (%)

28

(5.4.1.9) Percentage share of selected financial metric planned to align in 2030 (%)

44

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization's climate transition

HZL operates in India where there is no regulation on sustainability Taxonomy. However, to align itself with global norms, HZL has aligned its revenues and spending as per its Net-Zero transition plan for 2050. As part of our net zero strategy (2050 plan), we have defined a year-wise plan with clear short and mid-term milestones.

*The capex investments required to implement the solutions are being considered for calculation of percentage. We have committed to invest US 1 billion in a phased manner for our decarbonisation journey-(US 0.5 billion by 2025 and the remaining US 0.5 billion by 2030). The reported percentage is CAPEX used/to be used for achieving NetZero milestones / CAPEX (Sustenance Growth Mines Smelters) In FY 2023-24, we have invested INR 4,796,383,730.76 out of total CAPEX INR 42,100,000,000for environmental & decarbonisation activities including RE Power, ZLD, biomass utilization, EV, 100% green power for Pantnagar Metal Plant, and climate change initiatives etc. Percentage CAPEX in FY 2023-24 aligned with 1.5 degree 11.29% Percentage share of selected financial metric planned to align with a 1.5C world in 2025: Estimated CAPEX on Decarbonisation by 2025 INR 3750,00,00,000 or USD 0.5 Billion Estimated CAPEX on Business growth from current 967 KT to 1200 KT by FY2025 13, 513,00,00,000 Percentage share in FY 2025 (3750,00,00,000 / 13, 513,00,00,000) * 100 28% Expected activities: 25% RE, electrification of LMVs and mining vehicles, energy efficiency measures and other mitigation and adaptation measures etc. Percentage share of selected financial metric planned to align with a 1.5C world in 2030: Estimated CAPEX on Decarbonisation by 2030 (3750,00,00,000 3750,00,00,000) 7500,00,00,000 or USD 1 Billion Estimated CAPEX on Business growth from current 967 KT to 1500 KT by FY2030 16, 891,00,00,000 Percentage share in FY 2030 (7500,00,00,000 / 16, 891,00,00,000) * 100 44% Expected activities: 50% RE, 100% electrification of LMVs fleet, energy efficiency measures etc.*
[Add row]

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

(5.5.1) Investment in low-carbon R&D

Select from:
☑ Yes

(5.5.2) Comment

Our Research & Development (R&D) capabilities are pivotal in advancing our circular economy objectives, notably through the creation of innovative flotation reagents that enhance mineral recovery and minimise impurities. Additionally, our commitment to environmental stewardship is demonstrated by numerous waste recycling initiatives aimed at diminishing our ecological footprint and reclaiming valuable resources from waste. Furthermore, R&D has been instrumental in refining the processes within Waelz kiln operations, thereby optimising metal recovery from secondary materials. These technologies are pivotal in converting waste into valuable resources, thereby not only propelling the Company's operational efficiency but also empowering local entrepreneurs and communities. The above initiatives not only help us in metal recovery but also allow us to reduce our carbon footprint.
[Fixed row]

(5.5.4) Provide details of your organization’s investments in low-carbon R&D for metals and mining production activities over the last three years.

Row 1

(5.5.4.1) Technology area

Select from:

☑ Other, please specify **:**Wate Utilisation

(5.5.4.2) Stage of development in the reporting year

Select from:

☑ Basic academic/theoretical research

(5.5.4.3) Average % of total R&D investment over the last 3 years

1

(5.5.4.4) R&D investment figure in the reporting year (unit currency as selected in 1.2) (optional)

1260000

(5.5.4.5) Average % of total R&D investment planned over the next 5 years

20

(5.5.4.6) Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Based on lab-scale separation techniques and trials, the reuse of fine MCTP slag (particles
[Add row]

(5.9) What is the trend in your organization’s water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

(5.9.1) Water-related CAPEX (+/- % change)

19.35

(5.9.2) Anticipated forward trend for CAPEX (+/- % change)

10

(5.9.3) Water-related OPEX (+/- % change)

26.88

(5.9.4) Anticipated forward trend for OPEX (+/- % change)

10

(5.9.5) Please explain

The increase in CAPEX is primarily due to the implementation of major projects which were undertaken in the reporting year such as 4 MLD water treatment ZLD plant, RA mines ZLD at DSC tailing storage facility management and renewable power. Last year, the total capital expenditure (CAPEX) on environmental projects was INR 3,885,330,000 this number has increased to INR 4,637,300,000 in this reporting year, a 19.35% increase from last year. Water-related OPEX has increased by 26.88% due to operational and maintenance costs of 5 MLD STP Plant, ZLD plants, Tailing dam & reservoir management. Last year, the operational expenditure of environmental projects was INR 1,695,900,000. This number has decreased to INR 1,240,000,000 (26.88%) in this reporting year.
[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: ☑ Yes	*Select all that apply* ☑ Carbon

	Use of internal pricing of environmental externalities	Environmental externality priced
		☑ Water

[Fixed row]

(5.10.1) Provide details of your organization's internal price on carbon.

Row 1

(5.10.1.1) Type of pricing scheme

Select from:

☑ Shadow price

(5.10.1.2) Objectives for implementing internal price

Select all that apply

☑ Navigate regulations

☑ Drive energy efficiency

☑ Drive low-carbon investment

☑ Conduct cost-benefit analysis

☑ Reduce upstream value chain emissions

☑ Identify and seize low-carbon opportunities

☑ Influence strategy and/or financial planning

☑ Setting and/or achieving of climate-related policies and targets

☑ Incentivize consideration of climate-related issues in decision making

☑ Incentivize consideration of climate-related issues in risk assessment

(5.10.1.3) Factors considered when determining the price

Select all that apply

☑ Cost of required measures to achieve climate-related targets

☑ Price/cost of renewable energy procurement

☑ Scenario analysis

(5.10.1.4) Calculation methodology and assumptions made in determining the price

Setting a carbon price allows us to evaluate the profitability of various projects in different scenarios and make informed decisions for our business. This approach can also stimulate innovation and encourage the allocation of capital towards low-carbon solutions that deliver higher returns. To support emissions-efficient procurement, capital expenditure, and investment in R&D decision-making, we use shadow carbon pricing of INR 1,241.77/TCO2e. Therefore, we have calculated ICP by following the below steps: Step 1- Analysis of Mitigation measures (Analysis of GHG reduction measures) Step 2- Assessment of major measures (investment, reductions)- (Inclusion of measures contributing- 90% of GHG reduction for business) Step 3- Calculation of abatement cost (Calculating abatement cost USD/TCO2e)

(5.10.1.5) Scopes covered

Select all that apply

☑ Scope 1

☑ Scope 2

(5.10.1.6) Pricing approach used – spatial variance

Select from:

☑ Uniform

(5.10.1.8) Pricing approach used – temporal variance

Select from:

☑ Evolutionary

(5.10.1.9) Indicate how you expect the price to change over time

Currently, there are no regulations in India concerning the Internal Carbon Price; however, in line with our goal to achieve net zero emissions by 2050, significant steps have been taken. Notably, the recent signing of the Power Delivery agreement for 450 MW Renewable Energy Round the Clock (RE-RTC) and the successful operation of the Pantnagar Metal plant entirely powered by green energy have led to a decrease in the Internal Carbon Price (also known as Shadow Price) attributed to carbon. However, noting that since considering RE-RTC project of 450 MW will help reduce our annual GHG emissions by 2.7 million TCO2e by 2026, this would significantly bring down Internal Carbon price, we believe having US15/TCO2e of carbon allows us to identify low carbon projects to ensure we are on the right track for our decarbonisation journey.

(5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

1241.77

(5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

1241.77

(5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

☑ Operations
☑ Procurement
☑ Remuneration
☑ Product and R&D
☑ Risk management
☑ Impact management
☑ Capital expenditure
☑ Opportunity management
☑ Value chain engagement
☑ Dependencies management

(5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for all decision-making processes

(5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

100

(5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

HZL is committed to achieving its sustainability goals, and one way we are doing this is by using an internal carbon price. We aim to reduce 14% of our Scope 12 (absolute) by 2026-27 from a 2020 base-year. Setting a carbon price allows us to evaluate the profitability of various projects in different scenarios and make informed decisions to future-proof our business. This approach can also stimulate innovation and encourage the allocation of capital towards low-carbon solutions that deliver higher returns. To support emissions-efficient procurement, capital expenditure, and investment in R&D decision-making, we use shadow carbon pricing

of INR 1,204.086/TCO2e. This method adds a notional surcharge to the cost of procurement based on the degree of carbon emissions, rather than just being price competitive. This approach will help us to assess procurement decisions more accurately and prioritize emissions-efficient options. The goal of a carbon shadow price is to include climate impact when making decisions about projects, plans, and policies. It accomplishes this by formalizing a framework that steers organizational investment decisions in the direction of low-carbon alternatives. It helps create a consistent mechanism to quantify actual or modelled costs associated with select projects and operational decisions that produce carbon emissions. This is also helping the organisation to identify the tangible benefits of renewable energy which help reduce the cost of products and also highlight the impact of emissions in driving the cost of the project upwards and reducing the Internal rate of return and Net Present value, thus helping the organisation incorporate carbon price in financial decision making. As an example, for the upcoming Roaster at Debari that will have an STG (Steam Turbine Generator), post Waste Heat provided by STG, an additional 1.5 MW of residue will be required. The original IRR, when the ICP is not considered in the calculations, is 22.07%, and the payback period is 3.90 years. However, depending on the source of 1.5 MW (Conventional or Renewable), the Internal Rate of return will change basis implementing the Internal Carbon Price. If we use renewable energy, its IRR will increase and the Payback period decrease, however, the IRR will decrease, and the payback period will increase when we source 1.5 MW from a conventional source of energy. This is identified basis US15/TCO2e Internal Carbon Pricing.
[Add row]

(5.10.2) Provide details of your organization's internal price on water.

Row 1

(5.10.2.1) Type of pricing scheme

Select from:
☑ Internal fee

(5.10.2.2) Objectives for implementing internal price

Select all that apply
☑ Navigate regulations
☑ Drive water efficiency
☑ Conduct cost-benefit analysis
☑ Drive water-related investment
☑ Influence strategy and/or financial planning
☑ Identify and seize low-water impact opportunities
☑ Setting and/or achieving of water-related policies and targets
☑ Incentivize consideration of water-related issues in decision making
☑ Incentivize consideration of water-related issues in risk assessment

(5.10.2.3) Factors beyond current market price are considered in the price

Select from:

☑ No

(5.10.2.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

1. Data Collection and Tracking a. Usage Metrics: Gather data on water consumption, pricing structures, and associated costs. Track metrics such as water volume, pricing tiers, and the influence of pricing changes on overall consumption. b. Cost Accounting: Monitor expenses linked to water procurement, treatment, and distribution, including additional costs incurred due to inefficiencies or waste. 2. Benchmarking and Comparison a. Industry Standards: Compare current water pricing and efficiency measures with industry benchmarks to assess the effectiveness of existing pricing strategies. b. Historical Data: Review past water pricing data to identify trends and evaluate the impact of previous pricing adjustments on water consumption and operational efficiency. 3. Performance Indicators a. Efficiency Metrics: Track key performance indicators such as water usage per unit of production, cost savings from implemented efficiency measures, and reductions in operational costs. b. Pricing Impact: Evaluate how different pricing structures influence water consumption patterns and customer behavior. Therefore, our internal water price is INR 110.
[Add row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water
Investors and shareholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

	Assessment of supplier dependencies and/or impacts on the environment
Climate change	*Select from:* ☑ No, we do not currently assess the dependencies and/or impacts of our suppliers, but we plan to do so within the next two years
Water	*Select from:* ☑ No, we do not currently assess the dependencies and/or impacts of our suppliers, but we plan to do so within the next two years

[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ No, we do not prioritize which suppliers to engage with on this environmental issue

(5.11.2.3) Primary reason for no supplier prioritization on this environmental issue

Select from:

☑ We engage with all suppliers

(5.11.2.4) Please explain

Introduced ESG expectations in our procurement process via the ARIBA platform Post registration, Ariba team shall share the ESG Qualification questionnaire with the vendor. Response on the ESG Qualification questionnaire shall be evaluated and approved by an authorized representative of ESG based on the following scoring criteria: - Score is 50% or more– Approve the vendor. - Score below 50% – Not to approve the vendor. • Cases wherein ESG and quality score are less than defined limits, vendor code shall not be created. For any exception approval from the Commercial Head, Functional Head is to be obtained. • Vendor code in SAP shall not be created until receipt of response on ESG questionnaire & quality questionnaire (as applicable) from vendor on Ariba Comprehensive strategy and tools developed for product-level life cycle assessment for our critical machines & commodities for scope 3 calculations

Water

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ No, we do not prioritize which suppliers to engage with on this environmental issue

(5.11.2.3) Primary reason for no supplier prioritization on this environmental issue

Select from:

☑ We engage with all suppliers

(5.11.2.4) Please explain

Introduced ESG expectations in our procurement process via the ARIBA platform Post registration, Ariba team shall share the ESG Qualification questionnaire with the vendor. Response on the ESG Qualification questionnaire shall be evaluated and approved by an authorized representative of ESG based on the following scoring criteria: - Score is 50% or more– Approve the vendor. - Score below 50% – Not to approve the vendor. • Cases wherein ESG and quality score are less than defined limits, vendor code shall not be created. For any exception approval from the Commercial Head, Functional Head is to be obtained. • Vendor code in SAP shall not be created until receipt of response on ESG questionnaire & quality questionnaire (as applicable) from vendor on Ariba Comprehensive strategy and tools developed for product-level life cycle assessment for our critical machines & commodities for scope 3 calculations
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization’s purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ No, we do not have a policy in place for addressing non-compliance

(5.11.5.3) Comment

In August 2024, we have implemented the following requirements for our suppliers: a. ESG and quality score is less than defined limits, vendor code shall not be created. For any exception approval from the Commercial Head, Functional Head is to be obtained. b. Vendor code in SAP shall not be created until receipt of response on ESG questionnaire & quality questionnaire (as applicable) from the vendor on Ariba. In the coming financial year, HZL will conduct product-level life cycle assessment: 1. Comprehensive strategy and tools developed for product-level life cycle assessment for our critical machines & commodities 2. Aimed at a significant reduction in our Scope 3 emissions 3. Started systematic collection of data from BPs to determine the Scope 3 GHG emissions brought to our supply chain through procurement of certain goods, as well as the associated economic cost 4. Conducted training sessions for internal procurement teams and critical material BPs to facilitate the implementation of life cycle assessment within our procurement process

Water

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ No, we do not have a policy in place for addressing non-compliance

(5.11.5.3) Comment

In August 2024, we have implemented the following requirements for our suppliers: a. ESG and quality score is less than defined limits, vendor code shall not be created. For any exception approval from the Commercial Head, Functional Head is to be obtained. b. Vendor code in SAP shall not be created until receipt of response on ESG questionnaire & quality questionnaire (as applicable) from the vendor on Ariba.
[Fixed row]

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Climate change

(5.11.6.1) Environmental requirement

Select from:

☑ Other, please specify **:**To comply with Supplier Code of Conduct.

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Second-party verification

☑ Other, please specify **:**a. ESG & HSE questionnaire based on international standards on Ariba portal b. Introduced ESG expectations in our procurement process via the ARIBA

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 1-25%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:
☑ 100%

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:
☑ 100%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:
☑ Suspend and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:
☑ None

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply
☑ Providing information on appropriate actions that can be taken to address non-compliance

(5.11.6.12) Comment

All the suppliers are required to align with HZL's Supplier Code of Conduct.

Water

(5.11.6.1) Environmental requirement

Select from:

☑ Other, please specify :To comply with the Supplier Code of Conduct

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Supplier scorecard or rating

☑ Other, please specify :a. ESG & HSE questionnaire based on international standards on Ariba portal b. Introduced ESG expectations in our procurement process via the ARIBA

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 1-25%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Retain and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:

☑ None

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply

☑ Providing information on appropriate actions that can be taken to address non-compliance

(5.11.6.12) Comment

All the suppliers are required to align with HZL's Supplier Code of Conduct.
[Add row]

(5.11.7) Provide further details of your organization’s supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:
☑ Circular economy

(5.11.7.3) Type and details of engagement

Capacity building
☑ Other capacity building activity, please specify :Align supplier's target with HZL's net zero target

Information collection
☑ Collect targets information at least annually from suppliers

Innovation and collaboration
☑ Collaborate with suppliers on innovations to reduce environmental impacts in products and services

(5.11.7.4) Upstream value chain coverage

Select all that apply
☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 1-25%

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ 100%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

We conduct an annual, company-specific due diligence process to identify ESG risks, including climate-related risks, across our supply chain. This process enables us to take proactive measures to address critical risks such as material price increases, resource shortages, and regulatory non-compliance. Our sustainability strategy extends to our suppliers, and we collaborate with them to mitigate these risks effectively. To strengthen the resilience of our supply chain, we are implementing a comprehensive risk management framework in partnership with a third-party expert. This framework involves periodic evaluation of each vendor based on a wide range of ESG parameters, including ethics, labor and employee welfare, health and safety, environmental impact, climate change, and management systems. Special attention is given to suppliers in Conflict-Affected and High-Risk Areas (CAHRA). The individual scores from these assessments help us identify suppliers who do not meet our ESG criteria, and we take corrective actions when necessary. Our Sustainable Sourcing Policy serves as the foundation for our risk identification efforts, outlining our expectations for supplier performance on key ESG issues, including climate change objectives. For suppliers classified as high risk, we work closely with them to develop mitigation plans that include clear performance objectives and measurable indicators. These may be either qualitative or quantitative and are designed to foster significant improvements within a reasonable timeframe. We actively monitor and measure the performance of our business partners through the ARIBA integrated performance module, which allows us to track progress against set goals. When performance falls short, we take corrective actions to ensure continuous improvement and alignment with our sustainability goals. This structured approach helps us build a more sustainable and resilient supply chain, reducing exposure to ESG-related risks, particularly those related to climate change.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement :Reduce virgin raw materials Reduce emission

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ No

Water

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Circular economy

(5.11.7.3) Type and details of engagement

Capacity building

☑ Other capacity building activity, please specify :Align supplier's target with HZL's net zero target

Information collection

☑ Collect targets information at least annually from suppliers

Innovation and collaboration

☑ Collaborate with suppliers on innovations to reduce environmental impacts in products and services

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 1-25%

(5.11.7.7) % tier 1 suppliers with substantive impacts and/or dependencies related to this environmental issue covered by engagement

Select from:

☑ None

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

We conduct an annual, company-specific due diligence process to identify ESG risks, including climate-related risks, across our supply chain. This process enables us to take proactive measures to address critical risks such as material price increases, resource shortages, and regulatory non-compliance. Our sustainability strategy extends to our suppliers, and we collaborate with them to mitigate these risks effectively. To strengthen the resilience of our supply chain, we are implementing a comprehensive risk management framework in partnership with a third-party expert. This framework involves periodic evaluation of each vendor based on a wide range of ESG parameters, including ethics, labor and employee welfare, health and safety, environmental impact, climate change, and management systems. Special attention is given to suppliers in Conflict-Affected and High-Risk Areas (CAHRA). The individual scores from these assessments help us identify suppliers who do not meet our ESG criteria, and we take corrective actions when necessary. Our Sustainable Sourcing Policy serves as the foundation for our risk identification efforts, outlining our expectations for supplier performance on key ESG issues, including climate change objectives. For suppliers classified as high risk, we work closely with them to develop mitigation plans that include clear performance objectives and measurable indicators. These may be either qualitative or quantitative and are designed to foster significant improvements within a reasonable timeframe. We actively monitor and measure the performance of our business partners through the ARIBA integrated performance module, which allows us to track progress against set goals. When performance falls short, we take corrective actions to ensure continuous improvement and alignment with our sustainability goals. This structured approach helps us build a more sustainable and resilient supply chain, reducing exposure to ESG-related risks, particularly those related to water-related issues.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ No, this engagement is unrelated to meeting an environmental requirement

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ No

[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Innovation and collaboration

☑ Align your organization’s goals to support customers’ targets and ambitions

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

We believe in constant endeavour to scale up customer engagement initiatives and deliver a par-excellence experience to all our customers at every stage of their journey with HZL. Our approach is centred around our goal to reduce Scope 3 emissions by 2025 by 2026 as well as to meet changing customer demand for low-carbon products. We engaged with 100% of our customers who make around 90% of our revenues on climate issues as we need to understand their product requirements. We also engage with our customers to understand their commitment towards climate change and their changing demands for our low-carbon products. For example, we engaged with our steel sector clients who require low-carbon zinc to meet their Carbon Border Tax requirements applicable from 2026. This engagement helps us in reducing our own environmental footprint (climate-related impacts of our products) while supporting customers to meet their Sustainability Goals. Customer engagements: • Intuitive Moglix platform for continuous engagement & feedback • Periodic connects with key customers by senior executives & top management • Biennial customer satisfaction survey to collect feedback • Seminar and Educational Programme to enhance awareness about the use of zinc in infrastructure and sustainability of Smart Cities projects • Forum for quick customer query resolution. Scope of engagement aligned with climate matters: a) HZL's climate targets and Net Zero plan b) Reduction in environmental & social impacts of products c) Low-carbon products & design

(5.11.9.6) Effect of engagement and measures of success

We evaluate the effectiveness of our customer engagements by utilizing key indicators such as energy conservation, customer satisfaction ratings, and qualitative feedback. Our proactive approach and commitment to net zero ambition is in line with our commitment to a sustainable future for all. To align with our customers' climate-related goals we have launched EcoZen-Asia’s first low-carbon zinc product. As per mass balance approach HZL has 8% of Average Low Carbon SHG Zinc product of total SHG Zinc production for baseline year 2023-24, will reach 16.89% of Low Carbon SHG Zinc production at end of FY 2025 and 30.30% of Low Carbon SHG Zinc production at end of FY 2026. We undertook the Product Carbon Footprint of Average Low Carbon SHGZ product based on mass balance approach as per ISO 14067 Standards along with Third Party Verification by an Independent International reviewer. As per the latest verification carried out for Low carbon Zinc, the

total emissions associated with our zinc produced is 5.882 TCO2e/ tonne of Zinc & emissions associated with low carbon Zinc is 0.939 TCO2e/Tonne of Zn, which is less than 1 tonne. In FY 2023-24, the Company augmented its VAP portfolio by 34 kt, reaching a total of 161 kt. In FY2023-24, increasing the share of value-added products to 20% from 15% in FY 2022-23, For FY 2024-25- Focused approach to increasing the share of value-added products from 20% to 23%

Water

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Innovation and collaboration

☑ Align your organization’s goals to support customers’ targets and ambitions

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

We engaged with 100% customers with the highest contribution to revenue since they are crucial for maintaining business continuity. Our approach revolves around meeting evolving customer needs & quality expectations through innovative products, tailor-made solutions, tools, & platforms. We engage with our customers to take actions collectively & promote water stewardship to adapt to changing demands for low water-intensive products & provide support in reducing water-related impacts.

(5.11.9.6) Effect of engagement and measures of success

HZL has been working on improving technical & support services for all its customers for better awareness & detailing of product portfolio. Based on interactions with customers we realized that there was demand for Green Metals with lower carbon and water footprint. Hence, we are engaging with our customers to identify opportunities to develop products as well as forecast demand for our products in this transition. Based on customer interactions, HZL plans to develop Value Added Products (VAP) which have a lower environmental footprint. To further enhance our VAP portfolio, we have established a subsidiary called Hindustan Zinc Alloys Private Ltd (HZAPL). In FY 2023-24, the Company augmented its VAP portfolio by 34 kt, reaching a total of 161 kt. In FY2023-24, increasing the share of value-

added products to 20% from 15% in FY 2022-23, For FY24-25- Focused approach to increasing the share of value-added products from 20% to 23% Low carbon EcoZen launched in 2024 along with value-added products to help reduce water consumption at customers' end as well.
[Add row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control ensures that the organization accountable for emissions can effectively manage and reduce them. By defining control boundaries, we can clearly assign responsibility for emissions management and mitigation efforts.

Water

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control ensures that the organization accountable for source wise water withdrawal and water consumption can effectively manage and reduce them. By defining control boundaries, we can clearly assign responsibility for water management and mitigation & adaptation efforts.

Plastics

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control ensures that the organization accountable for plastic can effectively manage and reduce them. By defining control boundaries, we can clearly assign responsibility for plastic management and mitigation efforts.

Biodiversity

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Operational control ensures that the organization accountable for biodiversity can effectively manage them. By defining control boundaries, we can clearly assign responsibility for biodiversity management and mitigation efforts.
[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:
☑ No

(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

	Has there been a structural change?
	Select all that apply ☑ No

[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply ☑ No

[Fixed row]

(7.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Select all that apply

☑ IPCC Guidelines for National Greenhouse Gas Inventories, 2006

☑ ISO 14064-1

☑ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

(7.3) Describe your organization's approach to reporting Scope 2 emissions.

(7.3.1) Scope 2, location-based

Select from:

☑ We are reporting a Scope 2, location-based figure

(7.3.2) Scope 2, market-based

Select from:

☑ We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

(7.3.3) Comment

We use average emission factors to calculate Scope 2 emissions as we source electricity from State Grid. We do not have access to supplier-specific electricity emission factors or residual emissions factors. Therefore, scope 2 market based is not relevant to our operations as of now.
[Fixed row]

(7.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Select from:

☑ No

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

4480542

(7.5.3) Methodological details

The base year for our absolute emissions reduction targets is FY 2019-2020; hence, we are considering the same year as base year for our inventory. The base year is in line with our latest SBTi validated targets. This includes emissions from fuel used in our operating boundaries

Scope 2 (location-based)

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

253756

(7.5.3) Methodological details

The base year for our absolute emissions reduction targets is FY2019-2020 and hence we are considering the same year as base year for our inventory. The base year is in line with our latest SBTi validated targets. This includes emissions from power sourced from grid.

Scope 2 (market-based)

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

We source electricity from State Grid. We do not have access to supplier-specific electricity emission factors or residual emissions factors. Hence, we are unable to report a Scope 2, market-based figure.

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

363986

(7.5.3) Methodological details

The base year for our absolute emissions reduction targets is FY2019-2020. Therefore, we are considering the same year as the base year for our inventory. The base year is in line with our latest SBTi validated targets. This category includes upstream emissions from the production of products purchased by HZL for its operations in the reporting year. Products include goods (tangible products)

Scope 3 category 2: Capital goods

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

55196.5

(7.5.3) Methodological details

This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. For HZL, this is limited to, mining machinery and equipment, plants and facilities (as and when operational)

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

526490

(7.5.3) Methodological details

This category includes emissions related to the production of fuels and energy purchased and consumed by HZL in the reporting year that are not included in Scope 1 or Scope 2.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

27145

(7.5.3) Methodological details

Transportation and distribution of products purchased by HZL in the reporting year between HZL & suppliers considered in category 1 and its own operations (in vehicles and facilities not owned or controlled by HZL).

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

426001

(7.5.3) Methodological details

This includes emissions from third-party disposal and treatment of solid waste that is generated in HZL's operations in the reporting year.

Scope 3 category 6: Business travel

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

1560

(7.5.3) Methodological details

This Category includes emissions from the transportation of employees for business related activities in vehicles not owned by HZL.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

2370

(7.5.3) Methodological details

This Category includes emissions from the transportation of HZL's employees between their homes and work sites.

Scope 3 category 8: Upstream leased assets

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Category 8 has been excluded from HZL's footprint, as HZL did not lease any assets in the upstream during the reporting year.

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

17104.9

(7.5.3) Methodological details

This Category includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities nor owned or controlled by HZL.

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

280765

(7.5.3) Methodological details

It includes emissions from processing of sold intermediate products by third parties (e.g., manufacturers) after sale by HZL. Category 10 emissions originating from the first processing process of the intermediate goods supplied by HZL.

Scope 3 category 11: Use of sold products

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

We are primarily the manufacturer of non-ferrous metals which is sold as an intermediate product in the form of an ingot and is not the final product.

Scope 3 category 12: End of life treatment of sold products

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

36396

(7.5.3) Methodological details

This category includes emissions from treatment of products sold by the reporting company (in the reporting year) at the end of their life.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

HZL does not have any leased assets and thus, this is not applicable.

Scope 3 category 14: Franchises

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

HZL does not have franchises and thus, no emissions from this is applicable

Scope 3 category 15: Investments

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

31139

(7.5.3) Methodological details

Emissions due to our subsidiaries were included in this category for base year however from FY23-24 the emissions due to our subsidiaries have been included in Scope 1 & Scope 2.

Scope 3: Other (upstream)

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not Relevant

Scope 3: Other (downstream)

(7.5.1) Base year end

03/30/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Note Relevant
[Fixed row]

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4251360

(7.6.3) Methodological details

Scope 1 GHG emissions in FY23-24 increased by 23.41 % from FY 2022-23. Increase in GHG Emissions is due to increase in mined metal production by 2%. We had witnessed higher mined metal production of mined metal of 1079 KT. We also delivered the highest ever annual silver production i.e. 746 MT by increasing the production by 5% w.r.t. previous year. GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24 Methodology used: IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Past year 1

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

3444672

(7.6.2) End date

03/30/2023

(7.6.3) Methodological details

In FY 2022-23, Scope 1 emissions decreased by 20.27% from FY 2021-22 due to reduction in use of power from Captive Power plants and increase in purchased power from state grid. This is due to the non-availability of coal and the increase in coal prices. However, there was a reduction in Scope 1 & Scope 2 emissions, in spite of the increase in production by 6.61%, due to the implementation of energy conservation projects. Methodology used: IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Past year 2

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4320181

(7.6.2) End date

03/30/2022

(7.6.3) Methodological details

In FY 2021-22, our scope 1 emission decreased by 3.77% from past year due to temporary shutdown of captive power plants (CPPs). During this time, power was sourced from the state grid. Methodology used: IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Past year 3

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4489443

(7.6.2) End date

03/30/2021

(7.6.3) Methodological details

Scope 1 GHG emissions in FY20-21 increased by 0.19 % from FY 2019-20. Increase in GHG Emissions is due to increase in production by 7%. We had witnessed higher production of 15.5 MT. We also delivered the annual silver production of 706 tons. However, due to concerted efforts to reduce emissions through- (use of PNG, renewable energy sources and energy-saving projects), the overall increase in emissions from FY 2019-20 is insignificant. Methodology used: IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Past year 4

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4480887

(7.6.2) End date

03/30/2020

(7.6.3) Methodological details

IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Past year 5

(7.6.1) Gross global Scope 1 emissions (metric tons CO2e)

4704635

(7.6.2) End date

03/30/2019

(7.6.3) Methodological details

IPCC Guidelines for National Greenhouse Gas Inventories, 2006 ISO 14064-1 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
[Fixed row]

(7.7) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

562715

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.4) Methodological details

In FY 2023-24, our scope 2 emissions have decreased by 50.44% from the previous year. The huge declination was due to the execution of the power delivery agreement we had signed in FY 2022-23 for 450 MW round the-clock renewable energy (RE-RTC), and successfully advanced the first phase of delivery to May 2024. Scope 2 emissions are lower than FY 2022-23 on account of higher reliance on captive power plants during FY 2023-24.

Past year 1

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

1135622

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2023

(7.7.4) Methodological details

In FY 2022-23, our scope 2 emissions have increased by 131% from the previous year due to increase in purchased power from state grid and reduced power consumption from own captive power plant due to non-availability of coal and increase in coal prices. This is also due to increase in production by 6.61% from FY2021-22. It is in line with our commitment of Net Zero that no new Captive Thermal Power plants will be inducted, however due to increase in production we had to procure power from state grid.

Past year 2

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

491403

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2022

(7.7.4) Methodological details

Our scope 2 in FY 21-22, increased by 60% due to increase in our production by 4% from past year. Moreover, due to temporary shutdown of our CPP, our power demands were sourced through grid electricity.

Past year 3

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

307068

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2021

(7.7.4) Methodological details

Scope 2 emission for FY 20-21 increased over FY 19-20 by 21.01 %. Location based scope 2 emission for FY 19-20 was 253756 tCO2e. The overall increase is attributed to the usage of state grid energy for increased mine development activities. Hence, increase in GHG Emissions is due to the increase in production by 7%. We witnessed the highest ever ore production of 15.5 MT, and we also delivered the highest ever annual silver production of 706 tons.

Past year 4

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

253756

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2020

(7.7.4) Methodological details

Scope 2 emission for FY 19-20 increased over FY 18-19 by 47 %. Location based scope 2 emission for FY 18-19 was 167,239 tCO2e.

Past year 5

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

167239

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

0

(7.7.3) End date

03/30/2019

(7.7.4) Methodological details

In FY 18-19, our scope 2 GHG emissions increased by about 11.5% in comparison to FY 17-18. Our scope 2 emission in FY 17-18 was 150,000 metric tons CO2e. [Fixed row]

(7.8) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

432386

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Supplier-specific method

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes upstream emissions from the production of products purchased by Hindustan Zinc for its operations in the reporting year. Products includes goods (tangible products). Inclusions: Production consumables Emissions associated with the most relevant materials that are consumed in the production processes of our industrial assets, such as explosives, soda ash, lime, cement, to create intermediate or first-use products. Infrastructure Consumables Emissions associated with the production and use of infrastructure consumables like valves, pipes, motors & tyres that are important aspects of the production processes of our industrial assets but not specifically used up within the process. In this category we have considered emissions from consumables sourced from A & B category suppliers as per Vedanta's Critical supplier identification policy are only considered in this category.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

2425

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Calculation Boundary, Rationale and Status Category 2 includes upstream emissions associated with the production of capital goods that have been procured for HZL's operations. Capital goods are those that are treated as fixed assets, or as plant, property and equipment (PP&E), and are not typically amortized over the life of the asset. The total cradle-to-gate emissions of the capital goods are accounted for in the year of acquisition. For Hindustan Zinc, this is limited to, mining machinery and equipment, plants and facilities (as and when operational)

Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

844295

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes emissions related to the production of fuels and energy purchased and consumed by Hindustan Zinc in the reporting year that are not included in Scope 1 or Scope 2. Boundary Extraction, production and transportation of fuels and energy purchased by HZL in the reporting year. Well-to-tank (WTT) emission for the fuel consumption reported as Scope 1 emissions has been considered in this category along with T&D losses associated with purchased grid electricity. Inclusion: • Well-to-tank (WTT) emission for fuel consumed at operations. • Upstream emissions from extraction, production, and transportation of fuel combusted to produce grid electricity imported for the operations. • T&D losses associated with purchased grid electricity.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

14196

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

Transportation and distribution of products purchased by HZL in the reporting year between HZL & suppliers considered in category 1 and 3 and its own operations (in vehicles and facilities not owned or controlled by Hindustan Zinc). Boundary Emissions from third-party transport paid for by Hindustan Zinc, which is used to transport goods purchased by HZL and Inter-unit transport of goods (both to and between our operational sites). Inclusion: • Inter-unit transport of goods between company's operated sites. Emissions due to transport of goods from upstream suppliers to company's site.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

9631

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Franchise-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This includes emissions from third-party disposal and treatment of waste that is generated in HZL's operations in the reporting year. Boundary: Scope 3 emissions from waste generated in Hindustan Zinc's operations are not material but have been calculated. Inclusion: Tonnage of waste generated by all operations is collected for the following: • Hazardous & Non-Hazardous waste recycled • Hazardous & Non-Hazardous waste landfilled • Hazardous & Non-Hazardous waste incinerated

Business travel

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

205

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes emissions from the transportation of employees for business related activities in vehicles not owned by Hindustan Zinc Limited. Boundary This category covers emissions from domestic and international flights taken by employees for business commuting purposes, with all other travel being excluded. We have policies in place that promotes behavioural changes to avoid traveling whenever it is possible. Inclusion: Emissions from domestic and international flights taken by employees for business commuting purposes

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

1237

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes emissions from the transportation of HZL's employees between their homes and their work sites. Boundary This refers to emissions attributed to the transportation of employees between their homes and their work sites during the reporting year. Inclusion: Third party bus transport facility for employee commute from their homes to their work sites.

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Category 8 has been excluded from HZL's footprint, as HZL did not lease any assets in the upstream during the reporting year.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

25079

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities not owned or controlled by Hindustan Zinc Limited. Boundary Emissions associated with third-party transport not paid for by HZL and used to transport goods produced by HZL to the first-use customers. Inclusion: • Transport of finished goods between company's operated sites & first-use customer.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

236071

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average product method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

It includes emissions from processing of sold intermediate products by third parties (e.g., manufacturers) after sale by HZL. Boundary Category 10 emissions are considered material & relates to the GHG emissions originating from the first processing process of the intermediate goods supplied by HZL. Inclusions: GHG emissions of downstream companies that occur during the processing of the sold product into an intermediate use.

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

We are primarily the manufacturer of non-ferrous metals which is sold as an intermediate product in the form of an ingot and is not the final product.

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

16830

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average product method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

This category includes emissions from treatment of products sold by the reporting company (in the reporting year) at the end of their life. This includes the total expected end-of-life emissions from Lead sold in the reporting year. Boundary: Emissions arising due to end-of-life treatment of the company's sold products have an immaterial contribution to the overall Scope 3 emissions. This category includes the total expected end-of-life emissions from Lead sold in the reporting year. Sales data for lead was multiplied by metal-specific average global recycling rates to estimate the emissions associated with end-of-life of the products sold. Given that sold Special High Grade Zinc is not usually considered an end-product, there is no end-of-life treatment for it. This is in line with International Zinc Association's (IZA) Scope 3 guidance.

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Category 13 has been excluded from HZL's footprint, as HZL did not lease any assets in FY2023-24 to third parties.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

HZL does not operate on a franchise model and therefore does not have any franchises to which emissions can be attributed.

Investments

(7.8.1) Evaluation status

Select from:
☑ Not relevant, explanation provided

(7.8.5) Please explain

HZL has not done any major investment or acquisition which are not the part of scope 1 and scope 2 emissions. Thus, scope 3 emission from the investment has been considered as zero and neglected.

Other (upstream)

(7.8.1) Evaluation status

Select from:
☑ Not relevant, explanation provided

(7.8.5) Please explain

Our upstream emissions are from transportation and distribution and upstream leased assets which are been covered under the said scope 3 parameters.

Other (downstream)

(7.8.1) Evaluation status

Select from:
☑ Not relevant, explanation provided

(7.8.5) Please explain

Our downstream emissions are from transportation and distribution and downstream leased assets which are been covered under the said scope 3 parameters [Fixed row]

(7.8.1) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

(7.8.1.1) End date

03/30/2023

(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)

369654

(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)

22454

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

916109

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

9899

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

8175

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

630

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

1252

(7.8.1.9) Scope 3: Upstream leased assets (metric tons CO2e)

0

(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)

46553

(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)

222527

(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

0

(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

15875

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

0

(7.8.1.15) Scope 3: Franchises (metric tons CO2e)

0

(7.8.1.16) Scope 3: Investments (metric tons CO2e)

0

(7.8.1.17) Scope 3: Other (upstream) (metric tons CO2e)

0

(7.8.1.18) Scope 3: Other (downstream) (metric tons CO2e)

0

(7.8.1.19) Comment

During FY 2022-23, our total scope 3 emission was 16,13,128 metric tons CO2e resulting in 9% reduction in comparison to previous year i.e., FY 2021-22 during which our scope 3 emission stood at 17,69,630 metric tons CO2e.

Past year 2

(7.8.1.1) End date

03/30/2022

(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)

369317

(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)

6519

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

1011653

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

9727

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

8681

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

155

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

1827

(7.8.1.9) Scope 3: Upstream leased assets (metric tons CO2e)

0

(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)

26060

(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)

319263

(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

0

(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

16428

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

0

(7.8.1.15) Scope 3: Franchises (metric tons CO2e)

0

(7.8.1.16) Scope 3: Investments (metric tons CO2e)

0

(7.8.1.17) Scope 3: Other (upstream) (metric tons CO2e)

0

(7.8.1.18) Scope 3: Other (downstream) (metric tons CO2e)

0

(7.8.1.19) Comment

In FY 2021-22, total scope 3 emissions were increased by 7.37% from FY 2020-21.

Past year 3

(7.8.1.1) End date

03/30/2021

(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)

314837

(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)

6908

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

960673

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

11270

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

8811

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

1257

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

1947

(7.8.1.9) Scope 3: Upstream leased assets (metric tons CO2e)

0

(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)

19135

(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)

305326

(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

0

(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

17942

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

0

(7.8.1.15) Scope 3: Franchises (metric tons CO2e)

0

(7.8.1.16) Scope 3: Investments (metric tons CO2e)

0

(7.8.1.17) Scope 3: Other (upstream) (metric tons CO2e)

0

(7.8.1.18) Scope 3: Other (downstream) (metric tons CO2e)

0

(7.8.1.19) Comment

In FY 2020-21, total scope 3 emissions were 16,48,106 metric tons CO2e, a decrease of 6.79% compared to the previous year, FY 2019-2020, during which our scope 3 emissions stood at 17,68,153 metric tons CO2e.

Past year 4

(7.8.1.1) End date

03/30/2020

(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)

363986

(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)

55196

(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

526490

(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)

27145

(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)

426001

(7.8.1.7) Scope 3: Business travel (metric tons CO2e)

1560

(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)

2370

(7.8.1.9) Scope 3: Upstream leased assets (metric tons CO2e)

0

(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)

17105

(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)

280765

(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

0

(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

36396

(7.8.1.14) Scope 3: Downstream leased assets (metric tons CO2e)

0

(7.8.1.15) Scope 3: Franchises (metric tons CO2e)

0

(7.8.1.16) Scope 3: Investments (metric tons CO2e)

31139

(7.8.1.17) Scope 3: Other (upstream) (metric tons CO2e)

0

(7.8.1.18) Scope 3: Other (downstream) (metric tons CO2e)

0

(7.8.1.19) Comment

Our total scope 3 emissions in FY 2019-20 was 17,68,153 metric tons of CO2e.
[Fixed row]

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	*Select from:* ☑ Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	*Select from:* ☑ Third-party verification or assurance process in place
Scope 3	*Select from:* ☑ Third-party verification or assurance process in place

[Fixed row]

(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:
☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.1.4) Attach the statement

Signed Assurance Letter - CDP - HZL.pdf

(7.9.1.5) Page/section reference

all

(7.9.1.6) Relevant standard

Select from:
☑ ISAE3000

(7.9.1.7) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Row 1

(7.9.2.1) Scope 2 approach

Select from:
☑ Scope 2 location-based

(7.9.2.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.2.5) Attach the statement

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(7.9.2.6) Page/ section reference

All

(7.9.2.7) Relevant standard

Select from:
☑ ISAE3000

(7.9.2.8) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.3) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Row 1

(7.9.3.1) Scope 3 category

Select all that apply

☑ Scope 3: Franchises
☑ Scope 3: Investments
☑ Scope 3: Capital goods
☑ Scope 3: Business travel
☑ Scope 3: Employee commuting
☑ Scope 3: Waste generated in operations
☑ Scope 3: End-of-life treatment of sold products
☑ Scope 3: Upstream transportation and distribution
☑ Scope 3: Downstream transportation and distribution
☑ Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
☑ Scope 3: Use of sold products
☑ Scope 3: Upstream leased assets
☑ Scope 3: Downstream leased assets
☑ Scope 3: Processing of sold products
☑ Scope 3: Purchased goods and services

(7.9.3.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.3.5) Attach the statement

Signed Assurance Letter - CDP - HZL.pdf

(7.9.3.6) Page/section reference

All

(7.9.3.7) Relevant standard

Select from:

☑ ISAE3000

(7.9.3.8) Proportion of reported emissions verified (%)

100

[Add row]

(7.10) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Select from:

☑ Increased

(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Change in renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

27562

(7.10.1.2) Direction of change in emissions

Select from:

☑ Increased

(7.10.1.3) Emissions value (percentage)

0.6

(7.10.1.4) Please explain calculation

*The gross emissions (Scope 1 2) of HZL for this reporting year are 48,14,075 metric tons of CO2e. Its gross emissions for the previous reporting year were 45,80,294 metric tons of CO2e. This means that the total change in emissions is 2,33,781 metric tons of CO2e, equal to a 5.10% increase, according to the formula in the explanation of terms, above: (2,33,781/45,80,294) * 100 5.10%. The change from 45,80,294 to 48,14,075 metric tonnes is attributed to three reasons: 1) GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24 and 2) an estimated reduction of 2,32,793 metric tonnes of CO2e achieved due to emissions reduction activities. The emissions value (percentage) for each of these two individual factors can also be calculated using the same formula described in the guidance, above. In this example, the percentage change in emissions due to Change in Renewable energy consumption is: (27,562/ 45,80,294) * 100 0.60%. This represents a 0.60% increase in emissions due to a decrease in renewable energy consumption*

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

232793

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

5.08

(7.10.1.4) Please explain calculation

*The gross emissions (Scope 1 2) of HZL for this reporting year are 48,14,075 metric tons of CO2e. Its gross emissions for the previous reporting year were 45,80,294 metric tons of CO2e. This means that the total change in emissions is 2,33,781 metric tons of CO2e, equal to a 5.10% increase, according to the formula in the explanation of terms, above: (2,33,781/45,80,294) * 100 5.10%. The change from 45,80,294 to 48,14,075 metric tonnes is attributed to three reasons: 1) GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24 and 2) an estimated reduction of 2,32,793 metric tonnes of CO2e achieved due to emissions reduction activities. 3) PMP sourcing 100% green power reducing 37,740 tCO2e GHG emissions. The emissions value (percentage) for each of these two individual factors can also be calculated using the same formula described in the guidance, above. In this example, the percentage change in emissions due to emissions reduction activities: (2,32,793/ 45,80,294) * 100 5.08%. This represents a 5.08% decrease in emissions due to an increase in emission reduction activities.*

Divestment

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable

Acquisitions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Mergers

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

233781

(7.10.1.2) Direction of change in emissions

Select from:
☑ Increased

(7.10.1.3) Emissions value (percentage)

5.1

(7.10.1.4) Please explain calculation

*The gross emissions (Scope 1 2) of HZL for this reporting year are 48,14,075 metric tons of CO2e. Its gross emissions for the previous reporting year were 45,80,294 metric tons of CO2e. This means that the total change in emissions is 2,33,781 metric tons of CO2e, equal to a 5.10% increase, according to the formula in the explanation of terms, above: (2,33,781/45,80,294) * 100 5.10%. The change from 45,80,294 to 48,14,075 metric tonnes is attributed to three reasons: 1) GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24 and 2) an increase of 2% in mined metal production & a 0.14% increase in total metal recovery. The emissions value (percentage) for each of these two individual factors can also be calculated using the same formula described in the guidance, above. In this example, the percentage change in emissions due to increased output: (2,33,781/ 45,80,294) * 100 5.10%. This represents a 5.10% increase in emissions due to change in output.*

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable

Change in boundary

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable

Change in physical operating conditions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable

Unidentified

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable

Other

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not Applicable
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:
☑ Location-based

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:
☑ No

(7.15) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Select from:
☑ Yes

(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Row 1

(7.15.1.1) Greenhouse gas

Select from:
☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

4251360

(7.15.1.3) GWP Reference

Select from:
☑ Other, please specify :IPCC 2006

[Add row]

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
India	*4251360*	*562715*	*0*

[Fixed row]

(7.17) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

Select all that apply

☑ By facility

☑ By activity

(7.17.2) Break down your total gross global Scope 1 emissions by business facility.

Row 1

(7.17.2.1) Facility

Chanderiya Lead Zinc Smelter with CPP

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

2262889

(7.17.2.3) Latitude

24.83

(7.17.2.4) Longitude

74.82

Row 2

(7.17.2.1) Facility

Dariba Smelting complex with CPP

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1244938

(7.17.2.3) Latitude

24.95

(7.17.2.4) Longitude

74.13

Row 3

(7.17.2.1) Facility

Debari Zinc Smelter

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

6174

(7.17.2.3) Latitude

24.6

(7.17.2.4) Longitude

73.83

Row 4

(7.17.2.1) Facility

Rampura Agucha Mine

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

60790

(7.17.2.3) Latitude

25.83

(7.17.2.4) Longitude

74.74

Row 5

(7.17.2.1) Facility

Sindesar Khurd Mine

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

35977

(7.17.2.3) Latitude

25

(7.17.2.4) Longitude

74.16

Row 6

(7.17.2.1) Facility

Rajpura Dariba Mine

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

10285

(7.17.2.3) Latitude

24.95

(7.17.2.4) Longitude

74.13

Row 7

(7.17.2.1) Facility

Zawar Mine Complex with CPP

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

620685

(7.17.2.3) Latitude

24.35

(7.17.2.4) Longitude

73.71

Row 8

(7.17.2.1) Facility

Pantnagar metal Plant

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

3926

(7.17.2.3) Latitude

29.04

(7.17.2.4) Longitude

79.4

Row 9

(7.17.2.1) Facility

Kayad Mines

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

5696

(7.17.2.3) Latitude

26.53

(7.17.2.4) Longitude

74.69

Row 10

(7.17.2.1) Facility

Head Office, Udaipur

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

0

(7.17.2.3) Latitude

24.57

(7.17.2.4) Longitude

73.69

Row 11

(7.17.2.1) Facility

Center Research Development Laboratory

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

0

(7.17.2.3) Latitude

24.95

(7.17.2.4) Longitude

74.13
[Add row]

(7.17.3) Break down your total gross global Scope 1 emissions by business activity.

	Activity	Scope 1 emissions (metric tons CO2e)
Row 1	*Mining*	*733434*

[Add row]

(7.19) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Metals and mining production activities	*4251360*	*Emissions from mining activities in metric tons CO2e: Mines 7,33,434 Smelter 35,17,926*

[Fixed row]

(7.20) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

Select all that apply
☑ By facility

☑ By activity

(7.20.2) Break down your total gross global Scope 2 emissions by business facility.

Row 1

(7.20.2.1) Facility

Kayad Mines

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

7642

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 3

(7.20.2.1) Facility

Rampura Agucha Mines

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

118904

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 4

(7.20.2.1) Facility

Head Office, Udaipur

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

440.11

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 5

(7.20.2.1) Facility

Rajpura Dariba Mine

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

0

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 6

(7.20.2.1) Facility

Pantnagar Metal Plant

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

0

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 7

(7.20.2.1) Facility

Sindesar Khurd Mine

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

0

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 8

(7.20.2.1) Facility

Chanderiya lead Zinc Smelter with CPP

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

45942

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 9

(7.20.2.1) Facility

Dariba Smelting Complex with CPP

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

239434

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 10

(7.20.2.1) Facility

Debari Zinc Smelter

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

147234

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 12

(7.20.2.1) Facility

Zawar Mine Complex with CPP

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

3120

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0
[Add row]

(7.20.3) Break down your total gross global Scope 2 emissions by business activity.

	Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Mining*	*129665.5*	*0*

[Add row]

(7.21) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Comment
Metals and mining production activities	*562716*	*The calculation has excluded emissions from: Central Research Development Laboratory: 223 TCo2e. Mining 1,29,665.5 Smelting 4,33,050.5*

[Fixed row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

(7.22.1) Scope 1 emissions (metric tons CO2e)

4251360

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

562715

(7.22.4) Please explain

The mentioned figure is the total emissions (metric tons CO2e), including emissions generated by two of its subsidiaries (i.e., Vedanta Zinc Football & Sports Foundation, and Zinc India Foundation.

All other entities

(7.22.1) Scope 1 emissions (metric tons CO2e)

0

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

0

(7.22.4) Please explain

Not Applicable
[Fixed row]

(7.23) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Select from:
☑ Yes

(7.23.1) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Row 1

(7.23.1.1) Subsidiary name

Zinc India Foundation

(7.23.1.2) Primary activity

Select from:

☑ Waste water management

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ Other unique identifier, please specify :CIN

(7.23.1.11) Other unique identifier

U85300RJ2022NPL083038

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

92.71

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

0

(7.23.1.15) Comment

This is an unlisted entity. The mentioned figure is the total emissions (metric tons CO2e) including emission generated by two of our subsidiaries (i.e. Vedanta Zinc Football & Sports Foundation, Zinc India Foundation.

Row 3

(7.23.1.1) Subsidiary name

Vedanta Zinc Football and Sports Foundation

(7.23.1.2) Primary activity

Select from:

☑ Recreation & entertainment facilities

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ Other unique identifier, please specify :CIN

(7.23.1.11) Other unique identifier

U92412RJ2021NPL078767

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

0.0

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

172.35

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

0.0

(7.23.1.15) Comment

This is an unlisted entity aligned with our CSR activities. The mentioned figure is the total emissions (metric tons CO2e) including emission generated by two of our subsidiaries (i.e. Vedanta Zinc Football & Sports Foundation, Zinc India Foundation.
[Add row]

(7.29) What percentage of your total operational spend in the reporting year was on energy?

Select from:

☑ More than 15% but less than or equal to 20%

(7.30) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ No
Consumption of purchased or acquired cooling	*Select from:* ☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ Yes

[Fixed row]

(7.30.1) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

203595

(7.30.1.3) MWh from non-renewable sources

4772532

(7.30.1.4) Total (renewable and non-renewable) MWh

4976127

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

39313

(7.30.1.3) MWh from non-renewable sources

793084

(7.30.1.4) Total (renewable and non-renewable) MWh

832396

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:
☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

283111

(7.30.1.4) Total (renewable and non-renewable) MWh

283111

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

526019

(7.30.1.3) MWh from non-renewable sources

5565616

(7.30.1.4) Total (renewable and non-renewable) MWh

6091635
[Fixed row]

(7.30.4) Report your organization’s energy consumption totals (excluding feedstocks) for metals and mining production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	*Select from:* ☑ LHV (lower heating value)	*4976127*
Consumption of purchased or acquired electricity	*Select from:* ☑ LHV (lower heating value)	*832396*
Consumption of self-generated non-fuel renewable energy	*Select from:* ☑ LHV (lower heating value)	*283111*
Total energy consumption	*Select from:* ☑ LHV (lower heating value)	*6091635*

[Fixed row]

(7.30.6) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ Yes

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of steam	*Select from:* ☑ No
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ No

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

203595

(7.30.7.3) MWh fuel consumed for self-generation of electricity

203595

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

We have calculated fuel consumption following 2006 IPCC Guidelines for national Greenhouse Gas Inventories.

Other biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

HZL uses only sustainable biomass.

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

HZL does not use other renewable fuels in its operation. However, as part of its NetZero strategy, HZL plans to transition to hydrogen-based energy solutions and is exploring the use of hydrogen to substitute Coke in Reduction.

Coal

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

3785415

(7.30.7.3) MWh fuel consumed for self-generation of electricity

3785415

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

We have calculated fuel consumption following the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Oil

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

870029

(7.30.7.3) MWh fuel consumed for self-generation of electricity

870029

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

We have calculated fuel consumption for diesel HSD and light diesel oil (LDO) under oil following the 2006 IPCC Guidelines for national Greenhouse Gas Inventories.

Gas

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

117089

(7.30.7.3) MWh fuel consumed for self-generation of electricity

117089

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

We have considered PNG, LPG and Propane in this calculation. Calculation methodology: 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Other non-renewable fuels (e.g. non-renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

HZL does not use other non-renewable fuels in its operation.

Total fuel

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

4976127

(7.30.7.3) MWh fuel consumed for self-generation of electricity

4976127

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

Our program is staged in 4 phases which are categorized into various time horizons such as, 2026-Transition to Clean Energy, 2030- In line with NDC, 2040- Scaling Up, and 2050- Delivering Commitment. All these plans would be achieved through Firm RE, H2, CCUS, Efforts on Scope 3 and Circular Economy Our reductions in CO2 emissions between now and 2040 will come from currently available technologies. We have developed a pathway to Net Zero in spite the abatement for us is challenging. Our intent to becoming Net Zero reflect our action towards mitigating the impact of climate change. Our GHG emissions can be set to Zero by transitioning to RE 100- 100% Renewable Energy (by 2040) as about 90% of emission is due to electricity. As the company expands, organically and inorganically we will harness the opportunity presented by the growth of energy storage and PV panels, the Firm RE availability and shift will be a critical consideration. The last 8-10% of emissions, we can address by using Green Hydrogen for reduction post 2040.
[Fixed row]

(7.30.9) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Electricity

(7.30.9.1) Total Gross generation (MWh)

4685290

(7.30.9.2) Generation that is consumed by the organization (MWh)

4272121

(7.30.9.3) Gross generation from renewable sources (MWh)

696280

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

283111

Heat

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Steam

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Cooling

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0
[Fixed row]

(7.30.12) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed for metals and mining production activities.

	Total gross generation (MWh) inside metals and mining sector boundary	Generation that is consumed (MWh) inside metals and mining sector boundary
Electricity	*4685290*	*4272121*
Heat	*0*	*0*
Steam	*0*	*0*
Cooling	*0*	*0*

[Fixed row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

India

(7.30.16.1) Consumption of purchased electricity (MWh)

832396

(7.30.16.2) Consumption of self-generated electricity (MWh)

3989010

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

4821406.00
[Fixed row]

(7.42) Provide details on the commodities relevant to the mining production activities of your organization.

Row 1

(7.42.1) Output product

Select from:
☑ Zinc

(7.42.2) Capacity, metric tons

950835

(7.42.3) Production, metric tons

855001

(7.42.4) Production, copper-equivalent units (metric tons)

342000.4

(7.42.5) Scope 1 emissions

581145

(7.42.6) Scope 2 emissions

102742

(7.42.7) Scope 2 emissions approach

Select from:

☑ Location-based

(7.42.8) Pricing methodology for copper-equivalent figure

The source is the Transition Pathway Initiative publication on Carbon Performance Assessment in the Diversified Mining Sector (May 2020). The Discussion Paper contains the price factor for copper-equivalent calculations. So, we have taken the price factor of 0.4 for Zinc, 0.4 for Lead and 93.1 for Silver. (https://www.transitionpathwayinitiative.org/publications/57.pdf?typePublication), Page No. 17

(7.42.9) Comment

The total mined metal production capacity is 12,00,000 Mt, of which total mined metal production is 1079053 MT, out of which production of Zinc is 8,55,001 Mt (79%), and Lead is 2,24,052 (21%). So, we have considered the same percentage for calculations of Scope 1 & Scope 2 emissions for Zinc, Lead, and Silver production. The Overall Scope 1 emissions from Mines are 7,33,434 Tco2e, and Scope 2 emissions from Mines are 1,29,665 tco2e. So, we have considered the same percentage for calculations of Scope 1 and Scope 2 emissions for Zinc and Lead production from the mines.

Row 2

(7.42.1) Output product

Select from:

☑ Lead

(7.42.2) Capacity, metric tons

249165

(7.42.3) Production, metric tons

224052

(7.42.4) Production, copper-equivalent units (metric tons)

89620.8

(7.42.5) Scope 1 emissions

152288

(7.42.6) Scope 2 emissions

26923

(7.42.7) Scope 2 emissions approach

Select from:

☑ Location-based

(7.42.8) Pricing methodology for copper-equivalent figure

The source is the Transition Pathway Initiative publication on Carbon Performance Assessment in the Diversified Mining Sector (May, 2020). The Discussion Paper contains the price factor for copper-equivalent calculations. So, we have taken the price factor of 0.4 for Zinc, 0.4 for Lead and 93.1 for Silver. (https://www.transitionpathwayinitiative.org/publications/57.pdf?typePublication), Page No. 17

(7.42.9) Comment

The total mined metal production capacity is 12,00,000 Mt, of which total mined metal production is 1079053 MT, out of which production of Zinc is 8,55,001 Mt (79%), and Lead is 2,24,052 (21%). So, we have considered the same percentage for calculations of Scope 1 & Scope 2 emissions for Zinc, Lead, and Silver production. The Overall Scope 1 emissions from Mines are 7,33,434 Tco2e, and Scope 2 emissions from Mines are 1,29,665 tco2e. So, we have considered the same percentage for calculations of Scope 1 and Scope 2 emissions for Zinc and Lead production from the mines.
[Add row]

(7.42.1) Provide details on the commodities relevant to the metals production activities of your organization.

Row 1

(7.42.1.1) Output product

Select from:

☑ Zinc

(7.42.1.2) Capacity (metric tons)

913000

(7.42.1.3) Production (metric tons)

817059

(7.42.1.4) Annual production in copper-equivalent units (thousand tons)

326823.6

(7.42.1.5) Scope 1 emissions (metric tons CO2e)

2780407

(7.42.1.6) Scope 2 emissions (metric tons CO2e)

341915.207

(7.42.1.7) Scope 2 emissions approach

Select from:

☑ Location-based

(7.42.1.8) Pricing methodology for-copper equivalent figure

The source is the Transition Pathway Initiative publication on Carbon Performance Assessment in the Diversified Mining Sector (May,, 2020). The Discussion Paper contains the price factor for copper-equivalent calculations. So, we have taken the price factor of 0.4 for Zinc, 0.4 for Lead and 93.1 for Silver. (https://www.transitionpathwayinitiative.org/publications/57.pdf?typePublication), Page No. 17

(7.42.1.9) Comment

No additional comments.

Row 2

(7.42.1.1) Output product

Select from:

☑ Lead

(7.42.1.2) Capacity (metric tons)

210000

(7.42.1.3) Production (metric tons)

215984

(7.42.1.4) Annual production in copper-equivalent units (thousand tons)

86393.6

(7.42.1.5) Scope 1 emissions (metric tons CO2e)

734982

(7.42.1.6) Scope 2 emissions (metric tons CO2e)

90383

(7.42.1.7) Scope 2 emissions approach

Select from:

☑ Location-based

(7.42.1.8) Pricing methodology for-copper equivalent figure

The source is the Transition Pathway Initiative publication on Carbon Performance Assessment in the Diversified Mining Sector (May,, 2020). The Discussion Paper contains the price factor for copper-equivalent calculations. So, we have taken the price factor of 0.4 for Zinc, 0.4 for Lead and 93.1 for Silver. (https://www.transitionpathwayinitiative.org/publications/57.pdf?typePublication), Page No. 17

(7.42.1.9) Comment

No additional comments.

Row 3

(7.42.1.1) Output product

Select from:
☑ Silver

(7.42.1.2) Capacity (metric tons)

800

(7.42.1.3) Production (metric tons)

746

(7.42.1.4) Annual production in copper-equivalent units (thousand tons)

69.45

(7.42.1.5) Scope 1 emissions (metric tons CO2e)

2539

(7.42.1.6) Scope 2 emissions (metric tons CO2e)

312

(7.42.1.7) Scope 2 emissions approach

Select from:
☑ Location-based

(7.42.1.8) Pricing methodology for-copper equivalent figure

The source is the Transition Pathway Initiative publication on Carbon Performance Assessment in the Diversified Mining Sector (May,, 2020). The Discussion Paper contains the price factor for copper-equivalent calculations. So, we have taken the price factor of 0.4 for Zinc, 0.4 for Lead and 93.1 for Silver. (https://www.transitionpathwayinitiative.org/publications/57.pdf?typePublication), Page No. 17

(7.42.1.9) Comment

No additional comments.
[Add row]

(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Row 1

(7.45.1) Intensity figure

0.00001664

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

4814075

(7.45.3) Metric denominator

Select from:
☑ unit total revenue

(7.45.4) Metric denominator: Unit total

289320000000

(7.45.5) Scope 2 figure used

Select from:

☑ Location-based

(7.45.6) % change from previous year

24.18

(7.45.7) Direction of change

Select from:

☑ Increased

(7.45.8) Reasons for change

Select all that apply

☑ Change in output

☑ Change in revenue

(7.45.9) Please explain

Increase in GHG Emissions is due to increase in mined metal production by 2%. We had witnessed higher mined metal production of mined metal of 1079 KT. We also delivered the highest ever annual silver production i.e. 746 MT by increasing the production by 5% w.r.t. previous year. As well as GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24.
[Add row]

(7.52) Provide any additional climate-related metrics relevant to your business.

Row 1

(7.52.1) Description

Select from:

☑ Other, please specify :GHG Intensity (Scope 1 + 2)

(7.52.2) Metric value

4.66

(7.52.3) Metric numerator

4814075

(7.52.4) Metric denominator (intensity metric only)

Total Production units: 1033707.08

(7.52.5) % change from previous year

4.95

(7.52.6) Direction of change

Select from:

☑ Increased

(7.52.7) Please explain

Increase in GHG Emissions is due to increase in mined metal production by 2%. We had witnessed higher mined metal production of mined metal of 1079 KT. We also delivered the highest ever annual silver production i.e. 746 MT by increasing the production by 5% w.r.t. previous year. As well as GHG emissions are higher than FY 2022-23 on account of higher reliance on CPPs during FY 2023-24.

Row 2

(7.52.1) Description

Select from:

☑ Other, please specify **:**Energy Intensity

(7.52.2) Metric value

47.63

(7.52.3) Metric numerator

49238370

(7.52.4) Metric denominator (intensity metric only)

Total Production units: 1033707.08

(7.52.5) % change from previous year

14.69

(7.52.6) Direction of change

Select from:
☑ Increased

(7.52.7) Please explain

Increase in energy is due to increase in mined metal production by 2%. We had witnessed higher mined metal production of mined metal of 1079 KT. We also delivered the highest ever annual silver production i.e. 746 MT by increasing the production by 5% w.r.t. previous year. As well as on account of higher reliance on CPPs during FY 2023-24.
[Add row]

(7.53) Did you have an emissions target that was active in the reporting year?

Select all that apply
☑ Absolute target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:

☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Hindustan Zinc Limited SBTiCertificate.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

06/17/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.1.11) End date of base year

03/30/2020

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

4480887

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

253756

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

0.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

4734643.000

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2030

(7.53.1.55) Targeted reduction from base year (%)

50

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

2367321.500

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

4251360

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

562715

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

4814075.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

-3.36

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The target covers 100% of HZL's operations.

(7.53.1.83) Target objective

To achieve net zero by 2050 from base year 2020.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

Plan: a. Include low carbon Zinc products in our portfolio by leveraging increase in renewable energy usage leading to 30% of zinc portfolio as low carbon by FY 2025-26 b. Sourcing 50% electricity from renewable energy, which will significantly reduce our freshwater consumption and non-GHG (SOx & NOx) emissions c. Implement energy efficiency measures to reduce energy consumption d. Achieve 100% electrification of surface fleet Electrification of 50% of the mining fleet e. Drive innovation in product development to achieve recyclability and other emission during the use of final products f. Engage rigorously with the supply chain to reduce emissions associated with upstream purchased goods g. Deploy electric vehicles & alternate fuel vehicles (LNG) for IUT and finished goods transportation h. Engage with value chain partners who are committed to achieving Net Zero commitment Progress in FY 2023-24: a. Validated SBTi Targets aligned with 1.5oC scenario, to reduce Scope 1 & Scope 2 emissions by 50% & Scope 3 emissions by 25% by 2030 & Net Zero by 2050 b. Started receiving green power from 450 MW RE-RTC power delivery agreement (PDA) in 1st phase. The 180 MW Bikaner solar power project is the centrepiece of this strategic partnership and has been completed a year ahead of schedule in May 2024 c. 100% renewable power sourcing for Pantnagar Metal Plant d. 76,035 TCO2e emission reduced by biomass use e. MoU signed for 180 LNG vehicles for the transport of finished goods & IUT movement and out of these, 41 vehicles have been deployed in FY 2023-24 f. 3 underground battery electric vehicle (BEV's) deployed at SK Mines. In total 31 EV's have been deployed across HZL including 10, 55 MT EV trucks being deployed in FY 2023- 24 for interunit transport. Further, three EV charging stations have also been set up g. Conducted a pilot study at Dariba Smelting Complex (RDC) as per Niti Aayog's Water Neutrality standard and received certificate, "Aspiring company for water neutrality" h. Inaugurated phase 1 of 4,000 KLD ZLD plant at Zawar Mines, deploying advanced technology to aid in water conservation i. Dry Tailing plant started at Rajpura Dariba Complex j. Fumer plant commissioned at Chanderiya Lead Zinc Smelter to minimise generation of Jarosite

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ Yes

Row 2

(7.53.1.1) Target reference number

Select from:

☑ Abs 2

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Hindustan Zinc Limited SBTiCertificate.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

06/17/2023

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 3

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 15 – Investments

☑ Scope 3, Category 2 – Capital goods

☑ Scope 3, Category 6 – Business travel

☑ Scope 3, Category 7 – Employee commuting

☑ Scope 3, Category 8 - Upstream leased assets

☑ Scope 3, Category 9 – Downstream transportation and distribution

☑ Scope 3, Category 3 – Fuel- and energy- related activities (not included in Scope 1 or 2)

☑ Scope 3, Category 1 – Purchased goods and services

☑ Scope 3, Category 10 – Processing of sold products

☑ Scope 3, Category 5 – Waste generated in operations

☑ Scope 3, Category 12 – End-of-life treatment of sold products

☑ Scope 3, Category 4 – Upstream transportation and distribution

(7.53.1.11) End date of base year

03/30/2020

(7.53.1.14) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

363986

(7.53.1.15) Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

55196.5

(7.53.1.16) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

526490

(7.53.1.17) Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

27145

(7.53.1.18) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

426001

(7.53.1.19) Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

1560

(7.53.1.20) Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

2370

(7.53.1.21) Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

0

(7.53.1.22) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

17105

(7.53.1.23) Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

280765

(7.53.1.25) Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

36396

(7.53.1.28) Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

31139

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

1768153.500

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

1768153.500

(7.53.1.35) Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

(7.53.1.36) Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

100

(7.53.1.37) Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

(7.53.1.38) Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

(7.53.1.39) Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

(7.53.1.40) Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

100

(7.53.1.41) Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

100

(7.53.1.42) Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

0

(7.53.1.43) Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

(7.53.1.44) Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

100

(7.53.1.46) Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

100

(7.53.1.49) Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

100

(7.53.1.52) Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

100

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

03/30/2030

(7.53.1.55) Targeted reduction from base year (%)

25

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

1326115.125

(7.53.1.59) Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

432386

(7.53.1.60) Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

2425

(7.53.1.61) Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

844295

(7.53.1.62) Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

14196

(7.53.1.63) Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

9631

(7.53.1.64) Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

205

(7.53.1.65) Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

1237

(7.53.1.66) Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

0

(7.53.1.67) Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

42679

(7.53.1.68) Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

236071

(7.53.1.70) Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

16830

(7.53.1.73) Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

0

(7.53.1.76) Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

1599955.000

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

1599955.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

38.05

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

The target covers 100% of HZL's operations.

(7.53.1.83) Target objective

To achieve net zero by 2050 from base year 2020.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

Plan: a. Increasing reliance on renewable energy will significantly reduce emissions associated with category 3 (Scope 3) b. Committed to reducing our Scope 3 emissions by 25% by 2030 in line with our SBTi commitments. Progress in FY 2023-24: a. In FY 2023, a Group EV purchase policy has been introduced to the employees of the Company b. Comprehensive strategy and tools developed for product-level life cycle assessment for our critical machines and commodities for the purpose of Scope 3 calculations c. Scope 3 saw a decline of 1% owing to more domestic coal being used

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:
☑ Yes
[Add row]

(7.54.3) Provide details of your net-zero target(s).

Row 1

(7.54.3.1) Target reference number

Select from:
☑ NZ1

(7.54.3.2) Date target was set

06/17/2023

(7.54.3.3) Target Coverage

Select from:

☑ Organization-wide

(7.54.3.4) Targets linked to this net zero target

Select all that apply

☑ Abs1

☑ Abs2

(7.54.3.5) End date of target for achieving net zero

03/30/2050

(7.54.3.6) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.54.3.7) Science Based Targets initiative official validation letter

Hindustan Zinc Limited Certificate.pdf

(7.54.3.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

☑ Scope 3

(7.54.3.9) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

(7.54.3.10) Explain target coverage and identify any exclusions

Science Based Target initiatives (SBTi) has approved our ambitious targets to reduce our Scope 1 & Scope 2 GHG emissions by 50% & Scope 3 emissions by 25% by 2030 & Net Zero by 2050 across 100% of our operations. As described below, we are launching an aggressive program to minimize our carbon emissions, both for our direct emissions and for our entire supply and value chain. Our program is staged in 4 phases which are categorized into various time horizons such as, 2026- Transition to Clean Energy, 2030- In line with NDC, 2040- Scaling Up, and 2050- Delivering Commitment. All these plans would be achieved through Firm RE, H2, CCUS, Efforts on Scope 3 and Circular Economy. Our reductions in CO2 emissions between now and 2040 will come from currently available technologies. We have developed a pathway to Net Zero in spite the abatement for us is challenging. Our intent to becoming Net Zero reflect our action towards mitigating the impact of climate change. Our GHG emissions can be set to Zero by transitioning to RE 100- 100% Renewable Energy (by 2040) as about 90% of emission is due to electricity. As the company expands, organically and inorganically we will harness the opportunity presented by the growth of energy storage and PV panels, the Firm RE availability and shift will be a critical consideration. The last 8-10% of emissions, we can address by using Green Hydrogen for reduction post 2040.

(7.54.3.11) Target objective

To align HZL's business with the Paris Agreement and achieve net zero by 2050 from the base year 2020.

(7.54.3.12) Do you intend to neutralize any residual emissions with permanent carbon removals at the end of the target?

Select from:

☑ Yes

(7.54.3.13) Do you plan to mitigate emissions beyond your value chain?

Select from:

☑ No, we do not plan to mitigate emissions beyond our value chain

(7.54.3.14) Do you intend to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation?

Select all that apply

☑ Yes, we plan to purchase and cancel carbon credits for neutralization at the end of the target

(7.54.3.15) Planned milestones and/or near-term investments for neutralization at the end of the target

HZL has committed to the Business Ambition for 1.5C campaign of the Science Based Targets initiative (SBTi) to align company's climate mitigation targets with the most ambitious Paris Agreement- reach net-zero global emissions by 2050 at the latest in order to limit global warming to 1.5. We have signed power delivery agreement of 450 MW Renewable Energy- Round the Clock (RE-RTC), and our Pantnagar Metal plant has started sourcing 100% green power. The move is in line

with our strategic purpose of reducing dependence on thermal power by scaling up our renewable energy to cover 50% of our energy requirement by 2030 and reduce the GHG emissions from our operations

(7.54.3.17) Target status in reporting year

Select from:

☑ Underway

(7.54.3.19) Process for reviewing target

The progress of the target is always discussed and presented at all the board meetings.
[Add row]

(7.55) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Select from:

☑ Yes

(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	*0*	*`Numeric input*
To be implemented	*50*	*240000*
Implementation commenced	*50*	*240000*
Implemented	*50*	*232793*

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Process optimization

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

232793

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

1320000000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

115900000

(7.55.2.7) Payback period

Select from:

☑ 1-3 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

1. Stream-4 Ball Mill conversion from Overflow discharge to grate discharge. 2. STG generation increment from 6.4 to 6.8 3. Power optimization of Auxiliary fans in mine by providing timers 4. Reduction in average specific power consumption of zinc melting and casting furnaces from 135 kVAH/MT to 126.9 kVAH/MT 5. Cellhouse Current rating improvement from 7.02 to Year Average Rating of 7.28 6. Reduce M&C Power Norms from 142 to 135 Units/MT 7. SKA-2 LT fan Installation and to run with VFD 8. Reduction in Specific LDO consumption from 93Ltr/MT to 86Ltr/MT 9. CH Auxiliary specific to be reduce by 5% 10. MC norms to be reduce by 5 Units/MT of Ingots 11. Replacement of 75 KW Compressor with 22 KW Compressor at HEMM-1 Workshop 12. Reduction in average specific power norms of silver plant by 5% from 10.5 Units/Kg to 9.9 Units/Kg 13. Rectifier-1 Efficiency improvement by 0.5% 14. Power saving by reducing motor KW of 1240 screen 15. Stream-1 Pb scavenger tailing pump upgradation to eliminate dual pump operation. 16. Main Shaft HT Compressor Automation 17. Fills Pack Replacement 18. Re-desiging of reactor agitator from 75 to 55 KW motor 27 & 28 19. Reduction in sinter plant fresh air fan Power consumption 20. Installation of New Pump for R#2 GCP Plant & Stoppage of Old Pump

Row 2

(7.55.2.1) Initiative category & Initiative type

Company policy or behavioral change

☑ Supplier engagement

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

1171

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 3 category 1: Purchased goods & services

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

0

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

0

(7.55.2.7) Payback period

Select from:

☑ No payback

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

1. Supplier engagement: As a part of our collaborative activities, we explored circular economy related opportunities with our suppliers wherein we supplied them with Slag & Jarosite as a substitute for the replacement / part replacement of existing material i.e., Red Ocher and Mineral Gypsum, which in turn allowed them to reduce GHG emissions and enhance resource efficiency. For example, Replacement of 1.0 % mineral gypsum by Jarosite will reduce raw material consumption and reduced GHG emissions associated with importing gypsum and promote circular economy. As reported by one of our suppliers' utilisations of slag and jarosite from Hindustan zinc as a substitute to red ocher & mineral gypsum respectively helped reduce transportation related GHG emissions by 1171 tCO2e annually. This collaboration helped HZL to reduce its waste to landfill.

Row 3

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy generation

☑ Solid biofuels

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

76035

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

578209464

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

508177534

(7.55.2.7) Payback period

Select from:

☑ 1-3 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

We have utilised 51,369 MT of biomass for power generation, thereby reducing the carbon footprint through our captive thermal power plants. And also successfully reduced another 76,035 tCO2e of emission by minimising our coal consumption through use of sustainable biomass as an alternative fuel.

Row 5

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption

☑ Solar PV

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

67516

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

482492173

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

50523466

(7.55.2.7) Payback period

Select from:

☑ 1-3 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ Ongoing

(7.55.2.9) Comment

These are captive solar legacy projects. The capacity of the total solar is 40.70 MW. The Cost incurred in FY 2023-24 is due to maintenance of solar PV.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Dedicated budget for energy efficiency

(7.55.3.2) Comment

At HZL, energy efficiency is a top priority, driven mainly by the cost savings associated with it. At the start of each financial year, we plan and identify a range of energy conservation projects for the year, and allocate budgets accordingly. However, we also provide additional funding for initiatives identified throughout the year, such as technological retrofit and replacement projects, which can lead to significant reductions in energy consumption.We recognize the importance of sustainable practices in reducing energy costs and minimizing our impact on the environment. Our commitment to energy efficiency extends beyond mere cost savings. We strive to identify and implement initiatives that align with our values and contribute to a more sustainable future.

Row 2

(7.55.3.1) Method

Select from:

☑ Compliance with regulatory requirements/standards

(7.55.3.2) Comment

At HZL, compliance with regulatory requirements and standards is an essential component of our operations. Our commitment to sustainability extends beyond emission reduction to include efficient water usage and waste management. We prioritize research and development efforts to improve our processes in these areas.To meet our obligations for RPO, we are investing significantly in renewable energy generation. Furthermore, we adhere to the highest level of safety standards and comply with International Finance Corporation (IFC) norms to ensure the safety of our employees and the communities we operate in.We believe that adherence to regulatory requirements and standards is crucial for sustainable business practices. At HZL, we are dedicated to meeting and exceeding these requirements while continually improving our processes to minimize our environmental impact and contribute to a more sustainable future.

Row 3

(7.55.3.1) Method

Select from:

☑ Dedicated budget for other emissions reduction activities

(7.55.3.2) Comment

At HZL, we are dedicated to reducing the environmental impact and carbon footprint of our products and manufacturing operations, with a particular focus on GHG emissions. To achieve this commitment, we prioritize technological innovation and other initiatives aimed at reducing emissions.To ensure that we meet our corporate emission reduction targets, each unit at HZL has its own set of identified goals. We then allocate budgets and identify specific activities to implement to reach these

targets. This approach enables us to stay focused and accountable in our efforts to minimize our environmental impact and reduce GHG emissions.We understand the importance of environmental sustainability and are committed to making a positive impact through our operations. We believe that by working together and taking responsibility for our actions, we can achieve a more sustainable future for generations to come.

Row 4

(7.55.3.1) Method

Select from:

☑ Internal price on carbon

(7.55.3.2) Comment

The Internal Carbon Price (ICP) plays a crucial role in the decision-making process concerning climate change impacts, risks, and opportunities. It is determined based on the Shadow Price of Carbon and is calculated using the abatement cost method. This method involves assessing the price required to avoid emitting one tonne of CO2e through the implementation of various energy efficiency, fuel switches, waste heat recovery, CCUS, and renewable energy measures, along with the necessary investments. Currently, HZL's calculated Internal Carbon Price stands at INR 1241.77 per CO2e (15 USD tonnes of CO2e). The purpose of establishing a carbon shadow price is to ensure that climate impact is factored into project, plan, and policy decisions. By formalizing this framework, organizations can guide their investment choices towards low-carbon alternatives. It enables a consistent approach to quantify the actual or modelled costs associated with projects and operational decisions that result in carbon emissions. This, in turn, helps organizations identify the tangible benefits of adopting renewable energy, which can reduce product costs. Additionally, it sheds light on how emissions can drive project costs higher, subsequently impacting the Internal Rate of Return (IRR) and Net Present Value (NPV). Incorporating the carbon price in financial decision-making becomes possible through these insights. As an example, for the upcoming Roaster at Debari that will have an STG (Steam Turbine Generator), post Waste Heat provided by STG, an additional 1.5 MW of residue will be required. The original IRR, when the ICP is not considered in the calculations, is 22.07%, and the payback period is 3.90 years. However, depending on the source of 1.5 MW (Conventional or Renewable), the Internal Rate of return will change basis implementing the Internal Carbon Price. If we use renewable energy, it IRR will increase and the Payback period decrease, however, the IRR will decrease, and the payback period will increase when we source 1.5 MW from a conventional source of energy. This is identified based on ICP 15 US/TCO2e.
[Add row]

(7.74) Do you classify any of your existing goods and/or services as low-carbon products?

Select from:

☑ Yes

(7.74.1) Provide details of your products and/or services that you classify as low-carbon products.

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Product or service

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ No taxonomy used to classify product(s) or service(s) as low carbon

(7.74.1.3) Type of product(s) or service(s)

Power

☑ Onshore wind

(7.74.1.4) Description of product(s) or service(s)

The Company has 273.5 MW wind farms in five states across India which are registered under Clean Development Mechanism (CDM) program by United Nations Framework Convention on Climate Change (UNFCCC) as well as under Gold Standard. Wind power of 393425 MWh leading to a reduction of 3,72,735 tCO2e through green power. Currently, Indian regulations do not mandate Indian companies to align their revenue, CAPEX, and OPEX with any sustainability taxonomy. As HZL, operates within India, it falls outside the purview of a sustainability taxonomy.

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify **:**United Nations Framework Convention on Climate Change (UNFCCC) and Gold Standard

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-gate

(7.74.1.8) Functional unit used

Wind power of 393425 MWh leading to avoidance of 372735 tCO2e of GHG emissions.

(7.74.1.9) Reference product/service or baseline scenario used

Power generated by captive power plant based on fossil fuel.

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-gate

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

372735

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

The Company operates 273.5 MW wind farms spread across five states in India, all registered under the Clean Development Mechanism (CDM) program by the United Nations Framework Convention on Climate Change (UNFCCC) and the Gold Standard. These wind farms have collectively generated 3,93,425 MWh of wind power, resulting in an impressive reduction of 3,72,735 tCO2e.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.5

[Add row]

(7.79) Has your organization canceled any project-based carbon credits within the reporting year?

Select from:

☑ No

C9. Environmental performance - Water security

(9.1) Are there any exclusions from your disclosure of water-related data?

Select from:

☑ Yes

(9.1.1) Provide details on these exclusions.

Row 1

(9.1.1.1) Exclusion

Select from:

☑ Other, please specify :Marketing Offices

(9.1.1.2) Description of exclusion

The excluded facilities consist of non- production sites such as marketing offices. The water used in our excluded facilities is primarily for water, sanitation, and hygiene (WASH) services for our employees such as drinking water, toilets, etc. The water used here for WASH services is extremely small compared to withdrawals for the organization's production sites.

(9.1.1.3) Reason for exclusion

Select from:

☑ Shared premises

(9.1.1.7) Percentage of water volume the exclusion represents

Select from:

☑ Less than 1%

(9.1.1.8) Please explain

We have excluded marketing offices where we consider our water footprint to be negligible and they do not have a direct association with an operation
[Add row]

(9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

Water withdrawals – total volumes

(9.2.1) % of sites/facilities/operations

Select from:
☑ 100%

(9.2.2) Frequency of measurement

Select from:
☑ Daily

(9.2.3) Method of measurement

Water meters are installed at withdrawal points for daily data monitoring, with regular calibration. HZL performs internal and external audits, including ISO 14001 surveillance audits and hydrogeological studies for both surface and underground water sources. Internal audits by water managers occur semi-annually, focusing on water withdrawal. Additionally, we conduct an annual external water assurance audit aligned with GRI standards, external disclosures, and VSAP.

(9.2.4) Please explain

Our response encompasses all operations owned by HZL, including 6 CPPs, 5 mines, 3 smelters, and 1 refinery (100% ownership). We measure, test, and treat total water withdrawals from various sources (rainwater, groundwater, fresh surface water, STP water, and produced water) at regular intervals using NABL-accredited laboratories to ensure compliance with water quality standards. This data monitoring helps us understand the current state of water availability and develop strategies to minimise water withdrawal accordingly. Our total water withdrawal also includes the quantity used by our community and township, though these are not part of our operational boundary. HZL conducts environmental assessments, such as hydrogeological studies, to evaluate potential impacts. Additionally, we perform annual water risk assessments to analyze water stress levels in the basin. The performance is reported monthly to the Executive Sustainability Committee, chaired by the CEO.

Water withdrawals – volumes by source

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Water meters are installed at all withdrawal points to capture accurate water usage data, which is monitored daily. Flow meters are regularly calibrated for accuracy. HZL conducts both internal and external audits, including ISO 14001 surveillance audits and hydrogeological studies for surface and underground water sources. Semi-annual internal audits by our water managers cover water withdrawal. Additionally, we conduct annual external water assurance audits in line with GRI standards and VSAP.

(9.2.4) Please explain

Our response encompasses all operations owned by HZL, including 6 CPPs, 5 mines, 3 smelters, and 1 refinery (100% ownership). We measure, test, and treat total water withdrawals from various sources (rainwater, groundwater, fresh surface water, STP water, and produced water) at regular intervals using NABL accredited laboratories to ensure compliance with water quality standards. This data monitoring helps us understand the current state of water availability and develop strategies to minimise water withdrawal accordingly. Our total water withdrawal estimates also include the quantity used by our community and township, even though these are not part of our operational boundary. HZL conducts environmental assessments, such as hydrogeological studies, to evaluate potential impacts. Additionally, we perform annual water risk assessments to analyze water stress levels in the basin. The performance is reported monthly to the Executive Sustainability Committee, chaired by the CEO.

Entrained water associated with your metals & mining and/or coal sector activities - total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Water meters are installed at all withdrawal points to capture accurate entrained water quantities, with daily monitoring. HZL conducts both internal and external audits, including ISO 14001 surveillance audits and hydrogeological studies of surface and underground water sources. Semi-annual internal audits by water managers focus on water withdrawal. Additionally, we conduct annual external water assurance audits based on GRI standards, external disclosures, and VSAP.

(9.2.4) Please explain

Our response covers 100% of the mining operations (i.e., 5 mines) owned by HZL. Total entrained water withdrawals are measured, tested, and treated at regular intervals by NABL accredited laboratories to ensure compliance with water quality standards. Daily data monitoring helps us develop appropriate strategies for managing water withdrawal in response to current conditions. HZL conducts hydrogeological studies to assess potential impacts. We perform annual water risk assessments to analyze the level of water stress in the basin. Regular groundwater monitoring is conducted using piezometers and wells both inside and outside the lease area. Water level and quality reports are submitted quarterly to the Central Ground Water Authority and the State Pollution Control Board. Performance is also reported monthly to the Executive Sustainability Committee, chaired by the CEO.

Water withdrawals quality

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

HZL tests water withdrawal quality based on parameters such as conductivity, fluoride, TDS, and pH. Our in-house NABL accredited laboratories conduct daily direct monitoring to ensure water quality. Additionally, water quality is monitored by a third party monthly. Analyzers are installed for key parameters and are regularly calibrated.

(9.2.4) Please explain

Our response covers all operations owned by HZL, including 6 CPPs, 5 mines, 3 smelters, and 1 refinery (100% ownership). Total water withdrawals and their quality from various sources (rainwater, groundwater, fresh surface water, STP water, and produced water) are measured, tested, and treated regularly by NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited laboratories. This ensures that water quality meets standards for both domestic use and operational requirements. HZL analyzes and tests water quality parameters daily, including conductivity, fluoride, TDS, and pH.

Water discharges – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Storm water is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharge liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations.

Water discharges – volumes by destination

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and

Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Stormwater is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharges liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations

Water discharges – volumes by treatment method

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Stormwater is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharges liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations

Water discharge quality – by standard effluent parameters

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Stormwater is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharges

liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Stormwater is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharges liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations

Water discharge quality – temperature

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not relevant

(9.2.4) Please explain

Our response covers all operations owned by HZL, including CPPs, mines, and smelters (100% ownership). Our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 depends on maintaining a zero-discharge status from our premises. To meet these requirements, we conduct both external and internal audits. We manage process water by treating it at onsite ETP and through a two-stage RO system for reuse. Multiple Effective Evaporator and Mechanical Vapour Recompression systems have been implemented to enhance Zero Liquid Discharge (ZLD) capabilities. Stormwater is managed with a pond capacity of 345,000 cubic meters on-site to prevent runoff discharge into nearby water bodies during the rainy season. None of our processing plants discharges liquid effluent into surface water or groundwater, thereby eliminating environmental pollution. PTZ cameras and online flow meters are installed at discharge outlets to monitor compliance with ZLD regulations.

Water consumption – total volume

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

We closely monitor and measure water consumption at each operation to track progress toward our water performance targets. Data is monitored directly on a daily basis, with water usage from all sources measured every day. Mines: Surface and groundwater are metered daily, with electromagnetic flow meters installed to measure both input and output. Digital water level recorders are also in place. Smelters: Source water is metered and tested daily, and flow meters are installed to measure.

(9.2.4) Please explain

Our response covers 100% of HZL-owned operations, including 6 CPPs, 5 mines, 1 refinery, and 3 smelters. HZL follows strict water management standards, focusing on operational water consumption, excluding township and community usage. Water withdrawal data includes water supplied to local communities outside the fence. Water discharge equals water consumption at our sites. Integrating water management into decision-making is essential to minimize potential impacts on water resources. Daily water consumption is tracked via a metered monitoring system. Each site maintains an annually updated water resource management plan based on actual usage. This data is recorded for compliance and transparency. We also conduct annual external water audits, including ISO 14001, GRI assurance, and internal audits (VSAP).

Water recycled/reused

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Treated water is reused across all operations, with the total volumes of recycled and reused water recorded and monitored daily. Water is recycled after treatment at onsite Effluent Treatment Plants (ETP) and a two-stage Reverse Osmosis (RO) system. Samples of treated effluent are regularly collected and analyzed according to IS and CPCB-approved procedures, ensuring compliance with prescribed limits. This treated water is recycled, and zero discharge is maintained.

(9.2.4) Please explain

Our response covers all operations owned 100% by HZL, including 6 CPPs, 5 mines, 1 refinery, and 3 smelters. Water conservation is a shared responsibility and an essential part of sustainable development at HZL. We monitor each site to ensure a defined process for water recycling and reuse. Water is treated at onsite Effluent Treatment Plants (ETP) and a two-stage Reverse Osmosis (RO) system, meeting prescribed standards before reuse. Sewage Treatment Plants using Fluidized Aerobic Bed (FAB) technology serve all townships. In FY 2023, we commissioned RO Zero Liquid Discharge (ZLD) plants at Dariba and Debari to further enhance water recycling. Additional initiatives like tailing water recycling, dry tailing plants, and deep cone thickeners have been implemented at our mines and smelters to maximize water reuse.

The provision of fully-functioning, safely managed WASH services to all workers

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Potable water quality is monitored daily for key parameters. A third party also monitors this as per ISO:10500. A checklist has been prepared to inspect the hygiene conditions at water coolers/drinking water facilities and restrooms.

(9.2.4) Please explain

Our response includes all operations owned 100% by HZL, covering 6 CPPs, 5 mines, 1 refinery, and 3 smelters. HZL follows the WASH procedure to ensure fully functioning and safely managed WASH services (washrooms, drinking water, handwashing facilities, etc.) for all workers across its operations. The quality of potable water is monitored daily, ensuring access to safe drinking water, as well as water for cooking, cleaning, and sanitation. Third-party monitoring is conducted per IS:10500 standards, and inspection checklists are placed at water coolers and restrooms. Vedanta signed the WBCSD Pledge for Access to Safe Water, Sanitation, and Hygiene (WASH) at the workplace in October 2014 and implements the WASH Pledge at all sites. The company actively raises awareness on WASH at the workplace, with leadership showing commitment through internal and external communication.
[Fixed row]

(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

Total withdrawals

(9.2.2.1) Volume (megaliters/year)

27583.04

(9.2.2.2) Comparison with previous reporting year

Select from:
☑ Higher

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:
☑ Increase/decrease in business activity

(9.2.2.4) Five-year forecast

Select from:
☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

In FY 2023-24, we observed a slight increase of 3.43% in total water withdrawal, attributed to a 2% year-over-year rise in mined metal production, extensive exploration in new areas with inherent groundwater intersections, and a higher reliance on Captive Power Plants (CPPs). Looking ahead over the next five years, we anticipate a decrease in water withdrawals as we implement multiple water efficiency measures. These include installing dry tailing plants in all three Tailings Storage Facilities (TSF), commissioning ZLD plants to enhance water recycling, increasing the use of treated sewage water as an alternative source, and implementing projects like leakage arrestors. We also aim to reduce our dependency on CPPs, which currently utilize significant volumes of water. Rationale: Analyzing the previous year's performance helps us understand trends, enabling a comprehensive understanding of our business performance and water management practices while identifying areas for improvement. Future forecasts provide valuable insights to inform decision-making processes, enhance operational efficiency, and promote responsible and sustainable water resource usage, helping us meet our water-related targets for 2025. Method: We calculate water withdrawals based on aggregated local measurements. Total water withdrawal includes water distributed to the community, used in townships, pipeline losses, and wastewater sourced from the Udaipur Sewage Treatment Plant (STP). We incorporate these figures into our total withdrawal, as water withdrawn from the source is stored on-site and supplied via tankers to stakeholders. Consequently, our water balance does not align with the traditional definition of Water Withdrawal - Water Discharge Water Consumption. Threshold: Lower: Reduction within 2-5% compared to the previous year Much Lower: Reduction of 5% or more About Same: Change within 0-2% Higher: Increase within 2-5% Much Higher: Increase of 5% or more.

Total discharges

(9.2.2.1) Volume (megaliters/year)

0

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Due to zero liquid discharge of the company

(9.2.2.4) Five-year forecast

Select from:

☑ About the same

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

Our Consent to Operate under Section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside our operations. To meet these requirements, we rigorously monitor our water balance parameters. All our sites operate as ZLD plants, with no liquid effluent released into surface water, groundwater, or third parties, effectively eliminating environmental pollution from water discharge. We have installed real-time monitoring systems, flow meters, and PTZ cameras at the plant outlets for all smelters and captive power plants to ensure this process is maintained. All measures are in place to ensure no effluent is discharged outside the premises. We expect to maintain zero total discharges in the future.

Total consumption

(9.2.2.1) Volume (megaliters/year)

26162.25

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

In FY 2023-24, we recorded a 2.77% increase in total water consumption, driven by a 2% y-o-y rise in mined metal production and extensive exploration in new areas with inherent groundwater intersections. Over the next five years, we anticipate a decrease in consumption due to several water efficiency measures, including the establishment of dry tailing plants in all three TSF, implementation of ZLD plants for enhanced water recycling, exploration of treated sewage water as an alternative source, and the introduction of water-saving projects such as leakage arrestors. We also aim to reduce our dependency on CPP, which currently consumes significant water volumes, thereby further lowering our overall water consumption. Rationale: Analyzing the previous year's performance offers valuable insights into HZL's operations, enabling us to gain a comprehensive understanding of our business performance and water management practices while identifying areas for improvement. Future forecasts provide critical insights that inform decision-making, enhance operational efficiency, and foster the responsible and sustainable use of water resources, helping us achieve our water-related targets for 2025. Method of Measurement: Water withdrawals are calculated based on an aggregation of company-wide measurements. Water consumption figures account for water used in operational activities and some sanitation needs on-site. The total water withdrawal quantity includes water supplied to the local community outside our facility. Therefore, our water balance does not align with the traditional definition of Water Withdrawal - Water DischargeWater Consumption. Threshold Definition: Lower: Reduction within 2-5% compared to the previous year, Much Lower: Reduction of 5% or more, About Same: Change within 0-2%, Higher: Increase within 2-5% Much Higher: Increase of 5% or more.
[Fixed row]

(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.

(9.2.4.1) Withdrawals are from areas with water stress

Select from:

☑ Yes

(9.2.4.2) Volume withdrawn from areas with water stress (megaliters)

27536.51

(9.2.4.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.4.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.4.5) Five-year forecast

Select from:

☑ Lower

(9.2.4.6) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.4.7) % of total withdrawals that are withdrawn from areas with water stress

99.83

(9.2.4.8) Identification tool

Select all that apply

☑ WRI Aqueduct

☑ Other, please specify :CGWB-India

(9.2.4.9) Please explain

HZL used WRI Aqueduct to assess physical water risks and identify water-stressed areas, reporting annually on locations with 'Very High' and 'High' basin risk scores. Our latest assessment reveals that 100% of our water is withdrawn from areas with extremely high-water stress, covering all of HZL's operations, including 6 CPPs, 5 mines, and 3 smelters. In FY 2023-24, our total water withdrawal increased by 3.25% due to a XX% rise in production and extensive exploration in new areas with inherent groundwater intersections. However as per Central Ground Water Board (CGWB), 8 of our location are in water stress areas (except Pantnagar metal plant). During FY 2023-24, total water withdrawal increased by 3.25% due to mined metal production going up by 2% y-o-y and extensive exploration in new areas with inherent groundwater intersections. In the coming years, we plan to reduce water withdrawals by implementing various water efficiency measures, such as installing dry tailing plants at all three TSFs, commissioning ZLD plants to enhance water recycling, and launching water-saving projects like leakage arrestors. Additionally, we aim to decrease our dependency on CPP processes that consume significant water volumes and are exploring increased use of municipal sewage treated water to reduce our dependency on freshwater. Our total water withdrawal accounts for water used in community distribution, township distribution, pipeline losses, and wastewater sourced from the Udaipur STP. As this water is stored on-site and supplied via tankers, our water balance does not follow the traditional definition of Water Withdrawal - Water Discharge Water Consumption. Performance Tracking: Tracking our performance from previous years provides valuable insights into HZL's activities, helping us understand our business performance and water management practices while identifying areas for improvement. Future forecasts guide decision-making, enhance operational efficiency, and promote the responsible and sustainable use of water resources to meet our 2025 water-related targets. Categorization of Performance Changes: Lower: Reduction within 2-5% compared to the previous year. Much Lower: Reduction of 5% or more compared to the previous year. About the Same: Change of 0-2% compared to the previous year. Higher: Increase within 2-5% compared to the previous year. Much Higher: Increase of 5% or more compared to the previous year.
[Fixed row]

(9.2.7) Provide total water withdrawal data by source.

Fresh surface water, including rainwater, water from wetlands, rivers, and lakes

(9.2.7.1) Relevance

Select from:
☑ Relevant

(9.2.7.2) Volume (megaliters/year)

13693.45

(9.2.7.3) Comparison with previous reporting year

Select from:
☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

Fresh surface water and rainwater account for 49.64% of our total water withdrawal. With only two captive dams for CLZS and ZM, surface water withdrawals are significant and include water supplied to the community and township. In FY 2023-24, total water withdrawal decreased by 3.74% compared to the previous year, largely due to a 9.02% increase in the consumption of treated sewage water. We expect future withdrawals to decrease by reducing our dependency on CPP, installing dry tailing plants, and implementing ZLD systems. Monitoring our performance provides valuable insights into our business activities and water management practices, enabling us to identify areas for improvement. Calculations are based on aggregated local measurements. We categorise performance changes as follows: Lower: Reduction within 2-5% compared to the previous year Much Lower: Reduction of 5% or more About the Same: Change of 0-2% Higher: Increase within 2-5% Much Higher: Increase of 5% or more

Brackish surface water/Seawater

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

This water parameter holds no relevance because HZL's operations do not withdraw any volumes of brackish surface water or seawater. This trend is anticipated to persist in the future.

Groundwater – renewable

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

2809.33

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.7.5) Please explain

Groundwater is essential at RAM and PMP due to the lack of alternative surface water sources or nearby captive water sources. Kayad Mines, lacking a beneficiation plant, sends its ore to RAM for treatment, making RAM a strategic location. Groundwater withdrawal increased by 6.99%due to mined metal production increase by 2% y-o-y. We monitor data for financial planning, business strategy, and water efficiency assessment. Future groundwater dependency in direct operations will decrease as we implement initiatives to meet our 2025 reduction targets. For example, installing rainwater harvesting at RAM in FY2022-23 led to an 87 lakh m3 groundwater augmentation. Calculations are based on aggregated local measurements. Thresholds: Lower (2-5% reduction from the previous year), Much Lower (5% reduction), About the same (0-2% change), Higher (2-5% increase), Much Higher (5% increase).

Groundwater – non-renewable

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

This water parameter holds no relevance since HZL's operations do not withdraw any non-renewable groundwater volumes. This practice aligns with our water policy and is expected to continue in the future.

Produced/Entrained water

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

1736.63

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

Dewatering mine intersection water is crucial for our underground operations. HZL measures and monitors entrained water quarterly through third-party assessments. Produced water increased by 39.51% from last year due to extensive exploration in new areas with inherent groundwater intersections, and 100% of this water is used in mining operations. As we expand and explore more mines, entrained water will increase. We have implemented measures to recycle all of the water. We monitor this data for financial planning, business strategy, and risk management to make informed business decisions. Calculation is based on aggregated local measurements. Threshold definitions are: Lower (2-5% reduction compared to the previous year), Much Lower (5% reduction compared to the previous year), About the same (- 0-2% compared to the previous year), Higher (2-5% increase compared to the previous year), and Much Higher (5% increase compared to the previous year).

Third party sources

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

9343.64

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.7.5) Please explain

Third-party water, including municipal supplies and wastewater from other sources, is crucial for our operations to reduce reliance on freshwater. Treated water from Udaipur STP constitutes 33.87% of our total water withdrawal. Third-party water usage increased by 9.02% compared to last year as we sourced sewage-treated water from Udaipur STP, it will further increase in the future to further lessen our dependency on freshwater. We monitor this data for financial planning and business strategy to gain insights into water efficiency. The calculation is based on aggregated local measurements. Thresholds are Lower (2-5% reduction compared to the previous year), Much Lower (5% reduction compared to the previous year), About the same (- 0-2% compared to the previous year), Higher (2-5% increase compared to the previous year), and Much Higher (5% increase compared to the previous year).
[Fixed row]

(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?

Direct operations

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

9

(9.3.3) % of facilities in direct operations that this represents

Select from:

☑ 100%

(9.3.4) Please explain

According to the Water Risk Filter tool, facilities with medium operational risk include Chanderiya Lead Zinc Smelter, Debari, Dariba Smelting complex, Sindeswar Khurd mines, Rajpura Dariba Mines, and Rampura Agucha mines. These 6 facilities are reported as a single aggregated facility due to their interlinkage and location in one basin. We have implemented necessary measures to further mitigate risks at these sites, ensuring they are not exposed to water-related risks that could significantly impact our company's financial or strategic position. HZL consistently adopts proactive policies to manage water-related risks, crucial because interruptions in water supply pose substantial financial risks to HZL's operations, including mines, smelters, and power plants. Water is essential for various operations, including smelting, ore processing, dust suppression, slurry transport, and power generation at CPPs. HZL has initiated multiple initiatives for water conservation and harvesting to reduce freshwater consumption and maintain zero discharge. This includes implementing a ZLD system with a total capacity of 6,800 KLD across HZL, incorporating two-stage RO plants, Multiple Effect Evaporator (MEE) / Mechanical Vapor Recompression (MVR) systems, and ETP installations for water recycling and reuse at facilities.

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

55

(9.3.4) Please explain

Hindustan Zinc, being a responsible producer has assessed the risks associated with several commodities such as lime, soda ash, cement, chemicals etc. 55 Suppliers associated with the most relevant materials that are consumed in the production processes of our industrial assets to create intermediate products were assessed. HZL used the WWF's Biodiversity risk filter to identify climate related impact and dependencies of our suppliers. Using the said filter, we were able to sort the suppliers based in terms of different risk factors on overall very high-risk, high-risk, medium-risk, low-risk and very low-risk, We performed WWF's water risk filer-based scenario analysis for 2030 & 2050 and analyzed the basin physical risk of our suppliers using WWF's water risk filer and obtained the following results based on Optimistic (SSP 1), Current (SSP 2) and SSP 5 (Pessimistic), out of which 44 are in high to very high water scarce area. However 14 suppliers have water related targets in public domain and are taking actions to achieve them.

[Fixed row]

(9.3.1) For each facility referenced in 9.3, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Row 1

(9.3.1.1) Facility reference number

Select from:
☑ Facility 1

(9.3.1.2) Facility name (optional)

Chanderiya Lead and Zinc Smelter

(9.3.1.3) Value chain stage

Select from:
☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply
☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

India

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

24.83

(9.3.1.9) Longitude

74.82

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

9876.88

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

8901.46

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

975.41

(9.3.1.27) Total water consumption at this facility (megaliters)

9950.42

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much higher

(9.3.1.29) Please explain

At Chanderia Lead Zinc Smelter, we have significantly ramped up Sewage treated water consumption from nil in FY2022-23 to 975.42 megaliters in FY2023-24, STP water constituted 10% of our overall water withdrawal at this location. However, our total water consumption increased by 36% in the FY owing to higher reliance on CPP in FY2023-24. Our operations adhere to the Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, which

mandates maintaining zero-discharge status from our premises. This means no trade effluent is permitted to leave our operational premises. To ensure compliance, we meticulously monitor our water balance parameters. Consequently, the discharge parameter does not apply to us, as all our sites operate as zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 2

(9.3.1.1) Facility reference number

Select from:

☑ Facility 2

(9.3.1.2) Facility name (optional)

Dariba Smelting Complex

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

Afghanistan

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

24.95

(9.3.1.9) Longitude

74.13

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

5738.14

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

312.62

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

5425.52

(9.3.1.27) Total water consumption at this facility (megaliters)

5872.13

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much higher

(9.3.1.29) Please explain

We have achieved a 39% reduction in fresh surface water withdrawal from the previous year due to increased water recycling efforts and 6% increase in consumption of sewage treated water. Implementing third-party grey water intake is a critical component of our water management strategy, with 95% of our total water withdrawal sourced from sewage treated water. However, our total water consumption increased by 18.06% in the FY owing to higher reliance on CPP in FY2023-24, It's important to highlight that our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 hinges on maintaining a zero-discharge status from our premises, meaning no trade effluent can leave our operational area. To ensure compliance, we rigorously monitor our water balance

parameters. Consequently, the discharge parameter doesn't apply to us, as all our sites operate as zero liquid discharge facilities. The discrepancy between water withdrawal and consumption includes water distribution to communities and township drinking water. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 3

(9.3.1.1) Facility reference number

Select from:

☑ Facility 3

(9.3.1.2) Facility name (optional)

Debari Zinc Smelter

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

Afghanistan

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

25.0

(9.3.1.9) Longitude

74.16

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1335.65

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

386.16

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

949.49

(9.3.1.27) Total water consumption at this facility (megaliters)

860.17

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

(9.3.1.29) Please explain

With 3 MLD Zero liquid discharge facility deployed in Zinc Smelter Debari, and uptake in use of recycled water, total water consumption decreased by 39% we also see a 5% dip in water withdrawal owing to our initiatives to use recycled water. Sewage treated water constitutes 71% of total water withdrawan. Rainwater harvesting in storm water pond, potential 48000 m3/year in Debari is also contributing to our efforts of water conservation. Our operations at DZS adhere to our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, which requires us to maintain a zero-discharge status from our premises, meaning no trade effluent is discharged outside our operational area. To comply with these regulations, we strictly monitor our water balance parameters. As a result,

the discharge parameter does not apply to us since all our sites function as zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 4

(9.3.1.1) Facility reference number

Select from:

☑ Facility 4

(9.3.1.2) Facility name (optional)

Rampura Agucha Mine

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

Afghanistan

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

24.6

(9.3.1.9) Longitude

73.83

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

2854.23

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

2777.75

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

76.48

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.27) Total water consumption at this facility (megaliters)

2574.02

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Total water consumption increased by 5.75% due as our mined metal production went up by 2% y-o-y. Increased exploration also lead to increased mine water by 4.48%. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside operational premises. To meet these requirements, we rigorously monitor our water balance parameters. Consequently, the discharge parameter does not apply to us, as all our sites are zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared

to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 5

(9.3.1.1) Facility reference number

Select from:

☑ Facility 5

(9.3.1.2) Facility name (optional)

Rajpura Dariba Mine

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

Afghanistan

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

25.83

(9.3.1.9) Longitude

74.74

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

2229.25

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

164.4

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

1019.63

(9.3.1.20) Withdrawals from third party sources

1045.23

(9.3.1.27) Total water consumption at this facility (megaliters)

2229.25

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

(9.3.1.29) Please explain

Water withdrawal decreased by 30% due to the greater availability of recycled water from our tailing operations, However, we see a rise of 6 % in withdrawal of entailed water owing to increased exploration in the FY2023-24. As we dig deeper, the amount of entrained water needing extraction grows significantly, leading to higher water withdrawal. Meanwhile, sewage-treated water withdrawal constitutes 47% of our total water withdrawal significantly decreasing our dependence on freshwater. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside operational premises. To meet these requirements, we rigorously monitor our water balance parameters.

Consequently, the discharge parameter does not apply to us, as all our sites are zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 6

(9.3.1.1) Facility reference number

Select from:

☑ Facility 6

(9.3.1.2) Facility name (optional)

Sindesar Khurd Mine

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

Afghanistan

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

24.95

(9.3.1.9) Longitude

74.13

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1096.8

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

92.37

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

56.44

(9.3.1.20) Withdrawals from third party sources

948

(9.3.1.27) Total water consumption at this facility (megaliters)

1096.66

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

(9.3.1.29) Please explain

Water withdrawal decreased by 16% due to the greater availability of recycled water from our tailing operations, However we see a rise of 1.61 % in withdrawal of entailed water owing to increased exploration in the FY2023-24. As we dig deeper, the amount of entrained water needing extraction grows significantly, leading to higher water withdrawal. Meanwhile, sewage treated water withdrawal constitutes 86% of our total water withdrawal significantly decreasing our dependence on freshwater. Our water consumption has also decreased by 16% owing to availability of recycled water from our operations. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside

operational premises. To meet these requirements, we rigorously monitor our water balance parameters. Therefore, the discharge parameter does not apply to us, as all our sites are zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 7

(9.3.1.1) Facility reference number

Select from:

☑ Facility 7

(9.3.1.2) Facility name (optional)

Zawar Mines

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

India

☑ Mahi River

(9.3.1.8) Latitude

24.35

(9.3.1.9) Longitude

73.71

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

4263.04

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

3728.55

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

534.49

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.27) Total water consumption at this facility (megaliters)

3403

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

(9.3.1.29) Please explain

Water withdrawal increased by 5.94% due as our mined metal production went up by 2% y-o-y. Increased exploration also lead to increased mine water by 4.48%. Our water consumption has also decreased by 14% owing to the availability of recycled water from our operations. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside operational premises. To meet these requirements, we rigorously monitor our water balance parameters. Therefore, the discharge parameter does not apply to us, as all our sites

are zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 8

(9.3.1.1) Facility reference number

Select from:

☑ Facility 8

(9.3.1.2) Facility name (optional)

Kayad Mines

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

India

☑ Other, please specify **:**Luni

(9.3.1.8) Latitude

25.53

(9.3.1.9) Longitude

74.69

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

52.2

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

2.6

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

49.6

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.27) Total water consumption at this facility (megaliters)

39.07

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much higher

(9.3.1.29) Please explain

Water withdrawal increased by 8.84% due as our mined metal production went up by 2% y-o-y. Our water consumption has also increased by 21% in the FY owing to higher reliance on CPP in FY2023-24, It's important to highlight that our ability to operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 hinges on maintaining a zero-discharge status from our premises, meaning no trade effluent can leave our operational area. To ensure compliance, we rigorously monitor our water balance parameters. Consequently, the discharge parameter doesn't apply to us, as all our sites operate as zero liquid discharge facilities. The discrepancy between water withdrawal and consumption includes water distribution to communities and township drinking water. Threshold: Lower

(Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 9

(9.3.1.1) Facility reference number

Select from:

☑ Facility 9

(9.3.1.2) Facility name (optional)

Pantnagar Metal Plant

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

India

☑ Ganges - Brahmaputra

(9.3.1.8) Latitude

29.04

(9.3.1.9) Longitude

79.4

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

46.53

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Much lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

14.95

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

31.58

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.27) Total water consumption at this facility (megaliters)

46.12

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Much lower

(9.3.1.29) Please explain

Water withdrawal decreased by 14% due to the greater availability of recycled water from our tailing operations. Our water consumption has also decreased by 12% owing to the availability of recycled water from our operations. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside operational premises. To meet these requirements, we rigorously monitor our water balance parameters. Therefore, the discharge parameter does not apply to us, as all our sites are zero liquid discharge facilities. Threshold: Lower

(Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

Row 10

(9.3.1.1) Facility reference number

Select from:

☑ Facility 10

(9.3.1.2) Facility name (optional)

Head Office, Udaipur

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals only

(9.3.1.6) Reason for no withdrawals and/or discharges

Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply with these requirements, we strictly monitor our water balance parameters. All our sites are ZLD plants with no liquid effluent into surface water, groundwater, or third parties, eliminating the environmental pollution associated with the water discharge.

(9.3.1.7) Country/Area & River basin

India

☑ Other, please specify **:**Banas Basin

(9.3.1.8) Latitude

24.57

(9.3.1.9) Longitude

73.69

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

85.2

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ About the same

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

85.2

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.27) Total water consumption at this facility (megaliters)

85.2

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ About the same

(9.3.1.29) Please explain

Water withdrawal and water consumption of the head office in FY 2024 is same as the FY 2023. Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, requires us to maintain zero discharge status, meaning no trade effluent is discharged outside operational premises. To meet these requirements, we rigorously monitor our water balance parameters. Therefore, the discharge parameter does not apply to us, as all our sites are zero liquid discharge facilities. Threshold: Lower (Reduction within 2-5% compared to previous year); Much Lower (5% compared to previous year), About same - 0- 2% compared to previous year, Higher (Increase within 2- 5%compared to previous year); Much Higher (5% compared to previous year)

[Add row]

(9.3.2) For the facilities in your direct operations referenced in 9.3.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

(9.3.2.1) % verified

Select from:
☑ 76-100

(9.3.2.2) Verification standard used

This is reported as per ISAE3000

Water withdrawals – volume by source

(9.3.2.1) % verified

Select from:
☑ 76-100

(9.3.2.2) Verification standard used

This is reported as per ISAE3000

Water withdrawals – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:
☑ 76-100

(9.3.2.2) Verification standard used

This is reported as per ISAE3000

Water discharges – total volumes

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

This is reported as per ISAE3000

Water discharges – volume by destination

(9.3.2.1) % verified

Select from:

☑ Not relevant

(9.3.2.3) Please explain

All operations comply with the Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, ensuring no water is discharged outside our operations. We have not discharged any effluent or water from our premises. To ensure regulatory compliance, we monitor data and conduct quarterly third-party assessments of water discharge. Our site also has a stormwater management system with a pond capacity of 345,000 cubic meters to prevent runoff discharge into nearby water bodies during the rainy season. As production increases, we expect to treat more effluents but will continue to ensure no discharge outside our premises. Hence, there is no discharge to the natural environment.

Water discharges – volume by final treatment level

(9.3.2.1) % verified

Select from:

☑ Not relevant

(9.3.2.3) Please explain

All operations comply with the Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, ensuring no water is discharged outside our operations. We have not discharged any effluent or water from our premises. To ensure regulatory compliance, we monitor data and conduct quarterly third-party assessments of water discharge. Our site also has a stormwater management system with a pond capacity of 345,000 cubic meters to prevent runoff discharge into nearby water bodies during the rainy season. As production increases, we expect to treat more effluents but will continue to ensure no discharge outside our premises. Hence, there is no discharge to the natural environment.

Water discharges – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ Not relevant

(9.3.2.3) Please explain

All operations comply with the Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, ensuring no water is discharged outside our operations. We have not discharged any effluent or water from our premises. To ensure regulatory compliance, we monitor data and conduct quarterly third-party assessments of water discharge. Our site also has a stormwater management system with a pond capacity of 345,000 cubic meters to prevent runoff discharge into nearby water bodies during the rainy season. As production increases, we expect to treat more effluents but will continue to ensure no discharge outside our premises. Hence, there is no discharge to the natural environment.

Water consumption – total volume

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

This is reported as per ISAE3000
[Fixed row]

(9.5) Provide a figure for your organization’s total water withdrawal efficiency.

(9.5.1) Revenue (currency)

289320000000

(9.5.2) Total water withdrawal efficiency

10489054.14

(9.5.3) Anticipated forward trend

HZL aims to become 5x water-positive and achieve a 25% reduction in freshwater consumption based on a 2020 baseline. Currently, we are certified as 2.41 times water-positive, with an 8.67% reduction in freshwater withdrawal in FY 2023-24 from the 2020 base year. Key initiatives include: a. India’s first dry tailing plant at Zawar mines, recirculating over 80% of process water. b. A rainwater harvesting facility at Rampura Agucha mines. c. Increased sewage-treated water consumption at Chanderiya
[Fixed row]

(9.10) Do you calculate water intensity information for your metals and mining activities?

Select from:
☑ Yes

(9.10.1) For your top 5 products by revenue, provide the following intensity information associated with your metals and mining activities.

Row 1

(9.10.1.1) Product name

Zinc

(9.10.1.2) Numerator: Water aspect

Select from:

☑ Total water consumption

(9.10.1.3) Denominator

Select from:

☑ Ton of final product

(9.10.1.4) Comparison with previous reporting year

Select from:

☑ Lower

(9.10.1.5) Please explain

In the pyro-metallurgical process, ore concentrate is processed to produce lead, zinc, and silver metals. Because this processing happens simultaneously, it's challenging to separate water usage for each product. Thus, we report our water consumption as for zinc production, which includes water used for lead and silver production as well. Water intensity decreased by 2.59% compared to the previous year as mined metal production went up by 2% y-o-y. We classify changes between 2-5% as lower/higher, hence we selected lower. We have implemented various initiatives to reduce freshwater dependency, such as recycling from TSF, operating a dry tailing plant, and installing ETP, RO, and MEE processes, utilizing sewage treated water from udaipur STP which constitutes around 34% of our total water withdrawal & a significant rise of 9% sewage treated municipal water withdrawal in FY2023-24 from FY2022-23. Our water management strategy includes targets to reduce water usage volumes, and we use this metric to monitor progress. The water use intensity metric tracks our performance, informing our decision-making processes and driving operational efficiency. Future plans include reducing water intensity, decreasing dependency on CPP (a process with high water withdrawal), establishing dry tailing plants in all three TSFs, implementing ZLD plants for water recycling, exploring treated sewage water as an alternative source, and implementing water-saving projects like leakage arrestors.
[Add row]

(9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
	Select from: ☑ No	*We do not manufacture products which are categorized as hazardous as per regulatory authority.*

[Fixed row]

(9.14) Do you classify any of your current products and/or services as low water impact?

(9.14.1) Products and/or services classified as low water impact

Select from:

☑ Yes

(9.14.2) Definition used to classify low water impact

We have defined water positive ratio by analysing Water Credit to Debit Ratio which indicates plants' dependency on the fresh water sources when compared to other water sources.Higher the index, lower is the dependence on fresh water sources and vice versa.

(9.14.4) Please explain

100% of the products have a low water impact and hence, can be classified as low water impact products. We are 2.41 times water positive, which means that we have reduced our dependence on freshwater sources. This we have done by sourcing municipal wastewater from Udaipur STP, by improving recycling rate, rainwater harvesting structures, and by establishing ZLD plants across our smelting operations. For example, at Dariba Smelter (products Zinc, Lead & Silver), we consume 86% of the water from Udaipur STP (Sewage treated water) and rest 14% is sourced through fresh water sources for drinking water purpose.In a business-as-usual scenario, the freshwater intensity at Dariba would have been 18.81 m3 /tonne of metal produced. With utilization of STP water at Dariba, the freshwater intensity at Dariba is 2.57 m3 /tonne of metal produced.

[Fixed row]

(9.15) Do you have any water-related targets?

Select from:
☑ Yes

(9.15.1) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

Water pollution

(9.15.1.1) Target set in this category

Select from:
☑ Yes

Water withdrawals

(9.15.1.1) Target set in this category

Select from:
☑ Yes

Water, Sanitation, and Hygiene (WASH) services

(9.15.1.1) Target set in this category

Select from:
☑ No, but we plan to within the next two years

(9.15.1.2) Please explain

Vedanta, the parent company of HZL, signed the WBCSD Pledge for Access to Safe Water, Sanitation, and Hygiene (WASH) at the workplace in October 2014. The company implements the WASH Pledge across all its sites and aids the WBCSD in promoting awareness about WASH in the workplace. The leadership shows commitment through both internal and external communication. Potable water quality is monitored daily for key parameters and by a third party according to IS:10500 standards. A checklist inspects hygiene conditions at water coolers, drinking water facilities, and restrooms. Planned sanitation initiatives include: a) Providing safe drinking water to 100% of the workforce (2 litres per employee) b) Ensuring access to toilets for men and women c) Maintaining good hygiene in the workplace to keep workers healthy.

Other

(9.15.1.1) Target set in this category

Select from:
☑ Yes
[Fixed row]

(9.15.2) Provide details of your water-related targets and the progress made.

Row 1

(9.15.2.1) Target reference number

Select from:
☑ Target 1

(9.15.2.2) Target coverage

Select from:
☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Other
☑ Other, please specify **:**Reduce Fresh Withdrawal by 25%

(9.15.2.4) Date target was set

03/31/2019

(9.15.2.5) End date of base year

03/30/2020

(9.15.2.6) Base year figure

19978.26

(9.15.2.7) End date of target year

03/30/2025

(9.15.2.8) Target year figure

14984

(9.15.2.9) Reporting year figure

18239

(9.15.2.10) Target status in reporting year

Select from:

☑ Underway

(9.15.2.11) % of target achieved relative to base year

35

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

This target is organisation-wide and covers 100% of our operations.

(9.15.2.14) Plan for achieving target, and progress made to the end of the reporting year

The replacement of fresh water with STP-treated water for operations has increased freshwater availability for the community, with nearly 34% of total water withdrawal now met by treated sewage. STP water consumption has increases by 38% from base year. During FY 2023-24, we completed phase 1 of a ZLD plant at Zawar Mines, with a capacity of 4,000 KLD. This initiative has reduced our dependence on freshwater and facilitated water recovery and conservation through advanced technologies, supporting Hindustan Zinc's vision of zero waste and zero discharge. We have also begun work on a ZLD plant at Rampura Agucha Mine (RAM) with the same capacity. Additionally, a dry tailing plant and a paste-fill plant were commissioned at Rajpura Dariba Complex (RDC), saving 3,000 KLD of water with enhanced recovery and recycling. These initiatives follow capacity expansions at ZLD plants at Dariba, Debari, and Chanderiya smelting locations, which added 3,200 KLD, 3,000 KLD, and 600 KLD, respectively.

(9.15.2.16) Further details of target

Become 5x water positive company and achieve 25% reduction in freshwater consumption.

Row 2

(9.15.2.1) Target reference number

Select from:

☑ Target 2

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Other

☑ Other, please specify **:**Zero Category 5 incidents, environmental incidents related to water

(9.15.2.4) Date target was set

03/31/2019

(9.15.2.5) End date of base year

03/30/2020

(9.15.2.6) Base year figure

0

(9.15.2.7) End date of target year

03/30/2025

(9.15.2.8) Target year figure

0

(9.15.2.9) Reporting year figure

0

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved and maintained

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

We have committed to water positivity by FY 2030. Adding to our contributions towards SDG 6, In FY 2020, we had adopted a target of zero category 5 water-related environment incidents by FY 2025, with FY 2020 as a baseline. We continue to monitor our performance, in alignment with this target. In FY 2023, we have witnessed zero categories 5 water-related environment incidents. We have achieved 100% of the target set

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

We follow Vedanta's Triangular Approach to meet our continuous improvement targets and are under constant scrutiny to prevent the recurrence of Category 1, 2, and 3 incidents. If such incidents occur, a Corrective and Preventive Action (CAPA) plan is developed for the specific issue or location, resulting in Standard Operating Procedures (SOPs) to prevent future occurrences. For Category 5 incidents, work is halted or additional controls are implemented until the incident is investigated, risk controls are reviewed, and preventive actions are established. Senior management at our operational sites conducts a periodic review of incident data at least annually. This review identifies trends, assesses the effectiveness of current risk controls, and determines if additional measures are needed, often as part of a broader management review process.

(9.15.2.16) Further details of target

We have not had category 4 and 5 environment incidents in 2022-23

Row 3

(9.15.2.1) Target reference number

Select from:

☑ Target 3

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Water use efficiency

☑ Other water use efficiency, please specify **:**5X Water Positivity

(9.15.2.4) Date target was set

03/31/2019

(9.15.2.5) End date of base year

03/30/2020

(9.15.2.6) Base year figure

2.41

(9.15.2.7) End date of target year

03/30/2025

(9.15.2.8) Target year figure

5

(9.15.2.9) Reporting year figure

2.41

(9.15.2.10) Target status in reporting year

Select from:

☑ Underway

(9.15.2.11) % of target achieved relative to base year

0

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

This target is organisation-wide and covers 100% of our operations.

(9.15.2.14) Plan for achieving target, and progress made to the end of the reporting year

During FY 2023-24, zero liquid discharge plant of 4,000 KLD capacity was inaugurated at Zawar mines to facilitate water recovery and reduction in freshwater dependency, reaffirming our vision of zero discharge as well as 5x water positivity by 2025 1. ZLD at DSC,DZS,CLZS, & ZWM (8500 KLD) 2. Upgradation of Udaipur STP from 45 to 60 MLD (Credit gain of 54.7 Lac m3) 3. Groundwater recharge structure at RAM (Credit gain of 8.7 Million m3) 4. Rainwater harvesting in storm water pond at ZSD (Credit gain of 48000 m3) Upcoming initiatives: 1. Dry Tailing Stack at SK & RD Mines and RA Mines (Water Recovery 4500 m3/day) 2. 4MLD ZLD Plant at RA Mines 3. 2 MLD ZLD at Balaria Mine, Zawar 4. RO ZLD Capacity 4610 m3/day & Freshwater based RO installation for DM Plants capacity 5750 m3/day at Chanderiya

(9.15.2.16) Further details of target

We have established a long-term objective of achieving a 5 Times Water Positive status. In FY2020, we were certified as a 2.41 times water positive company. We continue to implement specific measures to recycle water in Rajasthan and are actively exploring alternative water sources and innovative methods to reduce water usage across the state. Our goal is to attain a 5 times water positive status by FY2025. This ratio is determined by analyzing the Water Credit to Debit Ratio, which reflects our plants' dependency on fresh water sources versus other sources. A higher index indicates lower reliance on fresh water sources, and vice versa.

Row 4

(9.15.2.1) Target reference number

Select from:

☑ Target 4

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Product water intensity

☑ Reduction per unit of production

(9.15.2.4) Date target was set

03/31/2019

(9.15.2.5) End date of base year

03/30/2020

(9.15.2.6) Base year figure

22.95

(9.15.2.7) End date of target year

03/30/2025

(9.15.2.8) Target year figure

12.48

(9.15.2.9) Reporting year figure

17.64

(9.15.2.10) Target status in reporting year

Select from:

☑ Underway

(9.15.2.11) % of target achieved relative to base year

51

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

This is an internal organisation-wide target.

(9.15.2.14) Plan for achieving target, and progress made to the end of the reporting year

a. Augmenting water recycling across the operations b. Exploring alternatives to freshwater c. Rainwater harvesting via localised watershed management, such as Rainwater harvesting at Rampura Agucha Mines leading to 87 lakhs m3 groundwater augmentation d. Water risk assessment using WRI Aqueduct Water Risk Atlas and data published by CGWB e. We have commissioned Zero Liquid Discharge at multiple locations and have committed to inducting Zero liquid discharge at all our Business Units. Commissioned & upcoming Zero Liquid Discharge will together contribute to 19,500 KLD freshwater savings by 2025 f. Dry Stack Tailing at our mining locations will help water recovery to the tune of 4,500 m3/day g. Sourcing power from 450 MW RE-RTC will help run CPP at lower PLF which in turn will reduce water consumption.

(9.15.2.16) Further details of target

a. Conducted a pilot study at Dariba Smelting Complex (RDC) as per Niti Aayog's Water Neutrality standard and received certificate, "Aspiring company for water neutrality". b. Inaugurated phase 1 of 4,000 KLD zero liquid discharge (ZLD) plant at Zawar Mines, deploying advanced technology to aid in water conservation. c. During the year, we commissioned a dry tailing plant and a paste-fill plant at Rajpura Dariba Complex (RDC) for saving 3,000 KLD of water with improved recovery and recycling.
[Add row]

C10. Environmental performance - Plastics

(10.1) Do you have plastics-related targets, and if so what type?

(10.1.1) Targets in place

Select from:

☑ Yes

(10.1.2) Target type and metric

Other

☑ Other, please specify **:**Prohibition of single use plastic

(10.1.3) Please explain

Our goal is to eliminate the use of single-use plastic items within our premises, aligning with the latest Plastic Waste Management (Amendment) Rules, 2022 set forth by the Ministry of Environment, Forest and Climate Change (MoEF&CC). This initiative targets zero usage of single-use plastics across our entire value chain. We have prohibited both single-use plastic items and the use of plastic bags with a thickness of less than 100 microns from FY 2021-22 onwards, and we continue to ensure strict compliance with the same. All our BPs are required to share an undertaking acknowledging their responsibility towards Hindustan Zinc's ESG commitments with 'no usage of single-use plastics' during packaging as a part of the tendering process. As an alternative, biodegradable packaging or the use of plastic complying with established rules is preferred across the supply chain. We strongly believe in creating long-term value leading to a green and sustainable future. It has banned single-use plastic from July 1, 2022. The Company has replaced all single-use plastic (SUP) with other suitable materials or compostable/biodegradable plastic. We strongly believe that behavioural changes will serve to lead our efforts towards elimination of SUPs. We have accordingly banned use of products like plastic cutlery, polystyrene, PVC banners less than 100 microns in all our units, offices and townships. We have issued advisories to keep away products like plastic water bottles, food packages, plastic bags, etc., and switch to reusable and durable alternatives. We are encouraging our supply chain to find alternatives to SUP and have introduced terms and conditions concerning SUP and the Plastic Waste Management (Amendment) Rules, 2022, along with the request for quotation (RFQ) for all vendors
[Fixed row]

(10.2) Indicate whether your organization engages in the following activities.

Production/commercialization of plastic polymers (including plastic converters)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Production/commercialization of durable plastic goods and/or components (including mixed materials)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Usage of durable plastics goods and/or components (including mixed materials)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Production/commercialization of plastic packaging

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Production/commercialization of goods/products packaged in plastics

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Provision/commercialization of services that use plastic packaging (e.g., food services)

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Provision of waste management and/or water management services

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Provision of financial products and/or services for plastics-related activities

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

Other activities not specified

(10.2.1) Activity applies

Select from:

☑ No

(10.2.2) Comment

This is Not Applicable to our sector. The products manufactured by HZL are integrated into various products produced by their customers, making it impractical to separate or reclaim them individually. Therefore, the question does not apply to products.

[Fixed row]

C11. Environmental performance - Biodiversity

(11.1.1) Please report your exclusions and describe their potential for biodiversity-related risk.

Row 1

(11.1.1.1) Exclusion

Select from:

☑ Other, please specify :Marketing Offices

(11.1.1.2) Description of exclusion

Marketing office

(11.1.1.3) Potential for biodiversity-related risk

Select from:

☑ No potential

(11.1.1.4) Please explain

We have omitted marketing offices from consideration due to their negligible biodiversity-related risks and lack of direct involvement in operational activities.
[Add row]

(11.2) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Land/water protection

☑ Land/water management

☑ Education & awareness

[Fixed row]

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
	Select from: ☑ Yes, we use indicators	*Select all that apply* ☑ State and benefit indicators

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

Legally protected areas

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

HZL has a Biodiversity Policy which aims to avoid, minimize and offset the negative impacts on biodiversity at its operations and encourage value chain partners to align with the company's commitment and avoid deforestation and habitat loss in internationally recognized areas such as World Heritage Sites, International Union for Conservation of Nature (IUCN) category (I-VI) Protected Areas, legally designated protected areas, and Key Biodiversity Areas

UNESCO World Heritage sites

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

The company strictly avoids operations, exploration, mining, or drilling in World Heritage Sites and Protected Areas classified under IUCN Categories I-IV. This proactive measure ensures that the most sensitive ecological zones are preserved.

UNESCO Man and the Biosphere Reserves

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

HZL has a Biodiversity Policy which aims to avoid, minimize and offset the negative impacts on biodiversity at its operations and encourage value chain partners to align with the company's commitment and avoid deforestation and habitat loss in internationally recognized areas such as World Heritage Sites, International Union for Conservation of Nature (IUCN) category (I-VI) Protected Areas, legally designated protected areas, and Key Biodiversity Areas

Ramsar sites

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ Not assessed

(11.4.2) Comment

HZL's operations are not in/nearby wetlands.

Key Biodiversity Areas

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

HZL has a Biodiversity Policy which aims to avoid, minimize and offset the negative impacts on biodiversity at its operations and encourage value chain partners to align with the company's commitment and avoid deforestation and habitat loss in internationally recognized areas such as World Heritage Sites, International Union for Conservation of Nature (IUCN) category (I-VI) Protected Areas, legally designated protected areas, and Key Biodiversity Areas

Other areas important for biodiversity

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ No

(11.4.2) Comment

HZL has a Biodiversity Policy which aims to avoid, minimize and offset the negative impacts on biodiversity at its operations and encourage value chain partners to align with the company's commitment and avoid deforestation and habitat loss in internationally recognized areas such as World Heritage Sites, International Union for Conservation of Nature (IUCN) category (I-VI) Protected Areas, legally designated protected areas, and Key Biodiversity Areas
[Fixed row]

(11.5) Can you disclose the mining project area and the area of land disturbed for each of your mining projects?

(11.5.1) Disclosing mining project area and area of land disturbed

Select from:

☑ Yes

(11.5.2) Comment

On a progressive basis, the company rehabilitates and restores areas to re-create biodiversity values and reclaims areas with a closure view. Such reclamation practices can help replace much or most of the biodiversity of the natural habitats that existed prior to the operational sites
[Fixed row]

(11.5.1) Provide details on the mining project area and the area of land disturbed for each of your mining projects.

Row 1

(11.5.1.1) Mining project ID

Select from:

☑ Project 1

(11.5.1.2) Total area of owned land/lease/project area (hectares)

1200

(11.5.1.3) Total area disturbed to date (hectares)

679

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Rampura Agucha Mine

Row 2

(11.5.1.1) Mining project ID

Select from:

☑ Project 2

(11.5.1.2) Total area of owned land/lease/project area (hectares)

1142

(11.5.1.3) Total area disturbed to date (hectares)

327

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Rajpura Dariba Mine and Dariba Smelting Complex

Row 3

(11.5.1.1) Mining project ID

Select from:
☑ Project 3

(11.5.1.2) Total area of owned land/lease/project area (hectares)

200

(11.5.1.3) Total area disturbed to date (hectares)

64

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply
☑ Natural habitat

(11.5.1.6) Comment

Sindesar Khurd Mines

Row 4

(11.5.1.1) Mining project ID

Select from:

☑ Project 4

(11.5.1.2) Total area of owned land/lease/project area (hectares)

3620.0

(11.5.1.3) Total area disturbed to date (hectares)

312

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Zawar Mines

Row 5

(11.5.1.1) Mining project ID

Select from:

☑ Project 5

(11.5.1.2) Total area of owned land/lease/project area (hectares)

481

(11.5.1.3) Total area disturbed to date (hectares)

29

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Kayad mines

Row 6

(11.5.1.1) Mining project ID

Select from:

☑ Project 6

(11.5.1.2) Total area of owned land/lease/project area (hectares)

437

(11.5.1.3) Total area disturbed to date (hectares)

256

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Chanderiya Lead Smelter Zinc

Row 7

(11.5.1.1) Mining project ID

Select from:

☑ Project 8

(11.5.1.2) Total area of owned land/lease/project area (hectares)

183

(11.5.1.3) Total area disturbed to date (hectares)

107

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply

☑ Natural habitat

(11.5.1.6) Comment

Zinc Smelter Debari

Row 8

(11.5.1.1) Mining project ID

Select from:
☑ Project 9

(11.5.1.2) Total area of owned land/lease/project area (hectares)

18

(11.5.1.3) Total area disturbed to date (hectares)

11

(11.5.1.4) Area disturbed in the reporting year (hectares)

0

(11.5.1.5) Type(s) of habitat disturbed in the reporting year

Select all that apply
☑ Natural habitat

(11.5.1.6) Comment

Pantnagar Refinery
[Add row]

(11.8) Provide details on mining projects that are required to produce Biodiversity Action Plans.

(11.8.1) Number of mining projects required to produce a BAP

9

(11.8.2) % of mining projects required to produce a BAP that have one in place

100.0

(11.8.3) Format

Select all that apply

☑ Stand-alone document

☑ Part of general Environmental Management System

(11.8.4) Frequency BAPs are reviewed

Select all that apply

☑ Regularly

(11.8.5) Please explain

We have developed a dedicated and exclusive Biodiversity Policy, which is designed to safeguard species of significant biodiversity value and address risks in high-priority conservation areas surrounding our operational sites. To facilitate the process of biodiversity risk assessment, we employ the IBAT mapping tool, categorizing our operations as high, medium, or low risk based on their respective risk profiles. This categorization informs the formulation of BMPs for all our sites. In collaboration with TERI (The Energy and Research Institute), our CLZS team has harnessed mycorrhiza technology to restore the depleted Jarofix Yard. This innovative technology ensures the rejuvenation of exhausted soils, transforming wasteland into fertile and productive terrain. As part of our ongoing efforts in biodiversity management, we have embarked on several key projects, including a significant afforestation program, establishment of the Peacock Conservation Park, Miyawaki afforestation at DZS plant, development of a biodiversity park at the RDM facility, creation of an endangered plant nursery, establishment of a butterfly garden and medicinal park, comprehensive tree inventory efforts, and extensive plantation initiatives at Kalimagri and Ratnagiri. Our commitment to preserving biodiversity is further evident through the implementation of extensive green belts. We have established nurseries for various endemic and medicinal (Ayurvedic) plants, Rampura Agucha, and Kayad Mine. A meticulously designed conservation plan has been executed to protect the national bird, Pavocristatus (Indian Peafowl), at our Kayad mines. Additionally, we have created a butterfly park at our Pantnagar Metal Plant (PMP) and Head Office. As a testament to our dedication to biodiversity preservation, we are signatories of the Indian Biodiversity Business Initiative (IBBI) and participants in the IUCN Leaders for Nature program. We have three years engagement with IUCN for revisiting our BMP and to align our actions towards no net loss.
[Fixed row]

(11.9) Have any of your projects caused, or have the potential to cause, significant adverse impact(s) on biodiversity?

(11.9.1) Any projects caused, or have the potential to cause, significant adverse impacts on biodiversity

Select from:

☑ No

(11.9.2) Comment

As per IBAT tool assessment, no Protected Areas, National Parks, Wildlife Sanctuaries, Bio Sphere Reserves, Wild Life Corridors etc. are situated in core/buffer zone (10 km area) of any of our operating sites. We are committed not to operate/explore/mine/drill in World Heritage areas and IUCN Category I-IV protected areas. [Fixed row]

(11.10) Are biodiversity issues integrated into any aspects of your long-term strategic business plan, and if so how?

Long-term business objectives

(11.10.1) Are biodiversity-related issues integrated?

Select from:

☑ Yes, biodiversity-related issues are integrated

(11.10.2) Long-term time horizon (years)

Select from:

☑ 5-10

(11.10.3) Please explain

Our objective is to establish ourselves as a pioneering force in green technology within the industry, while concurrently diminishing our ecological impact. HZL operates our activities that influence biodiversity and ecosystems across the entire lifecycle, spanning from exploration to closure. Recognising our role as a mining entity, we acknowledge that our impact on biodiversity can potentially entail business risks. To address and alleviate the biodiversity-related risks, we have integrated company-specific biodiversity objectives into our overarching long-term business strategy. These objectives aim to achieve a minimum of No Net Loss of biodiversity

and Net Positive Gain of biodiversity, particularly in cases involving critical habitats, while simultaneously establishing a digital roadmap for all our operations.Distinctive and tailored Biodiversity Management Plans have been devised for our nine operational sites, each located away from biodiversity hotspots, as confirmed by IBAT surveys conducted across our sites. Our commitment to prioritizing biodiversity is evident during the planning and developmental stages of new projects, where biodiversity risk screening and assessment, accompanied by risk-mitigation action plans, are integral since project inception. We also conduct ESIAs during the project permitting phase, ensuring alignment with regulatory bodies and stakeholders. Our diligent mapping of potential operational risks enables us to formulate comprehensive action plans aimed at safeguarding regional biodiversity. Moreover, even during project closure, we strive to restore the land as closely as possible to its natural state. In line with the Vedanta Sustainability Assurance Programme (VSAP), we have established a direct link between employee and executive compensation and biodiversity indicators and performance. This ensures the implementation and adherence to biodiversity practices across all operational sites.

Strategy for long-term objectives

(11.10.1) Are biodiversity-related issues integrated?

Select from:

☑ Yes, biodiversity-related issues are integrated

(11.10.2) Long-term time horizon (years)

Select from:

☑ 5-10

(11.10.3) Please explain

In pursuit of our climate ad biodiversity targets, we have ingrained biodiversity management deeply within our long-term business strategy. Over the course of this year, we introduced a distinct Biodiversity Policy, underscoring our unwavering commitment to preventing biodiversity-related risks across our entire business spectrum. To uphold this policy and achieve our overarching biodiversity objective of 'protecting and enhancing biodiversity throughout the life cycle,' we have undertaken the following proactive measures:- Conducted comprehensive biodiversity assessment studies at all our locations, resulting in the formulation of biodiversity management plans (BMPs) for each unit.- Established a nursery dedicated to endangered species of Rajasthan at both the RAM and Kayad sites.- Created a Peacock Conservation Park within the Kayad Mine premises.- Artificial bird nesting and feeding platform across all HZL units.- Developed a water pond to support bird populations at PMP.- Pioneered the creation of a butterfly garden at PMP.- Established a peacock and herbal bank within the township of HO, Udaipur.- Entered into a 3 Years engagement with IUCN for reassessment of Biodiversity risk- Restoration of Jarofix yard at Chanderiya Lead Zinc smelter- Restored of Waste dump at Rampura Agucha Mines - Development wildlife conservation plans for the protection of schedule-1 species and their habitatsEach of these initiatives undergoes annually twice review by our Board Level ESG and Sustainability Committee, ensuring their alignment with our strategic goals.In addition to our internal efforts, we have forged partnerships with NGOs, international institutions, and governmental bodies to advance our biodiversity agenda and access expert insights. Our commitment to addressing evolving nature-related risks is underscored by our membership in the Taskforce on Nature related Financial Disclosures (TNFD). Furthermore, as part of our endeavour to seamlessly integrate biodiversity and ecosystem service conservation into our operations and bolster our biodiversity conservation and management performance, we have engaged in a three-year partnership with IUCN.

Financial planning

(11.10.1) Are biodiversity-related issues integrated?

Select from:

☑ Yes, biodiversity-related issues are integrated

(11.10.2) Long-term time horizon (years)

Select from:

☑ 5-10

(11.10.3) Please explain

Biodiversity management holds a significant place within our annual financial planning process. Our financial plans are carefully designed to incorporate the imperative of safeguarding and enriching biodiversity across the entire project lifecycle and its surroundings. This strategic commitment is deeply embedded within our overarching business plan, as we consistently assess our operations to identify and mitigate potential risks or threats to the local ecology.Our proactive approach extends to collaborative partnerships with stakeholders, enabling us to solicit valuable insights on enhancing biodiversity. Our financial planning is comprehensive and includes projected estimates to effectively execute our long-term strategy of safeguarding and enhancing biodiversity, along with the associated cost considerations. [Fixed row]

(11.11.1) Provide details of your targets related to your commitments to reduce or avoid impacts on biodiversity, and progress made.

Row 1

(11.11.1.1) Target reference number

Select from:

☑ Target 1

(11.11.1.2) Target label

'PROTECT AND ENHANCE BIODIVERSITY THROUGHOUT THE LIFE CYCLE' is an ongoing and continuous process that is embedded in our company strategy i.e. Biodiversity Goal 2025. In alignment with this endorsement, we have undertaken the following sub-goals: Reassessment of biodiversity and development of biodiversity management plan; Implementation of critical/ endangered species conservation plan; One million plantation drives.

(11.11.1.3) Base year

2020

(11.11.1.4) Target year

2025

(11.11.1.5) % of target achieved

Select from:

☑ 31-40%

(11.11.1.6) Please explain

Our Biodiversity Goal 2025 is – to 'Protect and Enhance Biodiversity throughout the Life Cycle' and to plant one million trees. This represents an enduring commitment that is seamlessly integrated into our business philosophy. This commitment translates into a perpetual and seamless endeavor. Annually, our company engages in a comprehensive audit process, facilitated by an external agency, to assess the effectiveness of our policies. These yearly audits (VSAP) are systematically carried out across all Hindustan Zinc locations to ensure strict adherence to the Vedanta Standard Framework. We have undertaken massive afforestation program, Peacock Conservation Park, endangered plant nursery, butterfly garden, medicinal park, tree inventorization, plantation on Kalimagri and Ratnagiri as few of the key projects for biodiversity management'. Further, we have initiated a 3 Years engagement with IUCN for reassessment of Biodiversity risk, carried out restoration of Jarofix yard at Chanderiya Lead Zinc smelter, restored Waste dump at Rampura Agucha Mines.
[Add row]

(11.12.1) Provide relevant company-specific examples of your implementation of avoidance and minimization actions to manage adverse impacts on biodiversity.

Row 1

(11.12.1.1) Mining project ID

Select from:

☑ Project 1

(11.12.1.2) Approach and type of measure

Minimization

☑ Physical controls

(11.12.1.3) Description

Project 1: Minimization: Physical control At Rampura Agucha, we undertook a comprehensive Biodiversity assessment, culminating in the formulation of a robust Biodiversity Action plan. Our commitment to safeguarding local ecosystems, preserving biodiversity, and upholding the integrity of ecosystem functions led us to establish forests that serve as carbon sinks and act as sanctuaries for endangered species. Within our efforts, HZL has established an in-house nursery spanning an area of 1200 square meters at Rampura Agucha. This nursery encompasses a diverse array of plant species, including both exotic and medicinal (ayurvedic) varieties such as Commiphora Wightii, Butea monosperma, Terminalia arjuna, Colophospermum mopane, Drumstick, Hardwickia, Acacia, Simmondsia chinensis, Spirogyra, Nyctanthes arbor-tristis, Tecomella undulata, and Jatropha curcas. The significance of this nursery extends beyond its physical presence. Annually, it yields an impressive supply of approximately 10,000 saplings. This initiative serves as a commendable model, contributing to the resurgence of endangered and threatened floral species indigenous to Rajasthan. In line with our commitment to environmental stewardship, we extend the benefits of these saplings to neighbouring communities. By dispersing these saplings, we effectively expand the range and prevalence of endangered species, fortifying our collective efforts towards biodiversity conservation.

Row 2

(11.12.1.1) Mining project ID

Select from:

☑ Project 2

(11.12.1.2) Approach and type of measure

Avoidance

☑ Project design

(11.12.1.3) Description

Project 2 Avoidance Project design Under the Biodiversity Park project, around 10 ha of land in Rajpura Dariba Complex has been developed where around 50,000 plants of 42 different species were planted to attract local and migratory birds which come to a nearby irrigation pond.

Row 3

(11.12.1.1) Mining project ID

Select from:

☑ Project 3

(11.12.1.2) Approach and type of measure

Avoidance

☑ Other avoidance measure, please specify **:**Using Municipal STP treated water to reduce dependency of the fresh water and conserving the aquatic biodiversity

(11.12.1.3) Description

Project 3 Avoidance Other avoidance measure, please specify Other avoidance measure, please specify Using Municipal STP treated water to reduce dependency of the fresh water and conserving the aquatic biodiversity Udaipur is situated amidst the confluence of multiple rivers, and among them, the Ahar River holds historical significance. However, over time, the impacts of urbanization have taken a toll on this waterbody. The Ahar River has borne the brunt of urban growth, absorbing the entire domestic and industrial waste of Udaipur, amounting to approximately 100 to 150 million liters per day. Shockingly, nearly 10 percent of this waste consists of untreated industrial effluents. The accumulation of high levels of BOD (biochemical oxygen demand), COD (chemical oxygen demand), and alkalinity in the Ahar River has severely disrupted the local ecology. The adverse effects include deforestation in the surrounding areas, degradation of the catchment area, excessive exploitation of groundwater, and the onset of eutrophication. These challenges have led to the depletion of oxygen concentration in the lake water, creating anaerobic conditions that result in foul odors and a decline in aquatic life. To address this critical issue, Hindustan Zinc Limited (HZL) collaborated with the Udaipur Municipal Corporation to establish a state-of-the-art Sewage Treatment Plant (STP) with a capacity of 60 million Liters per Day (MLD). The primary objective of this initiative is to treat the sewage generated by Udaipur city, which was previously being discharged directly into the Ahar River. The treated water from the STP is judiciously utilized for various purposes, including HZL's mining and smelting operations. Remarkably, this innovative approach has led to a significant reduction in the environmental impact. For instance, approximately 80% of the water demand at the Sindesar Khurd mines is now met through the utilization of treated water from the Udaipur STP. The sewage treatment process involves a series of biological processes that yield both treated water and valuable manure. These byproducts undergo additional processing, including sludge thickening and dewatering, before the treated water is directed to our operations. By effectively redirecting the effluents from the river to our operational processes through dedicated pipelines, we have succeeded in preserving the aqua

Row 4

(11.12.1.1) Mining project ID

Select from:

☑ Project 4

(11.12.1.2) Approach and type of measure

Minimization

☑ Physical controls

(11.12.1.3) Description

We have embraced a proven technology known as "Phytoremediation," pioneered by NEERI, to mitigate the chemical challenges posed by tailings (the residue from the milling process in the flotation plant). This technology aims to transform the composition of tailings into a stable blend conducive to the growth of vegetation. Given the innate chemical hostility of tailings, fostering vegetation on them necessitates extensive laboratory and field research and experimentation. At Zawar mines, an array of around 25 plant species, including various grasses, underwent testing in the laboratory using 40 different nutrient combinations and various watering regimes. Subsequent field trials aided in identifying the plant and grass species that could facilitate the reclamation of tailings, along with the specific soil composition required to support this endeavor. Through these dedicated and conscientious efforts, several hectares of barren land that was once covered with discarded tailings have been cultivated into thriving green areas, now densely populated with vegetation.

Row 5

(11.12.1.1) Mining project ID

Select from:

☑ Project 5

(11.12.1.2) Approach and type of measure

Minimization

☑ Physical controls

(11.12.1.3) Description

At Kayad mines, a comprehensive Biodiversity assessment was carried out, leading to the initiation of three pivotal projects aimed at bolstering the area's Biodiversity: 1. Peacock Conservation Park: The Indian Peafowl, a native species in the vicinity of our Kayad Mine and classified under the scheduled-I category of the Wildlife Protection Act 1972, became the focus of our Peacock Conservation Park initiative. Collaborating closely with the State Forest Department of Rajasthan, we embarked on an ongoing endeavor to cultivate and safeguard an environment free from human interference. Through strategic landscaping with native species conducive to peacock habitation, provision of water sources, and designated feeding areas, the project not only enhances peacock habitats but also nurtures a diverse ecosystem encompassing insects and reptiles - essential elements of the peacocks' diet. Additionally, multilingual signage is strategically placed around the mining site, enlightening the local community about peacock habitats and the importance of their preservation. In support of this conservation initiative, Hindustan Zinc Limited (HZL) established an in-house nursery harboring plant species vital to peacock preservation, such as Ziziphus mauritiana, Aegle marmalos, Syzygium cumini, and Tamarindus indica. 2. Topsoil Conservation: The fertile topsoil is significantly impacted by mining activities. In an effort to safeguard and preserve this vital resource, around 9000 cubic meters of excavated topsoil were thoughtfully repurposed for afforestation and the creation of lawns within the mining area. 3. Sapling Plantation: An ambitious sapling plantation initiative was undertaken, with over 4,000 saplings being planted within the mine lease area and an impressive 58,000 saplings being introduced beyond the boundaries - encompassing government properties and private lands. The selection of fruit and shade-bearing trees was methodically based on soil characteristics and the preferences of individual landowners. These landowners committed to actively nurturing the saplings, pledging to provide timely watering, vigilant observation, and care to ensure the thriving growth of these plants on their own lands.

Row 6

(11.12.1.1) Mining project ID

Select from:

☑ Project 2

(11.12.1.2) Approach and type of measure

Minimization

☑ Abatement controls

(11.12.1.3) Description

In collaboration with The Energy and Resources Institute (TERI), we have employed Mycorrhiza technology to partially restore phase 2 of the Jarofix Yard at Chanderiya Lead-Zinc Smelter (CLZS). This project seeks to transform 6.25 hectares of wasteland into fertile land by boosting greenery, promoting biodiversity, mitigating fugitive dust emissions, and rejuvenating the site. Additionally, it enhances the resilience of plants to environmental pressures by optimizing water resource utilization

[Add row]

(11.13) Have significant impacts on biodiversity been mitigated through restoration?

(11.13.1) Have significant impacts on biodiversity been mitigated through restoration?

Select from:

☑ No

(11.13.2) Comment

There are no Ecological sensitive areas like Protected Areas, National Parks, Wildlife Sanctuaries, Bio Sphere Reserves, Wild Life corridors etc. located in the proximity of core/ buffer zone (10 km area) for any of the operating sites.
[Fixed row]

(11.14) Have significant residual impacts of your projects been compensated through biodiversity offsets?

(11.14.1) Have residual impacts been compensated through biodiversity offsets?

Select from:

☑ No

(11.14.2) Comment

No offsets have been applied as there are no Ecological sensitive areas like Protected Areas, National Parks, Wildlife Sanctuaries, Biosphere Reserves, Wildlife corridors etc. located in the proximity of core/ buffer zone (10 km area) for any of the operating sites.
[Fixed row]

(11.15) Is your organization implementing or supporting additional conservation actions?

(11.15.1) Implementing or supporting additional conservation actions?

Select from:

☑ Yes

(11.15.2) Comment

In addition to adhering to regulatory mandates, HZL actively engages in various floral and faunal conservation endeavours on an annual basis. These initiatives encompass activities like planting trees both within and beyond mining zones, establishing nursery facilities to ensure the availability of high-quality planting materials and safeguarding peacock populations. We consistently monitor the execution of our biodiversity management policies, standards, and plans to ensure our preparedness in tackling emerging environmental complexities and adapting to evolving regulatory conditions.
[Fixed row]

(11.15.1) Provide details on the main ACAs you are implementing or supporting.

Row 1

(11.15.1.1) Project title

Extensive Plantation in and around our operating sites

(11.15.1.2) Project theme

Select from:

☑ Forest conservation

(11.15.1.3) Country/Area

Select from:

☑ India

(11.15.1.4) Location

Select from:

☑ In the area of influence of mining project

(11.15.1.5) Primary motivation

Select from:

☑ Other, please specify **:**Legal and Voluntary both

(11.15.1.6) Timeframe

Select from:

☑ Undefined

(11.15.1.7) Start year

1966

(11.15.1.9) Description of project

HZL's resources and manufacturing facilities are in Rajasthan, the company strongly emphasizes Biodiversity Management alongside its Sustainable Governance initiatives. Extensive tree plantation efforts are carried out annually across all operational sites, complemented by various biodiversity conservation projects that enhance the regional biodiversity index, benefiting both flora, fauna, and local communities. The architectural design of industrial complexes and residential areas i

(11.15.1.10) Description of outcome to date

Amidst the environmental challenges posed by rapid urbanization, Miyawaki Plantation offers a promising solution. On this Biodiversity Day, we highlight this innovative technique that is revitalizing barren land into green spaces. HZL has applied the Miyawaki method across 2.4 ha at its Debari, Dariba, and Chanderiya units, planting 32,500 saplings from 65 species using a chemical-free approach.
[Add row]

(11.16) Do your mining projects have closure plans in place?

	Are there closure plans in place?	Comment
	Select from: ☑ Yes	*Mine closure plans are prepared for all sites in compliance with regulations.*

[Fixed row]

(11.16.1) Please provide details on mines with closure plans.

(11.16.1.1) % of mines with closure plans

100.0

(11.16.1.2) % of closure plans that take biodiversity aspects into consideration

100.0

(11.16.1.3) Is there a financial provision for mine closure expenditure?

Select from:

☑ Yes, for all mines

(11.16.1.4) Frequency closure plans are reviewed

Select all that apply

☑ Regularly (all projects)

(11.16.1.5) Please explain

Ensuring safe and sustainable mine reclamation and closure is a crucial part of responsible mining. Our main goal is to restore the land to ensure environmental safety for communities and future land use. We prioritize safety, environmental preservation, and community well-being throughout the entire reclamation and closure process to leave a positive legacy from mining.Hindustan Zinc recognizes the environmental and social impacts of mine closure. We closely monitor and take action from the pre-operational phase to mine closure, developing progressive closure plans alongside mining plans to mitigate environmental impact and comply with regulations.Our approach aligns with international standards like ICMM principles, IFC performance standards, and IFC EHS guidelines. We use site closure technical standards, conducting comprehensive impact and risk assessments for both environmental and social factors.Backfilling underground voids is integral to our mining operations, ensuring continuity, efficiency, and stability while minimizing the need for costly tailings storage and reducing environmental impact. These efforts collectively create a safe, sustainable, and visually pleasing post-operational mine site. During the mine closure process, we rigorously adhere to all regulatory mandates and strictly follow Vedanta Technical Standard on Site Closure. Our primary focus is on the following objectives:1. Enhancing Environmental Parameters to improve environmental conditions, ensuring that the land's ecological health is restored to its fullest extent.2. Preventing Contamination of Surrounding Natural Resources safeguarding the health and integrity of the surrounding environment and ecosystems.3. Preserving the Aesthetic Nature of the Land to maintain the visual appeal of the land, ensuring that it remains harmonious with its surroundings.4. Safeguarding Biodiversity to protect and nurture the local biodiversity, implementing measures that promote the well-being and diversity of the flora and fauna in the area.Throughout this closure process, our unwavering dedication to these principles guarantees that we not only meet regulatory requirements but also contribute to a sustainable and ecologically responsible legacy for the land and its surroundings.
[Fixed row]

(11.17) Can you disclose the area rehabilitated (in total and in the reporting year) for each of your mining projects?

(11.17.1) Disclosing area rehabilitated (in total and in the reporting year)

Select from:
☑ Yes

(11.17.2) Comment

On a progressive basis, the company rehabilitates and restores areas to re-create biodiversity values and reclaims areas with a view to closure. Such reclamation practices can help replace much or most of the biodiversity of the natural habitats that existed prior to the operational sites.
[Fixed row]

(11.17.1) Provide details on the area rehabilitated (total/reporting year) for each of your mining projects, including post-mining land use.

Row 1

(11.17.1.1) Mining project ID

Select from:

☑ Project 1

(11.17.1.2) Total area rehabilitated (hectares)

343

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

0

(11.17.1.4) Describe post-mining land use

A green belt has been established on a matured waste dump at the site. The utilization of GeoTextile has been employed for bench stabilization purposes. The post-mining land use strategy is comprehensively outlined in our Mining Plan, which encompasses the following key points: - All excavated stope voids will undergo backfilling. - Mining waste will be repurposed to fill the voids created during mining operations. - All equipment, whether on the surface or underground, will be removed. - Proper sealing and fencing will be applied to all mine entrances. - Infrastructure associated with mining operations will be dismantled. - The area will be restored to its natural ground profile, incorporating feasible drainage solutions and re-vegetation efforts. - Any potential instances of soil contamination will be thoroughly assessed and addressed through the excavation and replacement of contaminated soil with fresh, uncontaminated soil. - The plantations that have been established will be diligently maintained. - Further details regarding post-mining land use have been provided in the earlier section discussing land use. - The necessary approvals from relevant statutory authorities will be obtained for both Progressive and Final Closure Plans. - Following reclamation efforts, ongoing surveillance and monitoring activities will be implemented

Row 2

(11.17.1.1) Mining project ID

Select from:

☑ Project 2

(11.17.1.2) Total area rehabilitated (hectares)

190

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

2.5

(11.17.1.4) Describe post-mining land use

The intended land use following mining activities is clearly outlined in our comprehensive Mining Plan, as detailed below: - All excavated stope voids will undergo backfilling. - Mining waste will be repurposed to fill the voids created during mining operations. - All equipment, whether on the surface or underground, will be removed. - Proper sealing and fencing will be applied to all mine entrances. - Infrastructure associated with mining operations will be dismantled. - The area will be restored to its natural ground profile, incorporating feasible drainage solutions and re-vegetation efforts. - Any potential instances of soil contamination will be thoroughly assessed and addressed through the excavation and replacement of contaminated soil with fresh, uncontaminated soil. - The plantations that have been established will be diligently maintained. - Further details regarding post-mining land use have been provided in the earlier section discussing land use. - The necessary approvals from relevant statutory authorities will be obtained for both Progressive and Final Closure Plans. - Following reclamation efforts, ongoing surveillance and monitoring activities will be implemented

Row 3

(11.17.1.1) Mining project ID

Select from:

☑ Project 3

(11.17.1.2) Total area rehabilitated (hectares)

62

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

0

(11.17.1.4) Describe post-mining land use

A total area of 7 hectares has undergone rehabilitation through the implementation of green belt development. The post-mining land use has been comprehensively outlined in our Mining Plan, which includes the following measures: - All excavated stope voids will undergo backfilling. - Mining waste will be repurposed to fill the voids created during mining operations. - All equipment, whether on the surface or underground, will be removed. - Proper sealing and fencing will be applied to all mine entrances. - Infrastructure associated with mining operations will be dismantled -The area will be restored to its natural ground profile, incorporating feasible drainage solutions and re-vegetation efforts. - Any potential instances of soil contamination will be thoroughly assessed and addressed through the excavation and

replacement of contaminated soil with fresh, uncontaminated soil. - The plantations that have been established will be diligently maintained. - Further details regarding post-mining land use have been provided in the earlier section discussing land use. - The necessary approvals from relevant statutory authorities will be obtained for both Progressive and Final Closure Plans. - Following reclamation efforts, ongoing surveillance and monitoring activities will be implemented.

Row 4

(11.17.1.1) Mining project ID

Select from:

☑ Project 4

(11.17.1.2) Total area rehabilitated (hectares)

171

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

0

(11.17.1.4) Describe post-mining land use

Within a 45-hectare area of rehabilitation, we successfully transformed a waste dump site into a football stadium and a rock garden. In a larger 35-hectare rehabilitated area, the reclamation of an old tailing dam was effectively carried out. Our Mining Plan provides a comprehensive explanation of the post-mining land use, as outlined below: - All excavated stope voids will undergo backfilling. - Mining waste will be repurposed to fill the voids created during mining operations. - All equipment, whether on the surface or underground, will be removed. - Proper sealing and fencing will be applied to all mine entrances. - Infrastructure associated with mining operations will be dismantled. - The area will be restored to its natural ground profile, incorporating feasible drainage solutions and re-vegetation efforts. - Any potential instances of soil contamination will be thoroughly assessed and addressed through the excavation and replacement of contaminated soil with fresh, uncontaminated soil. - The plantations that have been established will be diligently maintained. - Further details regarding post-mining land use have been provided in the earlier section discussing land use. - The necessary approvals from relevant statutory authorities will be obtained for both Progressive and Final Closure Plans. - Following reclamation efforts, ongoing surveillance and monitoring activities will be implemented.

Row 5

(11.17.1.1) Mining project ID

Select from:

☑ Project 5

(11.17.1.2) Total area rehabilitated (hectares)

20

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

0

(11.17.1.4) Describe post-mining land use

Post mining land use is well explained in our Mining Plan which is as below - All excavated stope voids will undergo backfilling. - Mining waste will be repurposed to fill the voids created during mining operations. - All equipment, whether on the surface or underground, will be removed. - Proper sealing and fencing will be applied to all mine entrances. - Infrastructure associated with mining operations will be dismantled. - The area will be restored to its natural ground profile, incorporating feasible drainage solutions and re-vegetation efforts. - Any potential instances of soil contamination will be thoroughly assessed and addressed through the excavation and replacement of contaminated soil with fresh, uncontaminated soil. - The plantations that have been established will be diligently maintained. - Further details regarding post-mining land use have been provided in the earlier section discussing land use. - The necessary approvals from relevant statutory authorities will be obtained for both Progressive and Final Closure Plans. - Following reclamation efforts, ongoing surveillance and monitoring activities will be implemented.

Row 6

(11.17.1.1) Mining project ID

Select from:
☑ Project 6

(11.17.1.2) Total area rehabilitated (hectares)

18

(11.17.1.3) Area rehabilitated in the reporting year (hectares)

0

(11.17.1.4) Describe post-mining land use

CLZS

Row 7

(11.17.1.1) Mining project ID

Select from:

☑ Project 8

[Add row]

(11.18) Do you collaborate or engage in partnerships with non-governmental organizations to promote the implementation of your biodiversity-related goals and commitments?

(11.18.1) Collaborating or partnering with NGOs

Select from:

☑ Yes

(11.18.2) Comment

HZL actively collaborates with local communities and organizations such as the BAIF Institute of Sustainable Livelihood Development. Our flagship program, 'Samadhan,' is dedicated to promoting on-farm sustainable livelihoods through integrated farming systems and livestock development in 184 villages. With Samadhan, 5 Farmer Producer Organisations (FPOs) with 5000 shareholders and 2 microenterprises (Dairy unit & mineral mixture unit) are established. FPOs are maintained by the farmers, empowering livelihoods at individual and community levels. Through partnerships with NGOs, we conduct research and execute programs aimed at enhancing agricultural productivity, minimizing water usage, raising awareness about water harvesting technologies like drip irrigation, and enhancing biodiversity, among other goals.

[Fixed row]

(11.18.1) Provide details on main collaborations and/or partnerships with non-governmental organizations that were active during the reporting year.

Row 1

(11.18.1.1) Organization

BAIF Development Research Foundation

(11.18.1.2) Scope of collaboration

Select from:

☑ Company-wide

(11.18.1.4) Areas of collaborations

Select all that apply

☑ Other, please specify **:**Improvement in Agricultural yield

(11.18.1.5) Describe the nature of the collaboration

HZL actively collaborates with local communities and organizations such as the BAIF Institute of Sustainable Livelihood Development. Our flagship program, 'Samadhan,' is dedicated to promoting onfarm sustainable livelihoods through integrated farming systems and livestock development in 184 villages. With Samadhan, 5 Farmer Producer Organisations (FPOs) with 5000 shareholders and 2 microenterprises (Dairy unit & mineral mixture unit) are established. FPOs are maintained by the farmers, empowering livelihoods at individual and community levels. Through partnerships with NGOs, we conduct research and execute programs aimed at enhancing agricultural productivity, minimizing water usage, raising awareness about water harvesting technologies like drip irrigation, and enhancing biodiversity, among other goals.

(11.18.1.6) Duration (until)

Select from:

☑ No specified timeframe

[Add row]

(11.20.1) Provide relevant examples of other biodiversity-related engagement activities that happened during the reporting year.

Row 1

(11.20.1.1) Activities

Select from:

☑ Other, please specify :IUCN

(11.20.1.2) Mining project ID

Select all that apply

☑ All disclosed mining projects

(11.20.1.3) Please explain

In December 2023, we launched Rajasthan's first-ever TACO (The Animal Care Organisation) Club at Rampura Agucha Mine (RAM). The initiative aims to raise awareness and sensitivity among schoolchildren regarding animal cruelty and violence. The club will host monthly activities, exposure visits, and more, engaging students in meaningful conversations about animal welfare. By FY 2024-25, the TACO Club will be implemented in 100 government schools across Rajasthan, with plans to expand to 250-300 schools the following year. In addition, we have initiated a wildlife conservation programme at Rajpura Dariba Complex (RDC) to preserve and enhance the region's wildlife habitat while removing invasive species. This programme focuses on raising awareness in nearby communities and schools to prevent illegal poaching, and hunting, and mitigate man-animal conflict. Another vital aspect of the initiative is extending support to the forest department in wildlife monitoring, rescue, and rehabilitation. Our Biodiversity Policy underscores our commitment to biodiversity and sets expectations for improving our practices. We conduct regular assessments of our biodiversity impact, ecosystem services, and dependencies on nature. Each of our operations follows a unique Biodiversity Management Plan (BMP), which guides the company in avoiding, minimizing, and offsetting biodiversity risks.

Row 2

(11.20.1.1) Activities

Select from:

☑ Engaging with local communities

(11.20.1.2) Mining project ID

Select all that apply

☑ Project 3

(11.20.1.3) Please explain

Schedule-1 Conservation plan at Sindesar Khurd Mine in discussion with local administration and nearby community We endeavour to minimise the impact of upscale mining activities, maintaining pollutant levels within permissible limits in the surrounding environment and conserving wildlife populations in their habitats. In sync with this vision, our Sindesar Khurd Mine conducted a study and made conservation plans for 6 schedules -1 species (3 reptiles, 2 avifauna, 1 mammal species). These avifaunal, reptilian and mammalian species and their corresponding habitats require stringent protection and management, for which we drew up a comprehensive Wildlife Conservation Plan. The species-specific plans primarily focus on habitat conservation and generating awareness on biodiversity, its importance, activities that threaten them and conservation actions among the industrial staff and the buffer area population. With an aim to create a clean, healthy and well-protected environment where biodiversity is valued, conserved, restored and wisely used we have rolled out Zinc Eco Buddies initiative to empower people to contribute towards creating a better green world. Through this initiative People can take a green pledge through a virtual drive and HZL will plant an actual tree on their behalf. HZL will ensure to plant native species and drought tolerant tress to drive ahead their nature conservation journey. Participants will also be acknowledged and appreciated for their efforts.
[Add row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

☑ Water

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Base year emissions

☑ Emissions breakdown by country/area

☑ Other data point in module 7, please specify :GHG Emission Intensity (GHG emissions/tonnes of metal produced) GHG Emission Reduction (in TCO2e) Energy Intensity (Total energy consumption/tonnes of metal produced)

(13.1.1.3) Verification/assurance standard

General standards

☑ ISAE 3000

(13.1.1.4) Further details of the third-party verification/assurance process

A third-party assurance provider conducted our engagement by the International Standard on Assurance Engagements ('ISAE') 3000 (Revised), "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

Signed Assurance Letter - CDP - HZL.pdf
[Add row]

(13.2) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

	Additional information	Attachment (optional)
	GHG Intensity (Scope 12)	*Signed Assurance Letter - CDP - HZL.pdf*

[Fixed row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

CEO

(13.3.2) Corresponding job category

Select from:
☑ Chief Executive Officer (CEO)
[Fixed row]

(13.4) Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Select from:
☑ Yes, CDP may share our Disclosure Submission Lead contact details with the Pacific Institute