Welcome to your CDP Water Security Questionnaire 2023

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

Hindustan Zinc Limited (HZL) is one of the largest mining and metal production company in India and the second largest zinc-lead miner globally. It was established in 1966 and is headquartered in Udaipur, Rajasthan, India. The company boasts a significant Reserves and Resources (R&R) base of 460.1 million metric tons (MT) with an average zinc-lead grade of 7.18%. HZL's fully integrated zinc operations currently hold an impressive 80% market share. The company stands as the fifth largest silver producer globally, with an annual production capacity of 800 MT. HZL operates as a subsidiary of Vedanta Limited, with the latter owning a 64.9% stake, while the GoI retains a 29.5% stake.

HZL has an ore production capacity of 16.74 million MT per annum and is actively expanding its mining capabilities through five ongoing major underground mining operations. The silver bullion produced at HZL's Pantnagar unit boasts a remarkable purity of 99.9% and is listed on the LBMA Good Delivery List (LGD). To support its mining and smelting processes and achieve its vision of being the lowest-cost producer, HZL relies on its Captive Power Plants (CPPs), which provide low-cost and reliable power. Moreover, Hindustan Zinc is deeply committed to the Sustainable Development Goals (SDGs), which focuses on ensuring the sustainable development and management of resources for all.

Aligned with our commitment to achieving SDG goal 6, we are directing our efforts towards two primary focus areas: reducing dependency on fresh water and improving water efficiency. Our ambitious target is to attain a Water Positive status five times over, building on our current water-positive ratio of 2.41 times. Concurrently, we are firmly committed to reducing our freshwater withdrawal by 25% by the year 2025, relative to the base-year 2020. This reduction objective reflects our responsible approach to water management and signifies our drive to utilize water resources more effectively.

To accomplish these objectives, we have introduced comprehensive water management programs throughout our operations. Embracing cutting-edge technologies and practices, we prioritize water efficiency by incorporating water recycling measures, optimizing water consumption in our processes, investing in water-saving equipment and maintaining Zero discharge across locations.

In addition, we firmly believe in the strength of collaboration, actively engaging with stakeholders, including local communities, governmental bodies, and non-profit organizations,

to promote water stewardship programs. Recognizing the equal importance of water to our business, we have made the following commitments and implemented initiatives in this regard:
1. Committed to adopt and implement the strategic framework as outlined by the UN Global Compact Water Action Platform (CEO Water Mandate).
2. Dedicated to constructing rainwater harvesting structures in nearby villages to ensure water self-sufficiency.
3.Initiated project of Zero Liquid Discharge at RAM and ZM and rainwater harvesting project at RAM with ground water augmentation of 87 lacs m3.
4.Commissioned Dry tailing plant at Zawar. This plant recirculates over 80% of the process water from tailings. A dry tailing plant at RDM is in final stages of commissioning.
5.Commissioned Zero Liquid Discharge plant at our Debari and Dariba smelter.
6.Celebrated World Water Day on 22nd March and conducted lake cleaning drive at Fatehsagar lake.
7. Provided clean drinking water to the community through RO/ATMs established across 4 locations & 3 districts in Rajasthan.
Our approach to water management is reinforced by policies and standards implemented across all levels, from corporate to site-specific. The Sustainability & ESG Committee, established at the Board level, takes charge of formulating the Sustainability Strategy, as well as set long-term goals and targets related to water management. Given our operations are in water-stressed regions, we acknowledge the critical importance of efficient water usage and adopt a collaborative approach to manage it as a shared resource, involving relevant stakeholders. During the FY 2023, HZL received several accolades and recognitions related to its efforts in water management, which are listed below:
1. Ranked 3rd Globally in Metal & Mining sector and 1st in Asia Pacific in S&P Corporate Sustainability Assessment, 2022 (DJSI)
2. Won the 'Industry Leadership Award - Base, Precious and Specialty Metals' and 'Corporate Social Responsibility' at the prestigious S&P Global Platts Global Metal Awards.
4. Amongst the top 5% of most sustainable organizations by S&P, included in Sustainability Yearbook 2023.
5. Four mines received 5 Star Rated Mines' award by the Ministry of Mines, Govt. of India.
6. Scored 'A' in CDP Climate Change and 'A-'in CDP Water Security

W-MM0.1a/W-CO0.1a

(W-MM0.1a/W-CO0.1a) Which activities in the metals and mining and coal sectors does your organization engage in?

Activity	Details of activity
Mining	Zinc Lead
Processing	Silver Zinc Lead

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	April 1, 2022	March 31, 2023

W0.3

(W0.3) Select the countries/areas in which you operate.

India

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

INR

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Marketing offices	We have excluded marketing offices where we consider our water footprint to be 0.34% and risks to be very small and they do not have a direct association with an operation

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	INE267A01025

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	We use good quality of freshwater for our direct operations primarily required for drilling, mining & beneficiation, smelting, refining process, dust suppression, sanitation, hygiene and cooling activities etc. Good quality freshwater is “Vital” for our operation as good quality water results in more metal recovery in the beneficiation plants whereas bad quality water results in high O&M costs because of presence of high chloride content in water that results in corrosion. Quality of water also directly influences the treatment costs i.e.; Use of better-quality water leads to lower treatment cost and vice versa. Good quality freshwater is also required for drinking purposes in our offices and at sites. HZL operations rely on indirect freshwater use for building strong relations with the community. An “important” value is assigned as water is a shared resource and influences our social license to operate. Freshwater is consumed for meeting the domestic, sanitation & agriculture need of community residing nearby. We are implementing projects to enhance the water availability through rainwater harvesting, in and around our operations. Future: Future dependency on freshwater in direct operations is expected to reduce as we implement initiatives to meet our reduction targets. Our target is to reduce our water withdrawal by 25% by 2025.To achieve this HZL has adopted a multipronged approach to manage water resources and consumption by implementing technologies such as by Multiple Effective evaporator/Mechanical Vapor Recompression (MVR) at all Smelters in place of conventional evaporators which in turn will

			strengthen the Zero Liquid Discharge with improved water recovery. Example: In FY 2022-23 we undertook recycling of RO reject water in ZLD plants leading to increase in recycling rate of 42%. We also undertook rainwater harvesting to reduce freshwater consumption at Pant Nagar metal plant which resulted in 14228m3 of freshwater savings.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Not very important	We use recycled and produced water primarily for dust suppression, power generation, and ore processing, etc. HZL's operations are in water stressed regions, accentuating the importance of relying on lower quality water. Thus, a "vital" value was assigned for direct use of recycled and brackish water, as this reduces our need for good quality freshwater and is vital to maintain water security at our operations. Increased water conservation, demand management and use of third-party grey water as opposed to fresh or potable water use is key to our strategy. The indirect use of recycled, brackish and/or produced water has been rated as "not so important", as communities surrounding our operations only use freshwater for meeting their domestic, agricultural and sanitation needs. Future: As per the water risk physical climate risk assessment study, 100% of our operations are likely to get impacted by the unavailability of water- both in quantity & quality in 2030 & 2050 scenario time frames. Hence, we are taking measures to increase our dependency on recycled water in direct operations. Example: We have established Udaipur STP with a capacity to treat 60 MLD sewage and ~40 MLD treated water is being utilized at our operational units as alternative water resource instead of fresh water. This year overall consumption from STP is 32%.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain

Water withdrawals – total volumes	100%	Daily	Water meters are installed at the point of withdrawal source. Direct monitoring of data is done on a daily basis. On Regular basis flow meter calibration is being conducted. In addition, HZL conducts internal and external audits such as ISO14001 surveillance audit, Hydrogeological studies for surface and UG. Internal audit –conducted semi-annually by our water managers covers the water withdrawal aspect. We conduct external water assurance annually on GRI standards, external disclosures and VSAP	Our response covers all operations (i.e.,6 CPPs, 5 mines,3 smelters & 1 refinery) owned by HZL (100%). Total water withdrawals from each source (rainwater, groundwater, fresh surface water, STP water and produced water) are measured, tested & treated at regular frequency by NABL accredited Laboratories to ensure water standard requirements are met. Data monitoring helps us to understand current state of water availability and develop appropriate strategies for minimizing water withdrawal in response to these conditions. Our total water withdrawal estimates include quantity that we withdraw for use by our community and township though they are not

				included in the operational boundary. HZL conducts environmental assessments such as hydrogeological studies to assess potential impacts. We conduct water risk assessment every annuallyto analyze the level of water stress in basin. The performance is reported to the Executive Sustainability Committee which is chaired by the CEO monthly.
Water withdrawals – volumes by source	100%	Daily	Water meters are installed at all points of source to capture accurate water withdrawal quantities. Direct monitoring of data is done on a daily basis. For assessing the effectiveness of flow meters calibration is done. HZL conducts internal and external audits-ISO14001 surveillance audit, hydrogeological studies for surface and UG. Internal audit–conducted semi-annually by	Our response covers all operations (i.e.,6 CPPs, 5 mines,3 smelters & 1 refinery) owned by HZL (100%). Total water withdrawals from each source (rainwater, groundwater, fresh surface water, STP water and produced water) are measured, tested & treated at regular frequency by NABL accredited

			our water managers covers the water withdrawal aspect. We conduct annual external water assurance on GRI standards and VSAP	laboratories to ensure water standard requirements are met. Data monitoring helps us to understand current state of water availability and develop appropriate strategies for minimizing water withdrawal in response to these conditions. Our total water withdrawal estimates include quantity that we withdraw for use by our community and township though they are not included in the operational boundary. HZL conducts environmental assessments such as hydrogeological studies to assess potential impacts. We conduct water risk assessment every annually to analyze the level of water stress in basin. The performance is reported to the Executive Sustainability

				Committee which is chaired by the CEO monthly.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	100%	Daily	Water meters are installed at all points of source to capture accurate entrained water withdrawal quantities. Direct monitoring of data is done on a daily basis. HZL conducts internal and external audits-ISO14001 surveillance audit, hydrogeological studies for surface and UG. Internal audit–conducted semi-annually by our water managers covers the water withdrawal aspect. We conduct annual external water assurance on GRI standards, external disclosures and VSAP.	Our response covers 100% mining operations (i.e.5 mines) owned by HZL. Total entrained water withdrawals are measured, tested & treated at regular frequency by NABL accredited Laboratories to ensure water standard requirements are met. Data monitoring which is conducted daily helps us to develop appropriate strategies for management of water withdrawal in response to these conditions. HZL conducts Hydrogeological study to assess potential impacts. We conduct water risk assessment every annually to analyze the level of water stress in basin. Regular groundwater monitoring is being done by

				Piezometer and wells outside and inside the lease area, water level and water quality report quarterly submitted to Central Ground Water Authority and State pollution control board. The performance is also reported to the Executive Sustainability Committee which is chaired by the CEO monthly.
Water withdrawals quality	100%	Daily	HZL tests the water withdrawal quality on the following parameters- conductivity, fluoride, TDS, PH etc. In-house NABL laboratories established to monitor quality of water, daily through direct monitoring. Water quality is monitored by third party on monthly basis. Analyzers are installed for key parameters and calibrated.	Our response covers all operations (i.e.,6 CPPs, 5 mines,3 smelters & 1 refinery) owned by HZL (100%). Total water withdrawals and its quality from each source (rainwater, groundwater, fresh surface water, STP water and produced water) are measured, tested & treated at regular frequency by NABL-National Accreditation Board for

				Testing and Calibration Laboratories) accredited laboratories to ensure water standard requirements are met. This is to ensure that the water quality meets the standards for domestic use and operational requirements. HZL analyses and tests the water quality, conductivity, Fluoride, TDS, PH and other quality parameters daily. The performance is reported to the Executive Sustainability Committee which is chaired by the CEO monthly.
Water discharges – total volumes	100%	Continuously	To ensure Zero Liquid Discharge (ZLD) status, continuous /real time monitoring done with the help of flow meters and Pan-tilt-zoom (PTZ). Cameras which are installed at the plant outlets for all smelters and captive power	Our response covers all operations (i.e., CPPs, mines and smelters) owned by HZL (100%). Our Consent to Operate under section 21(4) of The Water (Prevention and Control of

			plants which are connected with server of SPCB and CPCB. Direct monitoring of data is done on a daily basis.	Pollution) Act, 1974 dependent upon our ability to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. None of our processing plants discharge liquid effluent to surface water, or

				groundwater, eliminating the environmental pollution. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD.
Water discharges – volumes by destination	100%	Continuously	To ensure Zero Liquid Discharge status, continuous monitoring systems done with the help of flow meters and Pan-tilt-zoom (PTZ). Cameras are installed at the plant outlets for all smelters and captive power plants and are connected with server of SPCB and CPCB. Direct monitoring of data is done. Water Audit- The sample of treated effluent are regularly collected and analyzed as per IS and CPCB approved procedures. Ground water monitoring is done on quarterly basis for piezo wells in and outside.	Our response covers all operations (i.e., CPPs, mines and smelters) owned by HZL (100%). Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 dependent upon our ability to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple

				Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. None of our processing plants discharge liquid effluent to surface water, or groundwater, eliminating the environmental pollution. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD.
Water discharges – volumes by treatment method	100%	Continuously	To ensure Zero Liquid Discharge status, continuous monitoring systems done with the help of flow meters and Pan-tilt-zoom (PTZ). Cameras are installed at the plant	Our response covers all operations (i.e., CPPs, mines and smelters) owned by HZL (100%). Our Consent to Operate under

			outlets for all smelters and captive power plants and are connected with server of SPCB and CPCB. Direct monitoring of data is done. Water Audit- The sample of treated effluent are regularly collected and analyzed as per IS and CPCB approved procedures. Ground water monitoring is done on quarterly basis for piezo wells in and outside.	section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 dependent upon our ability to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. None of our

				processing plants discharge liquid effluent to surface water, or groundwater, eliminating the environmental pollution. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD.
Water discharge quality – by standard effluent parameters	100%	Continuously	To ensure Zero Liquid Discharge status, continuous monitoring systems done with the help of flow meters and Pan-tilt-zoom (PTZ). Cameras are installed at the plant outlets for all smelters and captive power plants and are connected with server of SPCB and CPCB. Direct monitoring of data is done. Water Audit- The sample of treated effluent are regularly collected and analyzed as per IS and CPCB approved procedures. Standard effluent parameters are tested daily: PH,	Our response covers all operations (i.e., CPPs, mines and smelters) owned by HZL (100%). Our Consent to Operate under section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 dependent upon our ability to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing

			TDS, COD, BOD etc.	treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD. We have internal NABL approved QA labs to monitor water discharge quality for all effluent parameters.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides,	100%	Continuously	To ensure Zero Liquid Discharge status, continuous monitoring systems done with the help of flow meters and Pan-tilt-zoom (PTZ).	section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 dependent upon our ability

and/or other priority substances)			Cameras are installed at the plant outlets for all smelters and captive power plants and are connected with server of SPCB and CPCB. Direct monitoring of data is done. Water Audit- The sample of treated effluent are regularly collected and analyzed as per IS and CPCB approved procedures. Standard effluent parameters are tested daily: PH, TDS, COD, BOD etc.	to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD. We have

				internal NABL approved QA labs to monitor water discharge quality for all effluent parameters.
Water discharge quality – temperature	100%	Continuously	To ensure Zero Liquid Discharge (ZLD) status, continuous /real time monitoring is done. Direct monitoring of data is done. We track water which is recycled after undergoing treatment at onsite ETP and 2 stage RO system. Standard effluent parameters are tested daily: temperature, PH,TDS,COD,BOD etc.	section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 dependent upon our ability to maintain zero discharge status from the premises. To comply with these requirements, we conduct external and internal audits. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available

				at site to avoid run off discharge into the nearby water bodies during rainy season. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD. We have internal NABL approved QA labs to monitor water discharge quality for all effluent parameters.
Water consumption – total volume	100%	Daily	We monitor and measure consumption levels at each operation to track our water performance targets. Direct monitoring of data is done on a daily basis. Water consumption from each source is measured daily. Mines: Surface and ground water-metered daily, electromagnetic flow meter are installed for input & output measuring, digital water level recorders are in place. Smelters: Source water-metered daily,	Our response cover 100% operations owned by HZL (6 CPPs,5 mines,1 refinery & 3 smelters). HZL sites use water management standard for managing water. Water consumption data only accounts for consumption for operational process excluding water consumed by township and communities. Water withdrawal quantity includes

			tested daily, flow meter is installed for input & output measuring.	water that we withdraw to supply to our local community, outside fence. That is why our water balance doesn't align with definition of Water Withdrawal-Water Discharge= Water Consumption. It is important for us to integrate water management system in decision-making processes, avoid & minimize probable impact on water resources. To ensure this total water consumption data is recorded daily by a metered monitoring system. Our sites have water resource management plan which is updated annually based on actual water consumption. Consumption is recorded for compliance & transparent

				disclosure. We conduct annual external water audits including ISO14001, GRI assurance & VSAP.
Water recycled/reused	100%	Daily	Treated water is reused and the total volumes of recycled and reused water are recorded and monitored for all our operations. Direct monitoring of data is done on a daily basis. Water is recycled after undergoing treatment at onsite ETP and a two stage RO system. The sample of treated effluent are regularly collected and analyzed as per IS and CPCB approved procedures and treated effluent confirms the limit prescribed by the board, this water is recycled and Zero discharge is ensured.	Our response covers all operations (i.e., 6 CPPs, 5 mines, 1 refinery and 3 smelters) owned by HZL (100%). Water conservation is a collective responsibility and a non-negotiable aspect for sustainable development at HZL. Monitoring is done to ensure there is a specified process in place for recycle/reuse of water at all our sites. Water is recycled after undergoing treatment at onsite ETP and a two stage RO system. The treated effluent conforms to the prescribed standards and is reused in the process. Further, Sewage treatment plant

				based on Fluidized Aerobic Bed Reactors (FAB) technology has been provided for all townships. In FY 2023, we have also commissioned 2 RO ZLD plant at Dariba and Debari to recycle/reuse water. Other major initiatives like recycling of tailing water, dry tailing plant and deep cone thickener initiatives have been implemented at our mines and smelters to ensure maximum recycling of water.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Monthly	Potable water quality is monitored on daily basis for key parameters. This is also monitored by third party as per IS:10500. Checklist has been prepared to inspect the hygiene conditions at water coolers/ drinking water facilities and rest rooms.	Our response covers all operations (i.e.,6 CPPs, 5 mines, 1 refinery and 3 smelters) owned by HZL (100%). HZL implements WASH procedure to provide a fully-functioning, safely managed WASH services (washroom,

				drinking water, hand wash facilities etc.) to all workers at each of its operations (100%). Quality of potable water is monitored daily to ensuring that employees have access to good quality drinking water, water for cooking, cleaning and sanitation. This is monitored by third party as per IS:10500. Inspection checklist is put at water coolers/ drinking water facilities and rest rooms. Vedanta signed the WBCSD Pledge for Access to safe Water, Sanitation and Hygiene (WASH) at the workplace in October 2014. The company is implementing the WASH Pledge in all of its sites and is also assisting the WBCSD in raising awareness on

				the issue of WASH at the workplace. The company's leadership demonstrates their commitment through internal and external communication.

W1.2b

(W1.2b) 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?

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	26,667.32	About the same	Increase/decrease in business activity	Much lower	Increase/decrease in efficiency	In FY 2022-23, we saw slight increase of 1.40% in total water withdrawal due to increase in our production by 6.61% as well as due to extensive exploration in new areas having inherent ground water intersection. In future (5 years), we expect

						withdrawals to decrease as we are implementing multiple water efficiency measures such as installing dry tailing plants in all three TSF, commissioning ZLD plants to improve recycling of water, use treated sewage water as an alternative source and implementing projects such as leakage arrestors etc. We intend to reduce our dependency on Captive Power Plant which utilizes significant volume of water. This will help us to reduce water withdrawal. Rationale: Measuring previous year performance allows us to understand

						trends, enabling us to develop thorough understanding of business performance, water management practices and identify areas of improvement. Future forecast provides us insights to inform decision-making processes, drive operational efficiency & contribute to responsible & sustainable use of water resources and meet our water related targets for 2025. Method: The water withdrawals is calculated based on an aggregation of local measurements. Total water withdrawal includes water

						withdrawn for distribution to community, distribution in township & pipeline losses & wastewater sourced from Udaipur STP. We account for these numbers in our total withdrawal, since water after being withdrawn from source is stored inside our fence & then supplied via water tankers to stakeholders. For this reason, our water balance doesn't align with definition of Water Withdrawal-Water Discharge= Water Consumption . 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)
Total discharges	0	About the same	Maximum potential volume reduction already achieved	About the same	Maximum potential volume reduction already achieved	HZL's performance is 'about the same' as compared to previous year. 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 effluent shall be

						discharged outside our premises. Hence, our discharge is 0. We expect total discharges to remain same (zero) in the future (5 years) as well. Rationale for measurement: Measuring our previous year performance helps us to understand our compliance with regulatory requirements. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent discharge into surface water, or groundwater eliminating the environmental pollution. We are committed to Zero Liquid Discharge

						and have met the maximum 'Potential Volume Reduction' already. Method of measurement: The water withdrawals is calculated based on an aggregation of local measurements. Threshold Definition: Lower (Reduction within 2-5% compared to previous year) Much Lower (>= 5% compared to previous year) About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher (>=5% compared to

						previous year).
Total consumption	25,457.58	Higher	Increase/decrease in business activity	Lower	Increase/decrease in efficiency	In FY 2022-23, we saw a significant increase of 3.06 % in total water consumption due to increase in our production by 6.61% as well as due to extensive exploration in new areas having inherent ground water intersection. In future (5 years), we expect consumption to decrease due to implementation of water efficiency measures- establish dry tailing plants in all three TSF, implement ZLD plants for water recycling, explore treated sewage water as an alternative source &

						implement water-saving projects such as leakage arrestors etc. We intend to reduce our dependency on CPP, a process which utilizes high volume of water withdrawal. This will also help is to reduce our water consumption. Rationale: Measuring previous year performance allows us to obtain valuable insights into business activity of HZL, enabling us to develop thorough comprehensi on of our business performance & our water management practices and identify areas that require improvement. Future forecast

						provides us insights to inform decision-making processes, drive operational efficiency & contribute to responsible & sustainable use of water resources and meet our water related targets for 2025. Method of measurement: The water withdrawals is calculated based on an aggregation of company-wide measurements. Water consumption numbers consider water consumed only for running operations and some sanitation needs within the premise, water withdrawal

						quantity includes water that we withdraw to supply to local community outside the fence. For this reason, our water balance doesn't align with definition of Water Withdrawal-Water Discharge= Water Consumption . Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year) About the same= +-0-2% compared to previous year, Higher (Increase within 2-5% compared to previous year); Much Higher

						(>=5% compared to previous year).

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	100%	About the same	Increase/decrease in business activity	Lower	Increase/decrease in efficiency	WRI Aqueduct WWF Water Risk Filter Other, please specify Water Monetiser	HZL uses WRI Aqueduct, Water Risk Atlas tool for Physical risk assessment to define water stressed areas in locations, with 'Very high' and 'high' basin risk score were considered to report the areas. The assessment is conducted annually. Based on the results

								of our assessment, we found that we withdraw 100% of water from areas with extremely highwater stress. Our response covers all operations (i.e.,6 CPPs, 5 mines and 3 smelters) owned by HZL (100%). In FY2022-23, we saw slight increase of 1.40% in total water withdrawal due to increase in our production by 6.61% as well as due to extensive exploration in new areas having inherent ground water intersection.

								Method of measurement- The water withdrawals are calculated based on an aggregation of local measurements. In future, we expect withdrawals to decrease as we are implementing multiple water efficiency measures such as installing dry tailing plants in all three TSF commissioning ZLD plants to improve recycling of water & implement water-saving projects such as leakage arrestors etc. We also intend to reduce

								our dependency on CPP process which utilizes significant volume of water. We are also exploring possibility of using municipal sewage water to reduce our dependency on freshwater. Total water withdrawal includes water withdrawn for distribution to community, distribution in township & pipeline losses & wastewater sourced from Udaipur STP. We account for these numbers in our total withdrawal, since water after being withdrawn

								from source is stored inside our fence & then supplied via water tankers to stakeholders. For this reason, our water balance doesn't align with definition of Water Withdrawal-Water Discharge= Water Consumption. Rationale: Measuring previous year performance allows us to obtain valuable insights into business activity of HZL, enabling us to develop thorough comprehension of our business performance & our water manageme

								nt practices and identify areas that require improvement. Future forecast provides us insights to inform decision-making processes, drive operational efficiency & contribute to responsible & sustainable use of water resources and meet our water related targets for 2025. Threshold Definition: 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)

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	14,226.15	Higher	Increase/decrease in efficiency	Fresh surface water & rainwater meet 63.2% of our need. We only have 2 captive dams at CLZS & ZM this makes withdrawal from surface water sources relevant. Withdrawal figures include community & township water. Water withdrawal increased by 4% due to increase in production by 6.61% & withdrawal from entrained water in mining operation due to extensive exploration in new

					areas. In future, we expect withdrawal to decrease as we intend to reduce our dependency on CPP, install dry tailing plant, implement ZLD plants etc. Measuring performance allows us to obtain insights on business activity and water management practices and identify areas that require improvement. Calculation is based on an aggregation of local measurements. Threshold: Lower (Reduction within 2-5% compared to previous year) Much Lower (>= 5% compared to previous year) About the same=+- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher (>=5% compared to previous year)
Brackish surface water/Seawater	Not relevant				This water parameter is not relevant because no brackish surface water/seawater volumes are withdrawn by any of

					HZL's operations. This trend is expected to continue in the future.
Groundwater – renewable	Relevant	2,625.7	Much higher	Increase/decrease in efficiency	Groundwater is crucial at RAM & PMP due to absence of alternative surface water sources or nearby captive source of water. Our Kayad Mines do not have beneficiation plant & ore produced at KM is treated at RAM, making RAM strategic location for us. Ground water withdrawal saw 9% increase from last year data due to increase in our production by 6.61%. We monitor data for Financial Planning, Business Strategy of water related issues & gauge water efficiency. Future dependency on groundwater in direct operations will reduce as we implement initiatives to meet our 2025 reduction targets. Ex. We installed rainwater harvesting at RAM, led to 87 lacs m3 ground water augmentation. Calculation is based

					on an aggregation of local measurements. 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)
Groundwater – non-renewable	Not relevant				This water parameter is not relevant because no non-renewable groundwater volumes are withdrawn by any of HZL's operations. This trend is expected to continue in the future as it also is against our water policy.
Produced/Entrained water	Relevant	1,244.8	Much higher	Increase/decrease in business activity	Dewatering of mine intersection water is essential for our underground operations. HZL measures and monitors entrained water quarterly through third-party assessment. Increase in produced water from last year

					is 94.76% due to extensive exploration in new areas having inherent ground water intersection and 100% of this water is used in mining operations. Entrained water will increase in future as we go for expansion and more mine exploration. We have implemented measures to recycle 100% of the water. Rationale: We monitor data for Financial Planning, Business Strategy & Risk Management which helps in making informed business-related decisions. Calculation is based on an aggregation of local measurements. Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year) About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much

					Higher (>=5% compared to previous year).
Third party sources	Relevant	8,570.6	Much lower	Increase/decrease in efficiency	Third party water (includes water supplied by municipality and wastewater utilized by the company from other sources) is relevant for our operations as we depend on wastewater of other industries to reduce our dependency on freshwater. Treated Water from Udaipur STP makes up to 32.13% of total water withdrawal. Third party water decreased by 10% as compared to last year as we sourced water from other sources, but in future it will increase as we intend to source more water to reduce our dependency on freshwater. Rationale: We monitor data for Financial Planning, Business Strategy which provide business insights on water efficiency. Method of measurement: Calculation is based on an aggregation of

					local measurements. 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 previous year); Much Higher (>=5% compared previous year).

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Please explain
Fresh surface water	Not relevant	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 by these requirements, we strictly monitor our water balance parameters. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent into surface water, groundwater, or third parties, completely eliminating the environmental pollution associated with the water discharge. To ensure to maintain this process, real time monitoring systems along with flow meters and PTZ camera are installed at the plant outlets for all smelters and captive power plants. All measures are in place to ensure that no effluent is discharged out of the premise. We expect total discharges to remain zero in the future as well.
Brackish surface water/seawater	Not relevant	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 by these requirements, we strictly monitor our water balance parameters. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent into surface water, groundwater, or third parties, completely eliminating the environmental pollution associated with the water discharge. To ensure to maintain this process, real time

		monitoring systems along with flow meters and PTZ camera are installed at the plant outlets for all smelters and captive power plants. All measures are in place to ensure that no effluent is discharged out of the premise. We expect total discharges to remain zero in the future as well.
Groundwater	Not relevant	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 by these requirements, we strictly monitor our water balance parameters. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent into surface water, groundwater, or third parties, completely eliminating the environmental pollution associated with the water discharge. To ensure to maintain this process, real time monitoring systems along with flow meters and PTZ camera are installed at the plant outlets for all smelters and captive power plants. All measures are in place to ensure that no effluent is discharged out of the premise. We expect total discharges to remain zero in the future as well.
Third-party destinations	Not relevant	Our Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974is dependent upon our ability to maintain zero discharge status from the premises, meaning no trade effluent shall be discharged outside operations. To comply by these requirements, we strictly monitor our water balance parameters. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent into surface water, groundwater, or third parties, completely eliminating the environmental pollution associated with the water discharge. To ensure to maintain this process, real time monitoring systems along with flow meters and PTZ camera are installed at the plant outlets for all smelters and captive power plants. All measures are in place to ensure that no effluent is discharged out of the premise. We expect total discharges to remain zero in the future as well.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous	Primary reason for comparison with previous	% of your sites/facilities/operations this volume applies to	Please explain

			reporting year	reporting year		
Tertiary treatment	Relevant	0	About the same	Maximum potential volume reduction already achieved	100%	We have an integrated water treatment system that treats process water originating from smelting operations. The effluent is pumped to a cascade tower and reaction tanks to precipitate heavy metals. Effluents from the Hydro plant, Ausmelt and Pyro plant are the main source of fluoride ion with high suspended solids contents. Solids from effluent - oxides of lead and zinc are settled in thickener, Fluoride,

						gypsum and calcium fluoride are filtered. Effluent of cathode wash water, anode wash water & magnesium bleed are segregated. The effluent and precipitated solids are pumped to SRT. ETP treated water comes into reaction tank in which soda ash dosing is given to reduce the hardness. Ultra-filtration membranes help in removing salts of Calcium & Magnesium . After pre-treatment the feed enters into the RO-1 & RO-2. Reject is collected into RO

						reject tank. The required final treated water quality determines the chemical storage and feed equipment needed for coagulation, pH and flocculation. ZLD System installed is a fully integrated automated system incorporating a mechanical vapor compression seeded brine concentrator and a mechanical vapor compressor driven forced circulation crystallizer system. Since ours is an integrated system, we don't monitor

						different input and output values at each filtration stage. There was no effluent/water that has been discharged from our premises. We monitor data to ensure regulatory compliance. We have a quarterly third-party assessment to monitor our water discharged from the operations. In future we anticipate more effluents to be treated as the production will rise but will ensure no discharge outside our premises. Threshold Definition: Lower

						(Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year) About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher (>=5% compared to previous year)
Secondary treatment	Not relevant					We have an integrated water treatment system that treats process water originating from smelting operations. Therefore, we do not have a separate primary treatment. As all our operations are aligned

						with Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974no water is discharged outside our operations. There was no effluent/water that has been discharged from our premises. We monitor data to ensure regulatory compliance. We have a quarterly third-party assessment to monitor our water discharged from the operations. In future we anticipate more effluents to be treated as the production will rise but will ensure

						no discharge outside our premises. Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year)About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher(>=5 % compared to previous year)
Primary treatment only	Not relevant					We have an integrated water treatment system that treats process water originating from smelting operations. Therefore,

						we do not have a separate primary treatment. As all our operations are aligned with Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 no water is discharged outside our operations. There was no effluent/water that has been discharged from our premises. We monitor data to ensure regulatory compliance. We have a quarterly third-party assessment to monitor our water discharged from the operations. In future we

						anticipate more effluents to be treated as the production will rise but will ensure no discharge outside our premises. Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year) About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher (>=5% compared to previous year)
Discharge to the natural environme	Relevant					Our Consent to Operate under section

nt without treatment						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 effluent shall be discharged outside our premises. To comply by these requirements, we strictly monitor our water balance parameters. All our sites are Zero Liquid Discharge (ZLD) plants with no liquid effluent discharge into surface water or groundwater, eliminating the environmen

						tal pollution. We are committed to ZLD and have met the maximum potential volume reduction already achieved and expect total discharges to remain zero in the future as well. We monitor data to ensure regulatory compliance. We have a quarterly third-party assessment to monitor our water discharged from the operations. Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared

						to previous year) About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher (>=5% compared to previous year)
Discharge to a third party without treatment	Not relevant					As all our operations are aligned with Consent to Operate under section 21(4), of The Water (Prevention and Control of Pollution) Act, 1974 no water is discharged outside our operations. There was no effluent/water that has been discharged from our premises. We monitor data to ensure

						regulatory compliance. We have a quarterly third-party assessment to monitor our water discharged from the operations. Threshold Definition: Lower (Reduction within 2-5% compared to previous year); Much Lower (>= 5% compared to previous year)About the same= +- 0-2% compared to previous year Higher (Increase within 2-5% compared to previous year); Much Higher(>=5 % compared to previous year)
Other	Not relevant					

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	Please explain
Row 1	0	Nitrates Phosphates	Our response covers all operations owned by HZL (100%). The term "operations" refers to all HZLs' CPPs, mines and smelters. Monitoring & Measurement- The 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. We also conduct a quarterly third-party assessment of our sites to ensure the proper management of controls. We track the process water which is reused after undergoing treatment at onsite ETP & two stage RO system. Multiple Effective Evaporator & Mechanical Vapour Recompression have been provided to strengthen ZLD. Storm water management with capacity of storm water pond as 345,000 cum is available at site to avoid run off discharge into the nearby water bodies during rainy season. PTZ camera and online flow meters have been installed at discharge outlet to monitor compliance with ZLD. We have internal NABL approved QA labs to monitor water discharge quality for all effluent parameters.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	340,978,600,000	26,667.32	12,786,384.2335863	HZL has a target to be 5 times water positive by 2025 and to reduce freshwater withdrawal by 25% by 2025 from base year 2020. We are at 2.41times water positive certified

				company. We anticipate total water withdrawal efficiency to increase in future as we are integrating water reduction initiatives in our operations with our increasing production. We are implementing water efficiency initiatives at RAM and ZM and rainwater harvesting project at RAM with ground water augmentation of 87 lacs m3.

W-MM1.3/W-CO1.3

(W-MM1.3/W-CO1.3) Do you calculate water intensity information for your metals and mining activities?

Yes

W-MM1.3a/W-CO1.3a

(W-MM1.3a/W-CO1.3a) For your top 5 products by revenue, provide the following intensity information associated with your metals and mining activities.

Product name	Numerator: Water aspect	Denominator	Comparison with previous reporting year	Please explain
Zinc	Total water consumption	Ton of final product	Lower	In the pyro-metallurgical process, ore concentrate, is processed to yield lead, zinc and silver metals. Since the ore processing happens together, it is difficult for us to segregate water consumed for these products & hence we report our water consumption as water consumed for production of zinc-this includes water consumed for production of lead and silver as well. A.Production in FY 21-22= 776000 MT (80.19%) of Zinc, 191000 MT (19.73%) of Lead and 647 (0.06%) MT of Silver from a composite zinc ore B.Total Water consumption per ton of final product in FY 21-22= 25.52 m3/ Metric tonne of metal produced C.Production in FY 22-23 = 820900 MT of Zinc (79.58%), 210700 MT (20.42%) of Lead and 731.6 (0.07%) MT of Silver D.Total Water consumption per ton of final product in FY 22-23= 24.67 m3/ Metric

				tonne of metal produced Water intensity has decreased by 3.3 % compared to previous year due to integration of water efficiency initiatives in our operations in spite of increase in production by 6.61%. We define lower/higher as any change that is between 2- 5% and hence we have selected lower. We have implemented several initiatives to reduce our dependence on freshwater such as recycling from TSF, operating dry tailing plant, installation of ETP, RO & MEE process. We have Water management strategy in place & have taken up water target to reduce water use volumes & this metric is used to monitor progress towards achieving the target. Water use intensity metric is used to track our performance & the insights are used to inform our decision-making processes, drive operational efficiency. Future: We will reduce our water intensity & going forward we intend to reduce our dependency on CPP (process which utilizes high volume of water withdrawal), establish dry tailing plants in all 3 TSF, implement ZLD plants for water recycling, explore treated sewage water as an alternative source & implement water-saving projects e.g., leakage arrestors.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	No	We do not manufacture products which are categorized as hazardous as per regulatory authority.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement

Suppliers	Yes
Other value chain partners (e.g., customers)	Yes

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

Basin status (e.g., water stress or access to WASH services)
Supplier dependence on water
Supplier impacts on water availability
Supplier impacts on water quality
Procurement spend

Number of suppliers identified as having a substantive impact

5

% of total suppliers identified as having a substantive impact

Less than 1%

Please explain

We have established systematic approach to assess our suppliers according to their impact on water security. We first identify top 30 material suppliers based on procurement expenditure to identify suppliers who have a significant influence on our supply chain. We then evaluate water consumption of each supplier per ton of goods they supply to our organization to gain valuable insights into water efficiency practices employed by our suppliers. We then undertook risk assessment to understand water basin risk, as per WWF Risk Filter methodology to identify-Physical, Regulatory & Reputational risk. Suppliers with high-risk score on below parameters to be considered critical.
Threshold:
a) Basin Risk (risk score 4.2 & 5)
b) Type of industry based on water usage (Water intensive or Extensive industry)
c)Supplier's dependence on water
d)Relative Business Importance of site.

We have requested for operational management, targets from our significant suppliers etc.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements
Row 1	Yes, water-related requirements are included in our supplier contracts

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement

Complying with going beyond water-related regulatory requirements

% of suppliers with a substantive impact required to comply with this water-related requirement

100%

% of suppliers with a substantive impact in compliance with this water-related requirement

100%

Mechanisms for monitoring compliance with this water-related requirement

Certification
Supplier self-assessment
Supplier scorecard or rating

Response to supplier non-compliance with this water-related requirement

Retain and engage

Comment

We firmly believe in going beyond compliance & expect our suppliers to comply with Water (Prevention & Control of Pollution) Act,1974, & other relevant regulations. We have integrated ESG criteria in procurement process using ARIBA platform & require our suppliers to have meet the requirements as per ISO14001. Suppliers assess their performance using a score card which is used to develop a corrective action plan. We engage with all critical suppliers, including those with substantive impact to stress importance of ESG practices & ensure compliance with regulations. Our engagement process includes effective communication such as CEO connect sessions.

Water-related requirement

Complying with a water-related certification

% of suppliers with a substantive impact required to comply with this water-related requirement

100%

% of suppliers with a substantive impact in compliance with this water-related requirement

100%

Mechanisms for monitoring compliance with this water-related requirement

Certification
Supplier self-assessment
Supplier scorecard or rating

Response to supplier non-compliance with this water-related requirement

Retain and engage

Comment

Before engaging any potential business partners for the supply of products and services, we conduct a pre-qualification process. This involves obtaining and monitoring evidence to ensure that the potential partner meets or exceeds our established standards. By implementing this pre-condition, we aim to ensure that we only collaborate with partners who align with our requirements and can deliver the desired level of quality and service. Furthermore, to ensure the alignment of our business partners to our ESG practices, we follow a robust process to select our business partners: Business Partner Identification and Registration,Pre-Qualification (PQ), ESG Integrated Technical and Commercial Evaluation, Screening based on the HZL's KPIs, Contract Award, Performance Linkage with Contract, Business Partner Audits and Review.
To uphold the status of key suppliers in our procurement strategy, we have established a requirement for all suppliers to report their compliance with ISO 14001.

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement

Information collection

Details of engagement

Collect water management information at least annually from suppliers
Other, please specify
Included ISO14001 in supplier selection / management mechanism

% of suppliers by number

100%

% of suppliers with a substantive impact

100%

Rationale for your engagement

We understand that the supply chain risks can impact our business continuity, as well as has a potential to impact our reputation. To manage the supply chain risks, we sensitize

the supply chain partners, on the need for adhering to sustainable business practices and encourage them to inculcate the same culture in their own supply chain. As part of our engagement activities with our suppliers, we collect information such as adoption of management standards, details on policy etc. With our critical suppliers who have a significant impact on our business, we aim to regularly monitor their water related impacts at least annually, develop action plans to manage risks and partner with them to achieve the plan. Therefore, during FY 2022-23, we engaged with 100 % (235) critical tier 1 suppliers.

Rationale for engaging with our critical tier 1 suppliers:
a. High-volume suppliers, suppliers of critical components and non-substitutable suppliers.
b. Goods or services have significant impact upon HZL operations and/or sustainability, as well as a large footprint in one or more of our operations in terms of allocated personnel, equipment and resources, making replacement or substitution highly difficult.
c. non-substitutable business partners (e.g., Original Equipment Manufacturers)

The following were the activities undertaken:
a. Physical sessions on various topics of innovation, productivity, sustainability, health, safety, human rights, carbon emissions, water and air pollution, waste management and HZL's supplier code of conduct
b. Monthly and annual interactions at various leadership levels to exchange ideas on good practices, evaluation of performance in last tenure, evaluating the gaps and way forward to cover those gaps.
c. Conducted due diligence at a fixed frequency which included site visits and on-site assessment.
d. Strong rewards and recognition program are planned regularly to encourage and motivate business partners to come up with innovative solutions.

Impact of the engagement and measures of success

We measure business partner performance by setting and tracking the KPI in the contracts, for all the key contracts, we have Safety, Human rights issues, environmental related compliances being monitored on monthly/weekly/daily basis, we also have regular CFSA audits for all the service contractor in our premises for strengthening practices on HSES & ESG, Human rights. Similarly, we also track the performance of our supplier on Quality, delivery thru ARIBA integrated Performance module and take corrective action wherever needed.
Managing Supply Chain: We interact at a leadership level, audit and analyze our business partners' performance at their locations to track and assess their progress in adopting sustainable principles. We also helped them to overcome the identified risk by sharing expertise, technology transfer, and process innovations. We ensure that all vendors, service providers, and supervisors adhere to the Modern Slavery Act (MSA) in all their activities. This year we undertook comprehensive supplier ESG risk assessment, evaluating a total of 235 suppliers out of which 4 suppliers were identified as having high sustainability risk. Further, 5 suppliers were identified as having significant substantive impact related to water. Following are the initiatives undertaken:
• Launched Cloud based Case management module to deliberate on risk rating

• Engagement with all 5 suppliers and requested the suppliers to develop a net zero plan and take targets
Through this engagement strategy, our supply chain has a better understanding of our sustainability goals and may result in mutual growth and benefit. We focus on building sustainability consciousness in our supply chain and continue to address risks by identifying and tackling root causes. Applicable and adequate supplier support measures were identified and implemented to ensure effective remediation with all 4 high risk suppliers. The identified suppliers are in a process of implementing action plans and improve their processes in line with the Responsible Sourcing Standard. Once every 12 months, on-site quality audit will be done to re-assess the risk level of the suppliers and track progress on the action plan. If during the audit, it is found that the supplier has improved performance in line with an audit plan, their risk rating will be reclassified.

Comment

W1.5e

(W1.5e) Provide details of any water-related engagement activity with customers or other value chain partners.

Type of stakeholder

Customers

Type of engagement

Education / information sharing

Details of engagement

Educate and work with stakeholders on understanding and measuring exposure to water-related risks
Run an engagement campaign to educate stakeholders about the impacts on water that (using) your products, goods, and/or services entail

Rationale for your engagement

We engaged with 100% customers with 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 so as to adapt to changing demands for low water-intensive products & provide support in reducing water-related impacts. We undertook projects-ZLD plants & 450 MW Renewable Energy-RTC to not only decrease our GHG but also lower freshwater consumption in our CPP, resulting in reduced water intensity in our finished goods. We published our first Zinc Environmental Product Declaration (EPD) in 2022 and found a reduction in water footprint over its lifecycle.
Methods of customer engagements:
1)Intuitive Moglix platform for continuous engagement & feedback

2)Periodic connects with key customers by senior executives & top management
3)Biennial customer satisfaction survey to collect feedback
4)Seminar & Educational Program in smart cities to enhance awareness on zinc in Infrastructure Project & Sustainability of Smart cities projects
5)Forum for quick customer query resolution
Scope of engagement:
a)Determine quality & pricing of our products
b)Reduction in environmental & social impacts of products to help customers meet Sustainability Goals
c)Innovate & develop products keeping our customer requirements in-line

Impact of the 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 lower environment footprint. To further enhance our VAP portfolio, we have established subsidiary called Hindustan Zinc Alloys Private Ltd (HZAPL). Our VAP contribution for FY 2022-23 is 15%, & we aim to increase it to 30% by FY2024-25. HZL also collaborated with Indian chapter of IZA to increase zinc consumption in domestic market through active market development programme.
We undertake Customer satisfaction survey to measure the success of our engagement and to understand how well company meets its customers' expectations & needs, & degree. We evaluate effectiveness of our customer engagements by assessing KPIs such as customer satisfaction ratings & qualitative feedback. We also launched customer delight policy in-line with our engagement philosophy. Our interactions with customers occur through various channels: customer workshops, stakeholder engagement initiatives & nationwide seminars facilitated by IZA.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) 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
Row 1	No	We were not subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violation.

W3. Procedures

W3.1

(W3.1) 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?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified
Row 1	Yes, we identify and classify our potential water pollutants	We have water policy, technical standard & Guidance Note for water management including impacts related to water pollution. These are aligned with 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 & 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 a) We consider characteristic of pollution such as source, nature, toxicity, persistence & potential for bioaccumulation. This classification helps us to categorize pollutants based on their potential impacts. b) We follow regulatory guidelines that provide limits for discharging pollutants. These guidelines help us to identify and categorize pollutants based on adverse effects on water ecosystems & human health. It is important to note that all our processing sites adhere to Zero Liquid Discharge (ZLD) principle, meaning we aim to recycle & reuse all water within our operations.

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category

Other nutrients and oxygen demanding pollutants

Description of water pollutant and potential impacts

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

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

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

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 and 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 Effluent Recovery System (ERS) with Reverse Osmosis (RO) and MEE/MVR. Storm Water Ponds of designed capacity provided to store contaminated water if any and for further reuse after treatment. To avoid contamination of storm water raw materials, products and byproducts are stored within shed on impervious base and effluent form generating plants are 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

W-MM3.2/W-CO3.2

(W-MM3.2/W-CO3.2) By river basin, what number of active and inactive tailings dams are within your control?

Country/Area & River basin	Number of tailings dams in operation	Number of inactive tailings dams	Comment
India Mahi River	1	0	Our Zawar mining and beneficiation process includes a dry tailing disposal plant. This plant recirculates over 80% of the process water from dry tailings, minimizing water losses through seepage and evaporation. It virtually eliminates the risk of groundwater contamination and significantly enhances safety measures. Additionally, it facilitates faster rehabilitation and restoration of the storage site during mine closure. By introducing filtration plants, we can now extract excess water from tailings, enabling recirculation for mill operation. This technology transforms the solid fractions into a cake with only 16% moisture content, making it an efficient method for tailing treatment while conserving water. To support this system, we have installed an additional pump and constructed a new 5,000 m3 water reclamation storage facility at our tailing storage facility. These measures further enhance the efficiency and sustainability of our tailing management practices.
India Other, please specify Banas River Basin	2	0	As part of our RAM, RDM mining and beneficiation, we have implemented measures to enhance the monitoring and management of our tailing storage facility. To address excess water accumulation, we constructed a water collection reservoir at our Rampura Agucha and RDM tailing storage facility. To improve surveillance and eliminate the need for physical inspections, we installed vibrating wire type piezometers and location-based inclinometers within the embankment. These instruments provide real-time monitoring information, enhancing our overall surveillance capabilities. We have a structured organogram for our Tailing Storage Facility (TSF) at each site, ensuring periodic reviews and assessments of the facility's performance and safety. In FY2021, HZL introduced a cutting-edge satellite-based

			monitoring technique called InSAR (Interferometric Synthetic Aperture Radar). This technique utilizes radar images collected from orbiting satellites to map ground surface deformation, providing high-precision monitoring of surface displacement. InSAR monitoring is conducted at 13 sites, including the Rampura Agucha open pit, all tailings dams, and selected waste dumps. It complements our existing stability monitoring systems and significantly enhances safety and management assurance. These comprehensive monitoring and management measures contribute to the safe and efficient operation of our tailing storage facility at RAM, ensuring environmental protection and overall operational integrity.

W-MM3.2a/W-CO3.2a

(W-MM3.2a/W-CO3.2a) Do you evaluate and classify the tailings dams under your control according to the consequences of their failure to human health and ecosystems?

	Evaluation of the consequences of tailings dam failure	Evaluation/Classification guideline(s)	Tailings dams have been classified as 'hazardous' or 'highly hazardous'	Please explain
Row 1	Yes, we evaluate the consequences of tailings dam failure	Australian National Committee on Large Dams (ANCOLD) Canadian Dam Association (CDA) Other, please specify International Commission on Large dams (ICOLD)	Yes, tailings dams have been classified as 'hazardous' or 'highly hazardous' (or equivalent)	Dam break assessment was conducted at time of dam construction by HZL for all 3TSF. International guidance on managing large dams- ICOLD, CDA & ANCOLD have been referred to determine consequence category. These provide comprehensive guidelines, standards & best practices for dam safety assessment, risk management, provide structured framework for evaluating potential severity of dam failure and categorize consequences into levels ranging from low to extreme. Aspects include people at

				risk, possibility of fatalities, environment, cultural norms, infrastructure & economics which form basis of classification. Each dam is categorized based on severity of damage & loss expressed under Seven Consequence Categories: Very low-when risk of dam failure is negligible; Low, Significant, High- A, B and C; & Extreme-dam failure is considered severe. Design, monitoring and surveillance requirements are specified as per the consequence category. CCS rating is evaluated independently at frequency of once in 3 years. Higher the CCS rating, more stringent the requirements. Facilities that are classified as 'High' are regarded as 'hazardous' & 'Major' as 'highly hazardous. HZL follows Vedanta TFS Standard & Tailing Management Policy aligned with GISTM & is applicable to all existing & future tailing facilities. Status of each TSF determines management strategy applied and regular inspections are conducted. Tailing Committee meets monthly to assess compliance.

W-MM3.2b/W-CO3.2b

(W-MM3.2b/W-CO3.2b) Provide details for all dams classified as 'hazardous' or 'highly hazardous'.

Tailings dam name/identifier

Rampura Agucha Mines Tailing Dam

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

25.5

Longitude

74.44

Hazard classification

ICOLD 'IV': Extreme and ANCOLD: Extreme

Guideline(s) used

Australian National Committee on Large Dams (ANCOLD)

Other, please specify

International Commission on Large dams (ICOLD)

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

57.8

Planned tailings storage impoundment volume in 5 years (Mm3)

7.8

Please explain

We undertook dam break modelling in 2017 at Agucha TSF to assist in understanding risk posed to stakeholders downstream of the TSF.Results of model determine arrival times & maximum flow depths of breach flood wave produced by hypothetical breach of containment.Results were used to prepare inundation maps.Evaluated Agucha TSF against ICOLD hazard rating & determined that TSF has a rating level of 'IV (Extreme)'.This was mainly due to high population at risk (PAR) & was consistent for all modeled cases.Hazard rating was also evaluated against ANCOLD Guidelines & determined that TSF has Consequence Category of 'Extreme'.This was mainly due to high PAR & was consistent for all modeled cases. Recommended designing & constructing mitigation structures to reduce PAR exposure,demarcate safe areas for evacuation in case of a flood event & demarcate risk zones to prevent new settlements in these areas. Secondary Containment (Diversion Structure) is built downstream of dam to safeguard the PAR.

Tailings dam name/identifier

Rajpura Dariba Complex Tailing Dam

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

24.57

Longitude

74.08

Hazard classification

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

Guideline(s) used

Australian National Committee on Large Dams (ANCOLD)

Canadian Dam Association (CDA)

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

20

Planned tailings storage impoundment volume in 5 years (Mm3)

8

Please explain

Dam failure impact assessment of the TSF at Rajpura Dariba location was conducted in 2019-20. Overtopping and piping failure modes were considered for each of the selected breach locations. A Consequence Category Assessment was carried out for the TSF based on both the ANCOLD and CDA guidelines. Based on the ANCOLD guidelines, the TSF has a consequence category of High A and based on the CDA guidelines, the TSF has a consequence category of Very High. Mitigation options have been considered in this assessment for the reduction of impacts resulting from a breach of the Dariba TSF, in terms of impacts to surrounding populations. Engineered levees in the form of protection or diversion berms, placed along the inundated perimeter of the settlements could serve to reduce the potential flood impacts to the predicted inundated areas of the settlements. Further studies are recommended for proper planning, design, modelling, and installation of warning system.

Tailings dam name/identifier

Zawar Tailing Storage Facility

Country/Area & River basin

India

Mahi River

Latitude

24.2

Longitude

73.42

Hazard classification

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

Guideline(s) used

Canadian Dam Association (CDA)

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

33.83

Planned tailings storage impoundment volume in 5 years (Mm3)

13.1

Please explain

Dam Break analysis study of Zawar Tailings Storage Facility Failure was conducted in February 2021. To assess the potential damage associated with the hypothetical failure of the main dams at Zawar TSF. The structure's current consequential risk has been classified as "Very High".

Given the significant community downstream and short warning time, these assumptions would place the facility within the "Extreme" dam classification according to CDA guidelines.

The results from this report will serve to facilitate the path for an Emergency Response Plan so that future design requirements are adjusted. Dry stacking 12 million MT.

W-MM3.2c/W-CO3.2c

(W-MM3.2c/W-CO3.2c) 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?

Procedure	Detail of the procedure	Please explain
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	1) We have a Tailing Management Facility Standard (TMFs) in place to assess and manage potential impacts of TSFs on human health and ecosystems. This extends to HZL's mine practices as well, to manage all TSFs uniformly. TMF Policy and Standard are updated every two years or as and when necessary to ensure it remains relevant.

	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 folllow a company policy to eliminate or minimize water-related risks associated with tailings dams	2) All TSF waste is managed by (i) minimising the quantity of material stored to limit the extent of the footprint of land disturbed, (ii) ensuring storage sites are physically and chemically safe and well-engineered, and (iii) undertaking progressive rehabilitation – returning affected land to productive use after mining. The TSF stipulates a suggested closing methodology which HZL uses to inform their site-specific closing strategy, such to maintain acceptable risk levels in the closure of their mines. This closing methodology is reviewed annually to ensure that it remains current, applicable, and compliant with country-specific legislation. 3) HZL's quantification of acceptable risk levels form part of the TSF, which is used as a framework for each of HZL's tailings storage facility to detail the individual Closure Plans. Quarterly, and annual reports are compiled based off the status while monthly inspections are conducted. The reports are submitted to HZL's board, the operating team. Similarly, the site-specific operating procedures are reviewed annually to maintain applicability and legislative compliance. 4) To ensure that all TSFs are in adequate condition, daily inspections are conducted to facilitate proactive management of TSFs and to minimise risks associated with spillages or flooding of a TSF. HZ's team sets out the framework to manage the mine deposits, even after mine closure. All HZL mines make use of this guidance as a means through which to ensure basic adherence to the HSE standards. The safety of mine employees & others affected by the deposits is of key priority to HZL. 5) All our tailings storage facilities are in good standing and have been verified by a certified agency. 6) We take extensive measures for construction, operation, maintenance, and closure of facilities that mitigate risks of tailing dam failure. Wherever possible, we repurpose tailings materials and waste rock as backfill to stabilize our underground mining operations. Remaining

		tailings are then placed in a specially designed tailings storage to minimize the ESG risks. We are building dry tailing dam.
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	1. We take extensive measures for construction, operation, maintenance, and closure of facilities that mitigate risks of tailing dam failure. Wherever possible, we repurpose tailings materials and waste rock as backfill to stabilize our underground mining operations. Remaining tailings are then placed in a specially designed tailings storage to minimize the environmental, social, and economic risks. 2. Potential impacts of HZLs tailings dam facilities on human health and water ecosystems are managed through use of the Tailing Management Facility Standard. HZL uses the TMF across its operations in India, to develop their individual site-level operating plans, which consider all applicable design limitations, assumptions, and principles regarding TSFs. HZL operates within the design limits of the dam, continuously referring to the TMF as a framework for each TSF and considering the health and safety of mine employees and any other affected persons in the process of developing site-based operating plans. Each operating plan is reviewed on an annual basis to remain current, applicable, and compliant with legislation. 3. As some aspects of our operations particularly tailings deposition, entail altering the physical landscape permanently it is our aim to rehabilitate the land concurrently (where it is possible) to effective and appropriate post-mining land use once mining has ceased.HZL's TSFs were constructed with specific volume constraints which have been maintained and revitalised from time to time.Design specifications of each dam stipulate the constraints of that dam, as well as the construction methodologies used.To ensure that HZL can manage their impact on human health and water ecosystems,HZL must adhere to the design specifications.HZL monitors its TSFs frequently and reports on their tailing's capacity used, annually.In FY23,none of HZL's TSFs were

		operated beyond the design threshold. ailing Storage Facility (TSF) committee is constituted with experts from various functions.As a proactive measure, we will be installing dry tailing facilities to de-risk the dam failures. Dry tailing technology helps us to eliminate land requirement for landfills and water recovery. Last year,dry tailing plant was commissioned at Zawar Mine to reduce freshwater consumption by enhancing recovery of process water over 80%, improving tailing dam structural stability and reducing water footprint. Also,commissioning of the Dry Tailing Plant at RDC is nearing completion.
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 tailing management plan is in place to manage tailings and waste facilities ensuring to protect the health of our employees, community, and the natural environment throughout its lifecycle. This plan is developed in accordance with the tailing management and EHS policy s. In addition to this, we are also guided by the tailing management standard, which provides approach and methodology on tailings management at different stages. With the commissioning of the Backfill plant at ZM, enhanced use tailings in backfilling have increased the life and stability of the tailing dam and de-risked the operations and provided opportunity to mine left-out high-grade ore in pillars. Regarding the past high impact failures of tailing dams at other peers companies, as a proactive measure, we have decided to build all our future tailing Storage Facility as dry tailing to de-risk from dam failures. Dry tailing technology also helps us to eliminate land requirement for landfills and water recovery. Last year, India’s first dry tailing plant was commissioned at Zawar Mine to reduce fresh water consumption by enhancing recovery of process water over 80%, improving tailing dam structural stability and reducing water footprint. We are in process to commissioning dry tailing plant at Rajpura Dariba Mine.
Assurance program	An assurance program for each phase of the facilities' life that includes the scope of the various levels of inspections, audits and reviews	With the assistance of international specialists, we test the stability of each of our tailing storage facilities once in three years.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.

	An assurance program that includes an external audit covering the life of facility or the operating plans	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.
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	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.
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	At HZL, we currently operate three tailing storage facilities, each of which is overseen by a committee and a designated TSF manager. Members of the design, operations, construction, and environmental departments make up the committee. All TSFs are regularly audited and inspected, along with any related pipeline and pumping infrastructure.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise risk management
International methodologies and standards
Databases

Tools and methods used

WRI Aqueduct
Enterprise Risk Management
IPCC Climate Change Projections
Regional government databases

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Stakeholder conflicts concerning water resources at a basin/catchment level
Impact on human health
Implications of water on your key commodities/raw materials
Water regulatory frameworks
Status of ecosystems and habitats
Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers
Employees
Investors
Local communities
Regulators
Water utilities at a local level

Comment

With rigorous monitoring methodology that identifies and categorises current and emerging climate-related risks and opportunities with respect to both Physical and Transitional risks, HZL analyses strategic and financial consequences at the unit and company level. These risks are ranked according to how frequently they occur or recur, how much they affect revenue and costs, and how likely they are to interrupt our core operations. We have strong ERM system in place to evaluate the hazard & impact associated with water. Water Risk scenario assessment, greatest risks were identified as drought and extremely heavy rainfall.

Risk review committee is present at all sites and quarterly reviews identified risks and mitigation measures. Water risk analysis & calculation of risks for current & future trends were conducted for 100% operational sites of HZL. Assessment took in account internal site surveys, external data sets and third-party expertise to predict future water risks (up to 2060). All HZL's operations adopt Water Management Strategy.This strategy details the risk assessment procedure that each operation is required to undertake. Risk assessment procedure followed includes: 1) Hydrological and geo-hydrological investigations; 2) Identification of the sources, pathways; 3) An evaluation of impacts on the operation's catchment (basin) resource; and 4) The assessment of local water-

related legislation and permitting The Baseline Water Risk Analysis was conducted using the WRI Aqueduct Water Risk Atlas and Aqueduct. The Internal Risk Assessment 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 and as well as local/operational assessments to quantify residual water risks. The results were combination of basin and operation risk data to identify the highest risk facilities, residual risk and prioritise shared water challenges. In addition, in FY 22-23, HZL undertook a climate assessment Scenario analysis for Transitional Risk Scenarios we used IEA STEPS, APS & NZE 2050 and for Physical Risk we used RCP2.6, RCP4.5, RCP6.0 & RCP8.5 and NDCs and conducted stress testing to better understand the effects of climate change on our operations across the units and to develop a longer-term strategy for climate change risks and opportunities.

Value chain stage

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market
International methodologies and standards
Databases

Tools and methods used

WRI Aqueduct
Environmental Impact Assessment
IPCC Climate Change Projections
Regional government databases

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Water regulatory frameworks
Status of ecosystems and habitats

Stakeholders considered

Suppliers

Comment

We continuously engage with our supply chain partners to reduce their impact on water stress. We consider the feedback of our supply chain partners through stakeholder engagement process during materiality analysis stage as water is one of our material issues. An annual due diligence exercise is conducted for critical suppliers as part of our Supplier & Contractor Management Standard, to understand the key operational risks including water risk, being faced by the suppliers that would have a potential impact on our operations as well as impact our reputation. The risks are categorised as high, medium, and low based on the severity and likelihood. To assess our suppliers according to their impact on water security, we have established a systematic approach consisting of several key steps. The first step involves identifying the top 30 material suppliers based on the procurement expenditure. This allows us to focus our efforts on suppliers who have a significant influence on our supply chain.We then evaluate the water consumption of each supplier per ton of goods they supply to our organization. This assessment provides valuable insights into the water efficiency practices employed by our suppliers and helps us identify areas where improvements can be made. We then screen suppliers based on their dependence on water. To further enhance our assessment process, we utilize the WWF Water Risk Filter Basin Risk tool. This tool enables us to evaluate the water risk associated with the operations of our suppliers. Water was identified as a key risk for our suppliers as about 80% of or procurement spend is in Rajasthan which is a high-water risk zone. Basis this, we developed a Water Management Strategy, which is applicable to both supply chain partners as well as operations. As a result of engagement, we have requested our suppliers to submit climate targets and action plans.

W3.3b

(W3.3b) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	HZL's process for identifying, assessing, and responding to water-related risks is based on their engagement between management and the board regarding their direct operations, and between the company and stakeholders regarding other stages of their value	Water-related risks are earmarked as key in HZL's risk assessment process as our operations are critically dependent on water. Impacts of climate change on water results in risks and opportunities to HZL's operations, assets, and social considerations. These	HZL considers engagement with stakeholders as very important to understand water related issues While employee engagement is maintained on a regular basis through workplace surveys, social impact assessments and	Water-related risks are earmarked as key in HZL's risk assessment process & are driven by: 1)Identify & understand key water-related risks affecting water strategy & opportunities to achieve business goals 2) Input from key stakeholders 3) Facilitate engagements with stakeholders to ensure risks are

	chain. By maintaining transparent and healthy relationships with all relevant stakeholders, HZL can adequately manage the risks and uncertainties surrounding their operations. The Sustainability & ESG committee and the Audit and Risk committee meet twice in a year where they discuss water risks and changes in the responses to these risks. HZL's operations are critically dependent on water. Thus, water-related risks are earmarked as key in HZL's risk assessment process. Climate change impacts on water, results in risks and opportunities to HZL's operations, assets, and social considerations. These risks will impact on HZL's operating costs, business infrastructure, general operations, host communities and their supply chain.HZL also makes use of continuous water monitoring processes to track their water consumption, to improve their	risks will also impact on HZL's operating costs, business infrastructure, general operations, host communities and their supply chain. HZL has conducted scenario analysis to understand how climate change impacts host communities and local settings, the key risks in water scenario analysis were also included in physical risk, as increased competition for natural resources, tensions between operators and local populations, and social licence to operate may be impacted.	third-party baseline need assessments are used to engage with local communities. HZL additionally monitors prioritised stakeholders at the basin level. Water risk assessments also considers the results of a community survey on water stress. For our value chain, understanding the key operational risks including water risk being faced by the suppliers is critical as that would have a potential impact on our operations as well as impact our reputation. We continuously engage with our supply chain partners to reduce their impact on water stress. We consider the feedback of our supply chain partners through stakeholder engagement process during materiality analysis stage as water is one of our material issues. We also undertake water risk assessment for our 30 high spent suppliers.	addressed systematically 4) Ensure identified water risks/opportunities consider challenges faced by mine sector 5) Adhere to national & international water commitments to identify emerging risks/opportunities. Outcomes of risk assessment process inform HZL's internal decision-making structure which is done through HZL's evaluation of risk appetite & tolerance levels. HZL recognises potential impacts of water risk leading to substantive financial impact for their business which include safety e.g., WASH) regulatory e.g., increasingly stringent water use licensing) & major infrastructure incidents (excessive rain damage). Models determine tactical methods of combating negative impacts of climate change & water for HZL's operations. Risks are considered for making CAPEX & OPEX decisions. Sustainability committee approves projects aimed at mitigating these risks like-implementation of ZLD plants, Dry Tailing plant, Rainwater

	management methods. HZL uses WRI Aqueduct tool in conjunction with their monitored consumption values to drive water recycling initiatives. HZL's use of the WRI Aqueduct tool Water Risk Atlas and Aqueduct, as well as Water Risk Monetizer tool, to pre-empt water-related risks which could impact on their business operations, value chain and other relevant stakeholders.			harvesting & Internal water pricing initiative. HZL defines substantive financial impact as revenue loss incurred if 1 month of operation was lost at 1 site, resulting in around INR1003.41 million amount losses.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

Climate change-related risks including water related risks are integrated as key risk in our enterprise risk management and financial planning. We prioritize risks by- velocity of occurrence of risk, evaluating how frequently they occur or reoccur, as well as their potential impact on revenue and cost, including how they could disrupt our key business operations.

HZL defines the substantive financial or strategic impact on the business when either of the following points is observed:

Financial Impact

· Any issue brings a reduction of targeted EBIDTA by >7.5% in the current financial year;

· Causes > 7.5% reduction of targeted production volume;

· Decline in stock prices of <15% over a sustained period of 2 weeks due to negative media coverage/publicity.

Strategic Impact

a) Causes long term serious reversible environmental impact (typically 3 months) or may result into Category IV incident;

b) Major pollutants released into the environment around the local area (*reversible yet long term impac*t) with possibility of prosecution, litigations and financial damage and fines/penalties imposed; Serious impairment of ecosystem; recovery takes between 1 month and 3 months;

c) Material loss in brand value and perception and major loss of customer confidence;

d) Medium operational risk as per WRI Aqueduct

HZL calculates substantive financial or strategic impact on our business by computing the number of production days lost or the economic cost of the said risk has on our organization during the impact period.

For instance, the tailing dam breach at Zawar in Rajasthan, India, which includes four mines: Mochia, Balaria, Zawar Mala and Baroi can lead to significant irreversible environmental impact or may result into Category IV incident or may result into significant breaches, financial penalties and/or negative media coverage. The tailings slurry generated during beneficiation contains about 40-45% solids and rest water. Heavy precipitation can lead to breach of the tailing dam and impacts may be seen up to an area of 7 Kms. This can significantly impact the land, as well can cause safety incidents for the community, resulting into a fine by the authorities, and a negative media coverage. Remediation measures and fines can cause a loss of upto INR 150 million.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	51-75	As per the Water Risk Filter tool, the facilities with medium operational risk include, Chanderiya Lead Zinc Smelter, Debari, Dariba Smelting complex,Sindeswar Khurd mines, Rajpura Dariba Mines and Rampura Agucha mines. We are reporting 6 facilities as an aggregated 1 facility as they are all interlinked and located in one basin. We have taken the necessary precautions to further reduce the risk at these locations so that none of these facilities are subjected to water risks that could have a significant negative impact on our company's financial or strategic position. HZL always focuses on taking preventive policy measures to

			manage its water related risks as the continued operation of HZL's mines, smelters, and power plants as well as the company's profitability are seriously threatened by a lack of water supplies (since stoppages lead to large financial implications). HZL’s operations require water which is utilised in smelting and in all phases of mining, from ore processing to dust suppression and slurry transport, and is consumed in the expansion and development of HZL's assets. Operation of CPP also require large quantity of water for power generation. HZL has undertaken several water conservation and harvesting initiatives for reducing freshwater intake and maintaining zero discharge. ZLD of total capacity of 6,800 KLD commissioned across HZL, that includes two staged RO plant, MEE/ MVR and installation of ETP to recycling and reuse water at the facility.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

India

Other, please specify

Banas Basin

Number of facilities exposed to water risk

1

% company-wide facilities this represents

51-75

Production value for the metals & mining activities associated with these facilities

324,810,000,000

% company’s total global revenue that could be affected

100%

Comment

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 has been provided for Banas basin.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

India

Other, please specify

Rajasthan based operations considered

Type of risk & Primary risk driver

Acute physical

Drought

Primary potential impact

Increased operating costs

Company-specific description

As per climate-related physical risk assessment under RCP 2.6, RCP 4.5 and RCP 6.0 scenario, drought is identified as the top acute physical risk in medium-term and long-term. More than 90% of HZL's operations are in Rajasthan, one of the water stress zones of the country. Since water is a critical input for our smelting operations, non-availability of water from the captive water sources has the potential to disrupt our operations. To run the operations, we will procure water from alternative sources at a much higher cost, thereby impacting our direct costs.

For instance, as per the WRI Aqueduct study, the Chanderiya Lead Zinc Smelter has an operational risk due to drought, and non-availability of captive water from Gosunda dam, will have an impact on the 234 MW Captive Power Plant (CPP) if water is not sourced from alternative sources. In FY 21-22, HZL had sourced water from Udaipur STP at a higher cost to run its CPP, leading to increase in direct costs.

Timeframe

More than 6 years

Magnitude of potential impact

Medium

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

390,145,948.8

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

We have estimated the financial impact by calculating the total additional cost of procuring water from alternate sources. We have made the following assumptions to calculate the financial impact.

• Water from alternative sources will be available.

• The production units will not close down in event of drought like situation, thereby having no impact on production & revenue.

• The cost of water from alternative sources is based on current estimates.

• The drought like situation will persist for upto 6 months.

The costs below are expenses incurred if drought risk materialises:

A: Cost of procuring water from existing captive dam (no drought situation) = INR 2 / m3

B. Cost of procuring water from alternate source= INR 15 / m3

C. Total water procured in Chanderiya (6 months) = 18,48,009.6 m3

D. Increased cost due to procuring water from alternate source= (B-A)*C= INR 24,024,124.8

E: Cost of Treatment of STP water before use (Total cost for 6 months): INR 15,000,000

F: Cost implication for channelizing the water from alternative sources: INR 3,51,121,824

G: Total Extra Cost (D+E+F): INR 3,90,145,948.8

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

As per our water risk assessment all our operations are in water stressed area and hence it becomes imperative for us to implement initiatives to improve water efficiency as water is a critical resource for our operations and also a shared resource with the communities. By implementing Zero Liquid Discharge (ZLD) systems, we can significantly decrease our dependence on freshwater and contribute to preserving more water for the communities. Adopting water efficiency initiatives, recycle and reuse of water and conservation initiative will help mitigate potential risks to our business in case of water scarcity.

To mitigate this risk, we are continuously maximizing recycling and reuse of water at all our operations to reduce freshwater withdrawal, developing rainwater harvesting systems to replenish ground water sources, and build a second STP project at 40 MLD by FY 2025. The Company has set a goal to be 5 Times Water Positive Company and reducing the water withdrawal by 25% by 2025 from base year 2020. Presently, we have achieved to be 2.41 times water positive company.

a. Commissioned ZLD Plant at ZSD (3,000 KLD): INR 460 million
b. Commissioned ZLD Plant at CLZS (600 KLD): INR 250 million
c. ZLD plant at DSC (3,200 KLD):INR 500 million
d. Rainwater Harvesting project at RAM : INR 140 million
e. Commissioning of Dry Tailing Plant at RDM/SKM: INR 3,000 million
f. Dry Tailing Stack at RA Mines: 1750 million

Cost of response

6,100,000,000

Explanation of cost of response

To mitigate this risk, we are continuously maximizing recycling and reuse of water at all our operations to reduce freshwater withdrawal. We are developing rainwater harvesting systems to replenish ground water sources. The Company has set a goal to be 5 Times Water Positive Company and reducing the fresh water consumption by 25% by 2025 from base year 2020. Presently, we are 2.41 times water positive company.
a. Commissioned ZLD Plant at ZSD (3,000 KLD): INR 460,000,000
b. Commissioned ZLD Plant at CLZS (600 KLD): INR 250,000,000
c. ZLD plant at DSC (3,200 KLD):INR 500,000,000
d. Rainwater Harvesting project at RAM : INR 140,000,000
e. Commissioning of Dry Tailing Plant at RDM/SKM: INR 3,000,000,000
f. Dry Tailing Stack at RA Mines: 1750,000,000
Therefore, Cost of response= INR (460,000,000+250,000,000+500,000,000+140,000,000+3000, 000,000+1750000000)= 6,10,00,00,000
HZL is planning to undertake several measures around improving the water recycling rates as well exploring alternative sources for replacing fresh-water(Zero Liquid Discharge Plant at Rampura Agucha and Zawar, STP water at Chanderiya Lead Zinc Smelter; Dry Tailing across mines and Rain water structures).

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

India

Other, please specify

Rajasthan based operations considered

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Acute physical

Drought

Primary potential impact

Increased operating costs

Company-specific description

Suppliers of raw materials who source from water-stressed areas may be impacted and this shortage of raw materials could put our business in direct operational danger. For instance, our raw materials like cement, coal, etc. need water to be processed and, in the worst case, stored. When water is not available at the supplier's end, it can affect the functioning of our paste fill plant, backfilling, and mine rock strengthening process. Similarly, the scarcity of coal will increase the cost of coal thereby increasing our operational costs.

Timeframe

More than 6 years

Magnitude of potential impact

Low

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6,581,600,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The current cost estimates include the net difference in cost of coal for the same consumption of coal.
A: Power Requirement= 61,000,000 KWh
B. Quantity of coal consumed= 1,445,050 MT
C. Cost of Coal in FY 21-22 = INR 17,665,900,000
D. Cost of Coal in FY 22-23 = INR 24,247,500,000
E. Additional Cost of coal (due to impact) = (D-C) = INR 6,581,600,000

Primary response to risk

Upstream
Map supplier water risk

Description of response

To assess our suppliers according to their impact on water security, we have established a systematic approach consisting of several key steps. The first step involves identifying the top 30 material suppliers based on the procurement expenditure.

This allows us to focus our efforts on suppliers who have a significant influence on our supply chain. We then evaluate the water consumption of each supplier per ton of goods they supply to our organization. This assessment provides valuable insights into the water efficiency practices employed by our suppliers and helps us identify areas where improvements can be made. We then undertake comprehensive water risk assessment for all our critical supplier on water basin risk, as per WWF Risk Filter methodology. This methodology assesses risks based on a combination of 3 risks viz. Physical, Regulatory and Reputational. We have used the matrix provided by WWF Water risk Filter and any supplier operating in location where the risk is between 4.2 & 5 has been reported as high.

A strategy for risk mitigation includes the following: 1. Constant risk mapping for water suppliers 2. Cooperation with vendors to conduct trainings on capacity building 3. Offering top suppliers' incentives to enhance their ESG performance over the following three years. We have included crucial Tier 1 suppliers in our engagement for the fiscal years 2022–2023. In total, HZL had 736 active Tier 1 suppliers this year, of which 235 are Critical Tier 1 suppliers. These suppliers include High Volume Business Partners, Business Partners of Critical Components, and Non-Substitutable Business Partners (e.g., Original Equipment Manufacturers).

Threshold: We consider suppliers to be substantive who have
a) Geographic location (Lat-Long) of manufacturing units
b) Type of industry based on water usage (Water intensive or Extensive industry)
c) Supplier's dependence on water
d) Relative Business Importance of site.

We have also started reaching out to our suppliers to identify their short and long term strategies on climate change and motivate them to reduce their water footprint and align our short and long term goals and ESG expectations.

Cost of response

335,100,000

Explanation of cost of response

We collectively responded through meticulous planning to the risks in the supply chain that were triggered by external events like drought and/or heavy flooding:
A) Signed long-term or medium-term contracts at the appropriate moment to assure material security
B) Made sure that the situations were continuously tracked and observed
C) Used alternative products and sources while ensuring operational effectiveness
D) Delivering our best-ever performance by properly stocking inputs at our operations and managing working capital to satisfy both internal and external customers
E) Constant interaction with business partners to reduce risks during supply chain disruption.

We are minimising our reliance on suppliers to mitigate the water-related risks in upstream activities, by entering into long-term contracts. For the cost of response

calculation, we have considered the cost to manage the suppliers; the cost to develop other raw material sources:
• Cost Expenditure of towards conducting due diligence with the suppliers= INR 500000
• Cost Expenditure of renewable energy plant setup (Chanderiya) = 230,000,000
• Cost of Biomass as a substitute for coal= INR 104,600,000
• Total cost of response= 500000 + 230000000 + 104600000 = INR 335,100,000

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

We recognize the crucial role of water as HZL's operations are in water-stressed region of India and thus we have implemented multiple water-saving initiatives to reduce water withdrawal and support business growth seamlessly. With a current water positivity ratio of 2.41, our goal is to achieve a five times water positivity by 2025. Additionally, we aim to reduce water withdrawal by 25% by 2025, based on the 2020 baseline. This approach not only presents an opportunity to enhance our brand value but also provide us an opportunity for business to save cost.
In FY 2022-23, notable achievements include recycling RO reject water in ZLD plants, across HZL with capacity of 6800 KLD, we intend to install more ZLD plants to further reduce our freshwater withdrawal. Rainwater harvesting initiatives at Pant Nagar metal plant have led to water saving of ~14,000 m3 and Rampura Agucha have led to 87,00,000 m3 rainwater augmentation. In total, water conservation projects at site units in HZL have resulted in savings of 502,528 m3.
The Captive thermal power plants at Hindustan Zinc contributes to ~80% of power requirements and corner ~30% of total water withdrawal. With HZL moving towards renewable energy we will reduce our dependency on freshwater.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6,904,834.8

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

We have calculated the potential financial impact of these initiatives in terms of cost savings due to reduced water withdrawal or consumption. Presently, the price of water paid by the organisation varies across the locations. The average weighted price is INR 2.98 per m3.

By saving water through our initiatives, we reduce the total cost of procuring water. Therefore, in FY2022-23, financial impact of opportunity is:

A. Per unit cost of water procurement= INR 2.98 per m3

B. Total Water Savings through initiatives: 2,317,058.66 m3

C. Total Cost of Savings: [A*B] = [2.98*2317058.66] = INR 6,904,834.80

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Chanderiya Lead and Zinc Smelter

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

24.83

Longitude

74.82

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

8,277.7

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

8,277.7

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

7,314.39

Comparison of total consumption with previous reporting year

Much lower

Please explain

At Chanderia Lead Zinc Smelter, we have achieved a 17.77% reduction in water consumption compared to the previous year. This significant decrease can be attributed to an increase in our recycling rate and the temporary shutdown of the CPP (Captive Power Plant). Our operations are governed by the Consent to Operate, as outlined in section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974 is contingent upon our ability to maintain a zero-discharge status from our premises, which means that no trade effluent is allowed to be discharged outside our operational premises. To comply with these requirements, we rigorously monitor our water balance parameters. As a result, the discharge parameter is not applicable to us, as all our sites operate as zero liquid discharge facilities.

Facility reference number

Facility 2

Facility name (optional)

Dariba Smelting Complex

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

24.95

Longitude

74.13

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

5,650.42

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

512.15

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

5,138.28

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

5,007.59

Comparison of total consumption with previous reporting year

Higher

Please explain

Due to an increase in our water recycling rate, we have achieved a 19% reduction in water consumption levels compared to the previous year. We also take third-party grey water to reduce our dependence on freshwater withdrawal and is one of our key water management strategies and 91% of total water withdrawal is from Sewage treated water. It is essential to note that our Consent to Operate, as stipulated in section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, hinges upon our ability to maintain a zero-discharge status from our premises. This requirement mandates that no trade effluent is to be discharged outside our operational premises. To ensure compliance with these regulations, we closely monitor our water balance parameters. As a result, the discharge parameter is not applicable to us since all our sites operate as zero liquid discharge facilities. The difference between the water withdrawal and consumption includes water to communities and drinking water to township.

Facility reference number

Facility 3

Facility name (optional)

Debari Zinc smelter

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

24.6

Longitude

73.83

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,399.2

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

374.07

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,025.13

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1,399.2

Comparison of total consumption with previous reporting year

About the same

Please explain

During the year, water withdrawal at DZS has remained about the same (0.81%) compared to the previous year. We also commissioned 3000KLD ZLD Plant at DZS, which led to reduction of our dependency on freshwater withdrawal. In addition to this we also utilise sewage treated water from Udaipur STP and 73% of the total water withdrawal is from Sewage treated water. Our operations at DZS are conducted in accordance with our Consent to Operate, which is governed by section 21(4) of The Water (Prevention and Control of Pollution) Act, 1974, mandates our commitment to maintaining a zero-discharge status from our premises. It means that no trade effluent is permitted to be discharged outside the operational premises. To ensure compliance with these requirements, we maintain strict monitoring of our water balance parameters. Consequently, the discharge parameter is not applicable to us as all our sites operate as zero liquid discharge facilities.

Facility reference number

Facility 4

Facility name (optional)

Rampura Agucha Mine

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

25.83

Longitude

74.74

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

2,659.1

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

2,585.9

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

73.2

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

2,434

Comparison of total consumption with previous reporting year

Lower

Please explain

The total water consumption has decreased by 5.04% due to water efficiency initiatives and we have achieved a recycling rate of ~55%. 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 operational premises. To comply by these requirements, we strictly monitor our water balance parameters. Therefore, discharge parameter is not applicable to us as all our sites are zero liquid discharge facilities.

Facility reference number

Facility 5

Facility name (optional)

Rajpura Dariba Mine

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

24.95

Longitude

74.13

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

3,167.59

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

914.89

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

961.89

Withdrawals from third party sources

1,290.81

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

3,154.49

Comparison of total consumption with previous reporting year

Much higher

Please explain

There is considerable increase in water withdrawal (158%) due to the greater availability of entrained water. To ensure mining operations can continue in these areas, it is crucial to eliminate the entrained water. As we excavate deeper, there is a significant growth in the amount of entrained water that needs to be extracted. Consequently, our water withdrawal has experienced an increase. Conversely, surface water withdrawal has seen a slight decrease and our 40% of total water withdrawal is from sewage treated water. 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 operational premises. To comply by these requirements, we strictly monitor our water balance parameters. Therefore, discharge parameter is not applicable to us as all our sites are zero liquid discharge facilities.

Facility reference number

Facility 6

Facility name (optional)

Sindesar Khurd Mine

Country/Area & River basin

India

Other, please specify

Banas Basin

Latitude

25

Longitude

74.16

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,299.08

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

129.14

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

55.542

Withdrawals from third party sources

1,114.4

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1,299.07

Comparison of total consumption with previous reporting year

Much higher

Please explain

The total withdrawal at this site has increased by 65.9 % due to increase in our production at this site as and due to extensive exploration in new areas having inherent ground water intersection which is 100% used in our process. 85% of the total water withdrawn is from Sewage Treated water. To ensure mining operations can continue in these areas, it is crucial to eliminate the entrained water. As we excavate deeper, there is a significant growth in the amount of entrained water that needs to be extracted. Consequently, our water withdrawal has experienced an increase, though our freshwater withdrawal has seen a slight decrease, this is due to the increase in withdrawal from third-party sources.
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 operational premises. To comply by these requirements, we strictly monitor our water balance parameters. Therefore, discharge parameter is not applicable to us as all our sites are zero liquid discharge facilities.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water withdrawals – volume by source

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water withdrawals – quality by standard water quality parameters

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water discharges – total volumes

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water discharges – volume by destination

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water discharges – volume by final treatment level

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water discharges – quality by standard water quality parameters

% verified

76-100

Verification standard used

This is reported as per ISAE3000

Water consumption – total volume

% verified

76-100

Verification standard used

This is reported as per ISAE3000

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of the scope (including value chain stages) covered by the policy Description of business dependency on water Description of business impact on water Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to prevent, minimize, and control pollution Commitment to reduce or phase-out hazardous substances Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to reduce water withdrawal and/or consumption volumes in supply chain Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation	Our commitments to water security are embedded in our Policies and Standards. We understand that water is a key resource for all our operations- required for the health and wellbeing of employees and at every stage of an operation's life cycle. The dependency and impact on a shared resource create material risk for our business, which requires effective management that balances the needs of different stakeholders. We follow the Water Management Standard (TS-14) of Vedanta Sustainability Framework which is aligned to international IFC performance standards, Water Quality Standards in India (IS 2296:1992 and Drinking Water Specifications (IS 10,500:1991)) and reflects our commitment towards global water security, efficiency, and stewardship. Our Water Management policy is part of the Vedanta Sustainability Framework and is applicable across all our operations, staff, contractors, and relevant business partners. The intent we communicate is to be a global leader in water reuse and recycling, as well as work with communities and communicate with all our stakeholders on the progress and performance of water conservation and water management. The aspects that are covered in our water policy include compliance with national, regional, and local Identification and implementation of water saving projects, reduction in water consumption, avoid water pollution, maintain zero discharge, help communities for sustainable water resources by rainwater harvesting, participate in water catchment planning activities, monitoring, and

		and Hygiene (WASH) in local communities Commitment to stakeholder education and capacity building on water security Commitment to water stewardship and/or collective action Commitment to the conservation of freshwater ecosystems Commitments beyond regulatory compliance Reference to company water-related targets Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	transparent communication of water consumption performance. This includes our 2025 water targets (5 times water positive from current 2.41 times water positive). Our water stewardship targets are focused on completing actions that align with Sustainable Development Goal 6 which is about “Clean water and sanitation for all”. We are also committed for UN Global Compact Water Action Platform (CEO Water Mandate), a commitment to adopt and implement the mandate’s strategic framework and its six core elements for water management Stakeholders, and innovation & implementation of water efficient practices. The content and implementation of this policy is being reviewed periodically. [1]

[1]Vedanta_Water Management Policy.pdf

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual or committee	Responsibilities for water-related issues
Chief Executive Officer (CEO)	The ultimate responsibility for water-related issues lies with the CEO, who has the highest decision-making authority within the company. Our CEO is one of the members of HZL’s Board of Directors and is part of the Board Level Sustainability & ESG Committee that provides overall guidance on all identified key ESG issues. CEO has the following key responsibilities: • Reviews the company’s progress towards sustainability goals 2025. • Provides regular briefings to the Board on various climate related issues including water risk and mitigation, yearly targets, site’s performance, and progress of targets.

	• CEO is also authorized to sanction CAPEX & OPEX budgets and other necessary resources for the implementation of climate adaptation and mitigation actions. • CEO is also responsible for taking decisions related to Procurement, Human Resources, Finance, Legal, and operations which supports implementation of our water related strategy. We are certified as 2.41 times water positive company in base year and our long-term target is to be 5 Times Water Positive Company and reducing the freshwater consumption by 25% by 2025 from base year 2020. Examples of water-related initiatives taken by our CEO towards increasing the water efficiency are: a) Installation of ZLD plants in all our units, demonstrating our unwavering commitment to water conservation and the prevention of any discharge. We have initiated project of ZLD across sites- CLZS, DSC, DZS, RAM and ZM b) Commissioned dry tailing plants at 3 mines & Transition from wet tailings disposal to dry tailings disposal by 2025. We have already installed India's 1st Dry Tailing plant at Zawar mines. c) Approved signing of PDA of 450 MW RE-RTC under group captive scheme.
Board-level committee	Sustainability and ESG Committee at the Board level forms the Tier-1 of the governance framework to guide the company towards achieving its sustainability goals and water- related commitment. It comprises of an independent director, an executive director, and two non-executive nominee directors. The committee, chaired by an Independent Director, is responsible for providing oversight and formulating our sustainability strategy on various issues, including water, environment, safety, transparent disclosures, and setting of long-term goals. The committee considers the risks and opportunities associated with water to be an integral part of their accountability for the long-term stewardship of the organization. The committee's primary focus is to oversee our goal of achieving a five-time water positivity by 2025 and a 25% reduction in freshwater consumption by the same year. Additionally, the committee provides guidance to enhance our water performance continually, implement effective processes and policies throughout the company, and drive sustainable improvements. It also assumes responsibility for overseeing our sustainability strategy, establishing long-term goals and targets, and monitoring progress towards their achievement. In FY2022-23, the Board-level committee was involved in making following decisions aligned with our 2025 water-related goals: a. Approved signing of PDA of 450 MW RE-RTC under group captive scheme. b. Approved Zero Liquid Discharge (ZLD) projects at Rampura Agucha and Zawar Mines. c. Installation of Dry Tailing plants at three mines

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing acquisitions, mergers, and divestitures Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing innovation/R&D priorities Setting performance objectives	Role of Board-Level Sustainability and ESG Committee The Committee assists the Board in meeting its responsibilities in relation to the Environmental, Social and Governance (ESG) matters and ensuring strong oversight on sustainability including water -related issues.The Committee meets twice a year and is responsible for: 1.Oversight on Sustainability & Water Strategy, 2.Review & monitor Sustainability & Water Management Strategy 3. Monitor performance of objectives and oversee progress against goals and targets. 4.Oversee major capital expenditures on implementing Sustainability and Water Strategy 5.Continual improvement in Sustainability performance. 6.Implementation of appropriate Sustainability related processes and policies across the company, and 7.Periodically review the Company's stakeholder base and their material interests. Seek updates on the management of water -related issues from the respective functional and business head. Some of the key decisions that have been taken by committee are: a) Zero Liquid Discharge (ZLD) projects approved at Rampura Agucha and Zawar Mines. b) Commissioned dry Tailing plant at three mines. c) Approved signing of PDA of 450 MW RE-RTC under group captive scheme. Role of Board-Level Audit and Risk Management Committee Audit and Risk Management Committee oversees the water-related risks and opportunities. As climate risks including water risks is integrated as key risk in

			our enterprise risk management and financial planning, it is the primary responsibility of ARC Committee to provide oversight on Water related risks & Opportunities, and report progress on risk mitigation efforts to the Board on a quarterly basis. The Committee also reviews potential impacts to production disruptions due to climate-related physical and transition risks that may impact HZL's core business. For example: We conducted Baseline Water Risk Assessment was conducted using the WRI Aqueduct Water Risk Atlas and Aqueduct to identify business units having water risks based on Likelihood and Severity of the risk. This exercise was done to compare the Internal Risk Assessment with the results from the Water Risk Monitizer tool. Role of Water Management Community: HZL has also established a Water Management Community under the Executive Sustainability Committee, chaired by a senior leader, at the corporate level, to ensure strong governance for water conservation, water risk assessment, formulation of mitigation strategies, continual improvement and innovation in water management processes. The community is comprised of water experts from each site. The community meets on monthly basis and appraise the Chairman of Executive Sustainability Committee on the various Water Management projects' progress and seek guidance as and when required.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues
Row 1	Yes	The Nomination and Remuneration Committee devised criteria for evaluation of the performance of the Directors including the Independent Directors. The Committee (NRC) evaluates the knowledge, skill, professional & functional expertise and ensures that the potential candidates possess the requisite qualifications before

		appointment. In addition, NRC also facilitates competency building of the directors through dedicated familiarization programs on key themes relevant for the company. For example, our Whole-Time Director & CEO who is a member of the Sustainability & ESG Committee which oversees the implementation of Water Management Strategy. The CEO has requisite skillsets and has even represented HZL on various national & international forums of Climate change. During the year, Company engaged Deloitte Haskins & Sells LLP (DHS) was appointed to carry out the performance evaluation of all the Board members. The results of the performance evaluation were in line with our set criteria's related to competency, knowledge and skills, confirming that our board members our competent in taking decisions related to business strategy including climate action. Similarly, the head of the Water Management & Community has an extensive experience in management of water-related risk and ensure that the company is taking appropriate measures to undertake and implement actions to further accelerate its ESG vision and ambitions. The Committee under his leadership is equipped with relevant skills to take decisions related to Climate risks & opportunities in addition to other enterprise risks.

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Executive Officer (CEO)

Water-related responsibilities of this position

Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

CEO is the highest decision-making authority within the company on ESG issues including water. CEO is part of the Board Level Sustainability & ESG Committee which provides overall guidance on identified key ESG issues & reviews the company's progress on its sustainability goals 2025. CEO briefs the board on various water related issues, yearly targets, progress and site's performance. CEO is authorized to sanction

CAPEX & OPEX budgets and other resources for the implementation of water strategy, and climate adaptation and mitigation actions. CEO takes decisions related to Procurement, Human Resources, Finance, Legal, and Operations which supports implementation of our Water & Climate strategy.
Key decisions taken:
a) ZLD projects approved at Rampura Agucha and Zawar Mines
b) Commissioned Dry Tailing plant at 3 mines
c)Rainwater harvesting project at RAM with ground water augmentation of 87 lacs m3.
d)Signed PDA of 450 MW RE-RTC under group captive scheme, to reduce water use.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Chief Executive Officer (CEO)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations Improvements in water efficiency – product use Improvements in wastewater quality – direct operations	The indicators (reduction in water withdrawals and consumption, improved efficiency in direct operations, improvement in wastewater quality and community programs) for incentivised performance are directly linked to our 2025 water targets set under the helm of our water policy. These targets are focused to reduce freshwater withdrawal by 25% and being 5X water positive through our operational & community led initiatives. Our long-term strategy is to reduce risks related to drought and flooding by	The performance-based incentives are directly linked to our 2025 water targets (reduce freshwater withdrawal by 25% and being 5X water positive) that includes performance against KPIs such as- reduction in water withdrawal and consumption, improved efficiency in direct operations, improvement in wastewater quality and community programs. Our long-term strategy is to reduce risks related to drought and flooding by making systemic investments in water

		Reduction of water pollution incidents Reduction or phase-out of hazardous substances Implementation of water-related community project	making systemic investments in water conversation infrastructure.	conversation infrastructure. CEO, who leads Sustainability Strategy including water related goals, is incentivized based on his performance against the targets set in the specific year. CEO is eligible for our short-term incentive plan and is held accountable for the sustainability performance as per HZL's performance-based compensation structure. CEO has business as well as individual KPIs aligned with organizational goals, Sustainability performance, and People Metrics. The compensation criteria include 10% Sustainability linked performance which includes Water Stewardship. Stock-based long-term performance incentives represent the largest component of executive pay to encourage consecutive performance for 3 years aligned with shareholder interests. ESG & Carbon Footprint performance is 6% of the overall criteria for computing the long-term bonus share allotment. Water aligned incentive metrics for FY 22-23: Reduce freshwater consumption by 25% and being 5X water positive through our operational & community led initiatives.

Non-monetary reward	Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations Improvements in water efficiency – supply chain Improvements in water efficiency – product use	At HZL responsible water stewardship is practiced right from the top level. Water related focus areas are identified at the board meetings and responsibility of management of each focus area is given to board level members. At the subsequent board meetings progress under each of the issue is discussed and for good performance/ targets achievements, the aspect owners are recognized with non-monetary awards such as recognition in external forums, giving Advancement Opportunity –work on more meaningful and challenging projects etc.	Water is a shared resource and HZL acknowledges the need to conserve and optimally manage it. HZL has an ambitious target to reduce freshwater consumption by 25% by 2025. Rationale: These indicators (reduction in water withdrawals and consumption, improved efficiency in direct operations, supply chain and product use) are selected in line with the water policy and the goals that HZL aims to achieve. Being a water intrinsic company, HZL understands the significance to conserve, manage and re-use to provide a greater access of freshwater to the community. At HZL responsible water stewardship is practiced right from the top level. Water related focus areas are identified at the board meetings and responsibility of management of each focus area is given to board level members. At the subsequent board meetings progress under each of the issue is discussed and for good performance/ targets achievements, the aspect owners are recognized with non-monetary awards such as recognition in external forums, giving Advancement Opportunity –work on more meaningful and challenging

				projects etc

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Water management strategy at HZL provides clear guidelines and highlight the goals related to water efficiency. HZL has a Water Management community that ensures governance for water conservation at source, ensuring ZLD and creating positive water footprint. We have framed our Water Management policy in consultation with all relevant stakeholders, which is reviewed on a continuous basis in line with the evolving water related scenarios. We ensure that we take initiative on the issues identified in the policy and that a consistency is maintained in our approach for addressing these goals. We actively engage with our trade associations in policy discussions with the government and policy regulators. We align our policies and initiatives with the expectation set by UN Global Compact Water Action Platform (CEO Water Mandate). We use this as the opportunity to voice opinion in terms of water related policy decisions in India and globally. In doing so, we remain consistent of our company's water commitments and ensure that responsible water usage practices are encouraged through the policy framework.

In case any inconsistency is observed, it is discussed in the Board Sustainability Committee meeting and necessary actions are taken. Example, we provide periodic training to senior executives and all key employees on the material risks and important topics like water and encourage engagements and interactions with other stakeholders which are in line with companies stand on water.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

Hindustan Zinc Limited BRSR 2022-23.pdf

TCFD Hindustan Zinc Limited 2022-23.pdf

TCFD Report is latest and Integrated Report is of last year as Integrated report 2023 is underway.

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	21-30	Our Water Management Strategy aims to direct water management efforts, promote conservation & demand management with a uniform Group-wide approach. Sustainable water management is one of the goals within the long-term business strategy of HZL to maintain long life of 25+ years. Water-related issues are integrated in the company's long-term approach to ensure a) our ability to operate in water-scarce catchments b) create a shared value for all stakeholders as sufficient availability of water for the communities ensures our social license to operate. Our Water Management Strategy thus aims to direct water management efforts, promote conservation and demand management. We have made a commitment to be 5 times water positive by 2025 and reduce our freshwater withdrawal by 25% from base year 2020. This is made up of three key objectives: (1) Reduction—reduce water use intensity in our operations; (2) Replenishment—replenish in high-stress priority locations more water than consumed; (3) Accessibility-ensure access of clean drinking water to local community. All plans are reviewed monthly by Executive sustainability committee and once in every 6 months by Board level sustainability committee. All the identified water issues get reflected in our water policy to further ensure consistency in approach and action.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	21-30	We recognize that company's growth & business objectives can be affected considerably in case of shutdowns due to unavailability of water, water related legal actions, regulations or reputation loss. We conducted water risk assessment across HZL, at 100% of our sites, using 3 tools-WRI Aqueduct Water Risk Atlas, Water Risk Monetizer & WWF Water Risk Filter & identified that all our operations are in water stresses

			area. Specific water related issues such as reduction of water withdrawal; reuse and recycling; water use efficiency; addressing local community water needs; mine dewatering and discharge prevention are integrated into our strategy. We strategize for any social or reputational risks that may arise due to water consumption while simultaneously managing regulatory risks & physical climate change risks. While our water goal is in line with our business strategy to maintain long life of 25+ years, we have prepared 10-year plan to execute our strategy. We adopted internal water price of INR 329.20/m3 which we would invest in water efficient projects. These strategies include using more water efficient methods of production and consumption, using alternative sources of water to reduce dependency on fresh water & replenish water within local watersheds through rainwater harvesting. Our long-term water related goal is to become 5X water positive \& achieve reduction of 25% in freshwater consumption. Example: we would install dry tailing plants at all our locations.
Financial planning	Yes, water-related issues are integrated	21-30	Our future financial plans consider need to have sufficient availability of water at each facility. While our water goal is line with our business strategy to maintain long life of 25+ years. Strategy for using alternate sources of water in operations in water stressed areas also forms part of our financial planning. For instance, we have projected our water demand to increase by 15% YoY. Existing water resources can help meet 80% of our demand. We partner with stakeholders in various infrastructure & development projects to improve water security for our operations & to help supply needs of communities. Our financial planning includes projected estimate to manage the long-term risks of flooding & drought; cost of response for building water related infrastructure for communities, low quality water acquisition, water conservation initiatives, dry tailing dam construction etc. With our operations in water stressed areas, we foresee direct financial impacts on our business resulting from changes in precipitation

			pattern leading to floods, damage to asset and property, & drought leading to business disruption. Hence, we engage with experts using the WRI Aqueduct tool to understand level of water stress in our operational area so that we are aware of the financial impact it can lead to. We adopted an internal water price of IR 329.20/m3 to invest in water strategy. Example, we installed RO reject water in ZLD plants for INR 68,615 which helped reduce freshwater withdrawal.

W7.2

(W7.2) 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?

Row 1

Water-related CAPEX (+/- % change)

26.35

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

10

Water-related OPEX (+/- % change)

63.8

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

10

Please explain

Increase in CAPEX is primarily due to the implementation of major projects which were undertaken in the reporting year such as the ZLD Projects at ZSD and DSC, RAM Rainwater harvesting project, dry tailing project at RDM etc. Last year, the total expenditure on environmental projects was INR 3,075,000,000, this number has increased to INR 3,885,330,000 in this reporting year, a 26.35% increase from last year. Water related OPEX has increased by 63.80% due to operational and maintenance cost of 5 MLD STP Plant, ZLD plants, Tailing dam & reservoir management. Last year, the operational expenditure of environmental projects was INR 1,035,000,000. This number has increased to INR 1,695,900,000 in this reporting year.

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment

Row 1	Yes	HZL conducted water risk assessment across 100% of our sites, using 3 tools- WRI Aqueduct Water Risk Atlas, Water Risk Monetizer & WWF Water Risk Filter. Objective was to conduct a sensitivity analysis and stress testing for water-related risks in 2030 and 2050 scenario and define water pricing. Projections of physical water risks such as water scarcity, flooding, water quality, and ecosystem services, as well as regulatory and reputational water risks were identified. For all parameters, the tool provides three scenario pathways based on: • OPTIMISTIC: Sustainable socio- economic development (SSP1) and moderate reductions in GHG emissions (RCP 2.6/4.5) leading to approx. 1.5°C. • CURRENT TREND: Current socio- economic (SSP2) trends and intermediate GHG emission (RCP 4.5/6.0) levels leading to approx. 2°C. • PESSIMISTIC: Unequal and unstable socio-economic development (SSP3) and high GHG emission (RCP 6.0/8.5) levels leading to approx. 3.5°C.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related	We conducted water risk assessment across HZL, at 100% of our sites, using 3 tools - WRI Aqueduct Water Risk Atlas, Water Risk Monetizer, and WWF Water Risk Filter. Objective: Conduct sensitivity analysis and stress testing to assess water-related risks under different scenarios for the years 2030 and 2050, while formulating comprehensive water pricing mechanism. Basin-level value chain water risk assessments helped to quantify inherent water risks while local/operational assessments were utilized to quantify residual water risks. By combining basin and	Our analysis based on the WRI Aqueduct Water Risk Assessment indicates that all nine of our mining sites are categorized 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 measured during each period with the average water levels recorded between 2030 and 2040, spanning a	The occurrence of physical acute risks such as drought could have a significant impact on revenues and direct costs, potentially resulting in an estimated impact of 390.14 million In the FY 2022-23, our assessment highlighted the need for an investment of INR 6,100 million to implement risk mitigation strategies within a medium-term time frame. Some of the initiatives taken up are: a) Use of evaporation retardants chemicals for minimizing

		operational risk data, the results were generated to identify the facilities with the highest level of risk, assess residual risks, and prioritize shared water challenges. Climate risk assessment is studied as per IPCC Emission Scenario RCP 2.6, RCP 4.5, RCP 6.0 & RCP 8.5 (medium low emission, global average CO2 concentration about 600 ppm) for all operational sites (Mining and Smelters). We applied possible future impact to 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. Two-time frames considered: a. 2030 b. 2050 Parameters Considered: Average Temperature Increase: (Projected Change in Hot Day; Tmax >40 degrees), b. Heat Wave (Heat Index 35, Ensemble Median Range) c. Drought: Ensemble Median Range (Projected change in Annual Mean Drought Index; SPEI d. Severe Drought (Ensemble Median Range	duration of 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 uses. 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	evaporation in surface water Reservoirs (OPEX) b) Exploring alternate sources of water and ensuring more recycling of water (Informational actions) c) Installation cost for Udaipur STP d) Installation of 3 Dry Tailing plants. e) Approved signing of PDA of 450 MW RE-RTC under group captive scheme at a cost of INR 780 million. This will help in further reduce our dependency on freshwater withdrawal as Captive power plants contributes to ~80% of power requirements and corner ~30% of total water withdrawal. Anticipated timeframe for response- 2030

		(Probability) e. Annual flooding: Projected Change in Days with Rainfall> 50mm e. Extreme Events: Cyclone		

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

Yes

Please explain

Low purchase price of water and the perception of low purchase price continues to represent a challenge to driving water efficiency whilst meeting internal investment criteria. To ensure that we drive water efficiency at all our sites we have calculated our Internal price of water to be used by the organisation for decision making : INR 329.20 /m3.The methodology for determining the internal price of water considers the project cost and annual water savings for different interventions undertaken, planned and proposed, for the various business units. This cost represents our 'willingness to pay' a price level – as these are already approved or implemented projects.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Please explain
Row 1	Yes	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.	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.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	Yes	
Water withdrawals	Yes	
Water, Sanitation, and Hygiene (WASH) services	No, but we plan to within the next two years	Vedanta which is 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 is implementing the WASH Pledge in all of its sites and is also assisting the WBCSD in raising awareness on the issue of WASH at the workplace. The company's leadership demonstrates their commitment through internal and external communication. Potable water quality is monitored on daily basis for key parameters. This is also monitored by third party as per IS:10500. Checklist has been prepared to inspect the hygiene conditions at water coolers/ drinking water facilities and rest room. We plan to set up sanitation facilities for our employees across our locations: Below are some initiatives we plan to do: a) Providing Safe Drinking water to 100% workforce (2 lt/employee) b) Access to toilets for Man & female c) Maintaining good hygiene at the workplace to keeps workers alive and healthy

Other	Yes	

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number

Target 1

Category of target

Other, please specify

Reduce Fresh Water Withdrawal by 25%

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify

million cubic meters

Year target was set

2020

Base year

2020

Base year figure

19.97

Target year

2025

Target year figure

14.97

Reporting year figure

18.09

% of target achieved relative to base year

37.6

Target status in reporting year

Underway

Please explain

We have reduced Water Withdrawal by 1.88 million m3 as against the target of 5 million m3 reduction by 2025.
Fresh Water Withdrawal in Base year (2019-20) = 19.97 million m3
Fresh Water Withdrawal in Reporting Year (2022-23) = 18.09 million m3

Expected Fresh Water Withdrawal in Target Year (2024-25) = 14.97 million m3
Target Achieved is 37.6%

Target reference number

Target 2

Category of target

Water pollution

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify

Zero Category 4 and 5 environment incidents year on year

Year target was set

2020

Base year

2020

Base year figure

0

Target year

2025

Target year figure

0

Reporting year figure

0

% of target achieved relative to base year

Target status in reporting year

Achieved

Please explain

We have not had category 4 and 5 environment incidents in 2022-23.

Target reference number

Target 3

Category of target

Other, please specify

Water Positivity

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify

5 times Water Positive by 2025

Year target was set

2020

Base year

2020

Base year figure

2.41

Target year

2025

Target year figure

5

Reporting year figure

3.71

% of target achieved relative to base year

50.1930501931

Target status in reporting year

Underway

Please explain

To underscore our commitment to water conservation, we have set an ambitious long-term goal of becoming a 5 Times Water Positive Company. In FY2020, we received certification as a 2.41 times water positive company, and we remain dedicated to implementing targeted measures to recycle water in Rajasthan. We are actively pursuing alternative water sources and exploring innovative ways to reduce water usage throughout the state. Our aim is to achieve a significant improvement and become 5 times water positive by FY 2025. 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.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

Hindustan Zinc Limited BRSR 2022-23.pdf

TCFD Hindustan Zinc Limited 2022-23.pdf

EY_Assurance Statement_HZL_CDP Water Report 2023_260723.pdf

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water withdrawal , discharge, recycle and consumption verified	ISAE 3000	Water withdrawal, discharge, recycle and consumption verified for all units covered in this boundary. water disclosure assurance for FY 2022-23 has been attached in W-F1
W8 Targets	water saving target verified as part of SD report verification	ISAE 3000	Water saving target verified as part of SD report verification. water disclosure assurance for FY 2022-23 has been attached in W-F1
W1 Current state	Water withdrawal , discharge, recycle and consumption verified	ISAE 3000	Also, all the water credit and debit details verified by DNV and HZL certified as 2.41 times water positive company. Assurance letter attached in W-F1 for 2022-23.

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Value chain stage	Please explain
Row 1	Yes	Direct operations	We have recently completed a comprehensive assessment of the usage of plastic within our value chain. The assessment aimed to

			gain a thorough understanding of the environmental impact of plastic usage throughout our operations and identify opportunities for improvement and sustainable alternatives. During the assessment, we carefully analyzed the quantity of plastic consumed, the types of plastic utilized, and the associated waste generation at various stages of our value chain. Primarily, the plastic used in our operations is in equipment used for mining and product packaging.

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Please explain
Row 1	Not assessed – but we plan to within the next two years	We have currently not assessed potential environmental and human health impacts of our use of plastics but we intend to conduct the same in next two years.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Please explain
Row 1	Not assessed – but we plan to within the next two years	We have currently not assessed plastics-related risks with the potential to have a substantive financial or strategic impact on our business, but we plan to do it in next two years.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Target type	Target metric	Please explain
Row 1	Yes	Plastic packaging	Other, please specify Reduce, the use of single use plastic	We have a target to eliminate the usage of SUP in our operations.

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	This is Not Applicable to our sector.

Production of durable plastic components	No	This is Not Applicable to our sector.
Production / commercialization of durable plastic goods (including mixed materials)	No	This is Not Applicable to our sector.
Production / commercialization of plastic packaging	No	This is Not Applicable to our sector.
Production of goods packaged in plastics	No	This is Not Applicable to our sector.
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	This is Not Applicable to our sector.

W11. Sign off

W-FI

(W-FI) 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.

Vedanta_Water Management Policy.pdf

TCFD Hindustan Zinc Limited 2022-23.pdf

EY_Assurance Statement_HZL_CDP Water Report 2023_260723.pdf

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

No

Please confirm below

I have read and accept the applicable Terms