

## W0. Introduction

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### W0.1

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

Hindustan Zinc is a zinc, lead and silver business. We are one of the world's largest integrated producers of zinc and are among leading global lead and silver producers. We are one of the lowest cost producers in the world and are well placed to serve the growing demand of Asian countries. We are a subsidiary of Vedanta Limited which owns 64.9% stake in the Company while the Government of India retains a 29.5% stake. We are listed on the NSE and BSE.

Our core business comprises of mining and smelting of zinc and lead along with captive power generation. We have a metal production capacity of over one million tonnes per annum with our key lead-zinc mines in Rampura Agucha and Sindesar Khurd; and key modern smelting complexes in Chanderia and Dariba, all in the state of Rajasthan in India. We are focused on operational excellence and long-term sustainability on the back of our high-quality assets, long mine life of over 25 years and low cost base.

With a reserve base of 114.7 million MT and mineral resources of 288 million MT, our exploration programme is integral to our growth and future expansions. Successful exploration and subsequent development of mineral assets underlines our mission and business strategy. We own 474 MW of coal based thermal captive power plants in Rajasthan to support our metallurgical operations. In addition, our environment friendly power generation includes 273.5 MW of wind energy, 39.64 MW Solar power and 35.37 MW from waste heat generation.

During FY 2019-20, our water accounting assessment was carried out by DNV GL, a globally renowned risk management and quality assurance company, and we were certified 2.41 times water positive company. Initiatives such as rainwater harvesting, recharge to ground water and the use of treated sewage water have enabled us to achieve this distinction. This reinforces our commitment to the journey of water stewardship.

During the year, India's first dry tailing plant was commissioned at Zawar Mine to reduce fresh water consumption by enhancing recovery of process water up to 90%, improving tailing Storage Facility structural stability and reducing water footprint.

The company has constructed 45 million litres per day (MLD) Sewage Treatment Plant (STP) in Udaipur. This Sewage Treatment Plant is a significant step towards conservation of fresh water and care for environment by cleaning the water bodies thereby improving overall health & hygiene of Udaipur city.

As a socially responsible corporate, Hindustan Zinc is making sustainable efforts in uplifting the socio-economic condition of the rural community in the areas it operates. In close association with State and Central Government, Hindustan Zinc is reaching out to around 500,000 people in 189 villages in Rajasthan, focusing on community population, towards their sustainable development. Company received following awards for Water Stewardship in last three years:

- National Award for Excellence in Water Management 2016 by CII (Confederation of Indian Industry) to Dariba Smelter Complex as "Noteworthy Water Efficient Unit", "within the fence" category.
- National Award for Excellence in Water Management 2017 by CII (Confederation of Indian Industry) to Dariba Smelter Complex as "Water Efficient Unit", "within the fence" category.
- The Indian Chamber of Commerce (ICC) awarded Dariba Smelter Complex the Corporate Governance & Sustainability Vision Awards 2017. Dariba Smelter Complex bagged the second prize in the 'Water Stewardship' category.
- Dariba smelter received "Excellence Award for the best Sustainable water management" by Advance Water Digest 'Global Water Award 2015' (UK) for Sewage Treatment Plant at Udaipur
- In the "Asia Corporate Excellence and Sustainability Awards, 2016", HZL was awarded in the Category comprised of projects related to Environment Concern for Wastewater Treatment Plant, Udaipur.
- HZL received Outstanding accomplishment award in FY 2018 CII ITC Sustainability award also Dariba Smelter received Environment excellence award
- Hindustan Zinc's Sindesar Khurd Mine received the "Bala Gulshan Tandon Excellence Award – 2018", for "Best Overall Performance in Sustainable Development" from FIMI (Federation of Indian Mineral Industries).
- CII-ITC Sustainability Awards 2019- Corporate Environment and Dariba Smelting Complex received Commendation for Significant Achievement in Environment Management.
- Chanderia Lead Zinc Smelter Complex received 1st Water Conservation Award 2019 in office category by CII IGBC.

Further details are available in the company's website at <http://www.hzindia.com/>

### W-MM0.1a

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(W-MM0.1a) Which activities in the metals and mining sector 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 2019	March 31 2020

W0.3

(W0.3) Select the countries/areas for which you will be supplying data.

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 and risks to be very small. We do not collect the water input or output data of our offices that do not have a direct association with an operation (for example our marketing offices).

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	Direct: HZL has allocated its importance rating as "vital" due to the fact that fresh water is required for all our direct operational process viz. mining & beneficiation process, smelting and refining process etc. For instance good quality water results in more metal recovery in beneficiation plants, while bad quality water results in high O&M costs in plants as this leads to corrosion in equipment's due to high chloride content. Furthermore, the quality of water also has an impact on treatment costs. Good quality freshwater is also crucial for daily use, especially as drinking water in our offices and at sites. Making it vital for both the development and growth of our operations as well as the health and safety of our employees. Indirect: HZL has allocated its importance rating as "Important" due to our organisation being indirectly dependent on water for operation of our coal based thermal power plants which is supporting our metallurgical operations. Our Indirect freshwater use also relates to freshwater consumption by the nearby communities and thus it is important to us, as water is shared between us and the community in which we operate. Therefore, we have initiated projects to enhance the water replenishing activity through rain water harvesting, pond deepening and recharge shafts in and around our operating areas. Future: We are targeting to reduce our fresh water consumption by 25% by 2025. This will be done by strengthening our Zero Discharge initiatives by installing Multiple Effective Evaporator or Mechanical Vapour Recompression in smelters to accelerate water recovery and installation of dry tailing plants. We also plan to use municipal STP treated water across the 5 districts we operate in. We believe that water is a shared resource, and therefore the STPs will have the capacity to treat water for the entire district we operate in and we can use the treated water for our operations and also helping in cleaning our nearby district's water bodies
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Direct: Recycled, brackish, or produced water is categorised as "Vital" by HZL due to our efforts of trying to reduce our operational burden on water sources through implementing various initiatives to increase recycling of water and the use of alternative water sources. Our aim is to address the risk of depleting fresh water resources in the future through implementing strategies that promote recycling of fresh water. These strategies include the use of effluent treatment plants, tailing water recycling, dry tailing plants, deep cone thickeners. HZL has also expanded Udaipur STP by another 25 MLD and now operate 45 MLD of STP. Furthermore, STPs are installed at sites and township to treat the domestic water and reusing the same at site. Storm water collection ponds are also constructed to collect rainwater runoff and treated in ETP for reuse. Furthermore, HZL is undertaking water audits (both externally and internally) and implement water efficient technologies in the process and utility areas thereby reducing water usage. Indirect: Reducing the use of fresh water in operation in indirect use is rated as "important" as water is a shared resource. Therefore, the more we use the recycled water the more fresh water is available for the communities we operate in and the people that reside in them. Future: Future dependency on lower quality water in direct operations will increase as we implement initiatives to reduce freshwater and recycle more. This will be done by installing Multiple Effective Evaporator or Mechanical Vapour Recompression in smelters to accelerate water recovery and installation of dry tailing plants. We also plan to use municipal STP treated water across the 5 districts we operate in.

**W1.2**

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	HZL uses environmental assessments using ISO14001 to ensure optimum water withdrawal, to assess potential impacts due to excessive water withdrawal, and to help us maintain zero discharges at all our sites. Total water withdrawals from surface water is measured, tested, & treated to ensure standards for domestic use & operational requirements are met. Metered monitoring & steward system is in place to ensure that water usage is optimised. Water meters are installed at withdrawal points, to record water withdrawal quantity daily. There is also a water management plan aligned to the Vedanta technical standard at all our locations which helps us tracking the water performance. There is an internal water audit conducted by our water managers which covers the aspect of water withdrawals every year. We also conduct external water audits like annually ISO 14001, GRI audit and VSAP audit covers water systems and data also once in three-year water positive assurance.
Water withdrawals – volumes by source	100%	As we operate in water scare areas it is important to record our withdrawals to ensure water efficiency and reduce our dependency on fresh water sources. Therefore, total water withdrawals from surface water sources are measured and tested & treated wherever required to ensure that they meet the standards for domestic use and operational requirements. Daily metered monitoring through water meters & steward system is in place to ensure that water usage is optimized. This is done to track performance indicators and used to see whether water reduction targets are met. HZL records consumption of water withdrawn from different sources, including surface water, ground water and municipal water at all operational sites. It is important for HZL to measure withdrawals from all of these sources in order to implement reduction measures and report our data externally in our Sustainability report in line with the Global Reporting Initiative (GRI-standard).
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	76-99	The total water withdrawals from ground water intersection during mining of ore are monitored daily using a metered monitoring system in order to ensure that water usage is optimised. The water is collected and reused in process. Only Mines are being considered here.
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	The total water withdrawals from surface water sources are analyzed, tested and treated daily to ensure that they meet the standards for domestic use and operational requirements. Regular metered monitoring & stewards system is in place to ensure that water usage is optimized. This is done to track performance indicators and used to see whether water reduction targets are met.
Water discharges – total volumes	100%	All of our sites adhere to zero discharge standards Real time monitoring systems along with flow meters and PTZ camera are installed in all smelters and captive power plants at plant outlets
Water discharges – volumes by destination	100%	All of our sites adhere to zero discharge standards Real time monitoring systems along with flow meters and PTZ camera are installed in all smelters and captive power plants at plant outlets
Water discharges – volumes by treatment method	100%	All of our sites adhere to zero discharge standards Real time monitoring systems along with flow meters and PTZ camera are installed in all smelters and captive power plants at plant outlets
Water discharge quality – by standard effluent parameters	100%	All of our sites adhere to zero discharge standards Real time monitoring systems along with flow meters and PTZ camera are installed in all smelters and captive power plants at plant outlets
Water discharge quality – temperature	100%	All of our sites adhere to zero discharge standards Real time monitoring systems along with flow meters and PTZ camera are installed in all smelters and captive power plants at plant outlets
Water consumption – total volume	100%	Entire water consumption data is recorded daily by means of appropriate metered monitoring. All our sites are having water resource management plans. This plan is updated on annual basis and water balance for entire operations is also updated based on actual water consumption. In this exercise suitable water conservation projects are identified to minimize water losses and implemented. We record consumption in order to ensure compliance and effectively reduce costs.
Water recycled/reused	100%	There is different process in place for recycle/reuse of water at all our sites. Water is recycled after providing treatment at onsite Effluent Treatment Plant (ETP, RO, and MEE). The treated effluents conform to the prescribed standards and are recycled in the process. Tailing water recycling, dry tailing plant, deep cone thickener are the major initiatives at mines. Sewage treatment plant based on Fluidized Aerobic Bed Reactors (FAB) technology has been provided for all townships. Treated water is reused. Total volumes of recycled and reused water is recorded and monitored from all our operations throughout the year on a daily basis.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Water network providing water for WASH services is measured daily by means of appropriate monitoring and recording methodology. We as a Company are committed to implementing access to safe water, sanitation and hygiene at the workplace at an appropriate level of standard for all employees in all premises under direct control. Furthermore, it is aligned to Sustainable Development Goal 6 (To ensure access to safe water sources and sanitation for all). Initiatives taken during the year: • Conducted awareness-cum-training session • Display boards and signage • Safety Chaupal: • Ensuring safe water supply and workplace hygiene and sanitation • Easy access to drinking water, toilets, hand dryer, hand-washing facilities etc.

**W1.2b**

**(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?**

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	26730	Lower	In FY 18-19 the water withdrawal was 29,169 ML. The water withdrawal is lower than last year as a result of improved recycling from 36% to 39% Future: Future water withdrawal may continue to reduce (by another 25% by 2025 and 5% by 2021) as we aim to further improve our recycling processes and avoid evaporation losses through installing Multiple Effective Evaporator/Mechanical Vapour Recompression, and dry tailing plants.
Total discharges	0	About the same	All 100% of our facilities are zero discharge facilities, all measures are in place to ensure that no effluent discharged out of the premise We expect total discharges to remain zero in the future.
Total consumption	24795	Lower	The water consumption in FY 18-19 was 26,812 ML. total consumption is lower than last year due to increase in water recycling. The reason to why there is a difference of 1,935ML in water withdrawal and water consumption is due to the fact that total water withdrawal includes the water we use in fire services, distribution to community through CSR activities, consumption in township and pipeline losses. While, total consumption is water used in operations and also the water used in drinking purpose in offices. Future: Future water consumption may continue to reduce (by another 25% by 2025 and 5% by 2021) as we aim to further improve our recycling processes and avoid evaporation losses through installing Multiple Effective Evaporator or Mechanical Vapour Recompression, and dry tailing plants.

## W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	76-99	About the same	WRI Aqueduct	Except for the refining plant in Pantnagar, Uttarakhand all our mining and metal production operations are in the state of Rajasthan. All our sites in Rajasthan, which contribute to about 99% of all our water withdrawal fall under water stressed regions. We carry out risk scenario analysis to identify operations where water is a critical issue. This enables us to reduce our impact on fresh water sources in the area by identifying alternate sources of water. For this purpose, we engage with a team of external experts each year and water stress areas are classified based on WRI's Aqueduct tool. We are continuously improving our approach to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and decrease water intensity.

## W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	16763.52	Lower	Fresh surface water is relevant for our operations as it is strategic to our operations and crucial for in our production process. Additionally, fresh water provides our employees with fresh drinking water and also ensures those employees who live near our facilities with proper hygiene. In FY 18-19 total water withdrawal from fresh water sources was 19,670 ML This year (FY19-20) fresh water withdrawal has reduced by about 15% as compared to last year. One of the prominent reason for reduction in fresh water withdrawal is the increase in use of third party treated water.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	We do not consume any brackish water. We have updated our definition on this from last year to match the definition provided by CDP. As water withdrawn by us has TDS lower than 10000 we do not classify it as brackish water any more.
Groundwater – renewable	Relevant	2625.95	Lower	The major source of one of our location is ground water as there is no other alternative captive dam/ nearby surface water source or CSTP is available for use. Our ground water withdrawal levels have reduced by approximately 9% as compared to FY18-19 as there is increase in 46% recycling of water from last year.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	We do not consume water from ground water - non renewable, as it is a non-renewable source of water and is against our water policy.
Produced/Entrained water	Relevant	488.65	Higher	We are working below the ground water table and dewatering of mine intersection water becomes essential to run the operations. Produced/Entrained water consumption has increased by 32% from FY18-19 as due to heavy rainfall during the year the ground water table also increased.
Third party sources	Relevant	6751	Higher	Third party water is relevant for our operations as this water is recycled and as a result is in line with our water policy. Third party water definition also includes the wastewater utilized by the company from other sources. Based on this revised definition our third party water withdrawal for last year was 6290 ML. Thus, our third party water withdrawal has increased by about 7% due to increase in wastewater taken from Udaipur CSTP. The CSTP capacity has increased from 20 MLD to 45 MLD.

## W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	All our sites are zero water discharge sites
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	All our sites are zero water discharge sites
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	All our sites are zero water discharge sites
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	All our sites are zero water discharge sites

## W-MM1.3

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

Yes

## W-MM1.3a

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

Product	Numerator: Water aspect	Denominator	Comparison with previous reporting year	Please explain
Zinc	Freshwater use	Ton of final product	Lower	At HZL we primarily mine zinc and lead. Usually it is difficult for us to segregate water consumed for these products, and hence we report our water consumption as water consumed for production of zinc – this includes water consumed for production of lead as well. The Sp. water consumption in FY2018-19 was 15.73 m3/ metric tonne of metal produced and in FY 2019-20 is 14.51 m3/ Metric tonne of metal produced.(this is including STP treated water) This indicates an approximately 8% reduction in intensity from last year. This reduction is attributed to increase in recycling from tailing Storage Facility as well as the operation of dry tailing plant. Both these initiatives have resulted in a reduction in the amount of fresh water used, thereby reducing water intensity. On account of only fresh water intensity has reduced to 11.07 m3/ metric from 12.31 m3/ metric last year, which is reduction of 10%. As per HZL's water credit and debit accounting, we are 2.41 times water positive and certified by Third party. Future: HZL will continue to contribute towards water security and efficiency. Our focus areas will include increase efficiency in water use and exploring less water intensive technologies, increase in water recycling through improved systems, usage of alternative sources of water, and replenishment of local watersheds as well as utilisation of rain water harvesting. Through these initiatives it is anticipated that our long-term water security will improve and we will continue towards achieving our 2025 targets to become 5 times positive water company and reduce the water consumption by 25%.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for this coverage

With operations in water stressed regions it is important that our suppliers report on their water use, risks & management information, and requested suppliers who are critically at risk to do so and we have carried out a desk based review of our critical suppliers. We initiated this for the critical suppliers, planning to these detailed assessments for other suppliers also in next phase. As part of this review a detailed questionnaire was developed, which included criteria on environmental standards such as water, energy, emission, waste etc. As part of our Code of Conduct suppliers are required to monitor environmental compliance, opportunities & comply to ISO 14001 requirement which includes details for water management also. We do not provide any incentive to suppliers, but, there is a penalty of non-compliance (water related incidents, waste water leakages) which could result in termination of contracts with suppliers who are unable or unwilling to comply with our CoC.

Impact of the engagement and measures of success

All HZL suppliers are requested to complete a prequalification (PQ) questionnaire where environmental topics like water is a sub-category. This is typically for the Tier 1 suppliers. Environmental Management certification information was requested in the questionnaire. Vendor qualification is based on a pre-qualification form. Only vendors with minimum score of 75% are inducted. Key qualifiers include, quality standards, environmental performance, social performance, and health and safety performance, among others. After on boarding, suppliers may be required to provide proof of statements made and demonstrate that the supplier code of conduct is followed. HZL may conduct site visits and audits to verify compliance with the code. Where elements of the code aren't met, suppliers are required to implement corrective action plans to prevent recurrence. HZL may revoke the contracts of suppliers who fail to comply with the code.

Comment

Our responsible supply chain is a reaffirmation of our universal message of caring within and beyond the boundary. At HZL, we encourage our suppliers to not just comply by the relevant national & international standards, but ensure on-going improvement in their own standards through regular exchange of knowledge and training. Our supply chain management strategy incorporates processes which help integrate tenets of sustainability across our value chain.

W1.4b

**(W1.4b) Provide details of any other water-related supplier engagement activity.**

**Type of engagement**

Other

**Details of engagement**

Other, please specify (Others, Third party audits, assessments and surveys)

**% of suppliers by number**

26-50

**% of total procurement spend**

51-75

**Rationale for the coverage of your engagement**

We have taken this step to ensure we are dealing with suppliers who follow the regulations. Over the past two years - In Phase-I, 668 vendors were covered (57% of the total vendor base). As part of the evaluation for these vendors, we have covered economic, social, governance, and environmental criteria.

**Impact of the engagement and measures of success**

Based on the results and success of the engagement we are making a comprehensive action plan, which targets 46 suppliers that are at high risk. We carry out this activity in partnership with D&B and DHS where each vendor is periodically scored on a comprehensive set of fixed parameters like ISO/OSHAS certification, Modern Slavery Act requirements, Environmental aspects, General Supply Chain Management, among others. A letter/notice seeking clarification and mitigation plan is sent across to such vendors who fail to meet or sustain the minimum criteria. Further, if these partners are unable to satisfy compliance to the conditions laid down in the standards, they will not be engaged till the compliance is met.

**Comment**

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**Type of engagement**

Incentivizing for improved water management and stewardship

**Details of engagement**

Water management and stewardship is integrated into supplier evaluation processes

**% of suppliers by number**

76-100

**% of total procurement spend**

76-100

**Rationale for the coverage of your engagement**

The rationale for the coverage is to ensure all our suppliers effectively adopt HSE practices like water management and stewardship. There is also a structured vendor engagement plan in place across all levels. We have organised 'Confluence', a business value-creation workshop with our key business partners.

**Impact of the engagement and measures of success**

While audits ensure compliance, awards help our suppliers share their best practices with us. It provides one more opportunity for us to understand and learn from their practices and also encourage our suppliers to perform better. The success of this supplier engagement is measured through our supplier evaluation process which includes review of water performance/water risk management at the supplier end as well through monitoring of water management and stewardship.

**Comment**

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**W1.4c**

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**(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?**

Our rationale for prioritizing engagements with customers or any other partners in value chain is based on a two-pronged strategy **1- risks screening** and **2- potential impact**. HZL recognizes that water is a shared resource and hence in terms of our contribution to overall water solutions for Udaipur, we have collaborated with municipal authorities/other local parties and have undertaken a project on STP development. We aim to be an industry leader in using environmental friendly technologies for reducing our environmental footprint; we aim to achieve this by innovating processes for water stewardship; introducing captive usage of energy from renewable sources; and adopting new methods for waste recycling. To achieve this, we will be working with our stakeholders including suppliers, vendors, local communities, NGOs, and customers.

We focus on environmental and social initiatives. For instance, in FY2020, INR 21.04 Crore was spent on health, water & sanitation related initiatives targeted at local communities. We realize that water is among the most important needs of a community and our focus is on ensuring that communities around us receive safe potable water and access to proper healthcare and sanitation facilities. For instance we installed a hub and spoke model community RO plant to provide clean, safe, and affordable drinking water.

HZL is also exploring the opportunity of alternative low-quality water sourcing, and we have developed 121 rain water harvesting structures/pond deepening projects/gully plugs to store water. We have also undertaken Pond Deepening in Fathesagar (lake in Udaipur). HZL has also been promoting galvanization to increase the life of Steel and decreasing its water consumption life cycle. We work with government at different levels to enable treatment of domestic/industrial effluent and implementation of community initiatives. We measure success through the amount of water we recycle and save in our plants and communities we operate in.

**W2. Business impacts**

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**W2.1**

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**(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?**

No

**W3. Procedures**

**W-MM3.2**

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

**Country/Area & River basin**

India	Mahi River
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**Number of tailings dams in operation**

1

**Number of inactive tailings dams**

0

**Comment**

This tailing Storage Facility is part of our Zawar mining and beneficiation process. Dry Tailing disposal plant at Zawar mines is completed and ensuring re-circulation of >90% of the process water resulting in reduction in fresh water consumption. At the Zawar mill, we acknowledged the challenge concerning recirculation of water in our underground mines and tailing Storage Facility. The rate at which recirculation occurred was lower, owing to an insufficient pumping capacity in our mine water collection tank (2,000 m3). We also realised that there was no reservoir and a low pumping capacity for the tailing Storage Facility reclaim. We felt the need to increase the storage capacity and to that end, installed an additional pump and line system. We constructed a new 5,000 m3 tailing Storage Facility water reclaim facility.

**Country/Area & River basin**

India	Other, please specify (Banas River Basin )
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**Number of tailings dams in operation**

1

**Number of inactive tailings dams**

0

**Comment**

This tailing Storage Facility is part of our Dariba mining and beneficiation process. Our tailing Storage Facility area spans ~8.2 lakh m2 and tailing from the SKM and the RDM are stored in the dam. Supernatant water from the storage facility collected in a pit near our pump house, following which its pumped back into the SKM and RDM. This is made possible by transferring large volumes of water into the newly constructed lined storage pond, which has a capacity of 1.25 lakh m3. Water from this pond is diverted to the mines for further use in the ore beneficiation plant. To enhance the levels of monitoring piezometers have been installed. Inclinator are installed to monitor movement in X & Y axis. Reading from both the instruments is being transferred through GPS to the in charge of Tailing Storage Facility. This aids in taking proactive steps against the occurrence of unfortunate incidents.

**Country/Area & River basin**

India	Other, please specify (Banas River Basin)
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**Number of tailings dams in operation**

1

**Number of inactive tailings dams**

0

**Comment**

We erected a water collection reservoir. This reservoir stores excess water accumulating at our tailing Storage Facility. In order to eliminate the need for physical inspections, we commissioned the installation of vibrating wire type piezometers and location-based inclinometers within the embankment. These instrumentation systems provide real-time monitoring information to our offices, which has boosted overall surveillance. We also structured a Tailing Storage Facility (TSF) organogram at each site wherein periodic reviews are carried out.

**W-MM3.2a**



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

Row 1

**Evaluation of the consequences of tailings dam failure**

Yes, we evaluate the consequences of tailings dam failure

**Evaluation/Classification guideline(s)**

Australian National Committee on Large Dams (ANCOLD)

Canadian Dam Association (CDA)

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

**Tailings dams have been classified as 'hazardous' or 'highly hazardous'**

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

**Please explain**

We conducted dam break assessment for all three tailing storage facilities of HZL. The consequence category was determined using ICOLD, CDA and ANCOLD. Classification is determined based on population at risk, potential loss of life, environment and cultural values , infrastructure and economics. At HZL we follow Vedanta Tailing Management Facility Standard which is aligned with other international standards. The standard focuses on the full life-cycle of the tailings process (investigation, design, construction, operations, closure and rehabilitation). It is applicable to all existing and future tailing facilities in mining operations. HZL also has a dedicated policy on Tailing Management which guides us to manage tailings and storage facilities. The safe and responsible management of TSF is a core to our mining activities. Our management of these infrastructures include ensuring a high standard of care is applied at the design, construction, operation and closure stages of mining. Additionally, we are committed to continually improving the management of our facilities by developing and incorporating best practices like - Adopting a clear policy on tailings management and a strong commitment by management for the safe and responsible management of TSF; Establishing TSF Committee – in house experts to strengthen compliance to Vedanta TMF standard; Visual Monitoring and Inspection; Geotech Monitoring. HZL also has an emergency and planning response plan in place.

W-MM3.2b

(W-MM3.2b) 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)
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**Latitude**

25.58

**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)**

53

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

7.5

**Please explain**

We undertook dam break modelling in 2019 at the Agucha TSF to assist in understanding the risk posed to stakeholders downstream of the TSF. The results of the model determine the arrival times and maximum flow depths of the breach flood wave produced by a hypothetical breach of containment. The results were used to prepare inundation maps. Evaluated the Agucha TSF against the ICOLD hazard rating and determined that the TSF has a rating level of 'IV (Extreme)'. This was mainly due to the high population at risk (PAR) and was consistent for all modeled cases. The hazard rating was also evaluated against the ANCOLD Guidelines and determined that the TSF has a Consequence Category of 'Extreme'. This was mainly due to the high PAR and was consistent for all modeled cases. Recommended designing and constructing mitigation structures to reduce PAR exposure, demarcate safe areas for evacuation in the case of a flood event and demarcate risk zones to prevent new settlements in these areas.

**Tailings dam name/identifier**

Rajpura Dariba Complex Tailing Dam

**Country/Area & River basin**

India	Other, please specify (Banas Basin)
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**Latitude**

24.57

**Longitude**

74

**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)**

20.8

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

11.25

**Please explain**

Dam failure impact assessment of the TSF at Rajpura Dariba location 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, installation of warning system.

**Tailings dam name/identifier**

Zawar Tailing Storage Facility

**Country/Area & River basin**

India	Mahi River
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**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)**

34.14

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

0

**Please explain**

Hypothetical Study of Zawar Tailings Storage Facility Failure was conducted in 2019-20 to assess the potential damages 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 "Very high" 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.

W-MM3.2c

**(W-MM3.2c) 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
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Procedure	Detail of the procedure	Please explain
Acceptable risk levels	<p>Establishment of site-level guidance and standards for acceptable risk levels based on an evaluation of potential chemical and physical risks</p> <p>Establishment of site-level guidance and standards for acceptable risk levels for third party safety in consultation with potentially affected communities, employees and relevant government bodies</p> <p>Establishment of site-level guidance and standards for acceptable risk levels across all life stages, including post-closure</p> <p>Establishment of company-wide standards for acceptable risk levels that follow a company policy to eliminate or minimize water-related risks associated with tailings dams</p>	<p>In response to recent high-profile tailings dam failures in the world, the Company has also reviewed tailings storage facility standards, guidelines and risks and subsequently tailing management policy was rolled out. Dam break stability studies conducted in coordination with global experts. Tailing Storage facility (TSF) community has been formed for driving actions to prevent incidents and ensure best practices are implemented at all mining locations. In light of the recent high impact failures of tailing dams in Brazil, 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 is helping us in eliminating land requirement for landfills and water recovery. During the year, India's first dry tailing plant was commissioned at Zawar Mine to reduce fresh water consumption by enhancing recovery of process water up to 90%, improving tailing dam structural stability and reducing water footprint.</p>
Operating plan	<p>An operating plan that is aligned with your established acceptable risk levels and critical controls framework</p> <p>An operating plan that includes the operating constraints of the dam and its construction method</p> <p>An operating plan that considers the consequences of breaching the operating constraints of the dam</p> <p>An operating plan that includes periodic review of the foundations and slope materials</p> <p>An operating plan that evaluates the effectiveness of the risk management measures and whether performance objectives are being met</p>	<p>In light of the recent high impact failures of tailing dams in Brazil, as a proactive measure, we have decided to build all our future tailing Storage Facility as dry tailing to de-risk from dam failures. We Rolled out Tailing Management Policy to manage tailings and waste facilities in a manner that protects the health of our employees, community and the natural environment throughout its lifecycle. Following actions were initiated by TSF community • Structured TSF (Tailing storage facility) organogram at each mine site and periodic review • Replacing the wet tailing disposal system with dry Tailing disposal system. • Dry tailing disposal would reduce the water content in tailings which will help in improving the stability of dam • Creation of secretariat at each location for ensuring availability of Tailing Storage Facility related documents at single desk • Dam break assessment • Initiated online monitoring of health of tailing Storage Facility embankment through vibrating wire type piezometers and in-place inclinometer</p>
Life of facility plan	<p>A life of facility plan that identifies minimum specifications and performance objectives for the operating and closure phases</p> <p>A life of facility plan that includes an identification of potential chemical and physical risks from the design and construction phases</p> <p>A life of facility plan that considers post-closure land and water use</p>	<p>We Rolled out Tailing Management Policy to manage tailings and waste facilities in a manner that protects the health of our employees, community and the natural environment throughout its lifecycle. This plan is developed as per our tailing management policy and EHS policy. It is approved by the board of directors. In addition to Tailing management policy, we also have organization wide tailing management standard which provides approach, methodology and guidance on tailings management at different stages.</p>
Assurance program	<p>An assurance program for each phase of the facilities' life that includes the scope of the various levels of inspections, audits and reviews</p> <p>An assurance program that includes an external audit covering the life of facility or the operating plans</p>	<p>We have conducted stability tests across our three tailing Storage Facility with the help of global experts in addition to comprehensive internal audits by cross functional teams and recommendations from these are being addressed on a priority basis. • Independent assessment by global experts Golder Associates to review the integrity/ stability of our storage facilities and their associated management practices</p>
Approval	<p>A policy to eliminate or minimize water-related risks associated with tailings dams is approved by a C-suite officer</p> <p>The operating plan and the life of facility plan are approved by the EHS manager</p> <p>The results of the assurance program and the change management process are approved by the EHS manager</p> <p>The results of the assurance program and the change management process are approved by a C-suite officer</p>	<p>The tailing management policy of the company is approved by CEO.. At HZL we have three active tailing storage facilities and all sites have a dedicated TSF manager and TSF committee consisting of the design engineer , operations, construction and environmental staff. All TSFs, as well as associated pipeline and pumping infrastructure, are subject to a regular audit as well as regular inspection. In addition to Tailing management policy, we also have organization wide tailing management standard which provides approach, methodology and guidance on tailings management</p>

Procedure	Detail of the procedure	Please explain
Change management process	<p>Inclusion of a formal change management process for the construction phase of the facility</p> <p>Inclusion of a formal change management process for the operating phase of the facility</p> <p>Inclusion of a formal change management process for the closure and decommissioning phase of the facility</p> <p>Inclusion of a change management process in the assurance program</p> <p>Inclusion of the results from external audits of operating plans or life of facility plans into the change management process</p>	<p>At HZL we have three active tailing storage facilities and all sites have a dedicated TSF manager and TSF committee consisting of the design engineer ,engineer, operations, construction and environmental staff. All TSFs, as well as associated pipeline and pumping infrastructure, are subject to a regular audit as well as regular inspection. In addition to Tailing management policy, we also have organization wide tailing management standard which provides approach, methodology and guidance on tailings management In FY19 company carried out R&amp;D in Process development for tailing re-processing to recover metal from tailings. As a result of tailing re-processing at Rampura Agucha mine we will increase overall metal recoveries by 3%. In coming years further R&amp;D on Implementation of tailing recovery project will be carried out.</p>

### 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.

##### Direct operations

##### Coverage

Full

##### Risk assessment procedure

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

##### Frequency of assessment

More than once a year

##### How far into the future are risks considered?

3 to 6 years

##### Type of tools and methods used

Tools on the market  
International methodologies  
Databases

##### Tools and methods used

WRI Aqueduct  
IPCC Climate Change Projections  
Regional government databases

##### Comment

A risk review committee is also present at all sites and quarterly reviews the identified risks and mitigation measures.. Water managers are also present and are responsible for water risk assessment and water management planning. Also 30 global Vedanta sites (Including 9 sites of HZL) were assessed for water risk analysis and risks were calculated for current and future trends. The assessment took in account internal site surveys, external data sets and third party expertise to predict future water risks (up to 3 to 5 years). WRI's Aqueduct was used for carrying out water stress prioritization. Further to that, HZL is carrying out an internal water risk assessment as well.

**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  
Databases

**Tools and methods used**

Regional government databases

**Comment**

We continuously engage with our supply chain partners like suppliers, regulators other water users, local communities, investors, consumers to reduce their impact on water stress. We engage with our supply chain partners through stakeholder engagement process also during materiality analysis to take their feedback on water as one of our material issue

**Other stages of the value chain**

**Coverage**

None

**Risk assessment procedure**

<Not Applicable>

**Frequency of assessment**

<Not Applicable>

**How far into the future are risks considered?**

<Not Applicable>

**Type of tools and methods used**

<Not Applicable>

**Tools and methods used**

<Not Applicable>

**Comment**

W3.3b

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**(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?**

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	We consider water availability at the basin/catchment level as highly relevant as 99% of our operations exist in Rajasthan where water availability is a significant concern due to the area being a water stress zone. Availability of water is also categorized as a top 10 organisational risk. We carry out systematic tracking and monitoring of water availability at the local level and use WRI's aqueduct tool to identify water stress levels for all HZL plants. Furthermore, we also use an online monitoring system for measuring the quality of water at all operational sites. For measuring water quantity we have installed water meters at all suitable locations of all our sites. Under the monitoring program, our focus is on quality waste water generated & treated, water consumption trend, and quality of surface & ground water in surrounding villages. Water consumption is tracked on daily basis and reviewed in morning meeting. These measures are backed by in-depth water audits. Furthermore, water conservation projects are identified and reduction targets are developed on a yearly basis for all our sites. Quantum of waste water generation and its treatment is tracked on daily and monthly basis. The surface and ground water quality are monitored on the monthly basis. We have developed the schedule for potable water quality monitoring also at each location. Internal monitoring is being done on Daily Weekly, Monthly, basis and third-party monitoring is being done on half-yearly basis. Also, we are required to report these parameters to the regional authorities as part of our license requirements. These initiatives helps in achieving our long-term water intensity targets and we anticipate that these intensity levels will improve. We will also continue towards achieving our 2025 targets to become 5 times positive water company and reduce the water consumption by 25%.
Water quality at a basin/catchment level	Relevant, always included	Water quality at a basin/catchment level is important to our operations as the availability of good quality water directly impacts our costs, production, and employee health and safety (drinking water, etc). HZL undertakes assessments consisting internal site surveys, external data sets and third party expertise for better understanding water quality. We also factor current river basin management plans into our risk assessments and water management plan to ensure we understand any potential limitations or opportunities that may arise in relation to these plans. This is both in terms of quality and quantities. We use this data and our internal company knowledge to feed into the risk assessments we conduct on site regularly. A risk review committee is also present at all sites. Water managers are also present and are responsible for water risk assessment and water management planning. Moving forward, HZL anticipates the quality of water to remain a prominent part of our risk assessment.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Stakeholder conflicts concerning water resources is relevant to our operations as the inability to provide inclusive growth to the communities and any disruption to their lives due to the Company's operations will cause discontent and can have negative impact on the Company's reputation and social license to operate. We have always been conscious of this fact and having operations in water stress region our focus on communities' water and sanitation need has grown with time. We deliver strong water stewardship for the sustainability of our operation and nearby community. We ensure to include communities around water stress areas in our stakeholder management process. Environment and social impact assessment is mandate for all new projects as part of our Sustainability framework. As part of our risk assessment we identify opportunities to work in partnership with the water utilities and community to manage the water supply. We have been increasing the use of non-fresh water at our site to make fresh water resources available for community. Based on the need assessment and impact study carried out in FY19, the coverage of our Water, health and sanitation program is 34% in the nearby communities and it has resulted in 48% people receiving medium impact. Future need based on the assessment is to carry out: • Aquifer mapping and plotting of hand pumps, open well other sources • Conduct audit to replenish existing sources • Introduce rain water harvesting and recharge in all possible location • Improve safe drinking water • Our initiatives are in line with this and our efforts focussed towards long term ensuring potable water sufficiency. Our ongoing stakeholder engagement provides us with internal company knowledge that allows us to integrate these issues into our risk processes.
Implications of water on your key commodities/raw materials	Relevant, always included	HZL considers the implications of water on key commodities and raw materials important as these raw materials are the basis of our operations. For instance delays caused by water issues that affect the production of commodities like chemicals, diesel, explosive etc will reduce production levels As a result to assess these implications we have we have carried out risk assessment of our captive mines, and water scarce operations are identified using the aqueduct tool. Water scarcity has a direct impact on availability of raw materials from mines. The issue surrounding future water implications on key commodities/raw materials are factored into the risk assessment process through engagements and the dissemination of questionnaires to suppliers requesting environmental and water related information. We use the feedback from our internal engagement with our suppliers to feed into our risk management processes.
Water-related regulatory frameworks	Relevant, always included	Water related regulatory frameworks are relevant to us and HZL has always adhered to the changes in regulations and pricing structure and will continue to do so in future as well. We report certain water information to the regional authorities as part of our consent requirements. We use both internal knowledge and external legal compliance audits to ensure we stay up to date with current regulatory information and tariffs.
Status of ecosystems and habitats	Relevant, always included	The status of ecosystems is important to our organisation and due care is taken during conceptual stage that there is no impact to the natural ecosystem and habitat exhibiting at project location. Measures are taken to always enhance the ecosystem. All our sites are having Biodiversity management plan. Impact of project on biodiversity is well assessed and action plan is in place to mitigate the risks. Few of the major initiatives are: Nursery for endangered plant species, Medicinal park, peacock garden, butterfly park, extensive plantation. IBAT Integrated Biodiversity Assessment Tool is used to identify high risk biodiversity areas. Furthermore, as per our water policy we ensure that there is zero discharge where ever possible and water treatment is a priority for HZL. As a result, at the Udaipur Sewage treatment plant , from 20 MLD 15% treated water to be discharged in river in summer season, while another 15 MLD will discharge in river only to upkeep the aquatic life of sewerage river
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Access to fully functioning, safely managed WASH services for all employees is highly important to us as unhygienic conditions pose a risk to public health and inherently the health and safety of our employees. Therefore, HZL is committed to implementing access to safe water, sanitation and hygiene at the workplace at an appropriate level of standard for all employees in all premises under direct control within three years. Furthermore, it is aligned to Sustainable Development Goal 6 (To ensure access to safe water sources and sanitation for all). Initiatives taken during the year: • Conducted awareness-cum-training session • Display boards and signage • Safety Chaupal • Ensuring safe water supply and workplace hygiene and sanitation • Easy access to drinking water, toilets, hand dryer, hand-washing facilities etc., Improvement in housekeeping across all locations
Other contextual issues, please specify	Relevant, always included	Hydrogeological studies - to assess the availability of groundwater and comment on aspects of depth to potential aquifers, aquifer availability and type, possible yields and water quality. For this purpose, all available hydrogeological information of the areas has been analyzed, and a geophysical survey was done. Implementation of adequate recharge measures proposed in the hydrological and hydrogeological study. Piezometers are installed at all locations to monitor the trend of quality of water table.

**W3.3c**

**(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?**

	Relevance & inclusion	Please explain
Customers	Relevant, always included	The customers are the most important stakeholder to our business and water as risk assessment to deliver to our customers is always considered, therefore, they have been included in our water risk assessment. We engage with our customers to manage and mitigate social and reputational risk through following strategies: • Proactively communicate company aspirations, strategies, and goals to our customers and key external stakeholders to demonstrate that each site is an active participant in community/watershed issues. • We engage with our customers for stakeholder engagement to get their views on water management at their operations so as to design our product in such a way to reduce water and energy consumption at customer end. For example, Continuous Galvanizing Grade (CGG) zinc alloy as per customer requirement removes the need to alloy at customer's premises and thus saves water, energy, and cost and improves bath management during galvanizing. In 2018 we also conducted a detailed materiality assessment that included 857 stakeholders, including various customers and based on the feedback received from selected customer water management has been identified as key material issue.
Employees	Relevant, always included	Our employees are vital to our operations and they live in the accommodation provided to them near the company sites (our colony). Water is being supplied to them for daily uses. So it is our prime responsibility to inform them about the sustainable use of water in our operations and at domestic front as well. Engagement with our employees is done on a continuous basis. For example, the celebration of World Water day and world Environment Day through engagement with employees. The environmental team at sites put up posters water saving messages and held quiz, poster making , slogan making competition to raise awareness of water efficiency. Also within the plant premises Water risks related to specific functional area of the company are identified and discussed with the employees on a regular basis. Our water related targets on water savings, etc., is also communicated to the employees with responsibilities allocated to each business unit/segment. Water targets are also included as Key performance KPIs of relevant managers. Any relevant feedback on water we receive from our employees subsequently we use in the risk management process. In 2018 we also conducted a detailed materiality assessment that included 857 stakeholders, including employees and based on the feedback received from selected customer water management has been identified as key material issue.
Investors	Relevant, always included	Investors are increasingly aware that water is a necessity to our operations, therefore we include them as they now consider water as a key material issue. The loss of investor confidence would affect our share price and access to capital, therefore the views expressed by investors are through meetings, such as the AGM, investor calls etc. are taken into account. We incorporate the views of these investors into the risk assessment, where relevant. As water related issue also poses a potential physical risk for the company, we communicate on our water related risks and mitigation measures taken against the same with our investors through our website.
Local communities	Relevant, always included	The concerns of local communities are important to our water risk assessments as the risk of stakeholder conflict in a catchment can directly impact our operations. Water stewardship is a key pillar to our water management policy, availability of good quality potable water is a significant concern to us and the communities we operate in. We engage with communities through Stakeholder engagement programs and specific opportunity like the social impact assessment, Base line need assessment undertaken by third party. Through these channels local communities are consulted on the aspect of water and the views expressed by these communities factor into our water risk assessments. Our water related performance poses a reputational risk for the company. We engage with the communities around our operations to build local capacity for water-related community engagement. Samadhan is the Company's flagship program for on-farm sustainable livelihood, reaching out to 13,835 farmers through agriculture interventions and 11,507 families through livestock interventions till date. We engage with communities on improving their agriculture yield, reducing their water requirement , raising awareness on water harvesting technologies like drip irrigations etc. In 2018 we also conducted a detailed materiality assessment that included 857 stakeholders, including local communities and based on the feedback received from selected customer water management has been identified as key material issue.
NGOs	Relevant, always included	NGOs are included in our water risk assessments as they play a great role by helping acquire details locally and helping spread awareness among the surrounding area through programs and workshops. For improving our social and reputational risks related to water management, we engage with the NGOs around our operations to evaluate opportunities for community leadership, including watershed protection related educational partnerships, research support, and/or donation of technical skills like reduction in water requirement during agriculture , raising awareness on water harvesting technologies etc.
Other water users at a basin/catchment level	Relevant, always included	Water demands from municipalities as water service authorities, mining and agricultural entities are assessed along with the local communities and government to calculate the overall water demand in order to mitigate the risk of stakeholder conflict in a catchment. We also Monitor prioritized stakeholders at the catchment level as a means by which to keep track of water-related community issues, concerns, and opportunities. Accordingly we meet with the concerned authority and discussed the issues & mitigation plan. HZL conducts regular meetings with community representatives.
Regulators	Relevant, always included	Regulators are taken into account as new legislation, regulations, and laws on water aspects (tariff, water/wastewater compliance aspects/legal/regulatory updates, any restrictions/conditions notified for industries) may affect our operations. Regulatory risks are critical and thus their inputs are critical to our water risk assessments. We engage with regulatory authorities throughout the year. We also engage with local municipalities (municipal corporations' authorities) to have partnerships to improve the overall water availability in the regions in which we operate. We provide assistance (financially and technical) and participate in management and water conservation programmes as well as infrastructure development. Commissioning of 45 MLD STP to treat sewage of Udaipur City in Public Private partnership is the unique example to set win-win situation for municipality and industry. Also pond deepening of Fatahsagar lake in collaboration with Urban improvement trust is another example of engagement with local regulatory authorities. In 2018 we also conducted a detailed materiality assessment that included 857 stakeholders, including regulators and based on the feedback received from selected customer water management has been identified as key material issue.
River basin management authorities	Relevant, always included	Even though there is no major impact on river basins, as we are withdrawing most of the water from our captive dams which are situated on tributaries of river basins we have categorised river basin management authorities as relevant. HZL works with river basin management authorities to conduct various analysis of the basin and catchment area, this includes analysis pertaining to sewage treatment and waste water management. For instance through our engagement with the river basin authorities HZL has set up a 45 million litres per day Sewage Treatment Plant (STP) which treated water is being used in our operation as a substitute of fresh water. We engage with authorities such as the Water Resource Department of Rajasthan when the need arises.
Statutory special interest groups at a local level	Relevant, always included	They will be consulted in specific cases. Special interest groups like local influencers are identified around the operational units to identify their concerns related to water management in order to manage expectations of the communities and reduce our reputation risks. Engagement methods for statutory special interest groups include face to face meetings are conducted as and when it is required.
Suppliers	Relevant, always included	Suppliers are key components of value chain. There is risk of increase in the price of supply material or could be interruption of supply material in case of non-availability of water, hence taking their critical inputs on our water risk assessment becomes relevant. Suppliers are consulted through stakeholder consultation as part of our overall sustainability strategy. There are other engagement opportunities like supplier's meet through which they can provide key feedback on such risk assessment. Suppliers are also engaged every year through stakeholder engagement process. During the year we conducted confluence engagement session where more than 50 critical suppliers attended the session, during the session briefed about HZL's current risks and taken their inputs to improve the risk assessment and mitigation strategy. In 2018 we also conducted a detailed materiality assessment that included 857 stakeholders, including various suppliers and based on the feedback received from selected customer water management has been identified as key material issue.
Water utilities at a local level	Relevant, always included	HZL has included water utilities at a local level into its risk assessment as the continued supply of water to communities is crucial.. As a result, we engage with water utilities at local level on a need basis to discuss on the issues related to water and companies views on the same. One of the examples of effective engagement is our engagement with Udaipur local body whereby we have set up a CSTP to treat 45 MLD of water in and further expanding it to another 15 MLD by FY 2021. In this case, we regularly engage with them on topics related to water treatment, quality, flow and other commercial requirements. Our engagement methods include meetings with them.
Other stakeholder, please specify	Not considered	Not Applicable

W3.3d

**(W3.3d) 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.**

HZL's process of identifying, assessing, and responding to water-related risks within our direct operations and other stages of our value is built around the Water Resources Risk Screening. As HZL is part of the Vedanta group of companies we conduct a screening assessment to identify sensitive water resources and aquatic habitats and any known or suspected water resources constraints within and in proximity to each owned/managed operation and facility.

The Water Resources Risk Screening identifies a number of constraints that include - a naturally water stressed environment, with a high prevalence of droughts and water shortages; the presence or planned development of other water intensive industrial and/or agricultural activities, in particular commercial agriculture, agro-processing facilities and power generation and supply; any planned infrastructure in the river basin, such as hydropower schemes, river diversions etc; and a highly polluted water environment, e.g. where there are significant and poorly regulated industrial or agricultural activities upstream of the operation.

The Risk Screening assessment is carried out using the World Business Council for Sustainable Development Water Tool (or other internationally recognized proprietary databases) as well as by referring to other available sources of information including appropriate government management strategies or action plans, media and the internet. Other tools used include life cycle assessments and IPCC climate change projections.

**The Vedanta Sustainability Assurance Programme is our internal sustainability risk management tool and forms a part of group management assurance system.**

Our principal and emerging risks, which have been assessed based on impact and likelihood. While our Risk Management Framework is designed to help the organization meet its objective, there can be no guarantee that our risk management activities will mitigate or prevent these or other risks from occurring. Our approach to all sustainability topics is guided by the Vedanta sustainability framework of: responsible stewardship, building strong relationship, adding and sharing value and strategic communications.

**Example:** Availability of water is our top identified risk and our board decided to establish a 45 MLD STP at the cost of INR 250 crores. This will help in water recycling and reuse, and ensure we meet our target of continuing to being a water positive company.

Lastly, our water management standard ensures coverage of risks at all levels of the value chain, this includes – operations, key stakeholders like community, suppliers etc. both upstream and downstream users. We ask our suppliers to report water risks, use, and management information, while with communities we engage in CSR activities, and work with our customers through various customer engagement initiatives to assess risk.

**Risk Governance and Engagement**

Our risk management process is built on good governance and a well-designed risk management framework. The management of all types of risks take place through the risk management framework including climate change risk.

The framework comprises of risk management committee which comprise of subject matter experts in the areas of sustainability, water, and EHS. This committee works as a sub-committee of the board, and they oversee risk management procedures and project implementation. Furthermore, each of our locations is designated with a risk management officer who is responsible for identification of risks at operational units.

With regards to engagement, quarterly meetings are held at the Head Office and at the unit level to discuss the identified risks (including those associated with water) with the senior management. Risks identified are categorized on the basis of severity of impact on business. After the risk prioritization has been carried out, formal mapping of risks and mitigation plans on a risk matrix is carried out. For each of the risk identified, a 'risk owner' is assigned who monitors the progress on the actions taken for mitigating risk on an ongoing basis. For monitoring the progress on risk mitigation measures taken throughout the company, a risk officer is appointed at the Company's Head Office.

Formal discussion on risk management happens in unit level review meetings which cover aspects related to water consumption, efficiency, recycling, and pollution on quarterly basis. The respective units review the risks, change in nature and quantum of major risks since the last assessment, control measures established for mitigation and further action plans. The control measures stated in the risk register are periodically reviewed to verify their effectiveness.

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**W4. Risks and opportunities**

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**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?**

As we treat water as a vital for both our direct and indirect use substantive change to us would be a disruption in our primary operations that can result in a less production at our facilities caused by non-availability of quality water or disrupted supply chain. This information is reviewed daily and any deviation from the business plan is reported to the management. A "substantive change" could be the result of either an inadequate supply or a poor quality of water that prevents desired production. Substantive change could also come in the form of financial impacts that directly affect our revenues, income, and anything else that would impact our operations directly. These are usually measured as the number of production days lost or cost.

If there is a non-availability of water and shutdown of operations in smelters. This will result in a daily loss of INR 12 Crore.

**The method of review:**

The change shall be reviewed during BMG meetings, supplier meetings and regular stakeholders meeting.

**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	8	76-99	Although 90% of our operational sites (i.e. 8/9 of our sites) fall under water stressed region of the country. We have taken appropriate measures for risk mitigation at these sites so that none of these facilities are exposed to the water risks with the potential to have a substantive financial or strategic impact on our business. HZL always focuses on taking preventive policy measures to manage its water related risks. The Company has undertaken several water conservation and harvesting initiatives for reducing fresh water intake and maintaining zero discharge. Treated Municipal sewerage is used and recycling and reuse of the wastewater generated from our operations along with tailing Storage Facility, have mitigated this inherent risk to a large extent. We have a continuous plan to reduce this risk.

**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	Mahi River
-------	------------

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

2148000000

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

11-20

Comment

---

Country/Area & River basin

India	Other, please specify (Banas Basin)
-------	-------------------------------------

Number of facilities exposed to water risk

6

% company-wide facilities this represents

76-99

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

14413000000

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

81-90

Comment

---

Country/Area & River basin

India	Other, please specify (Luni Basin)
-------	------------------------------------

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

1288888888

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

1-10

Comment

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## 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)
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#### Type of risk & Primary risk driver

Physical	Severe weather events
----------	-----------------------

#### Primary potential impact

Increased operating costs

#### Company-specific description

We have a 3 smelters and 5 mines located in Rajasthan area. So Change in the precipitation level is one of the major risk areas for HZL. Rajasthan is the state which suffers from extreme climatic condition in temperature and rainfall and battles water scarcity related issues. Change in the precipitation level further intensifies the problem as our operations in the mining and smelter industry are heavily dependent on water availability. If there is less rainfall in these areas in future, it may affect our operations and productivity due to inadequate supply of water leading to a direct impact on company's revenue.

#### Timeframe

Current up to one year

#### Magnitude of potential impact

High

#### Likelihood

Likely

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

23200000

#### Potential financial impact figure - minimum (currency)

<Not Applicable>

#### Potential financial impact figure - maximum (currency)

<Not Applicable>

#### Explanation of financial impact

In case of less precipitation there will be direct impact on our CLZS and ZM operations as all other smelters and CPPs are currently using treated water from municipal sewage treatment plant of Udaipur city. Water consumption at CLZS CPP and ZM CPP is 45% of total fresh water consumption so in worst scenario we will shut down the CPP operation at these two sites and will consume electricity from state grid and this will lead to direct cost implication of 2.32 crore per day

#### Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

#### Description of response

In order to manage these risks, we have well established system in place for water conservation that includes business plan for specific water reduction initiatives and identification and implementation of action plan followed by periodic monitoring at operational and company levels. Various multi-pronged strategy is institutionalized within the operations and also various strategic actions / initiatives that are initiated and undertaken. In order to enhance the water retention capacity of the areas where operations are located in, we have planted more than 1.8million plants in total. Out of which 1.56 lacs have been planted in 2019-20. • Hindustan Zinc set up 45million litres per day Sewage Treatment Plant (STP) which treat sewage water of Udaipur city. This treated water is being used in our operations located in Dariba as alternative source of fresh water and reducing fresh water requirement to negligible. We also plan to municipal treated water across the 5 districts we operate in. We believe that water is a shared resource, and therefore the STPs will have the capacity to treat water for the entire district we operate in and we can use the treated water for our operations and also helping in cleaning our nearby district's water bodies. .Installing MVR plant at CLZS and Dry tailing plant at ZM will give us water security in these two locations. We also installed 1 MTPA Paste fill plant at ZM which is further adding to recycling of water and reducing our fresh water consumption, Increase in reservoir capacities is also helping us in restoring more water in sites. Further to this we are even prepared for the worst-case scenario and planned for artificial rain/ cloud seeding in and around our catchment area in case of low rain fall in the area with regulatory approvals.

#### Cost of response

2690000000

#### Explanation of cost of response

A budget is allocated for addressing such risks. The strategy for risk mitigation encompasses a prefeasibility study near by 5 districts around our operations at the cost of INR 16 lakhs. To strengthen the water recycling at CLZS unit we are installing MVR of the cost of ~ 33 crores and the development of a dry tailing plant at ZM worth INR 91 crores. These both will give us water security in these two locations, Installation of Hydrofill plant in ZM – 145 crores

#### Country/Area & River basin

India	Other, please specify (Rajasthan based operations considered )
-------	--

#### Type of risk & Primary risk driver

Regulatory	Tighter regulatory standards
------------	------------------------------

#### Primary potential impact

Other, please specify (Adopt water efficiency, water re-use, recycling and conservation practices )

#### Company-specific description

Water is a shared resource and a stressed resource in our area of operation which is Rajasthan. Hence, we foresee that in future regulatory standards with regards to water use may temporarily or permanently get impacted if the availability of water for other non-industrial uses becomes constraint. This may affect our direct operations as regulatory road blocks and rising costs become prevalent.

**Timeframe**

4-6 years

**Magnitude of potential impact**

High

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

120000000

**Potential financial impact figure - minimum (currency)**

<Not Applicable>

**Potential financial impact figure - maximum (currency)**

<Not Applicable>

**Explanation of financial impact**

Due to non-availability of water if our smelters will stop it will have impact of INR 12 crore per day

**Primary response to risk**

Other, please specify (We have increased focus on water efficiency and re-use, reduce & recycle activities. We have increased wastewater recycling % from 33.49% in FY17 to 39% in FY20.)

**Description of response**

As we operate in water stressed areas HZL wants to reduce its impact on freshwater. Therefore, we have undertaken a number of initiatives to help us reduce our impact on freshwater. These include the following 1. Using deep cone decanter to reduce water content in mine tailing disposal 2. Installing air cooled condenser. It saves water consumption up to 95% when compared to traditional water-cooled condenser. 3. Reducing freshwater use at the Demineralised (DM) water plant at DSC-Lead plant by condensing the steam generated at the Captive Power Plant (CPP) at DSC Zinc plant 4. Using harvested rainwater in operation 5. Integrated Effluent treatment plant at all smelters 6. Technological up-gradation by installation of Multiple Effective evaporator/ Mechanical Vapour Recompression (MVR) at Debari and Chanderia Smelters in place of conventional evaporators will strengthen Zero discharge with improved water recovery 7. Phase 2 of CSTP of 25MLD completed. 7. Water reservoir in Dariba smelter By reducing out consumption, withdrawal, and overall impact on freshwater we will be able to meet new regulations and ensure there is low pressure from regulatory authorities. These initiatives will also ensure that we remain water positive

**Cost of response**

1650000000

**Explanation of cost of response**

A budget is allocated for addressing such risks. The details are listed below: - Installation of MEE/ MVR at CLZS: INR 33 crores Instalation of MEE at DZS- 33 crores - RO reject conversion to Sodium Sulphate: INR 11 Crores - Construction of new reservoir at DSC: INR 8 crores - Udaipur STP- second phase: INR 80 crore

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W4.2a

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**(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**

Physical	Increased water scarcity
----------	--------------------------

**Primary potential impact**

Closure of company operations

**Company-specific description**

Raw material supplies which have their source from the region near water scare area may get affected. Gap in raw material supply may lead to direct operational threats for our company. for e.g. our major raw material like cement, coal, etc. require water for their processing and in worst scenario if due water unavailability we will not be receiving cement from the suppliers that can impact our paste fill plant operation, backfilling and mine rock strengthening process. in the similar way, unavailability of coal may impact our captive power plant process which can result in purchasing electricity on higher cost from state grid.

**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)**

23200000

**Potential financial impact figure - minimum (currency)**

<Not Applicable>

**Potential financial impact figure - maximum (currency)**

<Not Applicable>

**Explanation of financial impact**

Unavailability of coal will direct impact our CPP operations. in worst scenario we will have to shut down the CPP operation and will take the electricity directly from state grid and this will lead to direct cost implication of 2.32 crore per day (total electricity cost generated from CPP 4.5 Rs/kwh and total electricity cost of state grid is 7.6 Rs/ kwh).

**Primary response to risk**

Upstream	Map supplier water risk
----------	-------------------------

**Description of response**

We have identified regions where supply gaps may arise due to water scarcity issue for our suppliers. A mitigation plan to avoid such risks comprises: 1. continuous mapping of supplier water risks 2. Engagement with suppliers to carry out capacity building sessions on water management practices 3. Incentivising top suppliers for improved water performance in the next three year

**Cost of response**

5300000

**Explanation of cost of response**

Expenditure of INR 5,300,000 is anticipated to occur in implementing a mitigating strategy adopted as follows: 1) Annual Suppliers meeting is held to continuously review the suppliers performance. 2) Raw material source auditing is done by the procurement team to analyse the future risk. 3) Developing contacts with alternate suppliers. 4) Carrying out supplier sustainability assessment

**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**

This opportunity is considered strategic for HZL as we aim to reduce the fresh water dependencies of our operation due to the fact that we operate in Rajasthan, a water scarce area (90% of our sites are situated in Water stress area). With water scarcity an increasingly prominent issue in Rajasthan, being a responsible water steward through improving water infrastructure will facilitate interactions with the communities in which we operate and ensure that we are recognised as a partner of choice. For Example - Hindustan Zinc has already commissioned Sewage Treatment Plant of 45 MLD capacity and two decentralized Sewage Treatment Plants with combined capacity of 15 MLD. The company had invested Rs. 250 crores that involved expenditure pertaining to laying the pipelines for carrying the sewage to the plant. This is going to satisfy both the stakeholders need maintaining the aesthetic look of the lakes of tourist city as well as reduction in fresh water consumption at our operational sites. Case study on this project was published in WRG 2030 <https://www.waterscarcitysolutions.org/new-innovative-public-private-partnership-to-improve-water-quality-and-availability/> Water efficiency will lead to greater availability of water for the communities surrounding our sites, improve efficiency, and lower costs.

**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)**

23200000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact**

Operations in our industry are heavily dependent on water availability mainly smelting and CPP process. In worst scenario of less precipitation there will be direct impact on our CLZS and ZM operations as all other smelters and CPPs are currently using treated water from municipal sewage treatment plant of Udaipur city. Water consumption at CLZS CPP and ZM CPP is 45 % of total fresh water consumption so in worst scenario we will shut down the CPP operation at these two sites and will take the electricity directly from state grid and this will lead to direct cost implication of 2.32 crore/ day (total electricity cost generated from CPP 4.5 Rs/kwh and total electricity cost of state grid is 7.6 Rs/ kwh).

**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

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

9756

**Comparison of total withdrawals with previous reporting year**

Lower

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

9756

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)

9344.17

Comparison of total consumption with previous reporting year

Higher

Please explain

At Chanderiya Lead Zinc Smelter our water consumption has increased by a minuscule amount as compared to the previous year due to bad quality of water. But there is reduction in total water withdrawal.

---

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

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

6662

Comparison of total withdrawals with previous reporting year

Higher

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

912

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**

5750

**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)**

6358.14

**Comparison of total consumption with previous reporting year**

About the same

**Please explain**

Water withdrawal levels have increased as compared to the previous year. While, water consumption between last year and this year is about the same. Third party water is only treated sewage water and 86% of the requirement of water is from the treated water. Increased in use of treated water than fresh water.

**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

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

1774

**Comparison of total withdrawals with previous reporting year**

Lower

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

1592

**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**

182

**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)

1774

Comparison of total consumption with previous reporting year

Lower

Please explain

Water consumption and withdrawal has reduced as compared to the previous year, During the year for the first time DZS also initiated use of treated sewage water , improvement in recycling further reduces the dependencies on fresh water.

---

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

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

2631

Comparison of total withdrawals with previous reporting year

Lower

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

2564

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

67

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)

2307

**Comparison of total consumption with previous reporting year**

Lower

**Please explain**

Both water consumption and water withdrawal reduced due to use of more recycling water .

---

**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

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

840

**Comparison of total withdrawals with previous reporting year**

Lower

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

677

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

163

**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)**

247

**Comparison of total consumption with previous reporting year**

Higher

**Please explain**

Increase in mine development activities leading to higher consumption of water

---

**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

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

951

**Comparison of total withdrawals with previous reporting year**

Lower

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

93

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

39

**Withdrawals from third party sources**

819

**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)**

949

**Comparison of total consumption with previous reporting year**

Lower

**Please explain**

Both water consumption and water withdrawal reduced due to use of more recycling water . SKM uses 86% water from treated sewage water only.

**Facility reference number**

Facility 7

**Facility name (optional)**

Zawar Mines complex

**Country/Area & River basin**

India	Mahi River
-------	------------

**Latitude**

24.35

**Longitude**

73.71

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

3884

**Comparison of total withdrawals with previous reporting year**

Lower

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

3702

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

182

**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)**

3598

**Comparison of total consumption with previous reporting year**

Lower

**Please explain**

Both water consumption and water withdrawal reduced due to use of more recycling water through installation of Dry tailing plant.

---

**Facility reference number**

Facility 8

**Facility name (optional)**

Kayad Mine

**Country/Area & River basin**

India	Other, please specify (Luni Basin)
-------	------------------------------------

**Latitude**

29.96

**Longitude**

78.06

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

52

**Comparison of total withdrawals with previous reporting year**

About the same

**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

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

37

Withdrawals from third party sources

15

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)

43

Comparison of total consumption with previous reporting year

Lower

Please explain

Water Consumption has reduced due to improve recycling

---

W5.1a

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

**Water withdrawals – total volumes**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water withdrawals – volume by source**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water withdrawals – quality**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water discharges – total volumes**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water discharges – volume by destination**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water discharges – volume by treatment method**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water discharge quality – quality by standard effluent parameters**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water discharge quality – temperature**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water consumption – total volume**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

**Water recycled/reused**

% verified  
76-100

**What standard and methodology was used?**  
This is reported as per ISAE:3000 standard

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**W6. Governance**

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**W6.1**

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**(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	<p>Description of business dependency on water</p> <p>Description of business impact on water</p> <p>Description of water-related performance standards for direct operations</p> <p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>Our water policy is a forward looking document which provides the direction in which the company would like to move with respect to water. This includes our 2025 water targets and our commitment to the CEO water mandate (signed but not yet published on their website), as well as our ambitions to continue to be water positive. The policy is applicable to all our operations, staff, contractors, and relevant business partners. It follows the Water Management Standard (TS-14) of Vedanta Sustainability Framework and reflects our commitment towards global water security, efficiency, and stewardship. Our policy recognises the social, economic, and environmental value of water and the increasing global concern with regards to water security. We have outlined our policy in order to effectively communicate our intent and goal of water conservation across all our operations, staff, contractors, and relevant business partners. The scope has been selected as it includes all our operations and supply chain, making it holistic in nature. 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 rain water harvesting, participate in water catchment planning activities, monitoring and transparent communication of water consumption performance to stakeholders, and innovation &amp; implementation of water efficient practices. The policy is reviewed and updated from time to time based on the internal procedures.</p>

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	Please explain
Chief Executive Officer (CEO)	<p>At HZL we believe that sustainability should be embedded in our business decisions and is therefore, overseen at the board level. Group sustainability committee of Vedanta provides the overall guidance on sustainability. At HZL level, Sustainability Business Management Group, headed by HZL's CEO (Board member), provides overall guidance on the water and other issues which are identified as key ESG issues. Water related risks are identified at sites. These are reviewed by unit heads and the most critical issues are presented in the board meetings held quarterly. Our CEO discusses on each of the water related issue presented in these meetings and provides guidance on the actions to be taken against each. Certain actions that have been taken by the CEO include the implementation of a water management community across all our locations, development of the Udaipur STP, and identification of water as a key risk. The CEO also sets targets related to water management initiatives and delegates responsibilities to the officials for monitoring the progress on the same. For instance our CEO had outlined our sustainability goals for 2025.</p>

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 Overseeing acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	The board provides guidance on water management related strategy of the company and also reviews major plans of action. Key water related topics on which board insights are sought after management's view on risk management policies, guidance on developing climate risk mitigation strategies, reviewing expenditures and budget allocation for these projects, setting performance objectives, reviewing progress on performance against goals set for water related projects. Example In light of the recent high impact failures of tailing dams in Brazil, as a proactive measure, the board decided to build all our future tailing Storage Facility as dry tailing to de-risk from dam failures and further impact on communities. Further, to implement an enhanced tailing policy was rolled out last year for effective management of existing tailing Storage Facility. As a part of this structural stability of dams was assessed and systems were identified for strengthening. Alongside measures were identified to better utilize the water from tailing Storage Facility and also to convert some of the waste into items for back filling of mines and commercially usable items. Such a comprehensive thought process on tailing Storage Facility will reduce waste, increase water recycle/reuse and also reduce land requirement while. At Zawar mines: India's first dry tailing plant commissioned during the year.

**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)

**Responsibility**

Both assessing and managing water-related risks and opportunities

**Frequency of reporting to the board on water-related issues**

More frequently than quarterly

**Please explain**

Our CEO is the highest-level management authority below board level with responsibility for overseeing water-related issues, this includes both assessing and managing water related risks and opportunities. As part of his responsibilities he provides guidance through team meetings with the team to discuss the assessments of water risks, water security, opportunities, and policy implementation to mitigate risks and capitalize on opportunities. He also communicates with higher level management including the Board who perceive water as a significant aspect in the company's risk assessment matrix. This is done via quarterly reports and through board meetings. Our CEO also sets targets, and allocates responsibilities to individuals at the sites and corporate level for managing progress against set goals and targets.

**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	Please explain
Monetary reward	Board chair Board/Executive board Director on board Corporate executive team Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Chief Purchasing Officer (CPO) Chief Risk Officer (CRO) Chief Sustainability Officer (CSO)	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Improvements in efficiency - supply chain Improvements in efficiency - product-use Improvements in waste water quality - direct operations Implementation of employee awareness campaign or training program Supply chain engagement Increased access to workplace WASH Implementation of water-related community project	Executive committee comprising of all functional heads is responsible for monitoring all HSE projects including water on monthly basis. Along with the monitoring responsibility, each individual is designated with responsibility for implementing projects and achieving the set targets. Recognition in terms of monetary rewards in the form of company shares are awarded to the executive members when the targets are achieved within the set timeline. These targets are chosen based on their importance on our business operations and alignment with our water policy. Our management follow the approach of Kaizen where they continually improve water efficiency processes.
Non-monetary reward	Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Chief Purchasing Officer (CPO) Chief Risk Officer (CRO) Chief Sustainability Officer (CSO)	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Improvements in efficiency - supply chain Improvements in 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.

**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?**

We engage in the policy discussions through trade associations whenever the industry opinion is sought after by the government and policy regulators and voice industry 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 changes in the policy framework. Our water policy is framed in consultation of all relevant stakeholders & 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 our water policy and ensure that a consistency is maintained in our approach for addressing these goals. In case any inconsistency is observed, it is discussed in the board meeting and necessary actions regarding the same are taken. Our water related policies are publicly available for easy access by all our employees. Periodic training and engagement of senior executives and all key employees on the material risks and important topics like water, helps them understand the way forward, assist them in having engagements and interactions with other stakeholders which are in line with companies stand on water. During the year we establish Water Management community to ensure strong governance for water conservation at source, strengthening Zero Liquid Discharge, replenishing more water and creating positive water footprint and chaired by senior leader.

**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)

## 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	5-10	As HZL operates out of Rajasthan, where water stress is an inherent business risk for our operation and has a direct impact on company's revenues, it becomes important to integrate water related issues in our long term business objectives. Therefore, we set time horizons for assessing water related risks and these are integrated with assessing business risks and planning. We also set sustainability goals for 2025 and have a detailed water policy to help integrate water related issues in our long term business objectives. Establishment of Water Community at each location will further help us in achieving the long term targets through defined strategies. Furthermore, the development of STPs and other water recycling initiatives like paste fill plant, Dry tailing plant also helps us integrate water into our long term business objectives. Additionally, managing social and reputational risks form a part of planning for achieving long-term objectives of the Company. As water is a shared resource, we use water in a way that our usage does not impact the water availability of the communities near our operations. Living in harmony with the communities also forms a part of our long term business objectives.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	Similar to our long term business objectives, we also integrate water related issues into our strategy for achieving long term objectives. This is done through our Sustainability Goals 2025. As part of our goals we aim to become a 5 times water positive company and achieve a reduction of 25% in fresh water consumption. This ensures we develop water related strategies to meet these goals. These strategies include using more water efficient methods of production and consumption, using alternative sources of water to reduce dependency on fresh water, and replenish water within local watersheds through rainwater harvesting. We also strategize for any social or reputational risks that may arise due to water consumption while simultaneously managing regulatory risks, as we recognize that company's growth and business objectives can be affected considerably in case of shut downs due to any legal/ regulatory implications. For achieving our long term objectives, we conform to all sectoral, national and regional laws applicable to us
Financial planning	Yes, water-related issues are integrated	5-10	As our operations also fall under water stressed areas, water poses a physical threat for HZL operations that may have direct financial implications on our business. Strategy for using alternate sources of water in operations in water stressed areas forms a part of financial planning. We conduct regular risk assessments and the head of Sustainability Management Ground meets with our Board to discuss water related risks and their financial implications every quarter.

### 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)

-45

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

9

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

22

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

10

#### Please explain

The reduction in Capex is primarily attributed due to the fact that major projects were undertaken last year. Last year the total expenditure on environmental projects was INR 685 crores, this number has fallen to INR 328.53 crores. This includes major projects like the installation of a dry tailing plant at ZM, INR 91 crore, back filling plant at ZM INR 145 crore, MVR at DZS and CLZS INR 66 crores We are planning to expend our water related expenditure in next year by 9% as Another 15 MLD STP will be established in Udaipur. Water related opex has increased by 22% due to the addition of operations and maintenance cost of 25 MLD STP plant. We are anticipating a further increase of 10-15% in the opex due to the inclusion of operations and maintenance cost of the MEE/ MVR and 15 MLD STP.

### W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	Vedanta has conducted a water risk scenario analysis for 30 Indian as well as global sites. The scenario analysis was carried out to assess global water risk screening and individual site level risk scenarios to identify potential risks that may arise in short to medium term (between 3 to 5 years). The assessment was carried out with the help of a team of external experts along with HZL's corporate and site level sustainability teams. WRI's aqueduct tool was used for water stress analysis along with external datasets to identify other water related risks. Extensive site level surveys were also conducted to gather primary data from sites. Findings from this scientific approach were fed into company's global water risk screening and individual risk scenarios were generated for each site. A guidance document with detailed actions to be taken on each risk parameter was prepared to address the identified water challenges.

### W7.3a

**(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?**

Yes

**W7.3b**

**(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization’s response?**

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify (Bottom based approached)	HZL has identified the following water related risk scenarios that may pose potential risks to our operation from medium to long term. 1. Water supply interruptions 2. Insufficient water supply 3. Groundwater challenges 4. Impact of water related regulations 5. Water related community challenges 6. Social and reputational pressure	HZL has adopted bottom up risk management approach for identification of water related scenario analysis. This involves identification of broad water related risks at the plant level. These risks are narrowed down to identify risk factors contributing to each risk identified at the plant level. Discussions are carried out at the Company’s head office, where risks factors from each operational unit is looked into detail to form a HZL wise risk matrix. This exercise also includes prediction of level of risk attached to each risk along with the time horizon for the same. A risk mitigation plan is developed accordingly. Following strategies have been framed to address the identified risk scenarios: 1. Water supply interruptions - Implement a source water protection plan to ensure supply reliability and business continuity (e.g., back-up supply options) 2. Insufficient water supply - Focus on water optimization opportunities focusing initially on water intensive processes/equipment and utilities (process cooling, evaporators, condensers, boiler feed) 3. Groundwater challenges - Benchmark against like operations and evaluate options for water reduction. Continually monitor usage on-site to reduce the dependence of groundwater. 4. Impact of water related regulations - Evaluate adequacy and performance of pollution treatment equipment 5. Community challenges - promote sedimentation control & water pollution 6. social & reputation pressure - engaging with influencers

**W7.4**

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

Row 1

**Does your company use an internal price on water?**

No, but we are currently exploring water valuation practices

**Please explain**

HZL is conscious about its water use and efficiency. We are in process to set up and implement the internal water pricing policy. The policy is intended to promote efficient use of water in the facilities.

**W8. Targets**

**W8.1**

**(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.**

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	The company has long term commitment to sustainability, this is reflected through our Sustainability Goals 2025. We take guidance from the Water risk assessment carried out at global level and the internal water risk assessment that we undertake at corporate level. Based on this, company level water saving targets are defined annually and water conservation initiatives and projects are identified. Site specific water conservations initiatives and projects are identified and share with the board as a part of target setting. In addition, the company also takes view of the global scenario, local regulations etc. and decides on any long-term changes needed in its water management strategy and shares them as goals and targets. HZL takes annual water saving targets and maps its achievements along those targets. In FY 19-20 the target was to achieve a water saving of 0.27MCM. In actuality we achieved 2.030 mcm of water saving. The target is being monitor by concerned internal departments and senior management on monthly basis and by the board on quarterly basis. In addition, based on the global incidents related to tailing Storage Facility, we have taken a long-term goal to shift towards dry tailing in our operations to reduce environmental and social risks.

**W8.1a**

**(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.**

**Target reference number**

Target 1

**Category of target**

Other, please specify (Water savings - 0.27 MCM)

**Level**

Company-wide

**Primary motivation**

Risk mitigation

**Description of target**

The company has long term commitment to sustainability. We have taken water saving targets based on the identified water conservation initiatives and projects. The target for FY19-20 was 0.27 MCM of saving

**Quantitative metric**

Other, please specify (million cubic meter)

**Baseline year**

2018

**Start year**

2019

**Target year**

2020

**% of target achieved**

100

**Please explain**

HZL has achieved a 100% of its target for water savings by saving 2.03 MCM of water. With completion of one target , we will further form suitable targets to improve our water use efficiency

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**W8.1b**

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**(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.**

**Goal**

Other, please specify (Sustainability Goals 2025)

**Level**

Business

**Motivation**

Recommended sector best practice

**Description of goal**

We have taken a holistic view in setting our sustainability goals 2025 and over the next five years, we will focus on expanding the work towards creating positive changes. We do not view our goals as independent targets, but rather as a collective scorecard that requires tangible progress across different functions. Some of our key goals consist of the following: - GHG emissions saving - Water positive and reduction in fresh water consumption - Increase in gainful utilisation of smelting process waste - Enhance Biodiversity

**Baseline year**

2020

**Start year**

2020

**End year**

2025

**Progress**

We have made significant progress towards the goals with regards to water. We have already invested INR 170 crores for 20 MLD municipal sewage treatment plant and achieved the fresh water reduction at one of our facility and in 2018-19 the commissioning of another STP of 40 MLD of INR 80 crores investment has been completed. Further there is a plan to commission an STP of 15MLD with an investment of INR 31 crores. We are part of the CEO water mandate (Signed but not yet published on their website). Furthermore, we are currently a 2.41 times water positive company and are on track to be a 5 times water positive company by 2025. In order to ensure we remain on track we have a comprehensive water policy and water management framework which is overseen by our senior leadership.

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**Goal**

Other, please specify (Dry tailing staking at all the three Tailing storage facilities by 2025)

**Level**

Business

**Motivation**

Recommended sector best practice

**Description of goal**

This year we established the India's first dry tailing plant at Zawar mines which is helping us in reducing the water dependencies on fresh water also to ensure the stability of tailing dam . We have taken a target to have dry tailing plant at all the three tailing storage facilities to ensure dry staking of tailings in tailing storage facilities.

**Baseline year**

2020

**Start year**

2020

**End year**

2025

**Progress**

We have made significant progress towards the goals already established one such plant in one of the mine which is helping us reduce our water dependencies on fresh water.

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**W9. Verification**

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**W9.1**

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

Yes

**W9.1a**

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**(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 2019-20 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 2019-20 has been attached in W-F1
W1 Current state	Water withdrawal , discharge, recycle and consumption verified	ASAE3000	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

**W10. 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.**

Integrated Report 2019-20

Draft Sustainability Review report 2019-20

Water Positive signed assurance letter DNV 2019-20

Water Assurance KPMG 2019-20

Final Assurance Statement on Water Disclosures (FY 2019-20).pdf

Draft Sustainability Review Report 2019-20.pdf

Integrated -report-2019-20.pdf

Signed Verification Statement-2.41 times Water Positive.pdf

**W10.1**

**(W10.1) 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)

**W10.2**

**(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].**

Yes

**Submit your response**

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

**Please confirm below**

I have read and accept the applicable Terms