

W0. Introduction

W0.1

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

JSW Cement is part of the diversified US\$ 23 billion JSW Group. As one of India’s leading business houses, JSW Group also has other business interests in sectors such as steel, energy, infrastructure, paints, B2B Ecommerce, sports and venture capital. JSW Cement is India’s leading Green Cement company with current capacity of 19 MTPA having six operating plants in India which are Nandyal (Andhra Pradesh), Vijayanagar (Karnataka), Dolvi (Maharashtra), Salboni (West Bengal), Jajpur (Odisha) ,including one subsidiary unit Shiva in Odisha. The company is present across the entire value-chain of building materials comprising cement, & construction chemicals. This gives JSW Cement a unique advantage to cater to the diverse needs of the construction industry with its premium, high quality & eco-friendly products. The company converts industrial byproducts of Steel manufacturing into cement and other building materials thereby ensuring a greener future for the next generation. Its capable marketing & service teams ensure that customer’s needs are met within the shortest time by extensively leveraging digital tools, mobile-tech and conversational commerce interventions. JSW Cement’s growth plans include a capacity target of 50 MTPA. All current business investments are driven to achieve this goal. Its business vision has been acknowledged through various honours & awards including The Economic Times Sustainable Organisation of the year 2022, CII Sustainability Award 2022 for Outstanding accomplishment under Corporate excellence, Best Infrastructure Brand (2022 & 2021) among others. JSW Cement also ranks first in the Sustainalytics ESG risk rating globally in the construction material industry group of more than 140 companies.

All these plants are covered in CDP reporting scope. All these units together which produce six products: Clinker, Portland Slag Cement (PSC), Ordinary Portland Cement (OPC), Concreel HD (higher quality PSC), Composite Cement (CC) and Ground Granulated Blast Furnace Slag (GGBS). At JSW Cement, our major objective is to leverage technology to successfully integrate sustainability in the production process by converting an industrial by-product (Blast Furnace Slag) into green cement, i.e. PSC and CHD which is engineered for strength and durability.. Almost a decade later since its inception, JSW Cement has emerged as one of India’s leading manufacturers of ‘green cement’, using industrial by-products such as slag. JSW PSC has lowest clinker ratio which helps to conserve natural resources viz. Limestone, raw mix additives, coal and pet coke and water. PSC also consumes least amount of electrical energy compared to all other type of cement products in the Indian market. Our vision - Global recognition for quality and efficiency while nurturing nature and society.

With regard to Sustainability, we have adopted a vision that puts across our belief that encompasses three main pillars of responsibility: Environmental, Social and Governance (ESG). For our sustainability strategy to be effective, we have developed a Sustainability Framework to ensure that the strategy is implemented consistently and then continue to operate effectively. In developing the architecture and details of our Framework, we take into account, the national and international standards that already exist across the corporate world, for example UN Global Compact, International Finance Corporation (IFC) performance standards, OECD Guidelines, ISO standards, UN Guiding Principles on Business & Human Rights, UN SDGs, GRI Standards etc.

JSW Cement has committed to all three of The Climate Group’s campaigns - RE100, EV100 and EP100 in one go and we are globally first company in heavy industries to do so. Since our inception, we have been using the cutting-edge German technology of dry process, which is environment friendly and does not require the use of water. Our plants are fully automated and are managed through a centralized control desk. Careful sourcing and innovative and efficient use of water technologies form part of our water stewardship approach. All our plants have a water management plan in place curated with foresight and meticulous planning. Several water conservation measures have been initiated at both plant and community levels, which help us manage our available and sourced water efficiently. We use Zero Liquid Discharge (ZLD) technology at our units and treat domestic wastewater treated at sewage treatment plant for reuse and the treated water is further used for dust suppression and green belt development . Apart from this we ensure rainwater harvesting, groundwater recharge and the use of water efficient equipment. We have taken a target for year 2030 of becoming water positive by at least 5 times. Also we are working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021).

W0.2

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

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

W0.3

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

India

W0.4

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

INR

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

No

W0.7

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

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	INE718I01012

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	Not very important	Neutral	<p>Primary use in Direct Operations: Since inception, JSW Cement has been using the cutting-edge German technology of dry process, which is environment-friendly and does not require too much of water. Cement manufacturing is not a water intensive but it is required for cooling heavy equipment, power generation, dust suppression, cleaning, green belt and emission control systems. In terms of use in the aforementioned processes, the quality of water is not as crucial as its availability or quantity. JSW Cement ,at Nandyal , is using mine pit water which is primarily rainwater collected from nearby areas. This harvested water is used for plant operations. Our water needs can be met by using recycled, rain-harvested water.</p> <p>Primary use in Indirect Operations: For final building product from cement – concrete, water is required but the quality does not have an importance. Thus the availability of fresh water in our Indirect operations holds neutral importance considering the impacts on customers, suppliers, and contractors in our entire value chain. In the coming years, this may change</p> <p>However, freshwater of good quality is extremely important for domestic use i.e. for the employees and their families residing in the residential quarters in the vicinity of the plants' locations.</p>
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	<p>Water management is an important aspect of JSW Cement's operations and will continue to be so in the future.</p> <p>Primary use in direct operations: We selected important because currently we use recycled water for cooling heavy equipment, power generation, dust suppression, green belt development and washroom facilities. (non-potable use). This is projected to continue in the future because good quality of freshwater is not material, but sufficient quantities are needed. As a result, the availability of recycled water is critical in our direct operations, as these activities would otherwise require the usage of freshwater.</p> <p>Primary use in Indirect operations: The water needs of our customers and suppliers , quantity and quality wise, will vary. We selected neutral because of the following: Some customers/suppliers may need sufficient amounts of recycled water or brackish water (e.g., coal suppliers). For our customers, the bulk of the water required is of good quality for product applications. Considering both needs, we selected neutral. In future, as suppliers and customers face more water issues, this could change and become important depending on local situation.</p>

W1.2

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

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Monthly	We have installed meters at most of the withdrawal points. However at few of the locations, where meters may not be available or operational, there we estimate the withdrawal quantity.	<p>We follow the Global Cement and Concrete Association(GCCA)'s sustainability guidelines for the monitoring and reporting of water in cement manufacturing. We monitor the water withdrawals at site level using methodologies including measurement (digital flowmeters, volumetric meters ,etc.) and estimation by measurement. Water withdrawals are monitored at site level and are consolidated at company level on monthly basis and will continue in the future.</p> <p>We are improving our monitoring and reporting practices .</p>
Water withdrawals – volumes by source	100%	Monthly	We have installed Digital water Level Recording facility with telemetry . All plants create Water Reports on a regular basis to track these actions, which are then sent for assessment and consolidation /Sustainability reporting.	<p>JSW Cement measures and monitors water withdrawal volumes from various sources such as surface water, ground water, mine pit, harvested water, etc,on monthly in all (100%) of our sites in accordance with GCCA guidelines. Monthly Water Reports generated by all plants on withdrawal, consumption, discharge and water harvesting are sent to Corporate office for data consolidation and to establish plant /corporate water footprint. Using the GCCA Water guidelines, all sites identify and map major points of water withdrawal (incl sources), water consumption (incl. losses), water discharge (incl destination); and water recycling/reuse.. To track withdrawals, we have installed Digital water meters at many plants . Few of the plants are still transitioning from flow meters to digital. All plants submit water reports on a regular basis to track these actions, which are then sent for assessment and consolidation /Sustainability reporting.</p>

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Monthly	Periodic testing monitoring of quality parameters are done as per the requirements	Since water use in cement production is not for process but for ancillary activities, quality of water withdrawal is not very significant. For certain processes (e.g. cooling raw materials, exhaust gases, washing of aggregates, gardening ,dust suppression control) freshwater quality is not a criteria. however for equipment's or system cooling), the quality of water withdrawn is important.
Water discharges – total volumes	76-99	Monthly	We have been monitoring of water discharge volumes in accordance with the GCCA guidelines for all cement sites. We meters installed at few locations and at few , we estimate the amount.	Water discharge volumes are monitored at site level and consolidated at corporate level on monthly basis and the same will continue in the future. As we adopt zero waste water discharge policy, most of our plants do not discharge water or wastewater into natural source outside our plant boundary. We have STP installed at most of our locations. At few of locations we have Septic Tanks also. Treated waste water (from STP/ZLD systems) is reused for different purpose or destinations (dust suppression, horticulture, green belt development, heavy equipment cooling).
Water discharges – volumes by destination	76-99	Monthly	We have monitoring of water discharge volumes in accordance with the GCCA guidelines for all cement sites.	As we adopt zero waste water discharge policy, most of our plants do not discharge water or wastewater into natural source outside our plant boundary. Still , Water discharge, if any, is monitored at site level and consolidated at corporate level on a monthly basis and will continue in the future. . We have STP installed at most of our locations. At few of locations we have Septic Tanks also. Treated waste water (from STP/ZLD systems) is reused for different purpose or destinations (dust suppression, horticulture, green belt development, heavy equipment cooling)
Water discharges – volumes by treatment method	76-99	Monthly	We have monitoring of water discharge volumes in accordance with the GCCA guidelines for all cement sites.	As we adopt zero waste water discharge policy, most of our plants do not discharge water or wastewater into natural source outside our plant boundary. Still , Water discharge, if any, is monitored at site level and consolidated at corporate level on a monthly basis and will continue in the future. . We have STP installed at most of our locations. At few of locations we have Septic Tanks also. Treated waste water (from STP/ZLD systems) is reused for different purpose or destinations (dust suppression, horticulture, green belt development, heavy equipment cooling)
Water discharge quality – by standard effluent parameters	76-99	Monthly	We have been monitoring of treated waste water in accordance with the GCCA guidelines for all cement sites. Periodic testing monitoring of quality parameters are done as per the requirements.	We monitor quality of water discharge at stipulated as per Indian/local permitting standards . Monitoring will continue in the future. As we adopt zero waste water discharge policy, most of our plants do not discharge water or wastewater into natural source outside our plant boundary. Still , Water discharge, if any, is monitored at site level and consolidated at corporate level on a monthly basis and will continue in the future. . We have STP installed at most of our locations. At few of locations we have Septic Tanks also. Treated waste water (from STP/ZLD systems) is reused for different purpose or destinations (dust suppression, horticulture, green belt development, heavy equipment cooling)
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	76-99	Monthly	We have been monitoring of treated waste water in accordance with the GCCA guidelines for all cement sites. Periodic testing monitoring of quality parameters are done as per the requirements.	We monitor the quality of Treated waste water at stipulated as per Indian/local permitting standards. Monitoring of the same will continue in the future.
Water discharge quality – temperature	Not relevant	<Not Applicable>	<Not Applicable>	We do not monitor Temperature, it's not specified by SPCB. Monitoring of temperature is required only when the water is discharged into a natural water body such as River, lake or ocean where aquatic life might get affected due to variation in water temp. Since we do not discharge any waste water outside our boundary, we do not monitor it.
Water consumption – total volume	100%	Monthly	Total volume of water consumption is monitored at each site and is consolidated at corporate level on monthly basis. We have digital water meters at many consumption points and some consumptions point Volumes are estimated.	Total volume of water consumption is monitored at each site and is consolidated at corporate level on monthly basis. The same will continue in the future. Considering the challenge of growing water scarcity, water monitoring is the first step towards water efficiency and managing water scarcity and to improve our water footprint. Using the GCCA Water guidelines, all sites identify and map major points of water withdrawal (incl sources), water consumption (incl. losses), water discharge (incl destination); and water recycling/reuse. With the Commitment to become water positive five times over by FY2030, we have conducted comprehensive analysis of our water footprint at each and every facilities. For the purpose of water accounting, each of our plants uses a Water Balance Flow Diagram that details the interconnections between all of the different stages of production.
Water recycled/reused	100%	Monthly	Total volume of water recycled/reused is monitored at each site and is consolidated at corporate level on monthly basis.	All our cement sites have water recycling systems in place where water recycled/ reused is monitored (100%) and is consolidated at Corporate level on monthly basis. The same will continue in the future. By recycling water, we reduce our fresh water withdrawal as well as our water discharge. We have identified major consumption points requiring water recycling system and we will be working on the same.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	Yearly	While we have provision of safely managed WASH services, we are yet not monitoring all our sites in a formal way.	Most of our plants are provided with WASH facilities. However, we are still working towards formalizing its annual monitoring.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	753.52	Higher	Increase/decrease in business activity	Higher	Increase/decrease in business activity	<p>We define following for comparison purpose</p> <p>about the same - 0-5% (+/-) higher/lower - 5-15% (+/-) much higher/much Lower >15% (+/-)</p> <p>As given in the guidance document, this volume only takes into account the water which we withdraw from Ground water, surface water, harvested rainwater sources in cement and CPP operations. However, as per our definition, while rainwater is included in our overall water withdrawal but excluded in freshwater withdrawal KPI. The annualized rate of withdrawal was 753.52 Megalitre in last fiscal year. Last year we have withdrawn 673 ML .Thus there is ~11% increase because of higher production.</p> <p>We will be expanding in future raising our capacities thus total volume will be increasing.</p>
Total discharges	0	About the same	Other, please specify (This is our first year of measurement hence can't comment on this)	About the same	Maximum potential volume reduction already achieved	<p>JSW Cement has Zero Liquid Discharge (ZLD) Plants provided with either Sewage Treatment Plants (STPs) at most of the locations and septic tanks at few of the locations. We do not discharge water outside our plant boundary into natural sources such as river, lakes etc. Treated Waste water is used for horticultural purpose, dust suppression, heavy equipment cooling, green belt development and other activities which do not require water of a very high quality. It will be same in future also as we are ZERO liquid Discharge.</p>
Total consumption	663.26	Higher	Other, please specify (This is our first year of measurement)	Higher	Increase/decrease in business activity	<p>We define following for comparison purpose</p> <p>about the same - 0-5% (+/-) higher/lower - 5-15% (+/-) much higher/much Lower >15% (+/-)</p> <p>As given in the guidance document, this volume only takes into account the water which we withdraw from Ground water, surface water, harvested rainwater sources in cement and CPP operations. However, as per our definition, while rainwater is included in our overall water withdrawal but excluded in freshwater withdrawal KPI. The annualized rate of withdrawal was 663.26 Megalitre in last fiscal year. Last year we have withdrawn 650 ML .Thus there is ~2% increase because of higher production.</p> <p>We will be expanding in future raising our capacities and production thus total volume will be increasing.</p>

W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	11-25	About the same	Increase/decrease in business activity	About the same	Increase/decrease in efficiency	WRI Aqueduct Other, please specify (WBCSD India Water Tool)	<p>We define following for comparison purpose</p> <p>about the same - 0-5% (+/-) higher/lower - 5-15% (+/-) much higher/much Lower >15% (+/-)</p> <p>Only one location is located in water stress area - Vijayanagar where we have withdrawn almost 11% of total withdrawal quantity. IN future, % will remain the same from this location because higher production and our efficiency improvement .</p>

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	753.52	Higher	Increase/decrease in business activity	<p>We define following for comparison purpose</p> <p>about the same - 0-5% (+/-) higher/lower - 5-15% (+/-) much higher/much Lower >15% (+/-)</p> <p>As given in the guidance document, this volume only takes into account the water which we withdraw from Ground water, surface water, harvested rainwater sources in cement and CPP operations. However, as per our definition, while rainwater is included in our overall water withdrawal but excluded in freshwater withdrawal KPI. The annualized rate of withdrawal was 753.52 Megalitre in last fiscal year. Last year we have withdrawn 673 ML .Thus there is ~11% increase because of higher production in FY23.</p> <p>We will be expanding in future raising our capacities thus total volume will be increasing.</p>
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Irrelevant because we do not withdraw any water from brackish surface water /seawater
Groundwater – renewable	Relevant	322	Much higher	Increase/decrease in business activity	<p>We define following for comparison purpose</p> <p>about the same - 0-5% (+/-) higher/lower - 5-15% (+/-) much higher/much Lower >15% (+/-)</p> <p>As given in the guidance document, this volume only takes into account the water which we withdraw from Ground water, surface water, harvested rainwater sources in cement and CPP operations. However, as per our definition, while rainwater is included in our overall water withdrawal but excluded in freshwater withdrawal KPI. The annualized rate of withdrawal was 322 Megalitre in last fiscal year. Last year we have withdrawn 244 ML .Thus there is ~30% increase because of higher production.</p> <p>We will be expanding in future raising our capacities thus total volume will be increasing.</p>
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	We withdraw water from renewable groundwater only.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	We follow GCCA guidelines for monitoring and reporting of water withdrawal/consumption/discharge. In line with these guidelines, we do not withdraw any produced water for our operations. Hence, this is not relevant and not measured
Third party sources	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	As we do not purchase water from third party (from local municipalities). Hence this is not relevant and not measured

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Since JSW Cement works operates Zero Liquid Discharge facilities, we do not release water in any fresh water bodies and any facility outside our plant boundary. That is why it is not relevant
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Since JSW Cement works operates Zero Liquid Discharge facilities, we do not release water in any fresh water bodies and any facility outside our plant boundary. That is why it is not relevant
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Since JSW Cement works operates Zero Liquid Discharge facilities, we do not release water in any fresh water bodies and any facility outside our plant boundary. That is why it is not relevant
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Since JSW Cement works operates Zero Liquid Discharge facilities, we do not release water in any fresh water bodies and any facility outside our plant boundary. That is why it is not relevant

W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	0	About the same	Maximum potential volume reduction already achieved	1-10	All the units of JSW Cement are Zero Liquid Discharge plants. STPs use (Moving bed biofilm reactor (MBBR), a biological technology used for wastewater treatment process suitable for municipal For partial secondary treatment we use (chemical dosing) to remove chemical pollutants, is any. We have installed RO also at few of our locations.
Secondary treatment	Relevant	0	About the same	Maximum potential volume reduction already achieved	41-50	The level of treatment is done as per the local regulations and site specifications. Most of our units of JSW Cement are Zero Liquid Discharge plants. STPs use (Moving bed biofilm reactor (MBBR), a biological technology used for wastewater treatment process suitable for municipal For partial secondary treatment we use (chemical dosing) to remove chemical pollutants, is any. we do not discharge any waste water outside our plant boundary thus it is zero.
Primary treatment only	Relevant	0	About the same	Maximum potential volume reduction already achieved	41-50	The level of treatment is done as per the local regulations and site specifications. Most of our units of JSW Cement are Zero Liquid Discharge plants. STPs use (Moving bed biofilm reactor (MBBR), a biological technology used for wastewater treatment process suitable for municipal For partial secondary treatment we use (chemical dosing) to remove chemical pollutants, is any. we do not discharge any waste water outside our plant boundary thus it is zero.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	As we do not discharge any waste water outside our plant boundary , it is not relevant to us and not measured
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	As we do not discharge any waste water outside our plant boundary , it is not relevant to us and not measured
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	As we do not discharge any waste water outside our plant boundary , it is not relevant to us and not measured

W1.2k

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

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	0	Nitrates Phosphates	<Not Applicable>	Since there is no process water, there is no significant emissions. Whatever wastewater is generated, most of it from domestic use thus it may contain Phosphate or Nitrates and pathogens. While we monitor these elements in our waste water quality, we are not able to report the total emissions.

W1.3

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

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	5785000000	753.52	76773011.9970273	We expect an increase in the ratio in the coming years as the revenue is projected to increase due to market expansion plans, while simultaneously we will drive efforts towards reducing water withdrawal from freshwater sources as we have taken a target for year 2030 of becoming water positive by at least 5 times. Also we are working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021)

W1.4

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

	Products contain hazardous substances	Comment
Row 1	No	Cement does not include any hazardous substances. We have done the Life Cycle Assessment and published the EPD for our key products - GGBS and PSC.

W1.5

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

	Engagement	Primary reason for no engagement	Please explain
Suppliers	Yes	<Not Applicable>	<Not Applicable>
Other value chain partners (e.g., customers)	No	We are planning to do so within the next two years	Currently we engage with customer with a focus on climate change and low carbon products. We plan to include water related points and highlights important aspects in 1-2 years.

W1.5a

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

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

Supplier dependence on water
Supplier impacts on water availability

Number of suppliers identified as having a substantive impact

3

% of total suppliers identified as having a substantive impact

100%

Please explain

At JSW Cement, supply chain sustainability is one of our key focus areas. IN FY23, we undertook a detailed analysis of our suppliers profile and identified the critical suppliers . Critical suppliers are identified based on high volume, critical components & non-substitutability. Top 5% of our suppliers (50 by numbers) contribute ~60% of our total spend. We reached out to almost 40 of them to collect the information and 20-25% of them have responded. The questionnaire comprise of all sustainability aspects including water and climate change. They have been assessed and arrived at a score. Going ahead in 2-3 years we plan to engage with those suppliers who do not meet a threshold score and engage with them for improving their sustainability performance. We will also be undertaken on-site audit of selected suppliers.

We have considered a few key suppliers during TCFD assessments. 3 have been identified having a substantive impact on water security. Results are yet to be validated.

W1.5b

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

	Suppliers have to meet specific water-related requirements	Comment
Row 1	Yes, water-related requirements are included in our supplier contracts	<Not Applicable>

W1.5c

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

Water-related requirement

Complying with going beyond water-related regulatory requirements

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

100%

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

100%

Mechanisms for monitoring compliance with this water-related requirement

Supplier self-assessment

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

Retain and engage

Comment

JSW Cement has a supplier code of conduct which is based on key principles like compliance management, environment, human rights, labour & business ethics. Under Environment, we suggest suppliers to only extract water from the legally authorized sources. It is advised that Suppliers adopt and promote recycling and reuse of water and improve water efficiency. It is desirable that water conservation interventions such as rainwater harvesting be adopted wherever feasible. Acceptance of JSW Supplier Code of Conduct is mandatory to all suppliers and is available in the Purchase Orders.

For service contractors, we also have pre-qualification checklist which includes a few clauses/questions for WASH facilities. In case they do not meet the threshold score, they are rejected and consulted to improve their systems and scores.

W1.5d

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

Type of engagement

Information collection

Details of engagement

Collect water management information at least annually from suppliers

% of suppliers by number

1-25

% of suppliers with a substantive impact

1-25

Rationale for your engagement

JSW Cement has a supplier code of conduct which is based on key principles like compliance management, environment, human rights, labour & business ethics. Under Environment, we suggest suppliers to only extract water from the legally authorized sources. It is advised that Suppliers adopt and promote recycling and reuse of water and improve water efficiency. It is desirable that water conservation interventions such as rainwater harvesting be adopted wherever feasible. Acceptance of JSW Supplier Code of Conduct is mandatory to all suppliers and is available in the Purchase Orders.

IN FY23, we undertook a detailed analysis of our suppliers profile and identified the critical suppliers . Critical suppliers are identified based on high volume, critical components & non-substitutability. Top 5% of our suppliers (50 by numbers) contribute ~60% of our total spend. We reached out to almost 40 of them to collect the information and 20-25% of them have responded. The questionnaire comprise of all sustainability aspects including water and climate change. They have been assessed and arrived at a score. Going ahead in 2-3 years we plan to engage with those suppliers who do not meet a threshold score and engage with them for improving their sustainability performance. We will also be undertaken on-site audit of selected suppliers, We have also developed a sustainable supply chain standards (in final stage) to guide our team

Impact of the engagement and measures of success

The assessment exercise gives insights of ESG aspects followed by our suppliers. About 50 suppliers were invited for the session on sustainability in supply chain. This was done to make them aware of our ESG assessment questionnaire and clarify any doubt. The assessment gives an overall information on adherence to the sustainability aspects which are a part of our sustainability framework. It provides an important step for JSW to be a sustainable company including its partners i.e. suppliers & vendors. In the questionnaire, there are many questions related to water are included.

We will do the assessment annually and we will monitor the score. Improvement in scope will be considered as a measure of success.

For service contractors, we also have pre-qualification checklist which includes a few clauses/questions for WASH facilities. In case they do not meet the threshold score, they are rejected and consulted to improve their systems and scores.

Comment

This is still under progress and gradually developing.

W2. Business impacts

W2.1

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

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	No	<Not Applicable>	JSW cement is strictly adhering to the stipulations laid by statutory authorities Hence wasn't subjected to any fines, enforcement orders, and/or other penalties for water-related regulatory violations

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	Yes , Potential Water Pollutants associated with the activities are determined before its disposal. All the applicable norms are adhered accordingly.	<Not Applicable>

W3.1a

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

Water pollutant category

Other nutrients and oxygen demanding pollutants

Description of water pollutant and potential impacts

There is no process related waste water in cement manufacturing. Whatever waste water is generated, that is domestic waste water or from washing facilities, dust suppressions etc. Thus pollutants are very limited specially from the sewage.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Implementation of integrated solid waste management systems

Water recycling

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

Upgrading of process equipment/methods

Please explain

We have STP at most of our locations and also septic tanks at few. We continuously monitor the pollutants as per applicable norms. We monitor biological oxygen demand, chemical oxygen Demand ,pH, Total suspended solids, total dissolve solids and oil and grease.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Value chain stage

Direct operations
Supply chain

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

More than once a year

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market
Enterprise risk management
Databases
Other

Tools and methods used

WRI Aqueduct
COSO Enterprise Risk Management Framework
Regional government databases
Internal company methods
Materiality assessment
Nation specific databases, tools, or standards
Scenario analysis

Contextual issues considered

Water availability at a basin/catchment level
Water regulatory frameworks
Status of ecosystems and habitats
Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Local communities
Regulators
Water utilities at a local level
Other water users at the basin/catchment level

Comment

As a first step, risk level is assessed as per the outcome of WRI Aqueduct tool. Further validation is done by using WBCSD's India Water Tool which also takes into account the local criteria and more granular information but we have focused on Baseline Water Stress criteria. Inputs are also taken from Environmental Impact Assessment (EIA), which is undertaken by external consultant which covers water management for new sites / brownfield projects, including hydro-geological studies (e.g., impacts on aquifers, ecosystems). We also factor the impact of local regulations (ex. 2020 Centre of Ground Water Association notification) which categorize the sites based on current ground water aquifer and regulates the withdrawal and use of ground water. Considering our current Freshwater intensity also impacts the residual risk. We assigned weightage to all the criteria's listed above. Thus the final consolidated score is calculated for assessing overall risk.

For Two main plants - Vijaynagar (2022) and Nandyal(2020), a detailed study was undertaken through CII's WATSCAN tool, an IT driven, GIS and Remote Sensing based decision support system, is applied for evaluation. WATSCAN is a unique tool that links satellite information, on-ground databases and processes information (spatial and temporal) carried in millions of pixels on a GIS platform. This is used to undertake demand supply analysis that facilitates appropriate decision making for ensuring improved water scenario in an area.

As per the results, Nandyal plant is located in a pocket that is relatively good on water generation (320- 350 mm/year). This depicts that the watershed has adequate yield in the years with normal rainfall but considering the lower rainfall in past few years and if this trend continues it may lead to water stress in medium term. However the plant is de-risking this by enhancing its water harvesting initiatives and it provides water to nearby communities also.

For Vijayanagar plant , it was found that watershed is very high water stressed watershed, with low water yield values (<300 mm/year); low accumulation (low- very low flows). Since the water demand of the plant is not significant because it is a grinding unit, the risk can be mitigated if we develop and improve our efforts for water efficiency and explore alternate sources of water.

We are also undertaking the TCFD assessment, climate risk scenario analysis while assessing physical risks. Results are under validations

W3.3b

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

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	<p>Though Cement industry is not a water intensive but it is critical and important for our operations. Thus we do risk assessment related to water aspects - withdrawal, consumption, availability etc using different tools and approaches.</p> <p>As a first step, risk level is assessed as per the outcome of WRI Aqueduct tool. Further validation is done by using WBCSD’s India Water Tool which also takes into account the local criteria and more granular information but we have focused on Baseline Water Stress criteria. Inputs are also taken from Environmental Impact Assessment (EIA). We also factor the impact of local regulations (ex. 2020 Centre of Ground Water Association notification) which categorize the sites based on current ground water aquifer and regulates the withdrawal and use of GW. Considering our current Freshwater intensity the final consolidated score is calculated for assessing overall risks.</p> <p>For Two main plants - Vijaynagar (2022) and Nandyal(2020), a detailed study was undertaken through CII’s WATSCAN tool, an IT driven, GIS and Remote Sensing based decision support system, is applied for evaluation.</p> <p>We are also undertaking the TCFD assessment, climate risk scenario analysis while assessing physical risks. Results are under validations.</p>	<p>We assess the risk specially arising out of local legal framework around water . Few of our plants are located water stress area but because our water requirement is not significant that is why the risk impact is not high. However, in future this may be converted to significant impact. Water is also an important issue because of nearby community are dependent thus it is important to consider the water availability at basin/catchment level particularly in medium term time horizon.</p> <p>We are also undertaking detailed dependence and impact assessment on Biodiversity and Ecosystem Services through CII currently which will take into account the status of habitats and ecosystem</p>	<p>Regulators are important stakeholders as they are the one who regulate the withdrawal specially the Ground water, Any non compliance related to water may lead to fines. Communities are also key stakeholder as at few locations withdraw water from same sources. Local stakeholders in terms of other users and water utilities are also considered as it will impact the availability.</p>	<p>At locations, where a few water related risks are identified, response /mitigation measures are planned not only keeping short term but long terms as well and the financial impact it may cause.</p> <p>As per the results of assessment using CII’s WATSCAN tool it was found that Nandyal plant is located in a pocket that is relatively good on water generation (320-350 mm/year). This depicts that the watershed has adequate yield in the years with normal rainfall but considering the lower rainfall in past few year and if this trend continues it may lead to water stress in medium term.</p> <p>Risk-Response: However the plant is de-risking this by enhancing its water harvesting initiatives and it provides water to nearby communities also.</p> <p>For Vijayanagar plant , it was found that watershed is very high water stressed watershed, with low water yield values (<300 mm/year); low accumulation (low-very low flows). Risk response: Since the water demand of the plant is not very high because it is a grinding unit, the risk can be mitigated if we develop and improve our efforts for water efficiency and explore alternate sources of water which we are doing.</p> <p>Once our TCFD assessments are over and results are validated, we will develop the risk response accordingly.</p>

W4. Risks and opportunities

W4.1

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

No

W4.1a

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

The risk management process in JSW cement is guided by 'COSO' framework of Enterprise Risk Management. ERM brings together the understanding of the potential upside and downside of all those factors which can affect the organisation with an objective to maximise sustainable value to all the activities of the organisation and to its stakeholders. The company recognises that the emerging and identified risks need to be managed and mitigated, in order to - a. protect its shareholders and other stakeholders' interest b. achieve its business objective. c. enable sustainable growth.

There are three steps of Risk Management process

1. Risk Identification: Identification, assessment, response & tracking of risks under their control are ensured by the Risk owners (HODs) at respective locations. Risk is identified by the risk owners at the plant level and functional levels. subsequently, all the plant level risks and risks of corporate functions as well as organisational risks requiring review of macro environment, policies, processes are discussed at the Corporate meetings.
2. Risk Assessment: The framework provides the platform to discuss the risk factors which have significant impact on business sustainability, including that of climate change risks
3. Risk Response (e.g., avoid, mitigate, or retain). Risk mitigation is done through business continuity plans to manage disasters and other uncontrollable external risks and minimizing vulnerability through proactive planning, insurance and due diligence.

We consider following timelines for risk assessment

0-3 years - Short term

3-10 years- Medium Term

10-30 years - long term

Water related risks as part of TCFD assessment were identified this year not only for our own operations but also for few of our key suppliers and key customers.

The level of risks for physical risks is based on likelihood of the event occurring as well as the impact (intensity). We have used a mix of both qualitative and quantitative indicators as follows

Critical Risk – Very high (almost certain) probability of occurrence and severe impact on business & operations

Eg. The risk is likely to occur frequently, the financial impact is likely to exceed USD 100 million or loss of lives coupled with severe injury or disability and protests or disruption from communities and stakeholders.

High Risk – High probability of occurrence and high impact on business & operations

Eg. The risk is likely to occur frequently, the financial impact is likely to exceed USD 50 million or severe injuries or disability and protests or disruption from communities and stakeholders.

Moderate Risk – Medium probability of occurrence and medium impact on business & operations

Eg. The risk is likely to occur frequently (1 x 8-10 years), the financial impact is likely to exceed USD 30 million or severe injuries or disability and protests or disruption from communities and stakeholders.

Insignificant Risk – Low probability of occurrence and some impact on business & operations

Eg. The risk is likely to occur frequently (10+ years), the financial impact is likely to less than USD 1 million or some injuries or near misses along with some grievances from communities and stakeholders.

As per preliminary results of TCFD, one location may be exposed to water scarcity risk and the estimated financial impact is not substantive. However, results are still under validation.

W4.2b

(W4.2b) Why does your organization not consider itself exposed to water risks in its direct operations with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Evaluation in progress	As per our preliminary assessment through different tools - WRI Aqueduct and India Water Tool, few of our locations might be at risk. However we are undertaking detailed assessment through TCFD and site specific assessments. As per preliminary results of TCFD, one location may be exposed water scarcity risk and the estimated financial impact does not seem to be substantive. However, results are still under validation.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Evaluation in progress	Water related risks were assessed as part of TCFD assessment not only for our own operations but also for few of our key suppliers and key customers. As per preliminary results of TCFD, 1-2 suppliers/key markets may be exposed water scarcity risk and the estimated financial impact may not be substantive. However, results are still under validation.

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

Products and services

Primary water-related opportunity

Reduced impact of product use on water resources

Company-specific description & strategy to realize opportunity

While we make cement and cementitious products, water is needed in product use stage when we make concrete. Water is also required for curing purpose.

Our product portfolio includes innovative and sustainable products that perform under different climatic conditions.

KRYSTA LEAKPROOF, an Integral Crystalline Waterproofing admix, is a capillary waterproofing compound for concrete and mortar. It is in dry powder form and added to the concrete mix at the time of batching.

Enduroplast - a product provide eco-friendly building solutions in a form of Ready Mix Plaster which is made from Slag sand instead of river sand. We also intended to make it self-cured instead of water cured. Though the product is commercialized but still yet to grow in the market. We are also working towards CO2 curing.

We are also working towards developing a water-repellent cement. This cement has all the qualities of conventional OPC cement. This is a low carbon cement as it is slag based. It has a water repellent properties which absorbs 50-60% less water than conventional cement when exposed to it for hours, which results in better protection of concrete and steel reinforced slabs and structures. This type of cement has excellent corrosion inhibition properties and which results in an increased life of buildings and structures.

Our R&D is putting some efforts to develop a few products which may require less water for curing.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

24000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

For financial impact calculation, we have taken an example of Enduroplast which was launched 2 years ago. We have made a revenue of almost Rs.10 lakh per month thus the annual revenue can be calculated as Rs, 12000000.

Assuming we double this revenue in coming 2 years, the financial impact will be 24000000

Type of opportunity

Efficiency

Primary water-related opportunity

Water recovery from sewage management

Company-specific description & strategy to realize opportunity

In our cement manufacturing plants, significant amount of water is used for dust suppression, domestic use and green belt, quality is not very significant. We mostly use recycled water for all our own activities. We plan to reduce our intake of freshwater specially ground water by enhancing use of treated waste water available in nearby areas.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

3000000

Potential financial impact figure – maximum (currency)

6000000

Explanation of financial impact

For few locations location, we we are buying water at the rate of Rs. 20 to 40 per KL. Considering that if we can replace 20% of current freshwater consumption by waste water (150 Megalitre) impact will be of the tune of

20*150*1000 INR

40*150*1000 INR

To realised this opportunity, we will have to make the investments for supply of waste water from those locations to our plant.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to prevent, minimize, and control pollution Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to reduce water withdrawal and/or consumption volumes in supply chain Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to stakeholder education and capacity building on water security Commitment to the conservation of freshwater ecosystems Commitments beyond regulatory compliance Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	Through our policy on water we have considered following aspects : • Careful sourcing of water and Efficient use of water In furtherance of this commitment, the Board of Directors has adopted this 'Water Resource Management Policy' which mentions - Description of Business dependency on water • "All JSW's activities involve the use of water to a greater or lesser extent, and few of our sites operate in regions affected by water scarcity". Whilst we have always sought to minimize our use of water and have always worked within any relevant regulatory framework relating to water abstraction and use, we recognize that we have a moral, social, and economic need to do much more. Description of business impact on water "We aim to gain a full and detailed understanding of the nature, scale, and impact of all water use at our sites." This is followed by how we intend to gain this impact. Description of water-related performance standards for direct operations "We will continue to be fully committed to our statutory and voluntary obligations relating to water resource management. These include: • All local and national statutory regulations • Reporting of our performance on the issue of water usage through GRI (Global Reporting Initiative) and against the UNSDGs. Description of water-related standards for procurement "We aim to promote the careful sourcing and efficient and innovative use of water across all our suppliers and business partners. To do this we will: • Define and openly share in a Code of Practice the minimum expectations we have • Establish a detailed and transparent process for water evaluation • Encourage suppliers and business partners on water conservation Reference to international standards and widely-recognized water initiatives • We are committed to report our performance through GRI (Global Reporting Initiative) and against the UNSDGs. Company water targets and goals : • We have taken a target for year 2030 of becoming water positive by at least 5 times. Also working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021) • We are planning to completely phase out groundwater extraction by 2024-25 and will only utilize the harvested rain water collected in mine pit. Commitment to water-related innovation As part of policy commitment it is stated – "Support research into and development of new and innovative technologies within our industries that will contribute to reductions in water use."

W6.2

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

Yes

W6.2a

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

Position of individual or committee	Responsibilities for water-related issues
Board-level committee	<p>The Board of Directors have constituted a sub-committee of the Board known as the "Sustainability Committee" to assess environment / sustainability / climate change /water related performance of the Company. The committee discusses the water related targets, performance and our strategies. The Sustainability Committee comprises of two Executive Directors and two Non-Executive Independent Directors. The Company Secretary acts as the Secretary of the Committee. The roles and responsibilities approved by the Board, for the functioning of Sustainability Committee, inter alia include: 1. Responsible for adoption of National Guidelines on Responsible Business Conduct (NG RBC) in business practice of JSW Cement. 2. Reviews adoption of all sustainability related policies and standards. 3. Oversee management processes to ensure compliance with policies and standards. 4. Review audits and assurance reports on how policies and standards are implemented. 5. Review the progress of business sustainability initiative and progress at JSW Cement. 6. Review the annual business responsibility report and present to the Board for approval.</p> <p>All compliance related requirements pertaining to water are reviewed during the Executive meeting , Risk Management meeting and Sustainability Board Committee meeting , if needed.</p> <p>Board committee has advised to enhance our water harvesting efforts in all our locations.</p>
Board-level committee	<p>The Board of Directors have constituted a sub-committee of the Board known as the "Risk Committee" to assess environment / climate change related performance of the Company.</p> <p>Unit level and company level risks are identified for various issues including climate and water and if there is a substantial impact, they are presented to Risk Management committee. These meetings take place twice in a year.</p> <p>The broad terms of reference of Risk Committee are: a) To formulate and recommend to the Board Risk Management Policy for approval. b) To review the Risk Management Policy from time to time and recommend to the Board for review. c) Implement the Risk Management Policy as approved by the Board. d) To access the Company's risk profile and Key area of Risk in particular. e) To recommend to the Board adoption of risk assessment and rating procedures. f) To periodically review risk assessment and minimization procedure to ensure that Executive Management controls risk through means of defined framework g) Provide a methodology to identify and analyze the financial impact of loss to the organization, employees, the public, and the environment. h) To access and recommend to the Board acceptable level of risk. i) To review and nature and level of Insurance Coverage. j) Prepare risk management and insurance budgets and allocate claim costs and premiums to departments and divisions. k) To define risk appetite of the Company and review the risk profile of the Company from time to time to ensure that risk is not higher than the risk appetite approved by the Board. l) Provide for the establishment and maintenance of records including insurance policies, claim and loss experience. m) To exercise such powers as may be delegated by the Board of Directors from time to time.</p> <p>Our targets for reducing freshwater intensity, becoming water positive by 2030 and implementing WASH facilities have been approved by the board committee.</p>
Chief Operating Officer (COO)	The position oversees that all operating plants meet all water related regulatory requirements. Water related targets, strategies and initiatives are also reviewed, discussed and validated.
Chief Sustainability Officer (CSO)	The key Role and Responsibilities of the Chief Sustainability Officer is 1. Briefing the Board of Directors on sustainability issues 2. Engage executives on various sustainability updates 3. Engage with CEO & Senior Management to include sustainability on strategic decisions. 4. Drive and manage sustainability throughout the organization 5. Engage with internal & external stakeholders The CSO is also primarily responsible for deciding on actions on policy advocacy with external stakeholders, analysis and mitigation plans for water related risks for all operating units, need analysis of research and development needed, development of targets, and formulation of long term action plan, among others. CSO is also responsible for setting up of targets, monitoring and performance update.

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	<p>Monitoring implementation and performance</p> <p>Monitoring progress towards corporate targets</p> <p>Overseeing acquisitions, mergers, and divestitures</p> <p>Overseeing and guiding public policy engagement</p> <p>Overseeing and guiding scenario analysis</p> <p>Overseeing major capital expenditures</p> <p>Overseeing the setting of corporate targets</p> <p>Overseeing value chain engagement</p> <p>Providing employee incentives</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Reviewing and guiding corporate responsibility strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding strategy</p> <p>Reviewing innovation/R&D priorities</p> <p>Setting performance objectives</p>	<p>During the Sustainability board committee meetings, the committee reviews key water related issues including the targets, performance and strategies. The proposed budgets and strategy for implementation of various measures relating to water are also discussed. Wherever required committee gives guidance to the specific projects based upon the status of implementation. Approves the necessary budgets for implementation of the projects and financial allocation is done as per the Business Plan. The company has constituted an Executive committee (reporting to the Managing Director) which is responsible for monitoring for key KPIs.</p> <p>These meetings happens twice or thrice in an year.</p>

W6.2d

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

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	One of our board members has knowledge around water and climate change owing to his experience in cement sector but we have not assessed the competency in a formal manner as such. Another board member is also on CDP board	<Not Applicable>	<Not Applicable>

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)

Risk committee

Water-related responsibilities of this position

Assessing water-related risks and opportunities
 Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The Board level Risk Management Committee's constitution and terms of reference are as below

1. To periodically review risk assessment and minimization procedures including risks related to water security, if any
2. To review major risks and proposed action plan on various corporate issues including water security, if any

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

Chief Sustainability Officer (CSO)

Water-related responsibilities of this position

Monitoring progress against water-related corporate targets
 Integrating water-related issues into business strategy
 Managing annual budgets relating to water security

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

CSO is responsible for approving targets, monitoring the performance against the targets. Water related issue, if any, shall be discussed and presented to the CSO and strategies will be discussed with him along with COO and Business unit managers.

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

Business unit manager

Water-related responsibilities of this position

Assessing water-related risks and opportunities
 Managing water-related risks and opportunities
 Integrating water-related issues into business strategy

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

Each Business Unit manager is responsible for identification of assessing water related risks and opportunities and also working on mitigation plans. He is also responsible for identifying the intervention for water related projects and for cost analysis of CAPEX & OPEX of water projects .

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	No, not currently but we plan to introduce them in the next two years	While we have set the targets and monitoring the performances of plants but do not have incentive mechanism for water related performance. We will be exploring to include the incentives in coming 1-2 years

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, direct engagement with policy makers
- 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 are a member of CII's Indian Business and Biodiversity Initiatives which is one of the nodal agency to contribute to the policy reforms and decisions related to Water, Biodiversity and Ecosystem. Whenever, there is any proposed regulations, draft notifications are released, comments are provided to them which consolidates all the comments and send to the respective concerned authorities. At plant level also, Concerned environmental department head are in regular touch with respective state pollution control board (SPCB) in order to be compliant with the necessary guidelines and regulations. JSW Cement regularly attends meetings with the Ministry of Environment, Forest and climate change (MoEF & CC) to assess various regulatory trends and address them in their forthcoming sustainability policies. We are a member of the CMA, NCCBM, GCCA where we ensure that all are opinions are in synchronization with our sustainability policy framework.

(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)

Final Annual-report-2021-22.pdf

page 87-89, 137-138

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	11-15	<p>Since our inception, we have been using the cutting-edge German technology of dry process, which is environment friendly and does not require the use of water. Therefore, By increasing water recycling and cascading water use from higher to lower quality, we have been able to reduce our water use and consumption considerably. At JSW Cement, we continue to uphold our Zero Liquid Discharge (ZLD) status across all our cement manufacturing locations. We have taken a target for year 2030 of becoming water positive by at least 5 times. We are also working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021)</p> <p>Water is a scarce resource and it will become scarcer in future. Thus we have included water related interventions not within our operations but also in our communities. We are taking efforts for rainwater harvesting, WASH facilities. At all our existing locations and new locations, we are putting efforts for reducing our dependence on non-renewable ground water resources.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>Though Cement Manufacturing is not a water intensive process we ensure rainwater harvesting, groundwater recharge and the use of water efficient equipment. At JSW Cement, we continue to uphold our Zero Liquid Discharge (ZLD) status across all our cement manufacturing locations. We are also working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021)</p> <p>Water is a scarce resource and it will become scarcer in future. Thus we have included water related interventions not within our operations but also in our communities. .</p> <p>Strategies :</p> <ol style="list-style-type: none"> 1. Building rainwater harvesting/ recharge systems 2.Ensuring best WASH facilities. 3. enhanced use of recycled water 4.. exploring alternate sources of water such as waste water from outside 5. Reducing water footprint along the whole value chain.
Financial planning	Yes, water-related issues are integrated	5-10	<p>Water integration in financial planning for achieving long-term objectives involves a comprehensive assessment of water-related risks and the consideration of effective measures. In undertaking projects, whether they involve changes in production processes or brownfield/greenfield developments, extensive research and scenario analysis are conducted to evaluate potential water-related risks.</p> <p>The incorporation of water issues in financial planning ensures that the necessary measures are taken to address and mitigate these risks. Water scarcity, quality concerns, regulatory requirements, and potential impacts on operations and communities are considered during the evaluation and planning stages. This proactive approach allows for the identification of potential financial implications and the development of strategies to manage water-related risks effectively.</p> <p>Investments in water-efficient technologies, infrastructure upgrades, and sustainable practices are carefully evaluated for their financial viability and long-term value creation. This ensures that adequate financial resources are allocated to mitigate water-related risks and enhance operational efficiency. The decision to integrate water considerations into financial planning is driven by the recognition of water as a critical resource and the need to achieve long-term objectives in a sustainable manner.</p>

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)**

15

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

20

Water-related OPEX (+/- % change)

15

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

15

Please explain

There was a change of 15% in CAPEX due to our new plant Shiva and Nandyal which was upgraded recommissioned last year. Last year, we have put focused efforts towards enhanced use of recycling water and harvested water to that we reduce our dependence on non-renewable ground water. Thus,50% of CAPEX was spent on improving waste water treatment systems and 30% was attributed towards Rainwater harvesting systems. anticipated forward trend will be 20% change because of our increased production and capacities. Similarly regarding OPEX also, 30% of Total OPEX was for Shiva which got upgraded last year. OPEX was primarily spent on permit related work. In future also , this trend will continue as we this will remain more or less same.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	<p>Yes, as part of our TCFD assessment, we use scenario analysis for physical risk for which we used IPCC Representative Concentration Pathways SSP 5 (RCP) 8.5 and SSP 2 (RCP) 4.5 for assessing location-specific physical risks.</p> <p>As per the initial outcome we may get exposed to water unavailability, extreme rainfall & flooding risks in medium (3-10 years) and long term scenario (10-30 years). However, results are still under validation.</p> <p>Once we have the validated results, we will do a deep dive for locations which are exposed to water related risk and as a response and build future resiliency, we will develop a mitigation strategy as well as influence the business strategy.</p>

W7.3a

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

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Climate-related	<p>While undertaking TCFD assessments, we have considered scenarios covering broad spectrum of climate outcomes to gain insights into our risk & opportunities we might face over the time.</p> <p>For physical risks assessment, we used IPCC Representative Concentration Pathways SSP 5 (RCP) 8.5 and SSP 2 (RCP) 4.5 for assessing location-specific physical risks. This includes computation of 30-year averages (monthly, seasonally, yearly) around 2020, 2030 and 2050 to monitor the evolution of climate hazards over time. Climate hazards are computed for IPCC two emissions scenarios, which are aligned with TCFD guidelines-</p> <ul style="list-style-type: none"> • SSP2-4.5 – Middle of the Road Scenario: This scenario is projected to lead to a mid-century warming of 1.6 to 2.5°C and end of the century warming of 2.1 to 3.5°C. • SSP5-8.5 – High-reference Scenario (Fossil-fueled Development): This scenario, which is the most pessimistic one, is projected to lead to a mid-century warming of 1.9 to 3°C and end of the century warming of 3.3 to 5.7°C. <p>The level of risks for physical risks is based on likelihood of the event occurring as well as the impact (intensity).</p> <p>Critical Risk – Very high (almost certain) probability of occurrence and severe impact on business & operations</p> <p>High Risk – High probability of occurrence and high impact on business & operations</p> <p>Moderate Risk – Medium probability of occurrence and medium impact on business & operations</p> <p>Insignificant Risk – Low probability of occurrence and some impact on business & operations</p> <p>We have considered 9 perils and as per initial assessments few of our locations may face the following risks related water scarcity, Drought or flood. However, results are still under validation.</p>	<p>While undertaking TCFD assessments, we have considered scenarios covering broad spectrum of climate outcomes to gain insights into our risk & opportunities we might face over the time.</p> <p>For physical risks assessment, we used IPCC Representative Concentration Pathways SSP 5 (RCP) 8.5 and SSP 2 (RCP) 4.5 for assessing location-specific physical risks. This includes computation of 30-year averages (monthly, seasonally, yearly) around 2020, 2030 and 2050 to monitor the evolution of climate hazards over time. Climate hazards are computed for IPCC two emissions scenarios, which are aligned with TCFD guidelines-</p> <p>We have considered 9 perils for identifying the risks. As per RCP 8.5 and RCP 4.5 scenario for physical risks, few our operations may get exposed to water unavailability, extreme rainfall & flooding risks in medium (3-10 years) and long term scenario (10-30 years). However, results are still under validation.</p>	<p>Once we have the validated results, we will do a deep dive for locations which are exposed to water related risk and as a response and build future resiliency, we will develop a mitigation strategy.</p>

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

No we have not yet worked around this. However, since we have already calculated internal carbon pricing we will explore water valuation practices.

W7.5

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

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	Yes	<p>We have identified the products which save water at use stage(for curing) or if it helps in water harvesting or recharge, we can classify it as low water impact. There is no formal definition yet.</p>	<Not Applicable>	<p>Currently our products are low carbon product however we have not yet classified them as low water impact. We have conducted LCA and environment product declaration (EPD) wherein water is also considered.</p> <p>While we have developed few our products such ENDUROPLAST which is self cured and need less water for curing. However, going forward, we will define the low water impact products and develop few more low water impact products</p>

W8. Targets

W8.1

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

Yes

W8.1a

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

	Target set in this category	Please explain
Water pollution	No, but we plan to within the next two years	Since we do not discharge any waste or process waste water outside our boundary, we have not taken any target. However, we will assess it and develop the target, if we find it relevant.
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	Yes	<Not Applicable>
Other	Yes	<Not Applicable>

W8.1b

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

Target reference number

Target 1

Category of target

Water withdrawals

Target coverage

Company-wide (direct operations only)

Quantitative metric

Reduction of water withdrawals from groundwater

Year target was set

2022

Base year

2021

Base year figure

65

Target year

2030

Target year figure

55

Reporting year figure

50

% of target achieved relative to base year

150

Target status in reporting year

Underway

Please explain

We have taken a target for year 2030 of becoming water positive by at least 5 times. Also we are working towards reducing our freshwater consumption Intensity by more than 15% (vs 2021)

We have taken certain initiatives to reduce our freshwater withdrawal and consumption:

1. Better monitoring of our withdrawal and consumption in order to arresting leakage and loss
2. Use of recycled water
3. Rain Water harvesting at our plants

One of our main plant operations at Nandyal was shut down for 3 months, thus our overall freshwater consumption has reduced. Also our overall production volumes have increased that is why intensity has decreased.

The target mentioned is for freshwater withdrawal which includes Groundwater and Surface water and excludes harvested Rainwater.

Target reference number

Target 1

Category of target

Water withdrawals

Target coverage

Company-wide (direct operations only)

Quantitative metric

Reduction in withdrawals per product

Year target was set

2022

Base year

2021

Base year figure

65

Target year

2030

Target year figure

55

Reporting year figure

53

% of target achieved relative to base year

120

Target status in reporting year

Achieved

Please explain

We have taken a target for year 2030 of becoming water positive by at least 5 times. freshwater consumption Intensity (Litre/T) by more than 15% (vs 2021)

We have taken certain initiatives to reduce our freshwater withdrawal and consumption:

1. Better monitoring of our withdrawal and consumption in order to arresting leakage and loss
2. Use of recycled water
3. Rain Water harvesting at our plants

One of our main plant operations at Nandyal was shut down for 3 months, thus our overall freshwater consumption has reduced. Also our overall production volumes have increased that is why intensity has decreased.

The target mentioned is for freshwater withdrawal which includes Groundwater and Surface water.

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

Yes

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Final Annual-report-2021-22.pdf

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

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water withdrawal, Consumption, discharge and recycling	AA1000AS	We have verified the data in FY22 and for this year FY23, we are awaiting the verification statement and it will be available soon

W10. Plastics**W10.1**

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

	Plastics mapping	Value chain stage	Please explain
Row 1	Yes	Direct operations Supply chain	We use plastic bags for packaging of our cement products. We have adopted the circular approach right from the beginning so that we could save resources and reduce the carbon footprint. In plants like Nandyal, we are using alternative fuels of total ~35000 MT of Industrial and biomass waste out of which ~15000 MT is plastics waste through co processing and thus reducing our dependence on fossil fuels while managing waste efficiently. This has also reduced our net CO2 emissions by ~40,000 T and saved ~15,000 T of coal. To increase our co-processing capability, we upgraded all our necessary installations related to AF preparation (shredder), transportation and the liquid/solid feeding system.

W10.2

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

	Impact assessment	Value chain stage	Please explain
Row 1	Yes	Direct operations Supply chain Product use phase	Yes, we have assessed the impact partially on environment through Environment Product Declaration. In direct operations and supply chain, We have adopted the circular economy approach right from the beginning so that we could save resources and reduce the carbon footprint. In plants like Nandyal, we are using alternative fuels of total ~35000 MT of Industrial and biomass waste out of which ~15000 MT is plastics waste through co processing and thus reducing our dependence on fossil fuels while managing waste efficiently. This has also reduced our net CO2 emissions by ~40,000 T and saved ~15,000 T of coal. To increase our co-processing capability, we upgraded all our necessary installations related to AF preparation (shredder), transportation and the liquid/solid feeding system. we use We use plastic bags for packaging of our cement products. In Product use phase, we are using plastic for packaging of our cement products which is being reused by our customers to store debris or construction and demolition (C&D) waste.

W10.3

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

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1	No, risks assessed, and none considered as substantive	<Not Applicable>	<Not Applicable>	No we are not exposed to risk substantially as we co-process more plastic waste/RDF than we consume for packaging of our cement products. As a responsible Brand Owner, we have also applied for EPR (Extended Producer's Responsibility) Registration under Central Pollution Control Board norms to take back our plastic packaging and dispose it in a environment friendly manner.

W10.4

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

	Targets in place	Target type	Target metric	Please explain
Row 1	No – but we plan to within the next two years	<Not Applicable>	<Not Applicable>	We have taken a target of having a Plastic Negative Index (Plastic Co-processed or recycled/Plastic consumed). As a responsible Brand Owner, we have also applied for EPR (Extended Producer's Responsibility) Registration under Central Pollution Control Board norms to take back our plastic packaging and dispose it in a environment friendly manner. We continue to innovate and collaborate with academic and research institutions to produce eco-friendly building materials with reduced carbon emitting process technology. Some of these collaborations have led to the development of 3D concrete printing, biodegradable polymer for eco-friendly material packaging by collaborating with UK based Organizations.

W10.5

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

	Activity applies	Comment
Production of plastic polymers	No	We are a cement manufacturing company and we are not producing any kind of plastic polymers
Production of durable plastic components	No	We are a cement manufacturing company and we are not producing any kind of plastic polymers
Production / commercialization of durable plastic goods (including mixed materials)	No	We are a cement manufacturing company and we are not producing any kind of plastic polymers. Hence we are not involved in Production / commercialization of durable plastic goods
Production / commercialization of plastic packaging	No	We are a cement manufacturing company and we do not produce any kind of plastic packaging. Hence we are not involved in Production / commercialization of plastic packaging
Production of goods packaged in plastics	Yes	Our cement and allied products are packaged in Plastics bags
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	Our cement and allied products are packaged in Plastics bags but we do not have any Provision / commercialization of services or goods that use plastic packaging

W10.8

(W10.8) Provide the total weight of plastic packaging sold and/or used, and indicate the raw material content.

	Total weight of plastic packaging sold / used during the reporting year (Metric tonnes)	Raw material content percentages available to report	% virgin fossil-based content	% virgin renewable content	% post-industrial recycled content	% post-consumer recycled content	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	7500	None	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	We have used ~7500 MT of plastic for packaging of our cement products in FY22. We have not assessed the percentage of virgin and recycled plastic content in our packaging yet but we are collaborating with UK based organizations for making our product packaging biodegradable

W10.8a

(W10.8a) Indicate the circularity potential of the plastic packaging you sold and/or used.

	Percentages available to report for circularity potential	% of plastic packaging that is reusable	% of plastic packaging that is technically recyclable	% of plastic packaging that is recyclable in practice at scale	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	% reusable % technically recyclable	100	80	<Not Applicable>	Percentage are just approximate. Most of cement plastic packaging bags once used are generally reused for carrying construction and demolition waste for many other purpose.

W11. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

There is no significant impact on any water bodies from our water withdrawal in our plants . Last year almost 1/4th of our total water requirement was met by harvested water, stored at Nandyal mines. Last year we have used 156 ML of harvested water and 0.38 ML of recycled water which was primarily consumed for green belt development and dust control

W11.1

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

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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

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

Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below

I have read and accept the applicable Terms