

W0. Introduction

W0.1

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

The Bridgestone Group, headquartered in Tokyo, is one of the largest tire and rubber companies. In addition to tires for use in a wide variety of applications, it also manufactures a broad range of diversified products, which include industrial rubber and chemical products and sporting goods. Its products are sold in over 150 nations and territories around the world.

The Corporate Sustainability Division is responsible for answering the 2023 CDP questionnaire. This division coordinates and manages the Group's Environmental Mission Statement compliance, providing environmental support to business sections, Strategic Business Units (SBUs), at a global level.

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	January 1 2022	December 31 2022

W0.3

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

- Argentina
- Australia
- Belgium
- Brazil
- Canada
- China
- Costa Rica
- Hong Kong SAR, China
- Hungary
- India
- Indonesia
- Italy
- Japan
- Malaysia
- Mexico
- Philippines
- Poland
- Russian Federation
- South Africa
- Spain
- Taiwan, China
- Thailand
- Turkey
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Viet Nam

W0.4

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

JPY

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Non-production sites, the production sites where the number of employees does not consistently exceed 50, and the production sites under preparation to be certified according to ISO-14001.	<p>Non-production sites (e.g. offices, stores/shops, warehouses) and the production sites where the number of employees does not consistently exceed 50, most of the water used is for hand washing, toilets, etc.</p> <p>It is said that the world average of water used by one person per day for daily living (including washing clothes and showering) is less than 200 liters. Although this is an exaggerated estimate, if we assume that about 130,000 employees of our entire group, including facilities, use 200 liters per day at their workplaces, the amount of water used per year would be 26 megaliters. This is very small compared to the water withdrawal for the entire production site of 69,149 megaliters.</p> <p>Therefore, the impact of the excluded sites is estimated to be very small compared to the total water used.</p>

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	JP3830800003

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	Important	Important	<p>In our production process, we use water resources for cooling water and steam. Employees also need sufficient water of proper quality for drinking and washing. In addition, sufficient quantity and quality of water also is indispensable throughout the value chain for the production of various raw material and components, such as natural rubber, synthetic rubber, carbon black, cord, and steel belt, among others. Our suppliers use water resources for washing, cooling and steam.</p> <p>Therefore, continuous use of sufficient amounts of freshwater of adequate quality is important for continuing operation of our business (direct operations) and our value chain (indirect operations).</p> <p>At this time, we do not plan to make major changes in production methods for either our direct operations or indirect operations, so we do not believe that there will be any major changes in our future water dependency.</p>
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>In our production process, we use recycled water as cooling water. For example, sewage-treated water is used as cooling or steam. Also in our value chain (raw material production sites), recycled water is being utilized as cooling water.</p> <p>Therefore, continuous use of sufficient amount of recycled water is important for continuing operation of our business (direct operations) and our value chain (indirect operations).</p> <p>At this time, we do not plan to make major changes in production methods for either our direct operations or indirect operations, so we do not believe that there will be any major changes in our future water dependency.</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	The amount of water purchased from outside suppliers is measured from billing information, and the amount of water taken in-house is measured by using measurement meters.	<p>We monitor water withdrawal volume by water source at all our facilities on a monthly basis. The monitoring method is based on bills for water purchased from the outside, and measurement meters for water taken in-house.</p> <p>For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.</p>

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – volumes by source	100%	Monthly	The amount of water purchased from outside suppliers is measured from billing information, and the amount of water taken in-house is measured by using measurement meters.	We monitor water withdrawal volume by water source at all our facilities on a monthly basis. The monitoring method is based on bills for water purchased from the outside, and measurement meters for water taken in-house by water source. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
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	Water supplied by third parties, such as city water and industrial water, is subjected to appropriate water quality analysis by them. We also conduct our own analysis as necessary, according to local regulations and our own standards. When we analyze it, we do so on a monthly basis or as often as required by local regulations. The analysis may be performed by a specialized external organization or it may be done in-house.	Water supplied by third parties, such as city water and industrial water, is subjected to appropriate water quality analysis by them. For example, in Japan, pH, turbidity, bacteria, heavy metals, etc. are analyzed by the methods specified by the Water Supply Act and ministerial ordinances. Nonetheless, we also conduct our own analysis as necessary, according to local regulations and our own standards. When we analyze it, we do so on a monthly basis or as often as required by local regulations. The analysis may be performed by a specialized external organization or it may be done in-house. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharges – total volumes	100%	Monthly	Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the total volume of water discharges at all our facilities annually.	Because our finished products (tires, etc.) contain almost no water, we discharge most of the water we withdraw. Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the total volume of water discharges at all our facilities annually and are working to understand that impact. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharges – volumes by destination	100%	Monthly	Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the water discharges (volumes by destination) at all our facilities annually.	Because our finished products (tires, etc.) contain almost no water, we discharge most of the water we withdraw. Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the water discharges (volumes by destination) at all our facilities annually and are working to understand that impact. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharges – volumes by treatment method	100%	Monthly	Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the water discharges (volumes by treatment method) at all our facilities annually.	Because our finished products (tires, etc.) contain almost no water, we discharge most of the water we withdraw. Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the water discharges (volumes by treatment method) at all our facilities annually and are working to understand that impact. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharge quality – by standard effluent parameters	100%	Monthly	Water discharge quality is monitored by continuous real-time monitoring or in-house/third-party sampling analysis at all applicable facilities based on the standards of the countries and regions where the facilities are located.	We monitor water discharge quality based on applicable regulations (such as pH, BOD, COD, SS, harmful substances, etc.) by continuous real-time monitoring or in-house/third-party sampling analysis at all applicable facilities (mostly on a monthly basis), based on the standards of the countries and regions where the facilities are located. Our facilities have implemented their own wastewater standards, which are equal to or stricter than government standards, and endeavor to avoid exceeding government-established limits. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	1-25	Quarterly	Water discharge quality (emissions to water) is monitored by in-house/third-party sampling analysis at all applicable facilities based on the standards of the countries and regions where the facilities are located.	We monitor water discharge quality based on applicable regulations (nitrates, phosphates, pesticides, and/or other priority substances) by in-house/third-party sampling analysis at all applicable facilities, based on the standards of the countries and regions where the facilities are located. Our facilities have implemented their own wastewater standards, which are equal to or stricter than government standards, and endeavor to avoid exceeding government-established limits. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.
Water discharge quality – temperature	51-75	Monthly	Water discharge temperature is monitored by continuous real-time monitoring or in-house/third-party sampling analysis at all applicable facilities based on the standards of the countries and regions where the facilities are located.	We measure and manage the water discharge temperature by continuous real time monitoring or sampling analysis (mostly on a monthly basis), based on the standards of the countries and regions where the facilities are located. In areas where administrative agencies judge that it is unnecessary to measure water discharge temperature, some facilities do not measure it. Percentage monitored is as of the end of 2022. For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water consumption – total volume	100%	Yearly	Water consumption is calculated by subtracting the water discharge volume from the water withdrawals volume at all our facilities yearly.	<p>The monitoring method for water consumption is calculated by subtracting the water discharge volume from the water withdrawals volume at all our facilities yearly and we are working to grasp the impact.</p> <p>For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.</p>
Water recycled/reused	100%	Monthly	Recycled/reused water is calculated by reading the value of flow meters installed on equipment, and to estimate using design values for some equipment. For sites where flow rates cannot be measured, estimates are made based on the data of sites where flow rate can be measured.	<p>Based on the monthly water recycled/reused data of our facilities that monitor the data measured by flow meter, we estimate the water recycled/reused volumes at all our facilities and are working to understand that impact.</p> <p>The monitoring method for recycled/reused water is calculated by reading the value of flow meters installed on equipment, and to estimate using design values for some equipment. For sites where flow rates cannot be measured, estimates are made based on the data of sites where flow rate can be measured.</p> <p>For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.</p>
The provision of fully-functioning, safely managed WASH services to all workers	100%	Monthly	The water supplied by the public agencies is analyzed by them, and when using the groundwater pumped in-house, we or external analysis organizations analyze the quality.	<p>We recognize access to clean water and sanitation as human rights. We supply all employees with clean water and sanitation at all production facilities.</p> <p>Our method for monitoring: Most sites are supplied clean water purified by public agencies or private water treatment plants. The items to be analyzed and the frequency vary depending on the country rules and vary from once a day to once a month. The water supplied by the public agencies is analyzed by them, and when using the groundwater pumped in-house, we or external analysis organizations analyze the quality.</p> <p>For our company, "facilities" refers to our production sites certified according to ISO-14001 and consistently with 50 employees or more.</p>

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	69149.18	About the same	Increase/decrease in business activity	About the same	Increase/decrease in efficiency	<p>Total water withdrawal increased by 1.7% from the previous year due to a gradual recovery from the reduced operating hours caused by COVID-19, as well as a reduction in the number of facilities due to business restructuring during the period. As a result, there was no significant change (About the same) in water withdrawals compared to the previous year.</p> <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>From a long-term perspective, since it is expected that the water withdrawals will increase due to the increase in production volume, we promote reduction of water withdrawals continuously (About the same). In particular, we will focus on sites located in water stress areas.</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Total discharges	57705.19	About the same	Increase/decrease in business activity	About the same	Increase/decrease in business activity	<p>Despite continued efforts to reduce water withdrawals in 2022, total water withdrawals increased by 1.7% from the previous year as the reduced operating hours due to COVID-19 gradually recovered. The total water discharges increased by 8.3%, but there was no significant change (About the same) in water discharges compared to the previous year. In this way, the reasons why the increase / decrease in water withdrawal and the increase / decrease in water discharges are not always linked are as follows; Production processes use a lot of water for cooling, which is greatly affected by temperature (evaporation due to cooling), Water taken in as a BCP measure is stored in ponds (stocked instead of discharged), etc.</p> <p>For the next few years, we expect a slight increase or decrease in water discharges due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>From a long-term perspective, since it is expected that the water discharges will increase due to the increase in production volume, we promote reduction of water withdrawals continuously (About the same). In particular, we will focus on sites located in water stress areas.</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Total consumption	11443.99	Lower	Other, please specify (As factors that increased in 2021 returned to normal.)	About the same	Increase/decrease in business activity	<p>Total water consumption decreased by 22.0% from the previous year. The decrease can be attributed to the fact that the large increase in 2021 due to "Increased cooling demand due to high temperature (evaporation due to cooling)", "Water taken in as a BCP measure was stored in ponds (stocked instead of discharged)" and other factors has returned to normal.</p> <p>For the next few years, we expect a slight increase or decrease in water consumption due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>From a long-term perspective, since it is expected that the water consumption will increase due to the increase in production volume, we promote reduction of water consumption continuously (About the same). In particular, we will focus on sites located in water stress areas.</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</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	1-10	About the same	Increase/decrease in efficiency	About the same	Increase/decrease in business activity	WRI Aqueduct	<p>The percentage of water withdrawal at facilities located in the water stress areas in 2022 was 4.0%, almost unchanged from 2021.</p> <p>For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.</p> <p>In a large group such as a basin, the actual situation may not match the desk analysis, so we determine the facilities located in the water stress area by the following method.</p> <ol style="list-style-type: none"> 1. Extract facilities located in high or extremely high water stress areas using WRI Aqueduct, a recognized analysis tool used worldwide. 2. Collect local information on each region (e.g. past drought information, information on future water resource security, etc.). 3. Whether the facility uses water for the production process. <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>From a long-term perspective, since it is expected that the water withdrawals will increase due to the increase in production volume, we promote reduction of water withdrawals continuously in water stress areas in particular.</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</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	3436.59	Higher	Other, please specify (Changes in the mix of water withdrawal sources, and additional cooling due to the extremely hot weather.)	<p>Since we use water resources for cooling and steam in our production process, we select "Relevant". We can't produce products such as tires without fresh surface water. This volume is composed of river water and rainwater, most of which is river water. They are sourced from direct measurement.</p> <p>Fresh surface water volume increased by 17.7% compared with the previous year. The main reason for this increase is due to recovery from production decline caused by COVID-19, changes in the mix of water withdrawal sources, and additional cooling due to the extremely hot weather.</p> <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we don't expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Brackish surface water/Seawater	Relevant	38926.69	About the same	Increase/decrease in business activity	<p>Since we use seawater for cooling water at one site located on seaside, we select "Relevant". This volume is composed of seawater and sourced from direct measurement.</p> <p>Brackish surface water/seawater withdrawal volume was increased by 3.3% compared with the previous year. The main reason for this increase was a recovery in production volume, which had declined due to the impact of COVID-19.</p> <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>From a long-term perspective, since it is expected that the water withdrawals will increase due to the increase in production volume, we promote reduction of water withdrawals.</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Groundwater – renewable	Relevant	8941.53	About the same	Other, please specify (Changes in the mix of water withdrawal sources.)	<p>Since we use groundwater (renewable) for cooling and steam at the sites where groundwater can be used, we select "Relevant". We cannot produce products such as tires without groundwater. This volume is sourced from direct measurement.</p> <p>Groundwater withdrawal volume was decreased by 2.1% compared with the previous year. The main reason for this decrease was changes in the mix of water withdrawal sources.</p> <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<p>Since we do not use non-renewable groundwater that cannot be naturally recharged on the human time-scale, and we use renewable groundwater at shallow depths, we select "Not relevant".</p> <p>Since we have no plan to use non-renewable groundwater, no major change is expected in the future.</p>
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<p>We select "Not relevant" since we don't have produced water that enters our boundaries as a result of the extraction, processing, or use of any raw material.</p> <p>Since we have no plan to get produced/entrained water, no major change is expected in the future.</p>
Third party sources	Relevant	17844.36	About the same	Other, please specify (Changes in the mix of water withdrawal sources.)	<p>Since we use third party sources of water for cooling and steam in our production, we select "Relevant". We cannot produce products such as tires without it. This item contains the amount of city & industrial water, steam and wastewater recycled by others. This volume is sourced from direct measurement or invoice information.</p> <p>The volume was decreased by 2.4% compared with the previous year. The main reason for this decrease was changes in the mix of water withdrawal sources.</p> <p>For the next few years, we expect a slight increase or decrease in water withdrawal due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>

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	Relevant	11124.08	About the same	Increase/decrease in business activity	<p>If a site is adjacent to a river, it may be discharged into a river after meeting the wastewater standards. Therefore, "Fresh surface water" is closely related to our business, we select "Relevant".</p> <p>Based on the monthly water discharge data of our facilities, we estimate the volume of water discharges at all our sites and are working to understand that impact. The volume was increased by 5.5% compared with the previous year. The main reason for this increase was a recovery in production volume due to the impact of COVID-19.</p> <p>For the next few years, we expect a slight increase or decrease in water discharge to "Fresh surface water" due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Brackish surface water/seawater	Relevant	40915.87	About the same	Increase/decrease in business activity	<p>If a site is adjacent to a sea, it may be discharged into a sea after meeting the wastewater standards. Therefore, "Brackish surface water/seawater" is closely related to our business, we select "Relevant".</p> <p>The volume of water discharge to seawater is primarily sourced from direct measurement. The volume increased by 11.7% compared with the previous year. The main reason for this increase is that there was a period in 2021 when the production facilities were not discharged to "Brackish surface water/seawater" for routine maintenance.</p> <p>For the next few years, we expect a slight increase or decrease in water discharge to "Brackish surface water/seawater" due to changes in production volume in response to changes in social conditions and the economy, but we don't expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<p>Since we do not send wastewater to groundwater directly, we chose "Not relevant". We will not change this direction in the future.</p>
Third-party destinations	Relevant	5665.24	About the same	Increase/decrease in business activity	<p>When a site is located in the inland, it drains the wastewater to a third-party's treatment facility. Therefore, "Third-party destinations" is closely related to our business, we select "Relevant".</p> <p>Based on the monthly water discharge data of our facilities that monitor the data based on bills or in-house measurement meters, we estimate the volume at all our sites. It was decreased by 7.8% compared with the previous year. This is mainly due to the production fluctuations, and not to any particular changes.</p> <p>For the next few years, we expect a slight increase or decrease in water discharge to "Third-party destinations" due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>

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	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	In our product manufacturing process, we do not expect substances that cannot be treated in the secondary treatment to be mixed into the discharge, so we select "Not relevant".
Secondary treatment	Relevant	3400.31	About the same	Increase/decrease in business activity	1-10	<p>At facilities that clean and process natural rubber, organic wastewater containing nitrogen and other substances is generated, and the wastewater is subjected to secondary treatment such as aerobic and anaerobic treatment. In addition, secondary treatment is also carried out at facilities located in areas where some strict wastewater quality regulations are applied.</p> <p>We monitor water discharge quality based on applicable regulations (such as pH, BOD, COD, SS, harmful substances, etc.) by continuous real time monitoring or in-house/third-party sampling analysis at all of our facilities (mostly on a monthly basis), based on the standards of the countries and regions where the facilities are located.</p> <p>Our facilities have implemented their own wastewater standards, which are equal to or stricter than government standards, and endeavor to avoid exceeding government-established limits.</p> <p>We have defined 85%-115% of the previous year as "About the same", so we chose "About the same". (See threshold below for details)</p> <p>For the next few years, we expect a slight increase or decrease in "Secondary treatment" due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Primary treatment only	Relevant	15378.07	About the same	Increase/decrease in business activity	91-99	<p>In general, water at tire facilities and diversified products facilities is mainly used for cooling and steam, so the wastewater is not require secondary treatment. Therefore, in accordance with local wastewater regulations, primary treatment such as oil-water separation and sedimentation is performed.</p> <p>We monitor water discharge quality based on applicable regulations (such as pH, BOD, COD, SS, harmful substances, etc.) by continuous real time monitoring or in-house/third-party sampling analysis at all of our facilities (mostly on a monthly basis), based on the standards of the countries and regions where the facilities are located.</p> <p>Our facilities have implemented their own wastewater standards, which are equal to or stricter than government standards, and endeavor to avoid exceeding government-established limits.</p> <p>We have defined 85%-115% of the previous year as "About the same", so we chose "About the same". (See threshold below for details)</p> <p>For the next few years, we expect a slight increase or decrease in "Primary treatment only" due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Discharge to the natural environment without treatment	Relevant	38926.82	About the same	Increase/decrease in business activity	Less than 1%	<p>At facilities that use seawater for cooling, the possibility of water contamination during the process is extremely low, so the used seawater is returned to the sea without any special treatment, after confirming that it meets wastewater standards set by government for pH, effluent temperature, BOD, COD, SS, Oil, heavy metals, etc. Therefore, we select "Relevant".</p> <p>We have defined 85%-115% of the previous year as "About the same", so we chose "About the same". (See threshold below for details)</p> <p>For the next few years, we expect slight increase or decrease in "Discharge to the natural environment without treatment" due to changes in production volume in response to changes in social conditions and the economy, but we do not expect a large increase. (About the same)</p> <p>Our company-specific explanation for these thresholds is below. Much lower: Less than 49%, Lower: 50% - 85%, About the same: 85% - 115%, Higher: 115% - 150%, Much higher: More than 150%</p>
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Even if the water is discharged to a wastewater treatment plant in an industrial park, it is treated to meet the water quality acceptance standards of that plant before being discharged. Therefore, we do not discharge water used in the production process to third parties without treatment, so we select "Not relevant".
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	We select "Not Relevant" because no special wastewater treatment other than the method shown in the example is used.

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	0.05	Nitrates Phosphates	<Not Applicable>	This emission is estimated by the monitoring data of nitrates/phosphate and water discharge volume.

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	411007000000	69149.18	59437725.79805	"Total water withdrawal efficiency" is expected to improve over the medium to long term due to the expansion of "Solution Business" that generates high added value, in addition to our efforts to reduce water withdrawals and increase water-use efficiency through our innovations and continuous improvement.

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	Yes	<Not Applicable>

W1.4a

(W1.4a) What percentage of your company's revenue is associated with products containing substances classified as hazardous by a regulatory authority?

Regulatory classification of hazardous substances	% of revenue associated with products containing substances in this list	Please explain
Other, please specify (Regulations in the EU and US)	21-40	Products are produced compliant with the laws and regulations in the US and the EU, although they contain substances subject to the respective laws and regulations. US: Some products contain substances regulated by the United States Comprehensive Environmental Compensation Liability Act (CERCLA). EU: Almost products contain substances regulated by CLP regulation. Switching to alternative substances is under consideration, including substances that may be regulated in the future.
Please select	Please select	
Please select	Please select	

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)	Yes	<Not Applicable>	<Not Applicable>

W1.5a

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

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

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

Number of suppliers identified as having a substantive impact

0

% of total suppliers identified as having a substantive impact

None

Please explain

We use the EcoVadis mechanism to conduct sustainability due diligence on our major suppliers. Water-related survey items include the presence or absence of a nearby waterfront, water sources, water withdrawal volumes, water source protection methods, wastewater management methods, and targets for providing WASH services. Based on this information, we understand and evaluate their impact on water security.

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, suppliers have to meet water-related requirements, but they are not 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

Reducing total water withdrawal volumes

% 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

51-75

Mechanisms for monitoring compliance with this water-related requirement

Grievance mechanism/Whistleblowing hotline

Off-site third-party audit

Supplier scorecard or rating

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

Retain and engage

Comment

We are committed to continually working toward a more sustainable society to realize long-term environmental, social, and economic benefits across our entire supply chain. Since the initial release of our first Global Sustainable Procurement Policy in 2018, it has built upon its strong foundation and released the second version in 2021.

Suppliers are required to meet at least the minimum requirements defined in this Policy to do business with Bridgestone. In addition, suppliers are encouraged to meet preferred practices. These are aspirations that Bridgestone believes will enhance its various supply chains. Bridgestone is willing to work with suppliers to help them achieve preferred practices.

Regarding water, we have established minimum requirements and preferred requirements regarding compliance with national, regional, and local laws and regulations, identification associated potential water risks or opportunities, management their water usage and wastewater quality, and so on.

Water-related requirement

Other, please specify (Gathering information to identify potential water risks and opportunities)

% 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

51-75

Mechanisms for monitoring compliance with this water-related requirement

Grievance mechanism/Whistleblowing hotline

Off-site third-party audit

Supplier scorecard or rating

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

Retain and engage

Comment

We are committed to continually working toward a more sustainable society to realize long-term environmental, social, and economic benefits across our entire supply chain. Since the initial release of our first Global Sustainable Procurement Policy in 2018, it has built upon its strong foundation and released the second version in 2021.

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Regarding water, we have established minimum requirements and preferred requirements regarding compliance with national, regional, and local laws and regulations, identification associated potential water risks or opportunities, management their water usage and wastewater quality, and so on.

W1.5d

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

Type of engagement

Innovation & collaboration

Details of engagement

Educate suppliers about water stewardship and collaboration

% of suppliers by number

1-25

% of suppliers with a substantive impact

1-25

Rationale for your engagement

Since our headquarters is located in Japan, we hold a "procurement policy briefing session" every year in Japan, focusing on global and non-global suppliers based in Japan.

One of the topics of the briefing session is to tackle environmental issues including water, and we educate our suppliers on the importance of managing water usage and preventing illegal drainage.

The ratios are calculated by the following formula.

% of suppliers by number = Number of companies procured by Japan Tire SBU / Number of companies procured by all SBUs.

% of total procurement spend = Procurement spend by Japan Tire SBU / Procurement spend by all SBUs.

* SBU; Strategic Business Unit

Impact of the engagement and measures of success

With continuous education every year, our suppliers are becoming more aware of the importance of water. And, we have not received any reports of serious water problems from our suppliers.

The results of supplier activities lead to reduce water withdrawals and water-related issues, which in turn leads to cost savings.

We also believe that this will lead to a virtuous cycle that will lead to improved evaluations by third-party organizations (EcoVadis, CDP Water Security, etc.) of our suppliers.

As part of our engagement with suppliers, for example in Japan, we conduct annual evaluations using our own self-check sheets, and our measure of success is that we receive responses from all suppliers to whom we request responses. The self-check sheets confirm, for example, the policy for compliance with water-related laws and regulations, and the status of information gathering to identify potential water-related risks.

Comment

W1.5e

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

Type of stakeholder

Customers

Type of engagement

Education / information sharing

Details of engagement

Educate and work with stakeholders on understanding and measuring exposure to water-related risks

Other, please specify (Sharing information on our water-related initiatives, progress and achievements)

Rationale for your engagement

Since our efforts to reduce water withdrawal contribute to the reduction of water withdrawal over the entire life cycle of customers' products, we implement various water withdrawal reduction measures and cooperate with customers' requests for responses to CDP supply chain and water risk surveys, etc.

Impact of the engagement and measures of success

One of the impact of the engagement is that by making our efforts and achievements visible to our customers through our responses to CDP Water and by applying for awards held by our customers, we are contributing to our customers' consideration of water security-related activities throughout their supply chain.

One measure of success is applying for and winning supplier awards related to the environment held by our customers. This is because the beneficial effects of informational engagement are latent and difficult to see, whereas recognition is a tangible and easily understood measure.

Awards can give us the opportunity to showcase our efforts to reduce water withdrawals, not only to our customers, but also to their suppliers. Through such opportunities, we hope that our efforts to reduce water withdrawals will be used as a reference throughout the entire supply chain, and that activities to reduce water withdrawals will be promoted beyond the boundaries of companies.

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>	

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	<p>We identify oil and regulated pollutants as water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health. Regulated pollutants are substances or wastewater characteristics (e.g., pH, COD, BOD) defined by regulation, permission or local agreements that can cause environmental harm if released to the environment in amounts greater than a regulatory standard.</p> <p>Every year, all manufacturing sites confirm the update of regulated pollutants in applicable standards, review substances requiring management, and manage them appropriately by incorporating them into management procedures.</p> <p>In order to comply with the wastewater standards of each country and region, we have developed Bridgestone Global Environmental Standard (GES) . And each manufacturing site sets in-house standards that are stricter than legal standards, implement measures from physical and system perspectives, and monitor oil and regulated substances by continuous real-time monitoring or in-house/third-party sampling analysis.</p> <p>For example, in Japan, in order to comply with the standard of 5 mg/l for "normal hexane extractives content (mineral oil content)" in wastewater as stipulated in Water Pollution Prevention Act, we manage our wastewater under a voluntary standard that is more stringent than that.</p>	<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

Oil

Description of water pollutant and potential impacts

At our manufacturing sites, some direct raw materials and indirect raw materials contain oil, so there is a possibility that oil will be mixed in with wastewater discharged from manufacturing sites.

It takes a long time for the oil to decompose in the natural ecosystem, and during that time, it affects the natural ecosystem and may cause ecosystem destruction such as the collapse of the food chain. For example, plankton is located at the bottom of the food pyramid in aquatic ecosystems, and the entire food pyramid is supported by photosynthesis of phytoplankton. The oil slick on the surface of the water blocks the sunlight, inhibiting the photosynthesis of phytoplankton, and reducing the number of phytoplankton. In addition, unlike plants and small plankton, fish can move at high speed, but in some cases, oil adheres to their gills and body surface, causing them to malfunction. And by taking in oil-contaminated food and water, oil components accumulate in the body, which may affect the ecosystem through the food chain.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

- Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
- Implementation of integrated solid waste management systems
- Industrial and chemical accidents prevention, preparedness, and response
- Water recycling
- Reduction or phase out of hazardous substances
- Requirement for suppliers to comply with regulatory requirements

Please explain

We established internal global standard (Global Environmental Standard, GES) for wastewater, and all production sites are required to install equipment and systems to prevent the release of regulated substances into the water bodies.

For example, we require large tanks to be equipped with secondary containers to prevent oil spills, and we regularly inspect the condition of these containers. With this measure, even if oil leaks from the tank, the secondary container prevents it from flowing into the water bodies. In addition, some facilities have installed real-time monitoring systems to detect the presence or absence of oil film in wastewater so that if oil contaminate wastewater, it can be immediately detected and dealt with.

A measure of success is that regular measurements do not reveal any spillage of oil into the water bodies.

For suppliers, we request to comply with regulatory requirements by issuing "Global Sustainable Procurement Policy". Progress of activities for suppliers is monitored by the receiving rate of supplier's acknowledgement and self-assessment questionnaires.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Other

Tools and methods used

WRI Aqueduct

Internal company methods

Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Stakeholder conflicts concerning water resources at a basin/catchment level

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers

Employees

Investors

Local communities

NGOs

Regulators

Suppliers

Water utilities at a local level

Other water users at the basin/catchment level

Comment

We performed macro analysis with the WRI Aqueduct. It is one of the most widely utilized tools in the world to assess water risks and is considered to provide highly reliable results. In addition to the timing of tool updates and the frequency of our site closures and our operations' relocating to new sites, we perform water risk assessments at least annually.

We also assess regulatory and regional-level demands on a site-by-site basis as necessary.

Value chain stage

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Other

Tools and methods used

EcoVadis

WRI Aqueduct

Internal company methods

Contextual issues considered

Water availability at a basin/catchment level

Stakeholders considered

Suppliers

Comment

Through a partnership started in 2018 with EcoVadis, a leading provider of sustainability, risk and performance ratings for global supply chains, we conducted assessments to suppliers with current sustainability practices including water, and offered support as needed to improve their performance. This activity could be an opportunity for suppliers to confirm and improve their actions for preventing water-related issues further. We also use the WRI Aqueduct to analyze suppliers' water risks from time to time as needed.

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>< Direct operations > We use the WRI Aqueduct to analyze future changes in water stress (2030, 2040). We conduct water risk assessments at least once a year, and also when the tool updated and when new facilities are considered for installation. We are targeting all Bridgestone Group production sites. In addition, since we own sites that produce our raw materials (e.g., steel codes), we are also analyzing some of the raw material procurement stage of the value chain. The severity of risk is decided based on the five-rank risk level derived by WRI Aqueduct. Since the method of dealing with risks differs depending on the local situation, we collect various types of information on water resources (e.g., local water use) under the cooperation of municipalities that are closely communicating on a regular basis.</p> <p>< Supply chain > Through a partnership started in 2018 with EcoVadis, a leading provider of sustainability, risk and performance ratings for global supply chains, we conducted assessments to our major suppliers with current sustainability practices including water, and offered support as needed to improve their performance. This activity could be an opportunity for suppliers to confirm and improve their actions for preventing water-related issues further. For suppliers located in areas where water risk is expected to be particularly high, we also use the WRI Aqueduct to analyze them individually as necessary.</p>	<p>In direct operations and the supply chain, it is essential to have sufficient water for use as cooling and steam in the manufacturing process and to ensure sanitary conditions for employees. Maintaining good water quality is also important to ensure that cooling does not affect product quality. Without sustainable water use, product manufacturing and raw material procurement will be delayed, which will affect business continuity and growth. Therefore, it is important to comply with water laws and regulations, care for the local ecosystem, and maintain friendly relationships with stakeholders. Furthermore, a workplace where all employees can use safe and secure water is an important basis for them to work with peace of mind. Based on the above, in conducting the water risk assessment, the following contextual issues are considered; water availability/quality, stakeholder conflicts concerning water resources, implications of water on key commodities/raw materials, water regulatory frameworks, status of ecosystems and habitats, and access to fully-functioning, safely managed WASH services for all employees. In the supply chain, we also consider the water availability at a basin/catchment level for the same reasons.</p>	<p>In order to continue business in a stable manner, there must be a stable supply of sufficient quality and quantity of water. Adequate access to safe water is fundamental to the health and safety of employees. Water is a limited resource that should be shared locally, and serious conflicts with other water users in the community over water resources could affect the plant's operations. Failure to comply with water withdrawal and effluent water quality regulations may require production to be halted. There is also a risk that wastewater from the sites could affect downstream ecosystems and fisheries. With increasing interest from customers and investors in our water initiatives, adequate disclosure is an important issue. NGOs are valuable stakeholders who can advise us about our activities regarding water, based on their specialized knowledge.</p> <p>Based on the above, in conducting the water risk assessment, the following stakeholders are considered; customers, employees, investors, local communities, NGOs, regulators, suppliers, water utilities at a local level, other water users at the basin/catchment level. We also consider suppliers in our supply chain for the same reasons in conducting our risk assessment.</p>	<p>If the desk assessment results regarding water-related risks are High or higher, each SBU (Strategic Business Unit) will collect additional local information and examine the risks at the site. As a result of the scrutiny, if it is determined that the risk is still high, each SBU decides how to manage water-related risks (mitigate, transfer, accept, or control risks) by comprehensively considering how to cope with sustainability for the region and for our business, and report the Global Environment Working Group, the Global Sustainability Committee and the Global EXCO (Executive Committee) as necessary.</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?

i) A definition of substantive financial or strategic impact is given:

We define substantive financial or strategic impact resulting from water risks as any changes, which cause significant impact on our relationships with stakeholders, operation, financial performance and reputation in real terms. Specific examples of the impacts include plant shutdowns, property damage, supply chain disruptions, increasing operation costs, environmental regulation violations, and environmental accidents.

ii) The measure(s), metric(s) or indicator(s) used to identify substantive change:

When developing a business continuity plan (BCP) for each business or production site, we comprehensively evaluate a combination of four levels of probability of occurrence (Less than 20%, less than 50%, 50% or more, 80% or more) and five levels of business impact, and finally classify risks into four levels to measure their financial and strategic impact. Furthermore, we use the results of risk analysis by WRI Aqueduct to estimate the impact based on objective, universal data.

iii) The threshold or amount of change in the metric/measure/indicator which indicates substantive change:

We judge risk based on the following rank classification obtained from the analysis result of Aqueduct. At the highest risk level (Extremely high risk), we consider that there is the potential for substantive financial or strategic impact of water risk.

- Low risk (0-0.99)
- Low to medium risk (1.00-1.99)
- Medium to high risk (2.00-2.99)
- High risk (3.00-3.99)
- Extremely high risk (4.00-5.00)

iv) Whether the definition applies to direct operations, or supply chain, or both:

This definition is applied to direct operations. We conduct an annual risk analysis for the entire group to identify risks. And, we perform analysis for all production sites using WRI Aqueduct once every year.

For suppliers located in areas where water risk is expected to be particularly high, we also use the WRI Aqueduct to analyze them individually as necessary.

v) At least one example of substantive impact considered:

According to the latest Aqueduct analysis, there were 9 sites corresponding to "Extremely high risk" in India, Indonesia and China. The sites were evaluated as having a risk of not getting enough water in the quality and quantity needed for its operation. However, all of these sites are relatively small within our Group, with the total water withdrawal volume of the 9 sites only accounting for 2.4% of the Group's total, and it has never been any substantive financial or strategic impacts on its business in the past. Therefore, we recognize that water quality and quantity is important to the success of our business, but we do not believe there is an immediate substantive financial or strategic impact in direct operations at this point.

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	Risks exist, but no substantive impact anticipated	<p>We judge risk based on the following rank classification obtained from the analysis result of Aqueduct. At the highest risk level (Extremely high risk), we consider that there is a substantive financial or strategic impact of water risk. At the moment, this definition is applied to direct operations. We perform analysis on all production sites using Aqueduct once every year.</p> <p>According to the latest Aqueduct analysis, there were 9 sites corresponding to "Extremely high risk" in India, Indonesia and China. However, all of these sites are relatively small within our Group, with the total water withdrawal volume of the 9 sites only accounting for 2.4% of the Group's total, and it has never been any substantive financial or strategic impacts on its business in the past. Therefore, we recognize that water quality and quantity is important to the success of our business, but we do not believe there is an immediate substantive financial or strategic impact in direct operations at this point.</p>

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	<p>Tires, the main products of our Group, are made up of not only natural and synthetic rubber, but also steel cords, fibers, carbon black, various chemicals, and many other raw materials, so it is important to identify and prevent the risk of supply chain disruption due to water-related damage such as floods, tsunamis, and mudflows. Therefore, we have distributed our original "BCP Check Sheet" to our raw material suppliers, and required them to respond on a factory-by-factory basis, not as a company. We started this project in 2018 for Tier 1 supplier facilities managed by our procurement department in Japan, one of the major production and sales regions of our group.</p> <p>The BCP Check Sheet includes water risk as one of the items, and the questions focus on floods and tsunamis, which are considered to be relatively high risks in Japan. Specifically, it asks whether the buildings related to product manufacturing are located in the flood/tsunami hazard map inundation area defined by the local government, whether there is a risk of damage due to flood/tsunami even if the buildings are not located in the inundation area, and whether countermeasures have been implemented.</p> <p>We analyze the BCP Check Sheets collected from our suppliers and request improvements as necessary for supplier facilities with high water risks. By conducting this activity every year, we will be able to visualize the status of our suppliers' water risks and their responses to them, and promote improvements.</p>

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

Markets

Primary water-related opportunity

Improved community relations

Company-specific description & strategy to realize opportunity

i) Why this opportunity is considered strategic for the company:

Water is an essential resource for the growth of rubber trees on our natural rubber farms, and is used for cooling and steam in tire production. Adequate water of proper quality is also necessary to provide WASH services to employees. Therefore, continuous use of sufficient amounts of freshwater of adequate quality is important for continuing operation of our business.

Maintaining and further improving our good relationships with the local communities in which our sites are located regarding water use is an important strategic opportunity for us to continue our business and grow with local communities. Activities that cooperate/contribute to local communities in relation to water issues may help sustain our operations and maintain/improve brand reputation from customers or the general public.

ii) Action to realize the opportunity:

As water-related situations and issues differ from community to community, actions to realize opportunities will depend on each site. For example, in the effective use of wastewater, it is possible to take measures such as recycling and cascade using the water used in the process. Each site selects appropriate measures, taking into account relevant materials and communication with local governments and other water users.

By engaging with other water users in the local community, our business may share in the value created from tackling difficult local water challenges in a collective manner. This is an opportunity to influence how water is used locally and help ensure the sustainability of our business locally in the face of water challenges such as increasing water scarcity.

iii) Example of the strategy in action:

One example is the "cascade use of water" within the community, which leads to a reduction in water withdrawal for the entire community.

In 2019, Bridgestone Argentina S.A.I.C (BSAR), located in a water stress area, started a partnership with a nearby cement manufacturer (Loma Negra) to reduce overall water withdrawal in the Llavallol suburb of Buenos Aires. BSAR recycles wastewater generated from its operations, and provides filtered water for industrial use to Loma Negra.

Although this partnership does not directly lead to the reduction of our water withdrawal, it realizes our long-term vision of minimizing our footprint while enhancing our environmental contribution by reducing impact of water discharge and water withdrawal in the water stress area.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2400000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

The main goal of this BSAR project is to achieve environmental contributions that go beyond our own boundaries by collaborating with stakeholders to review processes and business models.

BSAR provides cement manufacturer (Loma Negra) with approximately 14,000 cubic meters of water per year with this project, which will reduce the amount of groundwater withdrawal to zero.

The approach used to calculate the figure is expressed by the following formula.

(Financial impact) = (Recycled water sales income) - (Recycled water manufacturing cost) + (Reduction of drainage cost) + (Other effects (e.g. PR effect))

BSAR does not exchange money with Loma Negra on this project, and there is no substantial change in drainage costs. Therefore, our "Potential financial impact figure" listed is only an original estimation of the PR effects introduced in many media (ex. newspapers, radio programs, etc.).

The financial impact is not great, but in the sense of reducing groundwater withdrawal, we think that it has made a great contribution to the community. This project is also an example for other companies to start thinking in possible synergy projects with nearby companies and lead toward a more sustainable society.

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	<p>Description of the scope (including value chain stages) covered by the policy</p> <p>Description of business dependency on water</p> <p>Description of business impact on water</p> <p>Commitment to align with international frameworks, standards, and widely-recognized water initiatives</p> <p>Commitment to prevent, minimize, and control pollution</p> <p>Commitment to reduce water withdrawal and/or consumption volumes in direct operations</p> <p>Commitment to reduce water withdrawal and/or consumption volumes in supply chain</p> <p>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace</p> <p>Commitment to stakeholder education and capacity building on water security</p> <p>Commitment to water stewardship and/or collective action</p> <p>Commitment to the conservation of freshwater ecosystems</p> <p>Commitments beyond regulatory compliance</p> <p>Reference to company water-related targets</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>Global climate change, an increasing population and an expanding global economy further threaten the sustainable balance of the freshwater supply. We consider water an essential resource for our operations since water is required for cooling and creating steam in our manufacturing processes as well as cultivating and processing natural rubber, an essential raw material. And, we use water with the understanding that our withdrawal of water deprives others, including the natural environment, of some of their access to water, and may affect watershed communities and the natural environment.</p> <p>Our water policy is applied company wide since we need to take actions under the common policy on a global level. In addition, the policy requires suppliers to comply with laws and regulations regarding water, and encourage them to identify their water risks and to manage their water usage in a manner consistent with this Policy.</p> <p>Our policy is composed of "Our Mindset" and "Our Way" to achieve the water access, which is socially equitable and environmentally sustainable. And, this policy commit to respect the international engagements such as the SDGs and the international standards.</p> <p>We aim to ensure our group goals, "Socially Equitable" and "Water Cycle Preservation" of the local water cycle where we operate, which constitutes "Our Mindset".</p> <p>We remain committed to socially equitable water access through cooperation with communities and stakeholders in order to address water challenges. We believe access to clean water is a basic human right. Accordingly, we provide safe water to all employees, contractors, and visitors.</p> <p>We make every effort to demonstrate, promote and preserve the water cycle within our communities by promoting water efficiency, stakeholder engagement and continued compliance with regulations.</p> <p>Our Way consists of "Understand", "Improve Locally" and "Maintain".</p> <ul style="list-style-type: none"> - Understand the local water sources, - Understand local water challenges, - Educate employees - Reduce water withdrawal and increase water-use efficiency through our innovations and continuous improvement, - Improve the balance in the local water cycle in cooperation with local communities through stakeholder engagement, - Require suppliers to comply with laws and regulations - Strive to maintain a balance between water withdrawal and discharge, - Comply with regulatory and internal water usage and efficiency standards, - Promote stakeholder interaction

W6.2

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

Yes

W6.2a

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

Position of individual or committee	Responsibilities for water-related issues
Chief Executive Officer (CEO)	<p>The Global CEO is a member of the board, and has the highest-level of responsibility for water-related issues, since the Global CEO is responsible for deciding policies and measures or presenting to the board and overseeing company-wide management activities about management vision, mid-term strategies, annual policies, etc. including water-related issues.</p> <p>One of the most recent important water-related decisions made was the Milestone 2030, which was announced in 2020. In this milestone, we have set water-related key actions and focused target as follows;</p> <p>< Key actions ></p> <ul style="list-style-type: none"> - Create and implement water stewardship plans based on the Water Stewardship Policy (policies related to the responsible use of water) - Continuous improvement of water withdrawal intensity - Improve supply chain environmental footprint through the Sustainable Procurement Policy - Enhance activities that contribute to improved biodiversity <p>< Focused target ></p> <ul style="list-style-type: none"> - Execute water stewardship plan at manufacturing facilities in water stress areas by 2030

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing major capital expenditures Overseeing the setting of corporate targets Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Setting performance objectives	At Bridgestone, the Global CEO is the highest-level management position. And the highest-level committee associated with the Bridgestone Group global business execution is the Global Executive Committee (Global EXCO) held quarterly, where the Global CEO is also one of the members. The Global Sustainability Committee that is comprised of executive officers in charge of Sustainability and representatives of Strategic Business Units (SBUs) and functions reports water-related issues to the Global EXCO. The reported contents are approved by Global EXCO as necessary. And, important discussions and decisions at Global EXCO are reported to the Board. Reporting the water-related issues to the Global EXCO and the Board through this governance mechanism enables the board to direct actions to achieve the target and to commit further resources or support to water-related issues as necessary.

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	Criteria: Previous experience managing an environmental section in charge of water-related issues or working on water-related issues as a facility manager/business manager.	<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)

Chief Executive Officer (CEO)

Water-related responsibilities of this position

- Assessing future trends in water demand
- Assessing water-related risks and opportunities
- Managing water-related risks and opportunities
- Setting water-related corporate targets
- Monitoring progress against water-related corporate targets
- Integrating water-related issues into business strategy
- Providing water-related employee incentives

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

i) Water-related topics that are reported to the board

In addition to progress towards water withdrawal reduction target, occasional water challenges and responses are reported. In 2022, the progress of "Milestone 2030" including water-related target and actions were discussed at Global Executive Committee (G-EXCO) and then reported to the Board as summary of discussion results.

ii) Water-related responsibilities

The Global CEO is the highest-level management position. And the highest-level committee associated with the Bridgestone Group global business execution is the G-EXCO held quarterly, where the CEO is one of the members. The Global Sustainability Committee that is comprised of executive officers in charge of Sustainability and representatives of Strategic Business Units reports water-related issues to the G-EXCO. The CEO has ultimate responsibilities to assess internal/external water-related circumstances/trends, issues and risks, and to determine and manage the water target.

W6.4

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

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

W6.4a



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

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Chief Executive Officer (CEO) Chief Operating Officer (COO) Other, please specify (Executive Officer)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in wastewater quality – direct operations Reduction of water pollution incidents Other, please specify (Overall water-related initiatives, including the development and promotion of water stewardship plans)	Our main business is the production and sale of tires, and we use water resources for cooling water and steam in our production process. And, all of our production sites are working to continuously improve water withdrawal intensity by improving water usage efficiency (Improvements in water efficiency, Reduction of water withdrawals, Reduction in water consumption volumes). We are also working on Improvements in waste water quality and Reduction of water pollution incidents as a responsibility of water users. Especially in sites located in water stress areas, we are focusing on these initiatives by developing water stewardship plans. This is positioned as one of the key actions of the mid-term environmental target "Milestone 2030" and is related to the evaluation of incentives for executives. The incentives have impacted our entire organization in a way that the executives are encouraged to perform better and to become more involved in our water initiatives. For example, the development of the water stewardship plan has progressed significantly ahead of initial schedule, leading to accelerated implementation of activities.	We believe that awareness among our employees of the importance of freshwater supply and its value to the global community is a key indicator in advancing water security. A healthy environment is the foundation of our ecosystem and our society and the water cycle is a critical component in achieving and maintaining long-term growth and the continued health of our communities. We introduced the RSU (Restricted Stock Unit) Plan for the Executive Officers in the fiscal year 2022 to support the realization of sustainability and long-term business strategies and to further promote management execution from a shareholder perspective by providing shares directly as remuneration during their tenure, and will continue the RSU Plan in the fiscal year 2023. We will provide the stock compensation and cash compensation to the RSU grantees, in accordance with the evaluation (non-financial evaluation of 0% to 120% of the qualitative target discussed and determined by the Compensation Committee) of the important items related to sustainability for a certain period.
Non-monetary reward	Other, please specify (All employees)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations Improvements in wastewater quality – direct operations Increased access to workplace WASH – direct operations Implementation of employee awareness campaign or training program on water-related issues Implementation of water-related community project Supply chain engagement	We believe that it is important for employees to be aware of the following indicators and engage in daily activities in order to improve water security. Therefore, these are positioned as one of the target indicators of "The Bridgestone Group Awards (BGA)". - Reduction of water withdrawals - Reduction in consumption volumes - Improvements in efficiency - direct operations - Improvements in waste water quality - direct operations - Implementation of employee awareness campaign or training program - Supply chain engagement - Increased access to workplace WASH - Implementation of water-related community project The BGA program provides opportunities to raise employee awareness and encourage environmental activities. Excellent cases are praised by the entire group by spreading the efforts of the awards to group employees, leading to further motivation and pride. BGA does not provide monetary rewards. The BGA program and incentives have played an important role in boosting employee's performance and knowledge, increasing their engagement with our water commitments.	The BGA are the highest global recognition for all employees that rewards efforts of organizations and individuals in the eight categories defined by the "Bridgestone E8 Commitment"; Energy, Ecology, Efficiency, Extension, Economy, Emotion, Ease, and Empowerment. Water-related efforts, such as reducing water withdrawals, improving water use efficiency, improving wastewater quality, and implementing water-related community projects, fall primarily under Ecology and Empowerment.

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?

No

W6.6

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

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

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	> 30	<p>- Which water issues are integrated: We consider water an essential resource for our operations since it is required for cooling and creating steam in our manufacturing processes as well as cultivating and processing natural rubber, an essential raw material. Therefore, we have developed the "Bridgestone Water Stewardship Policy". It is composed of "Our Mindset" and "Our Way" to achieve the water access, which is socially equitable and environmentally sustainable. We aim to ensure "Socially Equitable" and "Water Cycle Preservation" of the local water cycle where we operate.</p> <p>And, in order to reduce the environmental impacts and operational interruptions caused by water-related issues, we have set the long-term environmental vision for 2050 and beyond, that includes water-related initiatives, and milestone for 2030. Based on them, each Strategic Business Unit (SBU) incorporates measures into its business plan.</p> <p>- Examples of how are they integrated into the plan: We analyze the water risks at all production facilities using WRI Aqueduct. Based on the result, each SBU decides how to manage water risks by comprehensively considering how to cope with sustainability for the region and for its business, and integrates into its business plan.</p> <p>For example, the Izmit plant in Turkey, located in a water stress area, achieved a 52% reduction of water withdrawal (compared to a 2005 baseline) by taking measures to prevent water leakage and reusing water through advanced treatment.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	<p>Water is required for cooling and creating steam in our manufacturing processes as well as cultivating and processing natural rubber, an essential raw material. In order to reduce impact on the environment and operational interruptions due to restricted water withdrawal, we have set "Long-term Vision (for 2050 and beyond)" which aims to be "In balance with nature (Contribution> Footprint)". The water withdrawal reduction is positioned as an important indicator of this vision, and milestones for 10 years are set to promote activities. To achieve the milestone, each Strategic Business Unit (SBU) sets a water withdrawal reduction target for each facility and follows the progress status every month. Since water related issues vary greatly depending on the regions/areas, each SBU decides how to manage water risks by comprehensively considering how to cope with sustainability for the region and for its business, and integrates into its business plan. In order to achieve the milestone, we are promoting various measures such as water leakage survey/measures, utilization of rainwater, utilization of recycled water, and recycling, based on the situation at each facility. For example, the Sao Paulo plant launched a joint initiative with the local city designed to promote water recycling in order to help reduce the withdrawal of groundwater. This project enabled over 50% of the water withdrawal to be switched to recycled water supplied from a wastewater treatment company nearby.</p>
Financial planning	Yes, water-related issues are integrated	5-10	<p>Water is required for cooling and creating steam in our manufacturing processes as well as cultivating and processing natural rubber, an essential raw material. In order to reduce impact on the environment and operational interruptions due to restricted water withdrawal, we have set "Long-term Vision (for 2050 and beyond)". The water withdrawal reduction is positioned as an important indicator of this vision, and milestones for 10 years are set to promote activities.</p> <p>To achieve the milestone of reducing water withdrawals, each Strategic Business Unit has secured a budget for necessary research and capital investment, and is working systematically. In addition, we are systematically investing in research to cultivate Guayule, which grows in arid regions, and to extract/purify rubber components. Since, due to the effects of climate change, there is a possibility that natural rubber- which is the main raw material for tires that is mainly collected from Hevea brasiliensis in tropical regions with high precipitation-, cannot be continuously collected.</p> <p>Through these investments, we are concurrently working to reduce the water related impact and create new business opportunities.</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)

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

Water-related OPEX (+/- % change)

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

Please explain

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	<p>Bridgestone's mission is "Serving Society with Superior Quality." In line with that mission, we have explored a company-wide BCP that will enable us to earn the trust of stakeholders including our customers and business partners and ensure the safety of our employees. As part of that process, we have endeavored to assess our exposure to water risks and other risks in the interest of preventing a variety of crisis scenarios. We have assessed crisis scenarios that could materialize on a site-by-site basis and are currently engaged in a study of countermeasures. For example, we have carried out the analysis and stress testing using AQUEDUCT. We have analyzed the change of water stress (2030 and 2040) in each of the following three climate-related scenarios, which are included into the result of the AQUEDUCT analysis -Optimistic scenario, BAU scenario, and Pessimistic scenario.</p> <p>Details of the Climate-related scenario analysis conducted in parallel are provided in W7.3a.</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>We conducted our scenario analysis with business projections as of 2030, the target year of the SDGs.</p> <p>< Analytical choices > We selected 4 degree / 1.5 and/or 2 degree scenarios to clarify climate risks widely on overall aspects (including procurement, manufacturing, logistics etc. not limiting to our product/service). We consider the 1.5 and/or 2 scenarios would be appropriate representatives of contrast viewpoints of "low carbon society" and society where climate change actualizes due to increasing of carbon emission.</p> <p>< Parameters > A scenario analysis was conducted to quantitatively estimate the financial impact of risk based on the following parameters and their future projections, as well as qualitative perspectives. 1) Financial information (Sales, cost, operating profit, capital expenditure etc.) 2) Non-financial information (CO2 emission, energy consumption, material consumption, water intake etc.) 3) External information (Carbon price/tax, price of renewable energy, material, water etc.)</p> <p>< Assumption > 1) On the 1.5 and/or 2 degree scenario, we assume that physical impact such as flood, water shortage caused by climate change won't be as significant as in the 4 degree scenario so the risks to focus is strong rise of social demand and stricter policy. 2) On the 4 degree scenario, we assume that GHG emission will be kept high due to insufficient climate policy and/or social actions. Therefore, the risks to focus are limited to physical impact caused by high temperature, flood, hurricane, drought etc. 3) On both scenarios, we assume that we won't conduct any particular countermeasures for the climate risks.</p>	<p>According to the analysis under 1.5 and/or 2 degree scenario conditions, not taking any action may end in financial impacts such as increasing of water procurement costs due to more frequent droughts, especially in water stress areas. Since many of the regions from which we procure natural rubber overlap with areas of relatively high water stress, so these impacts should be managed properly (Approximately 50% of the natural rubber we procure comes from Indonesia and 30% from Thailand). We have already incorporated the risks into strategy and started action to mitigate them (e.g. Water withdrawal reduction activity with mid-term, development of alternative materials of natural rubber (Guayule, which can be cultivated even in arid regions such as deserts), etc.).</p> <p>Under the conditions of 4 degree scenario, it is expected that the operation will be suspended due to flooding, disruption of the supply chain, and water supply restrictions due to drought. In particular, natural rubber, which is the main raw material for tires cultivated mainly in the tropics, is concerned about poor harvest due to abnormal weather such as high temperature and drought (Approximately 50% of the natural rubber we procure comes from Indonesia and 30% from Thailand). If the natural rubber harvest were to suffer, the tire business, which accounts for approximately 90% of our company, would be affected.</p>	<p>As a measure against floods, BCPs have been formulated at each site and prepared according to the area and building conditions.</p> <p>As a measure against drought, we are promoting efforts to use water efficiently, such as the introduction of a water circulation system.</p> <p>For natural rubber, in particular, we are trying to diversify the production area by trying not only the current mainstream Hevea brasiliensis that is produced in the tropical area but also the plant guayule, which can be cultivated in the arid area. Our group has started field evaluation of the seedlings of superior varieties planted at our plantation in Arizona, USA. By analyzing the results of the field evaluation and combining it with the results of improving physical properties by optimizing the process and application development, we aim to commercialize guayule rubber as a tire material in the 2020s.</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, and we do not anticipate doing so within the next two years

Please explain

We are in the stage of collecting and examining information and examples on the effect and impact of internal price on water, and there is no plan to introduce it at this point within next two years.

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	The criteria for classification as a products/services with low water impact are those that use less water (water quantity) or have less environmental impact (water quality) during the manufacturing and use stages of the products/services compared to conventional products/services.	<Not Applicable>	A specific example of products/services that have low water impact is retread tires. Retread tires reuse the resource of tire casing by replacing the worn tread rubber (areas that come into contact with the road surface). Since only the tread of the tire will be newly made, it is possible to reduce the amount of water used during raw material manufacturing and tire manufacturing compared to making a new tire.

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, and we do not plan to within the next two years	While we do not have specific quantitative targets for water pollution, we are continually working to comply with national, regional, and local laws/standards and our own standards to prevent water pollution.
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	While we do not have specific quantitative targets for Water, Sanitation, and Hygiene (WASH) services, we have clearly stated " We believe access to clean water is a basic human right. Accordingly, we provide safe water and promote proper hygiene and sanitation to all employees, contractors, and visitors." in the Bridgestone Water Stewardship Policy and are working to improve WASH.
Other	Please select	<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

Other, please specify (The completion rate of development of the Water Stewardship Plan (= (Number of sites for which planning has been completed) / (Number of sites located in water stress areas)))

Year target was set

2020

Base year

2019

Base year figure

0

Target year

2030

Target year figure

100

Reporting year figure

70.6

% of target achieved relative to base year

70.6

Target status in reporting year

Underway

Please explain

In our "Milestone 2030", "Execute water stewardship plan at manufacturing facilities in water stress areas by 2030" is positioned as a company-wide focused target. Each facility that is determined to be located in a water stress area is required to develop its "Water Stewardship Plan" and promote activities to reduce water withdrawal based on this plan.

The target achievement rate is calculated using the following formula; (Number of sites for which planning has been completed) / (Number of sites located in water stress areas)

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

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 data - Fresh surface water (water from rivers and lakes); W1.2h Row1 - Brackish surface water/seawater; W1.2h Row2 - Groundwater - renewable; W1.2h Row3 - Third party sources; W1.2h Row6	ISAE 3000	We received the assurance of a third-party institution to ensure transparency, completeness, and accuracy of water withdrawal results (W1.2h). The verification by the third-party is implemented once a year for all production sites of our group that has certificated ISO 14001. We regard water withdrawal, which is the starting point of water related issues as the most important indicator among water related indicators, so we are subjecting it to the third-party verification at the present time.

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 Product use phase	We have already mapped the assumed in/out of plastics for direct operations such as product development, manufacturing, and sales, the supply chain involved in raw material procurement, and the product usage stage. Plastics as a commodity include synthetic rubber, which is a raw material for tires. The main uses of plastics in the value chain are packaging of raw materials and packaging of some diversified products, as well as food containers and PET bottles used by employees in facilities and offices. We are working to reduce the amount of plastic waste generated by our facilities and offices, and plastic waste that is generated is recycled or recovered as energy as much as possible before finally being disposed of in accordance with local laws and regulations.

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	Product use phase	Although it is not caused by the use or production of plastics, there is also literature that positions TRWP (Tire Road Wear Particles) as one of the microplastics, and we are proceeding with the evaluation of the potential impacts of TRWP. TRWP is the result of friction between the tire and the road surface which is essential to secure a safe and comfortable journey. TRWP is a complex issue impacted by many factors including driving behavior, weather, road conditions as well as vehicle and tire characteristics. We recognize the need to address the potential human and environmental impact of TRWP and the role the company can play. We are actively engaged with the tire industry through the World Business Council for Sustainable Development (WBCSD) Tire Industry Project (TIP) in building scientific knowledge on the physical and chemical characteristics of TRWP in addition to their impact. TIP is also involved in developing mitigation options. As member of Working Groups within the International Organization for Standardization (ISO) and through the discussions with the United Nations Economic Commission for Europe (UNECE), the company supports the globally harmonized test methods that will contribute to reducing the amount of wear particles from tire abrasion, while creating the same standards for all industry players. We continuously invest in sustainable technologies and materials to improve conflicting tire performance such as energy consumption, grip, noise or wear. Furthermore, by providing solutions that promote responsible driving behavior and enable customers to check tire wear and optimize routes, we contribute to mitigate the emission of tire wear particles. We continue to collaborate with industry and other partners to study this issue and find answers. At the same time, we are committed to pursue innovations in tire design, materials and solutions that can further reduce the generation of and potential environmental impact of tire wear particles.

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	Yes	Product use phase	Regulatory Reputational Technology	<p>Although it is not caused by the use or production of plastics, there is also literature that positions TRWP (Tire Road Wear Particles) as one of the microplastics, and we are proceeding with the evaluation of the potential impacts of TRWP.</p> <p>TRWP is the result of friction between the tire and the road surface which is essential to secure a safe and comfortable journey. TRWP is a complex issue impacted by many factors including driving behavior, weather, road conditions as well as vehicle and tire characteristics. We recognize the need to address the potential human and environmental impact of TRWP and the role the company can play. We are actively engaged with the tire industry through the World Business Council for Sustainable Development (WBCSD) Tire Industry Project (TIP) in building scientific knowledge on the physical and chemical characteristics of TRWP in addition to their impact. TIP is also involved in developing mitigation options. As member of Working Groups within the International Organization for Standardization (ISO) and through the discussions with the United Nations Economic Commission for Europe (UNECE), the company supports the globally harmonized test methods that will contribute to reducing the amount of wear particles from tire abrasion, while creating the same standards for all industry players. We continuously invest in sustainable technologies and materials to improve conflicting tire performance such as energy consumption, grip, noise or wear. Furthermore, by providing solutions that promote responsible driving behavior and enable customers to check tire wear and optimize routes, we contribute to mitigate the emission of tire wear particles. We continue to collaborate with industry and other partners to study this issue and find answers. At the same time, we are committed to pursue innovations in tire design, materials and solutions that can further reduce the generation of and potential environmental impact of tire wear particles.</p>

W10.4

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

	Targets in place	Target type	Target metric	Please explain
Row 1	Yes	Plastic polymers Plastic packaging Waste management	<p>Reduce the total weight of virgin content in plastic polymers</p> <p>Reduce the total weight of plastic packaging used and/or produced</p> <p>Eliminate problematic and unnecessary plastic packaging</p> <p>Reduce the total weight of virgin content in plastic packaging</p> <p>Increase the proportion of post-consumer recycled content in plastic packaging</p> <p>Increase the proportion of renewable content from responsibly managed sources in plastic packaging</p> <p>Increase the proportion of plastic packaging that is recyclable in practice and at scale</p> <p>Increase the proportion of plastic packaging that is reusable</p> <p>Increase the proportion of plastic packaging that is compostable</p> <p>Increase the proportion of recyclable plastic waste that we collect, sort, and recycle</p>	<p>We have set the long-term environmental vision targeting 2050 and beyond includes 100% sustainable materials for the raw materials we use. In Milestone 2030, our mid-term target, we have set a target to increase ratio of recycled and renewable material to 40% by 2030.</p> <p>We are also committed to reducing single-use plastics and issued the "Bridgestone Single-Use Plastics Guidelines" in 2022. This guideline defines our approach to single-use plastics reduction, "Our Mindset," and the direction of our activities, "Our Way." And, we aim to reduce single-use plastics in our business activities, convert the single-use plastics we use into reusable, recyclable and compostable materials, and recycle the single-use plastics we use.</p>

W10.5

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

	Activity applies	Comment
Production of plastic polymers	Yes	We have one plant that manufactures synthetic rubber, the raw material for tires.
Production of durable plastic components	Yes	In our diversified products business, we manufacture durable plastic components such as plastic piping, joints, and nylon tubing.
Production / commercialization of durable plastic goods (including mixed materials)	Yes	Durable plastic goods are used in our bicycle business.
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	Yes	We use plastic packaging for some diversified business products such as plastic piping, joints, and sporting goods.
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W10.6

(W10.6) Provide the total weight of plastic polymers sold and indicate the raw material content.

Row 1

Total weight of plastic polymers sold during the reporting year (Metric tonnes)

Raw material content percentages available to report

% virgin fossil-based content

<Not Applicable>

% virgin renewable content

<Not Applicable>

% post-industrial recycled content

<Not Applicable>

% post-consumer recycled content

<Not Applicable>

Please explain

We decline to answer the questionnaires because they are confidential to our company.

W10.7

(W10.7) Provide the total weight of plastic durable goods/components sold and indicate the raw material content.

Row 1

Total weight of plastic durable goods/components sold during the reporting year (Metric tonnes)

Raw material content percentages available to report

% virgin fossil-based content

<Not Applicable>

% virgin renewable content

<Not Applicable>

% post-industrial recycled content

<Not Applicable>

% post-consumer recycled content

<Not Applicable>

Please explain

We decline to answer the questionnaires at this time because we are currently in the process of gathering information.

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		Please select	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	We decline to answer the questionnaires at this time because we are currently in the process of gathering information.

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	Please select	<Not Applicable>	<Not Applicable>	<Not Applicable>	We decline to answer the questionnaires at this time because we are currently in the process of gathering information.

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.

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	Executive Director, Corporate Sustainability has signed off our CDP water response.	Environment/Sustainability manager