

W0. Introduction

W0.1

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

The Bridgestone Group, headquartered in Tokyo, is the world's largest tire and rubber company. 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 Communication Division is responsible for answering the 2019 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 2018	December 31 2018

W0.3

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

- Argentina
- Australia
- Belgium
- Brazil
- Canada
- China
- China, Hong Kong Special Administrative Region
- Costa Rica
- France
- Hungary
- India
- Indonesia
- Italy
- Japan
- Malaysia
- Mexico
- Philippines
- Poland
- Russian Federation
- South Africa
- Spain
- Taiwan, Greater 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.	Impact from the excluded sites is estimated to be negligible compared to the total impact.

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	In our production process, we use water resources as 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, cord, and steel belt, among others. Our suppliers use water resources as washing, cooling water and steam. 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). According to the result of the "Future Water Stress" of the WRI Aqueduct analysis, we believe that water dependency in direct/indirect use will not change much in the future. However, if abnormal weather such as high temperature and/or drought occur frequently, the importance of water security will be higher.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	In our production process, we use recycled water as cooling water. For example, sewage-treated water is used as cooling water or steam. Also in our value chain (raw material production sites), recycled water is being utilized as cooling water. 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). According to the result of the "Future Water Stress" of the WRI Aqueduct analysis, we believe that water dependency in direct/indirect use will not change much in the future. However, if abnormal weather such as high temperature and drought occur frequently, the importance of water security will be higher.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	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. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water withdrawals – volumes from water stressed areas	100%	We consider our water risk with the measure classified into five levels from Level 1: Low risk to Level 5: Extremely high risk based on WRI Aqueduct analysis. We perform analysis on all facilities using WRI Aqueduct once every year. According to the latest Aqueduct analysis, there was a site corresponding to Level 5. 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. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water withdrawals – volumes by source	100%	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 with 50 employees or more.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	<Not Applicable>	<Not Applicable>

	% of sites/facilities/operations	Please explain
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	76-99	At the beginning of the water supply, we confirmed that it meets our group's requested level, then the suppliers are monitoring it continually according to the method defined in each area. In that sense, we believe that most of all our facilities are measuring and monitoring water quality periodically (mostly, on a monthly basis), so we respond to the left column based on that idea. Since the rate includes estimated values, we did not select 100% for "% of facilities" in the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water discharges – total volumes	76-99	Because our finished products (tires, etc.) contain almost no water, we discharge most all of the water we withdraw. Based on the monthly water discharge data (based on bills or in-house measurement meters) of our major facilities, we estimate the total volume of water discharges at all our facilities and are working to understand that impact. Since the rate includes estimated values, we did not select 100% for "% of facilities" in the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water discharges – volumes by destination	76-99	Because our finished products (tires, etc.) contain almost no water, we discharge most all of the water we withdraw. Based on the monthly water discharge data (based on bills or in-house measurement meters) of our major facilities, we estimate the water discharges (volumes by destination) at all our facilities and are working to understand that impact. Since the rate includes estimated values, we did not select 100% for "% of facilities" in the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water discharges – volumes by treatment method	76-99	Because our finished products (tires, etc.) contain almost no water, we discharge most all of the water we withdraw. Based on the monthly water discharge data (based on bills or in-house measurement meters) of our major facilities, we estimate the water discharges (volumes by treatment method) at all our facilities and are working to understand that impact. Since the rate includes estimated values, we did not select 100% for "% of facilities" in the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water discharge quality – by standard effluent parameters	100%	We monitor water discharge quality by continuous real time monitoring or sampling analysis at all of our facilities (mostly on a monthly basis). Our facilities have implemented water effluent standards of their own that meet or tighten applicable government standards, and endeavor not to exceed government-established limits. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water discharge quality – temperature	26-50	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 quality temperature, some facilities do not water discharge temperature. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water consumption – total volume	76-99	The monitoring method for water consumption is to calculate by subtracting the water discharge volume from the water withdrawals volume at all our facilities yearly and we are working to grasp the impact. Since the rate includes estimated values, we did not select 100% for "% of facilities", the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
Water recycled/reused	76-99	Based on the monthly water recycled/reused data measured by flow meter of our major facilities, we estimate the water recycled/reused volumes at all our facilities and are working to understand that impact. The monitoring method for recycled/reused water is to read the value of flow meters installed on equipment, and to estimate using design values for some equipment. For sites where flow rates can not be measured, estimates are made based on the data of sites where flow rate can be measured. Since the rate includes estimated values, we did not select 100% for "% of facilities", the left column. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.
The provision of fully-functioning, safely managed WASH services to all workers	100%	During the design phase for new facilities, we specify that attention is given to adequate employee dining and sanitary equipment that reflect their local jurisdiction's standards. Our method for monitoring, most sites are supplied clean water purified by public agencies or private water treatment plants. At these water treatment plants, we recognize that the water quality is properly managed on a daily basis. At some sites that use the groundwater, we regularly conduct water quality inspection according to regional standards. (e.g. monthly, bimonthly, quarterly) Accordingly, we provide WASH services to employees at all our production facilities worldwide. For our company, "facilities" refers to our production sites certified according to ISO-14001 and with 50 employees or more.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	75487.9	About the same	Despite efforts to reduce water withdrawals, total water withdrawals was increased by 3.6% from the previous year due to increased production. However, there was no significant change (About the same) in water withdrawals compared to the previous year. In the future, no major change is expected (About the same). Since it is expected that the water withdrawals will increase due to the increase in production volume, we promote reduction of water withdrawals. 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%
Total discharges	60146	About the same	Despite efforts to reduce water withdrawals, total withdrawals was increased by 3.6% from the previous year due to increased production. Along with that, the amount of discharges also increased, but there was no significant change (About the same) in water discharges compared to the previous year. In the future, no major change is expected (About the same). Since it is expected that the water discharges will increase due to the increase in production volume, we promote reduction of water discharges. 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%
Total consumption	15341.9	About the same	Despite efforts to reduce water withdrawals, total withdrawals was increased by 3.6% from the previous year due to increased production. Along with that, the amount of consumption also increased, but there was no significant change (About the same) in water discharges compared to the previous year. In the future, no major change is expected (About the same). Since it is expected that the water consumption will increase due to the increase in production volume, we promote improvement of water efficiency. 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%

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	0.03	About the same	WRI Aqueduct	We consider our water risk with the measure classified into five levels from Level 1: Low risk to Level 5: Extremely high risk based on WRI Aqueduct analysis. We perform analysis on all sites using WRI Aqueduct once every year. According to the latest Aqueduct analysis, there was a site corresponding to Level 5, diversifying products small site in India. The ratio of the withdrawal volume at this site to the total is 0.03%, which is very small overall. Even though the amount of water withdrawal is small, because it is located in the water stressed area, we will promote continuous efforts to reduce the amount of water withdrawal. The water withdrawal rate in the water stress area was increased by 0.03%. Since there was almost no change from the previous year, "About the same" was selected as the answer to the question "Comparison with previous reporting year". The reason for choosing WRI Aqueduct as an analysis tool is introduced as a useful tool in the "Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities" published by TCFD and enables to map future water risks. 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%

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	5063.5	About the same	Since we use water resources as cooling water and steam in our production process, we select "Relevant". We can not produce products such as tires without this water. This volume is composed of river water and rainwater, and almost all is the amount of river water. It is sourced from direct measurement. River water withdrawal volume was decreased by 0.3% compared with the previous year. Rainwater withdrawal volume may vary depending on the weather of the year, but the proportion of rainwater to the total water usage is very small (0.4% in 2018). In the future, no major change is expected (About the same). Since it is expected that the water withdrawal will increase due to the increase in production volume, we promote reduction of water withdrawal. 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%
Brackish surface water/Seawater	Relevant	39680.6	About the same	Since we use seawater as cooling water at the site located on seaside, we select "Relevant". We can not produce raw materials without this water. This volume is composed of seawater and sourced from direct measurement. Brackish surface water/seawater withdrawal volume was increased by 8.9% compared with the previous year. This is because there was a time when the site using seawater had been shut down for maintenance last year. In the future, no major change is expected (About the same). Since it is expected that the water withdrawal will increase due to the increase in production volume, we promote reduction of water withdrawal. 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%
Groundwater – renewable	Relevant	11256	About the same	Since we use groundwater (renewable) as cooling water and steam in at the sites where groundwater can be used, we select "Relevant". We can not produce products such as tires without this water. This volume is sourced from direct measurement. Groundwater withdrawal volume was decreased by 2.9% compared with the previous year by efforts to reduce the amount of water withdrawal. In the future, no major change is expected (About the same). Since it is expected that the water withdrawal will increase due to the increase in production volume, but we promote reduction of water withdrawal. 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%
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Since we don't use non-renewable groundwater that can not be natural recharged on the human time-scale, and is generally located at deeper depths than renewable groundwater, we select "Not relevant". Since we have no plan to use non-renewable groundwater, no major change is expected in the future.
Produced/Entrained water	Relevant	18320.7	About the same	Since we use produced water as cooling water and steam in our production process, we select "Relevant". We can not produce products such as tires without this water. This item contains the amount of tap water, industrial water, steam purchased. This volume is sourced from direct measurement. Produced water withdrawal volume was decreased by 2.3% compared with the previous year by efforts to reduce the amount of water withdrawal. In the future, no major change is expected (About the same). Since it is expected that the water withdrawal will increase due to the increase in production volume, we promote reduction of water withdrawal. 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%
Third party sources	Relevant	1167.1	Higher	Since we use third party sources as cooling water and steam in our production process, we select "Relevant". We can not produce products such as tires without this water. This item contains the amount of recycled water that used and recycled by external third parties (Not a municipal supplier). This volume is sourced from direct measurement. Third party sourced withdrawal volume was increased by 10.1% compared with the previous year by changes in the water withdrawal source. In the future, no major change is expected (About the same). Since it is expected that the water withdrawal will increase due to the increase in production volume, we promote reduction of water withdrawal. 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%

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	12346.5	About the same	If a site is adjacent to a river, it drains the wastewater to a river after meeting the wastewater standards. Therefore, we think that "Fresh surface water" as water discharge destination is closely related to our business, it is appropriate to select "Relevant". Based on the monthly water discharge data of our major sites, we estimate the volume of water discharges at all our sites and are working to understand that impact. The volume of water discharge to fresh surface water was decreased by 4.0% compared with the previous year. This happens only because the composition ratio of the water discharge destination has changed, and is not the result of having a special factor. In the future, no major change is expected (About the same). Since it is expected that the water discharge will increase due to the increase in production volume, we promote reduction of water discharge.
Brackish surface water/seawater	Relevant	41639.4	About the same	If a site is adjacent to a sea, it drains the wastewater to a sea after meeting the wastewater standards. Therefore, we think that "Brackish surface water/seawater" as water discharge destination is closely related to our business, it is appropriate to select "Relevant". The volume of water discharge to seawater is sourced from direct measurement. It was increased by 8.7% compared with the previous year. This is because there was a time when the site using seawater had been shut down for maintenance last year (Seawater is returned to the sea after being used for cooling). In the future, no major change is expected (About the same). Since it is expected that the water discharge will increase due to the increase in production volume, we promote reduction of water discharge. 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%
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Since we do not send wastewater to groundwater directly, we chose "Not relevant". We will not change this direction in the future.
Third-party destinations	Relevant	6160.2	About the same	When a site is located in the inland area, it drains the wastewater to a third-party's wastewater treatment facility after meeting the wastewater standards. Therefore, we think that "Third-party destinations" as water discharge destination is closely related to our business, it is appropriate to select "Relevant". Based on the monthly water discharge data of our major sites, we estimate the volume of water discharges at all our sites. The volume was increased by 9.0% compared with the previous year. This happens only because the composition ratio of the water discharge destination has changed, and is not the result of having a special factor. In the future, no major change is expected. Since it is expected that the water discharge will increase due to the increase in production volume, we promote reduction of water discharge. This water discharge isn't used by a third-party directly, but is appropriately purified by a third-party (e.g. industrial wastewater treatment plant).

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	76-99%	About the same	We used CDP's definition and calculation method. Based on the monthly water recycled/reused data of our major sites, we estimate the volume of recycled/reused water at all our sites. The volume was "About the same" compared with the previous year. This is because there were no projects to introduce a new large-scale water recycling facility or to introduce recycled water from outside during the target period. Anticipated effects of the recycling/reuse are reduction of freshwater withdrawal, avoidance of drought risk and cost savings depending on the area. However, further treatment of waste water would generate more energy use, emissions, chemical use and air emissions as well as financial cost. Therefore, in promoting the recycle/reuse activities, it is necessary to comprehensively consider the increase of them and the water withdrawal risk (e.g. water shortage, water quality decline) on a case by case basis. In the future, no major change is expected (About the same). An important key to further promoting recycle/reuse activities is how to suppress not only the introduction cost but also the running cost. 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%

W1.4

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

Yes, our suppliers

W1.4a

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

Row 1

% of suppliers by number

76-100%

% of total procurement spend

76-100

Rationale for this coverage

In Feb.2018, Bridgestone issued the Global Sustainable Procurement Policy which is applicable to all purchased materials and services, as well as all suppliers globally. The journey towards “Sustainable society”, Bridgestone’s goal for 2050 and beyond as our long-term environmental vision including water viewpoint, will not be simple, nor can Bridgestone achieve it alone. Every business is supported by many suppliers. Regardless of the size of the supplier or where they operate in any region, we believe that the efforts of each supplier are important. This is why all of our suppliers were selected for reporting. There are the following incentives for suppliers to respond to assessments that use EcoVadis introduced together with the policies; 1. Get a score card with strengths / weaknesses that they can use for the next activity, 2. Get an evaluation of gold, silver and bronze that can appeal to outside, 3. Respond with the EcoVadis assessment at the same request from other customers.

Impact of the engagement and measures of success

Through a 2018 partnership with EcoVadis, we conducted assessing suppliers’ current sustainability practices, as well as the possible support needed to improve performance. This activity could be an opportunity for suppliers to confirm and improve their actions for preventing water-related issues further. Details of the type of information requested from suppliers are “water policy”, “water management actions”, and “water consumption”. Based on those kinds of information, we have started to assess the sustainability practices of our suppliers and support them for improvement as needed. Details of how success is measured is the ratio of acknowledgement of the policy by suppliers, as an example. As of March 2019, the ratio has been increased to 98 percent (more than 1,600) of our Tier 1 tire material suppliers and the majority of them are in the process of completing third-party assessments with EcoVadis.

Comment

W1.4b

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

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

<Not Applicable>

% of suppliers by number

<Not Applicable>

% of total procurement spend

<Not Applicable>

Rationale for the coverage of your engagement

We commend for the environmental activities of suppliers contributing to Bridgestone in Japan, and are calling on suppliers for their proactive efforts and applications. Since this award is conducted in Japan, and the companies eligible for the application will be companies that supply raw materials to Japan Tire SBU, the ratio to all suppliers is calculated by the following formula. % of suppliers by number = Number of companies procured by Japan Tire SBU / Number of companies procured by all tire SBUs % of total procurement spend = Procurement spend by Japan Tire SBU / Procurement spend by all tire SBUs * SBU; Strategic Business Unit

Impact of the engagement and measures of success

<Not Applicable>

Comment

<Not Applicable>

W2. Business impacts

W2.1

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

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.

Country/Region

Russian Federation

River basin

Volga

Type of impact driver

Physical

Primary impact driver

Declining water quality

Primary impact

Increased operating costs

Description of impact

Industrial water is used in the production process, and it is used once it has been purified to the required level with site's own water treatment equipment. However, when the quality of industrial water is very low, more expensive potable water is used in the manufacturing process due to limitations of equipment's capacity. By the way, the total financial impact is the difference between the cost of industrial water and potable water per month. The impact was small and there was no substantial impact.

Primary response

Engage with suppliers

Total financial impact

84000

Description of response

After discovering water quality problems, the site immediately contacted the supplier to get an explanation of the reasons. Suppliers check daily to ensure proper water quality.

Country/Region

Costa Rica

River basin

Other, please specify (Reventazón River)

Type of impact driver

Physical

Primary impact driver

Inadequate infrastructure

Primary impact

Closure of operations

Description of impact

The site was shut down for a few days in 2018 during the rainy season because the roads to the site were flooded. Employees and trucks can not access the site safely. There was no substantial impact as there was no direct damage to the site facilities and the impact on production was also slightly suppressed.

Primary response

Develop flood emergency plans

Total financial impact

0

Description of response

As BCP (Business Continuity Plan), we examined alternative route in case of emergency. As the amount of total financial impact is under calculation, it is 0 for convenience.

Country/Region

Malaysia

River basin

Other, please specify (Klang River)

Type of impact driver

Physical

Primary impact driver

Rationing of municipal water supply

Primary impact

Increased operating costs

Description of impact

Water supply to the site suddenly stopped due to a failure of the water supply company's pump. This temporarily made it impossible for employees to use water. The impact was small and there was no substantial impact.

Primary response

Secure alternative water supply

Total financial impact

80000

Description of response

We installed some tanks for storing water at the site so that water could be supplied for a certain period of time even in emergency.

W2.2

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

No

W3. Procedures

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market

Other

Tools and methods used

WBCSD Global Water Tool

WRI Aqueduct

Internal company methods

Comment

We performed macro analyses with the WBCSD Global Water Tool and WRI Aqueduct. These are the tools most widely utilized worldwide to assess water risks and are 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.

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?

>6 years

Type of tools and methods used

Other

Tools and methods used

External consultants

Comment

Through a 2018 partnership with EcoVadis, a leading provider of sustainability, risk and performance ratings for global supply chains, we conducted assessing suppliers' current sustainability practices including water, as well as the possible support needed to improve performance. This activity could be an opportunity for suppliers to confirm and improve their actions for preventing water-related issues further.

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Because water availability could affect production, we utilize the parameters of the WBCSD Water Tool and WRI Aqueduct and evaluate our production sites.
Water quality at a basin/catchment level	Relevant, always included	Because water withdrawal quality could affect production, we evaluate the parameters of our production sites using the WBCSD Water Tool and WRI Aqueduct. To prevent water pollution in the downstream area, we are reducing the risk by controlling the quality of discharges by administrative regulation values or our self -standards that are stricter than that.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	There is no current conflict with stakeholders that is an issue at local level, but in preparation for any future incidents, Bridgestone is gathering information from each operating site. We strive to maintain good relationships with local stakeholders through forest conservation activities with municipalities, collaboration with river conservation groups and river clean-ups, for example. Regarding risk assessment, we have used the results of WRI Aqueduct's Regulatory & Reputational Risk (Media Coverage & Access to Water).
Implications of water on your key commodities/raw materials	Relevant, always included	We own production sites that produce our raw materials (natural and synthetic rubber products, etc.) and use WBCSD Water Tool and WRI Aqueduct to assess their water risks.
Water-related regulatory frameworks	Relevant, always included	Because the regulation of water could affect our production including costs, we evaluate potential impacts using WRI Aqueduct's Regulatory & Reputational Risk. Regulatory and reputational risks identify areas of concern regarding uncertainty in regulatory change, as well as conflicts with the public regarding water issues.
Status of ecosystems and habitats	Relevant, always included	Regarding the estimation of the impact on ecosystems and habitats at local level, necessary measures are considered and carried out in accordance with the standards of each region. Especially, the production of natural rubber, our main raw material, consists of symbiosis with ecosystems and habitats, so they are closely linked to our business. Specifically, in some regions where biodiversity is expected to fall, we are providing the local community with rubber tree seedlings and instruction in their cultivation, with the intention of regenerating the forest through agroforestry. This activity is being undertaken as an industry-academia collaboration project between Bridgestone and Waseda University, through which we have evaluated the importance of the biodiversity of the surviving forest in the region and we are engaging in this activity to enable us to make a significant contribution to biodiversity of the overall region through agroforestry. In other locations around the world, we are cooperating with neighboring regions and NGOs in activities for the protection of biodiversity and evaluating the results. For example, Bridgestone Americas, Inc. (BSAM) acquired "Wildlife Habitat Conservation and Environmental Education Certification" from the Wildlife Habitat Council (WHC) for its 11 Wildlife Habitat Sites in the United States and Mexico. Obtaining such third-party certification is also used as one of the assessment tools. The new information and expertise gained through these activities are being applied to future activities and to activities at sites within the Bridgestone Group.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	A working place where all employees can use safe and secure water is an important basis for them to work with peace of mind. Therefore, we recognize that "Access to fully-functioning, safely managed WASH services" is closely related to our business. Using internal company methods, we conduct surveys and studies on the access to WASH services for employees at all production sites at the time new sites are placed into operation. We regularly conduct water quality inspection as necessary according to regional standards.
Other contextual issues, please specify	Please select	

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Not relevant, explanation provided	Since our final products, tires and diversified products (anti-vibration rubber, sporting goods, bicycles, etc.) do not contain water and they do not need water when used by customers, we do not factor "Customers" into our water risk assessments. The way of thinking is also applied to consideration in the future.
Employees	Relevant, always included	We recognize that the risk that low water quality can affect the livelihoods and health of our employees and that limits on tap water withdrawal due to water shortages affects employees' productivity. Thus, we strive to measure that risk on a site-by-site basis. In addition, we provide employees with information on water risk and encourage them to take care of water. For example, in Japan, we continually raise our employees' awareness about environmental information, including water conservation, through our intranet.
Investors	Relevant, always included	As investors' requests include advanced level efforts, it is valuable hint for our activities. Every year, we assess the demands of our investors, study and implement solutions aimed at addressing those demands. We also exchange views on various environmental themes / risks, including water, at individual interviews with investors. Finally, we regard the response to CDP Water Security as one of the important information disclosure methods to investors.
Local communities	Relevant, always included	We recognize that the risk that low-quality discharges can affect the livelihoods, health and business activities in the downstream area. When water impacts occur, we strive to avoid impacts to local communities by gathering local data for each site and explore countermeasures. We also exchange views on various environmental themes including water at regional roundtable meetings held periodically at each facility as needed.
NGOs	Relevant, always included	There may be some risk of difference of opinion with NGOs due to lack of activities related to water. We constantly gather information on NGO trends and have a framework in place to integrate NGO demands into our environmental action programs. For example, we are providing NGOs, etc. with access to ponds on site property for the purpose of breeding research of an endangered species.
Other water users at a basin/catchment level	Relevant, always included	Depending on the discharges from sites, there may be some risk of affecting in the downstream ecosystems and fisheries. Where there are fishing areas in the drainage area of the site or downstream of the site, sometimes we have entered into agreements with local groups regarding the temperature of the discharges and the amount of floating matter. Therefore, we collect and evaluate information on fishers and other water users as part of our CSR focus.
Regulators	Relevant, always included	There is the risk that production may be stagnated without being able to respond to the strengthening of water regulations. (e.g. Tightening of wastewater quality) We collect information from regulatory authorities on a site-by-site and region-by-region basis at regular intervals and explore measures that will ensure operations at our sites are not impacted. Regarding global trends of water regulations, the corporate headquarters provides updates, which are used to anticipate risks on a regional level. One of the ways to engage with stakeholders is through dialogues with industry-wide organizations, which we have joined, such as the WBCSD's Tire Industry Project, the chemical industry association and the rubber industry association.
River basin management authorities	Relevant, always included	There are risks to be stagnated production if Bridgestone is not address water regulation strengthened. (e.g. Restrictions on water withdrawal volume) One of the ways to engage with stakeholders is face-to-face information exchange. We collect information from river basin management authorities on a site-by-site and region-by-region basis periodically as needed and explore measures that will mitigate impact to operations.
Statutory special interest groups at a local level	Relevant, sometimes included	There is the risk that production may be stagnated without being able to assume water-related issues pointed out by statutory special interest groups at a local level suddenly. As of today, there is no important issue to be tackled in cooperation with statutory special interest groups at local level. One of the ways to engage with stakeholders is face-to-face information exchange. When local issues arise, the potentially impacted site communicate with local groups to gather information, implement and evaluate measures in close liaison with corporate headquarters.
Suppliers	Relevant, always included	We recognize that measures of our suppliers for water risks are important for sustainable procurement, therefore we request suppliers to perform water risk assessments and reduce water withdrawal volumes. For example, we are requesting suppliers to make efforts as a supplier by communicating the importance of reducing water consumption through the opportunities such as "Explanatory meeting of procurement policy" held annually for suppliers.
Water utilities at a local level	Relevant, always included	There is the risk of production stagnation due to lack of sufficient water quality or sufficient amount of water not being supplied. Since water is important to operations, from early stage of site establishment, we are conducting risk assessments to determine whether stable water quality and quantity are available for long term and whether sustainable measures can be implemented. Based on the results of the risk assessments, we continue to discuss with our stakeholders to ensure sufficient water quality and quantity.
Other stakeholder, please specify	Please select	

W3.3d

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

We perform macro analyses with the WBCSD Global Water Tool and WRI Aqueduct. These are the tools most widely utilized worldwide to assess water risks and are considered to provide highly reliable results. We have analyzed the change of water stress (2020, 2030, and 2040) in each of the three climate-related scenarios. In addition to the timing of tool updates and the occurrence of our site closures and our operations' relocating to new sites, we perform water risk assessments at least annually. We are targeting all Bridgestone Group production sites. In addition, since we own sites that produce our raw materials (natural and synthetic rubber, carbon black, steel code, etc.), we are also analyzing some of the raw material procurement stage of the value chain. Since water usage at non-manufacturing sites such as offices and dealers is very small, they are not covered. We do not periodically analyze raw material suppliers and dealers outside our group, but analyze using WRI Aqueduct as necessary. The severity of risk is decided based on the five-rank risk level derived by WRI Aqueduct. As we deal with risks, conditions vary from region to region. So, we collect the following information under the cooperation of municipalities that are closely communicating on a regular basis. Collect information such as regulations, opinions of stakeholders (local governments and communities, NGOs, etc.), water resource information (Usage situation, water volume, price in the area such as city water, groundwater, river water, etc.), and possibility of impact on ecosystem. Based on those information, each SBU (Strategic Business Unit) decides how to deal with 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 GCEC (Global CSR Enhancement Committee) and the Global EXCO (Executive Committee) as necessary.

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?

We consider substantive financial or strategic impact from water risk in case of the status of the highest level of comprehensive water risk (level 5: Extremely high risk) based on WRI Aqueduct analysis. At the moment, this definition is applied to direct operations. We perform analysis on all production sites using WRI Aqueduct once every year.

According to the latest Aqueduct analysis, there was a site corresponding to Level 5. But, the ratio of the water withdrawal of this site to the total is 0.03%, and there 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.

However, we considered the potential for substantive change because operations might be impacted by water risk at all of the production sites under our direct management. (Examples of substantive impact considered; site shutdown due to drought / flood, production cost increase due to soar water cost, etc.)

Our company-specific explanation for the thresholds is below.

- 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)

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	We consider substantive financial or strategic impact from water risk in case of the status of the highest level of comprehensive water risk (level 5: Extremely high risk) based on WRI Aqueduct analysis. At the moment, this definition is applied to direct operations. We perform analysis on all production facilities using WRI Aqueduct once every year. According to the latest Aqueduct analysis, there was a site corresponding to Level 5. But, the ratio of the water withdrawal of this site to the total is 0.03%, and there 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. However, we considered the potential for substantive change because operations might be impacted by water risk at all of the production sites under our direct management. (Examples of substantive impact considered; site shutdown due to drought / flood, production cost increase due to soar water cost, etc.)

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	Not yet evaluated	Because our value chain is very diverse and spread all over the world, we are not yet able to analyze its water risks at the moment. It is under consideration how to analyze the water risk in our value chain.

W4.3

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

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

W4.3a

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

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

In our vulcanizing processes of tire manufacturing sites, the heat and pressure of steam are frequently used. By changing this steam vulcanizing to the Nitrogen vulcanizing, there is a possibility that the steam amount (that is to say, water) can be reduced. Currently in a trial phase at a certain site in USA, potential financial impact figure is estimated that the amount of water withdrawal is to be reduced by about 50,000 cubic meters annually. When we introduce a new technology, we will first test with a testing machine, and if the performance exceeds the initial assumption we will introduce it to the actual production line and further add that line. The introduction of the technology is not limited to one site, and it will be expanded globally and developed to sites using similar equipment. There are about 50 sites that make new tires around the world, and their introduction will bring about significant effects.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

6500000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

Potential financial impact figure is estimated at a certain site that the amount of water withdrawal is expected to be reduced by about 50,000 cubic meters annually. Specifically, the financial impact is calculated by multiplying the unit price of water charges at the site by the amount of water expected to be reduced. In addition, there are more financial effects such as energy savings and operation related.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitments beyond regulatory compliance Commitment to stakeholder awareness and education Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	We are disseminating our water policy through the Sustainability Report etc., not as a single statement. The followings are described based on them. We recognize that the issues of water environment and water resources are not independent issues, but are also related to climate change. We have set the 2020 target of reducing water withdrawal by 35%, which is beyond regulatory compliance. The target is applicable to the entire Group and is a performance standard target for direct operations. In our Environmental Mission Statement, we are promoting stakeholder awareness and education. Security of access to water and public sanitation is incorporated in our production site design manual. To ensure no loss of human right of access to them, each site has created and is active in mechanisms to prevent contamination. We disclose our efforts through CDP Water which is widely-recognized water initiatives. Suppliers are required in the Procurement Guidelines to meet requirements for water.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	The CEO is a member of the board, and has the highest-level responsibility for water-related issues, since the 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.

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 Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Setting performance objectives	Bridgestone, in accordance with its Articles of Incorporation and applicable laws, stipulates in the Regulations of the Board of Directors that the Board of Directors is the highest decision-making body within the company. The restructuring of the Board's authority conducted in February 2018 enables the Board to focus more on deliberations concerning business strategy including: 1)Fundamental management policy the foundation of which includes: -Our global CSR commitment ("Our Way to Serve") -The Environmental Mission Statement one of the important objectives of which is water withdrawal reduction 2)Mid-term policy which incorporates environmental/water issues into its basis of consideration To the Board, situation and progress of execution of the items above are reported quarterly. In addition, executive officer, responsible for Sustainability also report comprehensive activities on CSR and sustainability including environment and water issues which have been once a year reviewed by the Global Executive Committee (Global EXCO), Bridgestone highest-level execution committee. In 2018, (1)Progress of our CSR activities such as education and enhancement of Global CSR commitment - "Our Way to Serve"- one of the 3 priority areas of which is environment including water withdrawal reduction (2)Introduction of "the Sustainable Global Procurement Policy" which contributes to water withdrawal reduction within our whole supply chain were reported to the board.

W6.3

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

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

Chief Executive Officer (CEO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

At Bridgestone, the CEO is the highest-level management position and has ultimate responsibility for management strategy and overall management including water-related issues. And the highest-level committee associated with the Bridgestone Group global business execution is the Global Executive Committee (EXCO). Members of the Global EXCO are nominated from full-time corporate officers by the CEO/COO. Reporting to the Global EXCO, Bridgestone has the Global CSR Enhancement Committee (GCEC) that is comprised of executive officers in charge of CSR and representatives of Strategic Business Units (SBUs) and functions. The GCEC prioritizes CSR initiatives in areas pertaining to a variety of global issues including water, formulates global CSR strategies and tracks the progress of activities in each area. Then, the GCEC reports to the Global EXCO and ask them for decision making on important issues.

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?

No, and we have no plans to do so

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	Bridgestone business strategy links to the Environmental long-term vision and the mid-term target including water withdrawal reduction target. Specifically speaking about water, the long-term vision is "In balance with nature (Contribution > Footprint)" by 2050 and beyond, and the mid-term target is to reduce water withdrawal by 35 percent by 2020 (per unit from a 2005 baseline). Global Environmental Working Group summarizes progress of water withdrawal reduction target and next strategies to achieve the target and reports to Global CSR Enhancement Committee (GCEC). GCEC then report them to the Global Executive Committee (Global EXCO), and Global EXCO considers from a broad and long-term perspective and finalizes management policies taking into account the report. Based on the management policies finalized at Global EXCO, Strategic Business Units (SBUs) reflect it in each Mid-term Management Plan also considering our long-term vision and implement it steadily.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	> 30	Aiming to be "In balance with nature (Contribution> Footprint)" in 2050, as an intermediate milestone, we are working towards the mid-term target of reducing water withdrawal by 35% compared with 2005 in 2020. In order to achieve the mid-term target and the environmental long-term vision, we establish our MTP (Mid-Term Management Plan) yearly, rolling updates to this plan to reflect changes in the operating environment and our outlook for the future. We thereby aim to utilize this plan as an important tool for advancing reforms in the Group's management.
Financial planning	Yes, water-related issues are integrated	> 30	Aiming to be "In balance with nature (Contribution> Footprint)" in 2050, as an intermediate milestone, we are working towards the mid-term target of reducing water withdrawal by 35% compared with 2005 in 2020. Based on this target, each business/site is planning to reduce water withdrawal. In particular, we are planning to update aging equipment and introduce highly efficient equipment in order to reduce the amount of water withdrawal, and we have secured necessary expenses for that purpose systematically while reviewing our MTP (Mid-Term Management Plan) yearly.

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 climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Yes	Bridgestone's mission is "Serving Society with Superior Quality." In line with that mission, we have explored a company-wide business continuity plan that will enable us to earn the trust of all 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 of WRI (World Resources Institute). We have analyzed the change of water stress (2020, 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.

W7.3a

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

No

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.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	To realize our "Environmental mission statement", We have issued a "Bridgestone Group's Long-term Environment Vision" for the year 2050 and have set a goal to be in balance with nature for 2050 and beyond. In order to achieve this goal, we set our quantitative company-wide 2020 target for the reduction of water withdrawal, and we continue monitoring. Since water is the geographically uneven distributed resource, in setting up the group target, each business set its own individual target taking into account local situations and characteristics of each business first of all. After that, we set the company-wide target. Every year, we monitor the performance against site specific targets, business level specific targets and company-wide target and make use of them in further reduction activities. We believe that this goal & target, and efforts towards them will definitely contribute to SDGs' Goal 6, "Ensure availability and sustainable management of water and sanitation for all".

W8.1a

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

Target reference number

Target 1

Category of target

Water withdrawals

Level

Company-wide

Primary motivation

Reduced environmental impact

Description of target

We have a target on water withdrawal per unit to reduce 35% by 2020 compared to 2005. It can contribute to achieving water security in the area where our sites are located and the realization of Goal 6 of SDGs (Goal 6: Ensure availability and sustainable management of water and sanitation for all).

Quantitative metric

% reduction per business unit

Baseline year

2005

Start year

2014

Target year

2020

% achieved

100

Please explain

In 2014, we set a target on water withdrawal per unit to reduce 35% by 2020 compared to 2005. In 2018, the Group exceeded its goal, reducing water withdrawal by 37 percent, reflecting significant improvements over the prior year.

W8.1b

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

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Company-wide

Motivation

Water stewardship

Description of goal

Natural rubber, one of the main raw materials we use, comes from the blessings of biodiversity, we have identified strong correlations between our business operations and biodiversity. Accordingly, our group has laid out a long-term environmental vision for the year 2050 and has set a target to be in balance with nature for 2050 and beyond. The implication of this target is that the quantitative indicators of our contribution to biodiversity should outweigh the quantitative indicators of our impact on biodiversity. This goal is very important for us as it leads to the preservation of biodiversity and also leads to the stable procurement of natural rubber. Activities in water resource conservation and ecosystem protection by our entire group will be important to the achievement of this goal. To implement the goal, for example, our group is reusing/recycling water at many of its manufacturing sites, including operations in areas where there are serious concerns regarding water shortage. It is also using water resources more efficiently by enhancing the production process and using rainwater. And, Bridgestone Americas, Inc. (BSAM) acquired wildlife habitat conservation and environmental education certification from the Wildlife Habitat Council for its 11 Wildlife Habitat Sites in the United States and Mexico. BSAM conserves the natural flora and fauna at each of these sites and provides environmental education opportunities in line with local conditions.

Baseline year

2005

Start year

2012

End year

2050

Progress

Bridgestone has implemented actions worldwide to protect water resources and ecosystems. For example, we have been conducting waterside nature observation events where local communities near the site can participate from 2005. Through this activity (86 times), many people aim to reaffirm the rich nature of Lake Biwa and increase the interest in the environment. Also, in 2010, we launched a project to preserve water-resource forests in Japan. Currently, we have conducted forest preservation activities in 9 districts (Total 107 ha) and held forest preservation events (110 times). These activities are conducted at sites around the world, and their progress is assessed based on the measurable indicators. For example, % of on-site area managed as habitat compared to on-site area, Number of events / participants focused on environmental conservation / education, etc. Through efforts of this kind, we are working to expand our quantitative contributions to the achievement of our long-term vision "In balance with nature" for 2050 and beyond. Since there is no established international index to quantitatively evaluate the "In balance with nature" at present, it is difficult to quantitatively explain the progress of our activities. However, with regard to the reduction of water withdrawal, which is one of its components, we achieved a 37% reduction in 2018 against the target of a 35% reduction by 2020. We believe that we are steadily approaching "In balance with nature".

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Tradeoff

Type of linkage/tradeoff

Increased energy use

Description of linkage/tradeoff

We recognize a trade-off between water withdrawal reduction and energy saving. Using advanced water equipment such as recycling, closed system leads to more efficient water use. On the other hand, higher energy load may be applied compared to the conventional one.

Policy or action

In designing new production sites and introducing new equipment, we have comprehensively examined the supply stability of each water and energy supply in the area, CO2 emissions, cost, etc. as quantitatively as possible, and selected the more appropriate method. This management action is an indicator in considering investment profitability, so it can be said that it is integrated into business strategy. The details are described below. In our tire manufacturing process, we use a large amount of steam and cooling water. So, when introducing new equipment, we compare the amount of CO2 reduction by reducing water withdrawal and the amount of CO2 increase by new equipment beforehand as quantitatively as possible and try to balance them in advance. In addition, in order to avoid becoming a trade-off relationship, a certain site is working to cover the surface of the storage pond so that the water temperature and pH do not rise due to solar radiation. As a result, without using additional energy, we reduce water withdrawal for cooling by tens of thousands of cubic meters a year. In the reporting year, as with last year, there were no major change in the impacts of the trade-off.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

Yes

W10.1a

(W10.1a) 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 - Produced water (City water, Industrial water, Water purchased as steam); W1.2h Row5	ISAE3000	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 the 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.

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 Vice President and Executive Officer Responsible for Global Public Relations, Government Relations and Sustainability	Chief Sustainability Officer (CSO)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No