

# Ajinomoto Co., Inc. CDP Water Security 2020

## W0. Introduction

### W0.1

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

Ajinomoto Co., Inc. is a Japanese company that produces food seasonings, processed foods, sweeteners, amino acids and pharmaceuticals. Ajinomoto is active in 130 countries and regions worldwide, employing around 34,000 people. Yearly net sales stands at 1,100 billion.

### W-FB0.1a

**(W-FB0.1a) Which activities in the food, beverage, and tobacco sector does your organization engage in?**

Processing/Manufacturing

### W0.2

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

	Start date	End date
Reporting year	April 1, 2019	March 31, 2020

### W0.3

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

Belgium  
Brazil  
Cambodia  
China  
France  
India  
Indonesia  
Japan  
Malaysia  
Myanmar  
Peru  
Philippines  
Thailand  
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?**

No

## W1. Current state

### W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water is used for direct amino acid production operation such as dilution of raw material and cleaning for amino acid crystal. We have recognized that a great deal of good fresh water is used for indirect production such as cultivation of agricultural crop for raw material and steam for sterilization of equipment. Therefore, we have regarded this type of water as important. In our business, for direct operations and indirect operations, the sufficient amounts of good quality fresh water will be also important in the future because we will continue to produce processed food and seasoning in the future.
Sufficient amounts of recycled, brackish	Important	Important	Ajinomoto group has regarded this type of water as important, because recycled water is used in direct production operation for cooling our

and/or produced water available for use			products such as amino acid and frozen food, and in indirect production such as cooling raw material. We have been developing a new production technology to decrease recycled water in our plants. In order for effective water use in our value chain, recycled water have been regarded as important in our supply chain. In our business, for direct operations and indirect operations, the recycled water will be also important in the future, because we will continue to cool our products such as processed food and raw material in the future.
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## W-FB1.1a

**(W-FB1.1a) Which water-intensive agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.**

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Maize	Less than 10%	Sourced	Ajinomoto group factories in USA use starch of Maize for raw material of Amino acid fermentation. Maize need much fresh water while nurturing.

## 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 monthly grasp and monitor total volumes of water withdrawals of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to minimize the environmental impact by operation of our factories. We have recognized that it is the important step for plan implementation to measure general quantity and quality of total water intake. Therefore, we had made a plan non-financial targets of

		<p>environment. According to targets, it is important for Ajinomoto group to measure the amount of withdrawals water and the quality of water. Therefore, we monthly monitor water amount used and consider its reduction based on the results.</p>
Water withdrawals – volumes by source	100%	<p>We monthly grasp and monitor volumes by source of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to minimize the environmental impact by operation of our factories. We have recognized that it is the important step for plan implementation to measure general quantity and quality of water intake. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the amount of withdrawals water and the quality of water. Therefore, we monthly monitor water amount used and consider its reduction based on the results.</p>
Water withdrawals quality	100%	<p>We monthly grasp and monitor the quality of water withdrawals of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to minimize the environmental impact by operation of our factories. We have recognized that it is the important step for plan implementation to measure general quantity and quality of water intake. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the amount of withdrawals water and the quality of water. Therefore, we monthly monitor water amount used and consider its reduction based on the results.</p>
Water discharges – total volumes	100%	<p>We monthly grasp and monitor total volumes of water discharges of all relevant sites through Ajinomoto group environmental performance</p>

		<p>survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have recognized that it is the important step for plan implementation to measure discharges water volumes and quality. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the quantity and quality of discharges water. Therefore, we monthly monitor water amount used and consider its reduction based on the results.</p>
Water discharges – volumes by destination	100%	<p>We monthly grasp and monitor volumes by destination of water discharges of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have recognized that it is the important step for plan implementation to measure discharges water volumes and quality. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the quantity and quality of discharges water by destination. Therefore, we monthly monitor water amount used and consider its reduction based on the results.</p>
Water discharges – volumes by treatment method	100%	<p>We monthly grasp and monitor volumes by treatment method of water discharges of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have recognized that it is the important step for plan implementation to measure discharges water volumes and quality. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for</p>

		Ajinomoto group to measure the quantity and quality of discharges water by treatment method. Therefore, we monthly monitor water amount used and consider its reduction based on the results.
Water discharge quality – by standard effluent parameters	100%	We monthly grasp and monitor water discharge quality by standard effluent parameters of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have recognized that it is the important step for plan implementation to measure discharges water quality. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the quality of discharges water by standard effluent parameters. Therefore, we monthly monitor water amount used and consider its reduction based on the results.
Water discharge quality – temperature	100%	We monthly grasp and monitor this data of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been measured in our facilities of less than 25% for Ajinomoto group. Ajinomoto group has recognized that it is important to conserve the environment by operation of our factories. We have recognized that it is the important step for plan implementation to measure discharges water quality. Therefore, we had made a plan non-financial targets of environment. According to targets, it is important for Ajinomoto group to measure the quality of discharges water by standard effluent parameters. Therefore, we monthly monitor the temperature of water discharged.
Water consumption – total volume	100%	We monthly grasp and monitor water consumption volumes of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been calculated in our facilities of 100% for

		Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have calculated water consumption volumes. Therefore, we monthly monitor water amount used and consider its reduction based on the results.
Water recycled/reused	100%	We monthly grasp and monitor water recycled/reused data of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water have been calculated in our facilities of 100% for Ajinomoto group. Ajinomoto group has recognized that it is necessary to conserve the environment by operation of our factories. We have measured amount of recycled/reused water. Therefore, we monthly monitor water amount used and consider its reduction based on the results.
The provision of fully-functioning, safely managed WASH services to all workers	100%	We monthly grasp and monitor this and information about the provision of fully-functioning, safely managed WASH services to all workers of all relevant sites through Ajinomoto group environmental performance survey. The parameter of water is watched in our facilities of 100% for Ajinomoto group. We consider it is important for our employee to lead healthy and comfortable life. Therefore, we recognize that offering safe water and the clean environment to the employee is obligation for us. Therefore, we monthly monitor water amount used and consider its reduction based on the results.

## 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	66,900	About the same	Total withdrawals in FY 2019 is about the same that of previous fiscal year (lower than that of previous fiscal year by 4%), because the amount of production was lower than that of

			<p>previous year by 4%. Ajinomoto group has used industrial water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous fiscal year is accident error. We estimate that amount used may increase accompanying our merger and acquisition in the future, however, at the same time, we will reduce water consumption intensity by technology development, reducing, reusing, or recycling.</p>
Total discharges	52,300	Lower	<p>Total discharges is lower than that of previous fiscal year by 6%, because the amount of production was lower than that of previous year by 4%. Ajinomoto group has used discharge water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group considers that under 5% difference data from previous fiscal year is accidental error. We estimate that the amount of total discharges may increase accompanying our merger and acquisition in the future. However, at the same time, we will try to reduce water consumption intensity by technology development, reducing, reusing, or recycling.</p>
Total consumption	14,600	About the same	<p>Total consumption in FY 2019 is about the same (higher than that of previous fiscal year by 4%), because the amount of production was lower than that of previous year by 4%.. This is within the range of error, because both amount of withdrawals and discharges were about the same by considering meter accuracy and production volume. Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We estimate that amount used may increase accompanying our merger and acquisition in the future, however, at the same time, we will reduce water consumption intensity by technology development, reducing, reusing, or recycling.</p>

## W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	Less than 1%	About the same	WRI Aqueduct	Ajinomoto group factories producing amino acid use much withdrawal water. We have assessed these factories by AQUEDUCT and factory detail information. By utilizing AQUEDUCT and detail information, we recognize which factories are exposed to high water stress. We have selected factory located in water stressed area in terms of focusing Baseline Water Stress and Groundwater Stress of the assessment results. The factory located in water stressed area among Ajinomoto group is only Peru. From the previous reporting fiscal year, the amount of water withdrawals from area with water stress has decreased by 9%.

## W-FB1.2e

(W-FB1.2e) For each commodity reported in question W-FB1.1a, do you know the proportion that is produced/sourced from areas with water stress?

Agricultural commodities	The proportion of this commodity produced in areas with water stress is known	The proportion of this commodity sourced from areas with water stress is known	Please explain
Maize	Not applicable	Yes	We assess supplier based on "Ajinomoto Group Policies" (4.4 We involve our subcontractors and suppliers in our efforts to

			<p>fulfill our social responsibilities, including environmental preservation and protection of human rights.) and “Group Shared Policy for Suppliers (5. Taking into Consideration the Global Environment), Guidelines for Group Shared Policy for Suppliers (5. Taking into Consideration the Global Environment). Therefore, we have not purchased raw material from water stress area. By using Aqueduct and factory detail information, we identify the area around Peru factory as water stressed area. Peru factory has used Sucrose or Cane Molasses for raw material. The factory has never used maize starch.</p>
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## W-FB1.2g

**(W-FB1.2g) What proportion of the sourced agricultural commodities reported in W-FB1.1a originate from areas with water stress?**

Agricultural commodities	% of total agricultural commodity sourced from areas with water stress	Please explain
Maize	0%	<p>We assess supplier based on “Ajinomoto Group Policies” (4.4 We involve our subcontractors and suppliers in our efforts to fulfill our social responsibilities, including environmental preservation and protection of human rights.) and “Group Shared Policy for Suppliers (5. Taking into Consideration the Global Environment), Guidelines for Group Shared Policy for Suppliers (5. Taking into Consideration the Global Environment). Therefore, we have not purchased raw material from water stress area. The Group head quarter is reported every month kinds and quantities their raw material by all Group factories to confirm no water stress. Peru factory has used Sucrose or Cane Molasses for raw material. The factory has never used maize starch. We assume that we will be able to reduce approximately 10% volume/intensity of involved agricultural commodities after installing innovation new technology.</p>

## 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	19,600	Lower	<p>Comparison with this fiscal reporting year is 5% lower than the previous fiscal year. Because, amount of production was decreased by 4% from previous year. Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water which participates directly in these products is essential for our operations. Therefore, the Group has measured amount of this kind of water. Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We assume that we are able to reduce approximately 5% volume/intensity of involved water after installing innovation new technology.</p>
Brackish surface water/Seawater	Not relevant			<p>Ajinomoto group has not used this kind of water. Because the group has produced amino acid and frozen food by fresh water for safety eating people. We had answered not relevant of this data from previous reporting year.</p>
Groundwater – renewable	Not relevant			<p>Ajinomoto group has not used this kind of water.</p>

				Because the group has produced amino acid and frozen food by fresh water for safety eating people. We had answered not relevant of this data from previous reporting year.
Groundwater – non-renewable	Relevant	14,400	About the same	Groundwater (non-renewable) in FY 2019 is about the same (lower than that of previous fiscal year by 4%). This is within the range of error, because amount of production was about the same. Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water which participates directly in these products is essential for our operations. Therefore, the Group has measured amount of this kind of water. Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We estimate that amount used may increase accompanying our merger and acquisition in the future, however, at the same time, we will reduce water consumption intensity by technology development, reducing, reusing, or recycling.
Produced/Entrained water	Not relevant			Ajinomoto group has not used this kind of water. Because the group has produced amino acid and frozen food by fresh water for

				safety eating people. We had answered not relevant of this data from previous reporting year.
Third party sources	Relevant	33,000	About the same	<p>Third party sources water in FY 2019 is about the same (lower than that of previous fiscal year by 3%). This is within the range of error, because amount of production was about the same. Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water which participates directly in these products is essential for our operations. Therefore, the Group has measured amount of this kind of water.</p> <p>Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We estimate that amount used may increase accompanying our merger and acquisition in the future, however, at the same time, we will reduce water consumption intensity by technology development, reducing, reusing, or recycling.</p>

## W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
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Fresh surface water	Relevant	41,000	Lower	Comparison with this fiscal reporting year is 8% lower than the previous fiscal year. Because, amount of production was decreased by 4% from previous year. Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of treated waste water have discharged to fresh surface water. Therefore, the Group has measured amount of this kind of water. Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We assume that we are able to reduce approximately 5% volume/intensity of involved water after installing innovation new technology.
Brackish surface water/seawater	Not relevant			Ajinomoto group do not discharge to Brackish surface water/seawater. Because the group has produced amino acid and frozen food by fresh water for safety eating people. We had answered not relevant of this data from previous reporting year.
Groundwater	Not relevant			Ajinomoto group do not discharge to Groundwater. Because the group has produced amino acid and frozen food by fresh water for safety eating people. We had answered not relevant of this data from previous reporting year.
Third-party destinations	Relevant	11,300	About the same	Third party destinations in FY 2019 is about the same. This is within the range of error, because amount of production was about the same. Ajinomoto group produces amino acid, processed food and seasoning. We have

				<p>recognized that waste water should treat third-party destination not to discharge directly. Therefore, the Group has measured amount of this kind of water. Ajinomoto group has used water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 5% difference data from previous year is accident error. We estimate that amount used may increase accompanying our merger and acquisition in the future, however, at the same time, we will reduce water consumption intensity by technology development, reducing, reusing, or recycling.</p>
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### W-FB1.3

**(W-FB1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a?**

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Maize	Not applicable	Yes	<p>Ajinomoto group factories have measured and evaluated every month productivity based on input unit consumption of raw material and fuel and energy and water. Only Ajinomoto group factories in USA use maize starch. Ajinomoto group factories in USA also have measured and evaluated every month productivity based on unit consumption of raw material (Maize starch also) and so on. Ajinomoto group has assessed water footprint of some products for understanding water risk. Ajinomoto group had evaluated water footprint of products in</p>

			USA using water inventory of maize starch and so on. Water risk of these products are not so serious.
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## W-FB1.3b

**(W-FB1.3b) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3 that you source.**

### Agricultural commodities

Maize

### Water intensity value (m3)

757.8

### Numerator: Water aspect

Freshwater withdrawals

### Denominator

Tons

### Comparison with previous reporting year

About the same

### Please explain

Only Ajinomoto group factories in USA use maize starch. Ajinomoto group factories including in USA have measured and evaluated every month productivity based on unit consumption of raw material (Maize starch also) and so on. Ajinomoto group have assessed water footprint of some products for understanding water risk. Ajinomoto group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious. Water intensity in this question is cited from Water Footprint Network. Therefore, water intensity value of maize is the same as previous year. Comparison with the previous reporting year is same as this year because we had just referred from Water footprint Network. Water intensity will be lower in the future. Nevertheless, the group factories including in USA have been analyzing and decreasing input unit consumption of raw material by developing new strain.

## 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**

Less than 1%

#### **% of total procurement spend**

1-25

#### **Rationale for this coverage**

We have requested answering CDP Supply chain program to our suppliers that are big chemical companies and the main raw material companies in Thailand and Brazil and France and USA. The reason why we selected these suppliers is water footprint account for 90% by raw material such as amino acid. We consider that decreasing water dependency should be tackled by cooperating with raw material suppliers. We consider that we are going to expand a number of our suppliers step by step. The first step as 2017 had selected large suppliers which respond to CDP. The second step as 2018-2020 has selected critical suppliers. Instead of requesting all of our suppliers on their water use, we have investigated the water consumption, the water risk and the management of water about raw material by Water Footprint and WBCSD global water tool and AQUEDUCT. In addition, we have asked our suppliers to recognize the necessity of management of water risk. We will apply long-term contract for good suppliers.

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

The information that we asked for suppliers; Ajinomoto group had asked selected suppliers to answer and disclose all water information such as water use, risk and/or management at CDP Supply chain program. How we use the information; The group had analyzed water withdrawal intensity compared same business category from CDP Supply chain program. The measures of success; The group considers success our this initiative after starting to decrease water consumption with our suppliers. We make efforts to get suppliers' information of water use, risk and/or management. In order to collect the information effectively, we have requested our suppliers to mention about their environmental protection and CSR active by showing "Guideline for Group Shared Policy for Suppliers". By using the information that we get from suppliers, we try to decrease water-related impact by suppliers. We will apply long-term contract for good suppliers.

#### **Comment**

Ajinomoto group has joined CDP supply chain program and SEDEX. Therefore, via CDP supply chain program, they are to be evaluated in our supplier score card.

## W1.4b

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

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#### **Type of engagement**

Onboarding & compliance

#### **Details of engagement**

Requirement to adhere to our code of conduct regarding water stewardship and management

#### **% of suppliers by number**

1-25

#### **% of total procurement spend**

26-50

#### **Rationale for the coverage of your engagement**

We have asked all suppliers for Ajinomoto Co., Inc. to abide "Guideline for Group Shared Policy for Suppliers".

In fiscal 2018, the Group held explanatory meetings and issued written notices to primary suppliers in Japan in preparation for requesting that they join and share data through Sedex.

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

In 2016, the Group had conducted another supplier survey to promote mutual understanding by confirming whether the Group and its suppliers were achieving adequate two-way communication in accordance with company standards, and by incorporating supplier requests into future policies and actions. The Group also developed a self-assessment questionnaire (SAQ) for suppliers to assess performance on socially responsible procurement. It has periodically asked suppliers to answer the SAQ and provided feedback on their responses. SAQ include items on fostering pleasant working environments, fulfilling social responsibility obligations, and food defense management in production bases. The measures of success; The Group has evaluated and communicated with suppliers using Sedex from fiscal 2019, it also collect information from suppliers that do not join by asking them to respond to a self-assessment questionnaire similar to that used by Sedex. Participation in 2018: 340 suppliers.

#### **Comment**

The Group held explanatory meetings and issued written notices to primary suppliers in Japan in preparation for requesting that they join and share data through Sedex. The Group has evaluated and communicated with suppliers using Sedex from fiscal 2019, and it also collect information from suppliers that do not join by asking them to respond to a self-assessment questionnaire similar to that used by Sedex.

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**Type of engagement**

Innovation & collaboration

**Details of engagement**

Provide training and support on sustainable agriculture practices to improve water stewardship

**% of suppliers by number**

1-25

**% of total procurement spend**

1-25

**Rationale for the coverage of your engagement**

The Ajinomoto Group produces the amino acids used in its products through fermentation processes from crops that are easily available in each region. Nearly 100% of the nutritionally rich by-products (co-products) that remain after extracting amino acids in the fermentation process are then used as fertilizer and feed. The Group considers such recycling-based amino acid fermentation processes that procure sustainable agricultural production while enriching regional agriculture as “bio-cycles.” These bio-cycles are a means of simultaneously contributing to reliable supplies of food resources and realizing sustainable agriculture. For this reason, the Group is introducing these cycles at its fermentation factories worldwide. Leveraging its accumulated expertise, the Group is also actively guiding farmers on raising value-added crops and quality control, provide training and support on sustainable agriculture practices to improve water stewardship.

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

For example, Ajinomoto Co., (Thailand) Ltd. has been providing co-products as organic fertilizers to farmers near the plant for more than 40 years. Its agricultural subsidiary, FD Green (Thailand) Co., Ltd. (FDG), is handling the overall sales of co-products since 2001.

Leveraging its accumulated expertise, FDG is also actively guiding farmers on raising value-added crops and quality control in recent years. FDG then purchases these crops for use in Ajinomoto Group products and new value-added local products, thereby creating a new cycle. The Group’s relationship with farmers developed over many years helped to inexpensively and steadily procure raw materials of stable quality, as it brings profits to local farmers and food processing industries in a positive cycle.

**Comment**

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**Type of engagement**

Innovation & collaboration

**Details of engagement**

Provide training and support on sustainable agriculture practices to improve water stewardship

**% of suppliers by number**

Less than 1%

**% of total procurement spend**

Less than 1%

**Rationale for the coverage of your engagement**

Water is an indispensable ingredient in the bottled and instant coffee products made by Ajinomoto AGF, Inc. The company's production bases, AGF Suzuka, Inc. and AGF Kanto, Inc., withdraw water from the Suzuka River and Arato River (a tributary of the Tone River), whose sources trace back to forests located in the foothills of the Suzuka Mountains and the south foothills of Mount Akagi, respectively. Forest of Blendy® is an initiative aimed at conserving these forests for future generations by actively managing a portion of them and learning the importance of sustaining wildlife and clean water.

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

The company's production bases, AGF Suzuka, Inc. and AGF Kanto, Inc., withdraw water from the Suzuka River and Arato River (a tributary of the Tone River), whose sources trace back to forests located in the foothills of the Suzuka Mountains and the south foothills of Mount Akagi, respectively. Forest of Blendy® is an initiative aimed at conserving these forests for future generations by actively managing a portion of them and learning the importance of sustaining wildlife and clean water. As of March 2017, groundwater (recharge volume) from the Forest of Blendy® accounted for about 20% of the water used in Blendy® bottled coffee produced at two factories. Ajinomoto AGF, Inc. aims to expand the area to five times compared to the size as of March 2017 by fiscal 2025 to cover all of the water used in the product with groundwater (recharge volume) supplied by Forest of Blendy®. As of March 2018, the contract area was expanded to 21.8 ha in sum, which is about 4.2 times.

**Comment**

## 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?**

No

## W3. Procedures

### W-FB3.1

#### **(W-FB3.1) How does your organization identify and classify potential water pollutants associated with its food, beverage, and tobacco sector activities that could have a detrimental impact on water ecosystems or human health?**

The method used to identify the potential water pollutants and details on whether the company follows an established standard; Ajinomoto group manufactures several kinds of amino acid, many processed food and seasoning. The Group factories which produce several kinds of amino acids among the Group products, have used much water for starch raw material dissolution and products/facilities for cleaning, and have used much nitrogen for fermentation. Discharged waste water from these Group factories contain nitrogen and biochemical oxygen demand (BOD). There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has set voluntary waste water standard about nitrogen and BOD, there is no country with regulations that go beyond our voluntary standard now. Our voluntary waste water standards are BOD  $\leq 10$ ppm and total-nitrogen  $< 5$ ppm. The Group factories have measured every day BOD and total-nitrogen of their treated waste water before discharge to confirm preserving the Group voluntary standard and prevent water pollution. The Group is committed to developing water-saving processes. Our target is: Water consumed per unit of production 80% or more reduction (compared to fiscal 2005).

What types of water-related impacts on ecosystems and human health; Among the Group, factories producing amino acid consume much water and much ammonia and so on. There are discharged waste water contained high concentration nitrogen from facilities in these factories. There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has identified potential water pollutants associated with its discharged treatment waste water that could have a detrimental impact on water ecosystem and human health. Therefore, to reduce the high concentration of nitrogen and high levels of biochemical oxygen demand (BOD) in process effluent from the production of amino acid fermentation-related products, the Ajinomoto Group has implemented measures to control pollutant sources, and has developed advanced treatment technologies best suited to the quality of effluent water at each site. Our voluntary waste water standards are BOD  $\leq 10$ ppm and total-nitrogen  $< 5$ ppm. This is half the harshest requirement value (20ppm) from any regulation in the world. In addition, based on its belief that it is vital to minimize water usage, the Group is committed to developing water-saving processes. Our target is Water consumed per unit of production 80% or more reduction (compared to fiscal 2005). The Group factories have measured every day BOD and total-nitrogen of their treated waste water before discharge to confirm preserving the Group voluntary standard and prevent water pollution. The group have assessed water footprint of amino acid products for identifying potential water pollutants associated with entire our value chain. The group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious. Information on whether and how the water-related impacts considered vary across the value chain. There is

discharged waste water contain high concentration nitrogen from facilities in these factories. The group has identified potential water pollutants associated with its discharged treatment waste water that could have a detrimental impact on water ecosystem and human health.

## W-FB3.1a

**(W-FB3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your food, beverage, and tobacco sector activities.**

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### Potential water pollutant

Food additives

### Activity/value chain stage

Manufacturing – direct operations

### Description of water pollutant and potential impacts

Ajinomoto group manufactures several kinds of amino acid, many processed food and seasoning. The Group factories which produce several kinds of amino acids among the Group products, have used much water for starch raw material dissolution and products/facilities for cleaning, and have used much nitrogen for fermentation. Discharged waste water from these Group factories contain nitrogen and biochemical oxygen demand (BOD). There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has set voluntary waste water standard about nitrogen and BOD, there is no country with regulations that go beyond our voluntary standard now. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen  $<$  5ppm. The Group is committed to developing water-saving processes. Our target is: Water consumed per unit of production 80% or more reduction (compared to fiscal 2005).

The group has identified potential water pollutants associated with its discharged treatment waste water that could have a detrimental impact on water ecosystem and human health.

Therefore, to reduce the high concentration of nitrogen and high levels of BOD in process effluent from the production of amino acid fermentation-related products, the Ajinomoto Group has implemented measures to control pollutant sources, and has developed advanced treatment technologies best suited to the quality of effluent water at each site. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen  $<$  5ppm. This is half the harshest requirement value (20ppm) from any regulation in the world. In addition, based on its belief that it is vital to minimize water usage, the Group is committed to developing water-saving processes. Our target is Water consumed per unit of production 80% or more reduction (compared to fiscal 2005). The group have assessed water footprint of amino acid products for identifying potential water pollutants associated with entire our value chain. The group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious.

## Management procedures

- Waste water management
- Product innovation
- Follow regulation standards

## Please explain

Ajinomoto group manufactures several kinds of amino acid, many processed food and seasoning. The Group factories which produce several kinds of amino acids among the Group products, have used much water for starch raw material dissolution and products/facilities for cleaning, and have used much nitrogen for fermentation. Discharged waste water from these Group factories contain nitrogen and biochemical oxygen demand (BOD). There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has set voluntary waste water standard about nitrogen and BOD, there is no country with regulations that go beyond our voluntary standard now. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen  $<$  5ppm. The Group is committed to developing water-saving processes. Our target is: Water consumed per unit of production 80% or more reduction (compared to fiscal 2005).

The group has identified potential water pollutants associated with its discharged treatment waste water that could have a detrimental impact on water ecosystem and human health.

Therefore, to reduce the high concentration of nitrogen and high levels of BOD in process effluent from the production of amino acid fermentation-related products, the Ajinomoto Group has implemented measures to control pollutant sources, and has developed advanced treatment technologies best suited to the quality of effluent water at each site. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen  $<$  5ppm. This is half the harshest requirement value (20ppm) from any regulation in the world. In addition, based on its belief that it is vital to minimize water usage, the Group is committed to developing water-saving processes. Our target is Water consumed per unit of production 80% or more reduction (compared to fiscal 2005). The group have assessed water footprint of amino acid products for identifying potential water pollutants associated with entire our value chain. The group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious.

## Potential water pollutant

Wastewater and sludge with high organic or suspended solids content

## Activity/value chain stage

Manufacturing – direct operations

## Description of water pollutant and potential impacts

Ajinomoto group manufactures several kinds of amino acid, many processed food and seasoning. The Group factories which produce several kinds of amino acids among the Group products, have used much water for starch raw material dissolution and

products/facilities for cleaning, and have used much nitrogen for fermentation. Discharged waste water from these Group factories contain nitrogen and biochemical oxygen demand (BOD). There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has set voluntary waste water standard about nitrogen and BOD, there is no country with regulations that go beyond our voluntary standard now. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen <5ppm. The Group is committed to developing water-saving processes. Our target is: Water consumed per unit of production 80% or more reduction (compared to fiscal 2005).

The group has identified potential water pollutants associated with its discharged treatment waste water that could have a detrimental impact on water ecosystem and human health.

Therefore, to reduce the high concentration of nitrogen and high levels of BOD in process effluent from the production of amino acid fermentation-related products, the Ajinomoto Group has implemented measures to control pollutant sources, and has developed advanced treatment technologies best suited to the quality of effluent water at each site. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen <5ppm. This is half the harshest requirement value (20ppm) from any regulation in the world. In addition, based on its belief that it is vital to minimize water usage, the Group is committed to developing water-saving processes. Our target is Water consumed per unit of production 80% or more reduction (compared to fiscal 2005). The group have assessed water footprint of amino acid products for identifying potential water pollutants associated with entire our value chain. The group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious.

### **Management procedures**

- Waste water management
- Product innovation
- Follow regulation standards

### **Please explain**

Ajinomoto group manufactures several kinds of amino acid, many processed food and seasoning. The Group factories which produce several kinds of amino acids among the Group products, have used much water for starch raw material dissolution and products/facilities for cleaning, and have used much nitrogen for fermentation. Discharged waste water from these Group factories contain nitrogen and biochemical oxygen demand (BOD). There are waste water quality regulations of nitrogen and BOD for preventing detrimental impacts on water ecosystems and human health at all concerned area of these Group factories. The group has set voluntary waste water standard about nitrogen and BOD, there is no country with regulations that go beyond our voluntary standard now. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen <5ppm. The Group is committed to developing water-saving processes. Our target is: Water consumed per unit of production 80% or more reduction (compared to fiscal 2005).

The group has identified potential water pollutants associated with its discharged

treatment waste water that could have a detrimental impact on water ecosystem and human health.

Therefore, to reduce the high concentration of nitrogen and high levels of BOD in process effluent from the production of amino acid fermentation-related products, the Ajinomoto Group has implemented measures to control pollutant sources, and has developed advanced treatment technologies best suited to the quality of effluent water at each site. Our voluntary waste water standards are BOD  $\leq$  10ppm and total-nitrogen <5ppm. This is half the harshest requirement value (20ppm) from any regulation in the world. In addition, based on its belief that it is vital to minimize water usage, the Group is committed to developing water-saving processes. Our target is Water consumed per unit of production 80% or more reduction (compared to fiscal 2005). The group have assessed water footprint of amino acid products for identifying potential water pollutants associated with entire our value chain. The group had evaluated water footprint of products in USA using water inventory of maize starch and so on. Water risk of these products are not so serious.

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## **Potential water pollutant**

Fertilizers

## **Activity/value chain stage**

Agriculture – supply chain

## **Description of water pollutant and potential impacts**

If farmers use too much chemical fertilizers, their farm land is polluted by chemical fertilizers. Therefore, the Ajinomoto group has sold organic fertilizer as follow explanation. The Ajinomoto Group produces amino acids at 18 plants across nine countries worldwide. Since its establishment, the Group has produced these amino acids through a fermentation process using crops that are readily available in each region, such as sugar cane, cassava, corn, and sugar beet, as raw materials. In the process, amino acids are extracted from a fermentation liquor, leaving behind nutritionally rich by-products (co-products) that are then almost completely used locally as fertilizer for agricultural crops and as feed for livestock, including farmed fish. The Ajinomoto Group has been employing such regional resource recycling processes (bio-cycles) in amino acid production worldwide for more than 40 years. Manufacturing amino acids without using the fermentation process would lead to the depletion of resources. The sustainability of the Group's business depends on the continued pursuit of a resource-efficient manufacturing process.

Although co-products by itself can be used as nutrient-rich organic fertilizer, research is also being conducted on further improving their effectiveness and turning them into higher value added agricultural materials with nutritionally balanced amino acids and minerals essential to plants. Through this research, the Group is helping add value and improve the productivity and quality of agricultural crops. Going forward, the Group will continue creating bio-cycle models that are beneficial to all three parties: local farmers, food processing industries, and the Ajinomoto Group.

## Management procedures

Soil conservation practices  
Crop management practices  
Fertilizer management

## Please explain

Ajinomoto Co., (Thailand) Ltd. has been providing co-products as organic fertilizers to farmers near the plant for more than 40 years. Its agricultural subsidiary, FD Green (Thailand) Co., Ltd. (FDG), is handling the overall sales of co-products since 2001. Leveraging its accumulated expertise, FDG is also actively guiding farmers on raising value-added crops and quality control in recent years. FDG then purchases these crops for use in Ajinomoto Group products and new value-added local products, thereby creating a new cycle. The Group's relationship with farmers developed over many years helped to inexpensively and steadily procure raw materials of stable quality, as it brings profits to local farmers and food processing industries in a positive cycle.

Going forward, the Ajinomoto Group aims to develop a framework for compliance with the Supplier CSR Guidelines to further strengthen this relationship. Through the sales of co-products and raw material procurement, FDG will continue acting as the bridge connecting the Ajinomoto Group and the farmers.

A new proposition called the circular economy is currently spreading across Europe. This concept encompasses reduction of waste and disposal, recycling, sharing, and more, along with environmental conservation as a strategy for economic growth.

The Ajinomoto Group has been continuously engaged in various initiatives that make full use of energy and food resources without waste, such as bio-cycles. Through these initiatives, the Group takes pride in enriching local agriculture and economic activities in areas where it produces the ingredients required for its business growth.

However, the Group recognizes that there is still room for improvement to make consumer lifestyles more environmentally friendly. Although forming a complete cycle is difficult given the constraints, such as the legal system and organization, the Ajinomoto Group aims to be a hub for creating "circulation" for the whole society, in collaboration with every consumer.

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## Potential water pollutant

Manure and slurries

## Activity/value chain stage

Distribution – supply chain

## Description of water pollutant and potential impacts

Amount of livestock manure and GHG emission control may be applied to livestock industry. The Ajinomoto Group has been exploiting worldwide markets for feed-use amino acids for more than 40 years. With lysine, threonine, and tryptophan as its main feed-use amino acids, the Group has long been a leader in the markets for these products. Feeds with a good balance of amino acids help to reduce impact on soil and water from livestock manure and greatly reduce greenhouse gas emissions. They also help to reduce the amount of land required for feed crop cultivation. The Ajinomoto

Group's feed products are gaining worldwide attention. Conventional livestock feed is a combination of soybean meal and energy-giving grains like corn and wheat. However, it contains more of certain amino acids than can be effectively used by the animal's body. As a result, amino acids are excreted as nitrogen compounds. In addition to having a negative impact on soil and water quality, part of this nitrogen is released into the atmosphere as N<sub>2</sub>O, which promotes global warming. The greenhouse gas effect of N<sub>2</sub>O is 300 times greater than that of CO<sub>2</sub>. By giving low-protein feed fortified with feed-use amino acids to livestock, it is possible to reduce the amount of nitrogen in the animal waste by 30% for example, which helps to curtail the greenhouse gas effect.

### Management procedures

- Livestock management
- Soil conservation practices
- Waste water management

### Please explain

Amount of livestock manure and GHG emission control may be applied to livestock industry. The Ajinomoto Group has been exploiting worldwide markets for feed-use amino acids for more than 40 years. With lysine, threonine, and tryptophan as its main feed-use amino acids, the Group has long been a leader in the markets for these products. Feeds with a good balance of amino acids help to reduce impact on soil and water from livestock manure and greatly reduce greenhouse gas emissions. They also help to reduce the amount of land required for feed crop cultivation. The Ajinomoto Group's feed products are gaining worldwide attention. Conventional livestock feed is a combination of soybean meal and energy-giving grains like corn and wheat. However, it contains more of certain amino acids than can be effectively used by the animal's body. As a result, amino acids are excreted as nitrogen compounds. In addition to having a negative impact on soil and water quality, part of this nitrogen is released into the atmosphere as N<sub>2</sub>O, which promotes global warming. The greenhouse gas effect of N<sub>2</sub>O is 300 times greater than that of CO<sub>2</sub>. By giving low-protein feed fortified with feed-use amino acids to livestock, it is possible to reduce the amount of nitrogen in the animal waste by 30% for example, which helps to curtail the greenhouse gas effect. When essential amino acids of soybean meals were partially replaced by industrially manufactured amino acids (forming a low-protein feed), the carbon and water-consumption footprints in France were lowered by 0.41 t-CO<sub>2</sub>/t-feed and 100 m<sup>3</sup>/t-feed, respectively. The low-protein feed also incurred a 10% lower water-eutrophication footprint in comparison with the conventional feed.

## 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

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### 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?

More than 6 years

### Type of tools and methods used

Tools on the market  
Enterprise Risk Management  
International methodologies  
Databases

### Tools and methods used

Water Footprint Network Assessment tool  
WRI Aqueduct  
Environmental Impact Assessment  
Life Cycle Assessment  
FAO/AQUASTAT

### Comment

[Drought impact to direct operation] We have set key targets to reduce discharged water and water consumption by 80% compared to FY 2005. [Flood impact to direct operation] As part of the investigating on the Business Continuity Plan. As part of the investigation on the BCP, we have improved the height of plant outer wall. [Drought and Flood impact to suppliers] There is a huge coverage area where suppliers of agricultural irrigation are located. We have purchased raw material from some area.

## Supply chain

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### 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?

More than 6 years

### Type of tools and methods used

Tools on the market

Enterprise Risk Management  
International methodologies  
Databases

### **Tools and methods used**

Water Footprint Network Assessment tool  
WRI Aqueduct  
Environmental Impact Assessment  
Life Cycle Assessment  
FAO/AQUASTAT

### **Comment**

[Drought and Flood impact to suppliers] The level of water risk of agricultural crop is high. There is a huge coverage area where suppliers and facilities of agricultural irrigation are located. Therefore, we have purchased raw material from a number of area and suppliers.

The Group has been effectively utilizing the nutrient-rich co-products of amino acid production as organic-type fertilizer. By fortifying these co-products with suitable amounts of phosphoric acid and potassium. Continued experiments and researches have been revealing these amino acid enriched fertilizers to have an enhancing effect on root development, plant growth, and harvest yields. Ajinomoto Brasil (ABR) sells AJIFOL® made from fermentation co-products mainly to coffee and fruit producers. ABR's fertilizers have been used by farmers for more than a decade and are recognized for their effectiveness. More coffee farmers with sustainability goals have been taking steps to shift from chemical fertilizers to ABR's fertilizers at full scale.

The Africa Rice Center is undertaking a project to increase the country's self-sufficiency in rice as a food staple. The Group have been participating in this project in Côte d'Ivoire since 2017. Using test samples of factory co-products from France, their research has shown benefits for more efficient rice development without negative impacts on the soil. Through this project, they aim to contribute to food security and improved nutrition for local people.

### **Other stages of the value chain**

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#### **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?**

More than 6 years

#### **Type of tools and methods used**

Tools on the market  
Enterprise Risk Management

International methodologies  
Databases

### Tools and methods used

Water Footprint Network Assessment tool  
WRI Aqueduct  
Environmental Impact Assessment  
Life Cycle Assessment  
FAO/AQUASTAT

### Comment

The Group has assessed and planned transportation of raw material and our products when drought and flood occur.

## 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	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity (availability) of flow of river basin are monitored. We have evaluated water availability issue by Internal company knowledge and WBCSD global water tool and AQUEDUCT and Water Footprint, because this element directly affects our future production volume. Water availability is, we should take it into account in order to reduce the water risk in the future such as water scarcity and flood risk. We collect information of water regulation from river basin of each of our plant from regulators. We revise assets investment plan with middle term management plan. We have set key targets which are reducing discharged water and water consumption by 80% compared to FY 2005. We had decreased 78% of these targets at FY 2019. We have investigated Business Continue Plan. We have improved height of plant outer wall and others. We have reviewed and revised Business Continue Plan.
Water quality at a basin/catchment level	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity of flow of river basin are monitored. We have evaluated water quality issue by Internal company knowledge and WBCSD global water

		<p>tool and AQUEDUCT and Water Footprint, because this element directly affects our future production volume. Water quality is, we should take it into account in order to reduce the water risk in the future such as water scarcity and flood risk. We collect information of water regulation from river basin of each of our plant from regulators. We revise assets investment plan with middle term management plan. We have set key targets which are reducing discharged water and water consumption by 80% compared to FY 2005. We had decreased 78% of these targets at FY 2019. We have investigated Business Continue Plan. We have improved height of plant outer wall and others. We have reviewed and revised Business Continue Plan.</p>
<p>Stakeholder conflicts concerning water resources at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity of flow of river basin is monitored. We have evaluated stakeholder conflict issue by Internal company knowledge and Life Cycle Assessment and WBCSD global water tool and AQUEDUCT and Water Footprint. We should obtain the permissions by the local residents for our operation, therefore, stakeholder conflict is an important element for us. We judge that it is not supposed to be opposition with a stakeholder in water use. We have a discussion with residents living in the vicinity our factories so that a quarrel with a local resident does not occur.</p>
<p>Implications of water on your key commodities/raw materials</p>	<p>Relevant, always included</p>	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity of flow of river basin are monitored. We have evaluated water quality issue by Internal company knowledge and WBCSD global water tool and AQUEDUCT and Water Footprint, because this element directly affects our future production volume. Implication of water on our raw material is a very important element in food manufacture because we have purchased raw material from a number of area and suppliers. The water quality will be a very important element in food manufacture. We have kept optimized stock of raw materials and products for applying each area. We conclude the autonomous body in an area which constructs our factory and contract of surety-ship about water which extends over a long term in more than 10 years. Therefore, the possibility of water scarcity and</p>

		<p>water contamination which is bad influence to business is low. We also work on Research and Development of next-generation production technologies that minimize the use of crops that receive competing demand from amino acid production and food.</p>
Water-related regulatory frameworks	Relevant, always included	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity of flow of river basin is monitored. The regulatory framework on the water is an important element for us, because the element affects our production and facilities. Therefore, we collect information about future potential regulatory changes at river basin of each our plant from regulator, consider improving our facilities by using Internal company knowledge. The price and tariffs of the water are also important elements for us. We collect information of the price and tariffs of the water. We have evaluated water related regulatory framework issue by Internal company knowledge and Water Footprint and WBCSD global water tool and AQUEDUCT and Water Footprint. We revise assets investment plan with middle term management plan. We have set key targets which are reducing discharged water and water consumption by 80% compared to FY 2005.</p>
Status of ecosystems and habitats	Relevant, always included	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. In our plants, the quality and the quantity of flow of river basin is monitored. We have evaluated status of ecosystems and habitats issue by Internal company knowledge and Water Footprint and WBCSD global water tool and AQUEDUCT and Water Footprint, because status of ecosystems and habitats issue is an important factor for us. Status of ecosystems and habitats issue is, we should operate our plants without destroying ecosystems and habitats at a local level in order to keep global sustainability. Currently, there is no destruction of ecosystems and habitats at a local level around each of our plant. Our plants have operated to discharge water which is better quality than withdrawal water. We have researched ecosystems and habitats of fishery products which are bonito and shrimp with NGO. We also work on Research and Development of next-generation production technologies that minimize the use of crops that receive competing demand from amino acid production and food. We will estimate the element to which degree is important the ecosystem and</p>

		habitats will be at the one of the factory constructions respectively. In addition, we always predict and manage about the change which would occur soon.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. We have produced food and have identified that we should provide all employees for keeping clean their hands. We believe leading a healthy and having a comfortable working environment are important factors. Therefore, we have already offered safe water and the hygienic environment to an employee. We have measured residual chloride concentration of supply WASH water for ensuring safety by tools on the market.
Other contextual issues, please specify	Not relevant, explanation provided	Stakeholders of Ajinomoto group are completely included above lists into the future. Therefore, we consider other contextual issues not relevant.

### W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. Our customer is always exposed to the risk of water. We cooperate with our customer, and judge that it is important to move to a solution of water. For instance, we have launched "Eat well, Live well" and have implemented the educational program about many kinds of environmental issues including water for customers.
Employees	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. We believe it is necessary for our employee to have a healthy and comfortable working environment. Therefore, we have already offered the safe water and the hygienic environment to our employee. In addition, we regularly implement the program, which is defined by our environmental management system, and tell our employee about the importance of water and the relevance between our businesses and water.
Investors	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. When we manage a factory, we judge that this item is not so influential, currently. However, instead of integrating this stakeholder into our water

		<p>risk assessment, we have described our environmental efforts such as "Bio-cycle" and "Conservation of water resources in production, Forest conservation at water sources" in our financial report in order for investors to evaluate our environmental efforts.</p>
Local communities	Relevant, always included	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. We recognize it is important for our factory to receive local communities' operation permit. Therefore, we engaged with Local communities by receiving their permit for our operation. The Ajinomoto Group promotes open communication with neighborhood residents. The Group values communication with the community by participating in neighborhood association and council meetings, and asking residents to call the factory immediately when they have something to say or when they notice anything unusual in their environment such as a strange odor or noise. In concrete, our Kawasaki plant has engaged meeting with neighborhood once a year.</p>
NGOs	Relevant, always included	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. It is indispensable for us to cooperate with NGOs these days, because NGOs understand river basin issues and inform us their issues before regulation. Therefore, we exchange of opinion with NPOs and NGOs through the Ajinomoto Group Sustainability Data Book for the purpose of utilizing their opinions to our plan of Sustainability.</p>
Other water users at a basin/catchment level	Relevant, always included	<p>We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. We regard this element as important. Our factories always have to use a great deal of water. We and other water users at a local level work closely and build a good relationship with the local community locating in the river basin. The Ajinomoto Group promotes open communication with neighborhood residents. The Group values communication with the community by participating in neighborhood association and council meetings, and asking residents to call the factory immediately when they have something to say or when they notice anything unusual in their environment such as a strange odor or noise. In concrete, our Kawasaki plant has engaged meeting with neighborhood once a year.</p>

Regulators	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. It is necessary to take a contact each other with Regulators, because regulators inform us new candidate regulation before decision. Therefore, we regularly take a contact with Regulators and get the latest information from them.
River basin management authorities	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. The authority which manages a basin is also an important element, because the authority informs us new candidate regulation before decision. Therefore, we regularly take a contact with these authorities and get the latest information from them.
Statutory special interest groups at a local level	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. The groups which manage a basin are also important elements, because the groups which manage a basin understand river basin issues and inform us their issues before regulation. Therefore, we regularly take a contact with these groups and get the latest information from them.
Suppliers	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. We assess the water risk for the suppliers that produce the main raw materials like a cassava, since we identify that we can not be provided the main raw material from suppliers by water problem. Currently, we ask the only important suppliers to assess their water risk, because we have huge number of suppliers. However, we plan to increase the number of target suppliers (which we ask to assess the water risk) in future.
Water utilities at a local level	Relevant, always included	We make several kinds of amino acid, many processed food and seasoning. It uses much clean water to manufacture these products such as amino acid. We check quality and management system of water utilities before contracting them, because we use water to produce seasoning and processed food and so on. While receiving the information from them, we collect their water quality report and inspect water quality by ourselves.
Other stakeholder, please specify	Not relevant, explanation provided	Stakeholders of Ajinomoto group are completely included above lists into the future. Therefore, we consider other contextual issues not relevant.

### 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.**

Ajinomoto group has produced and sold amino acid, seasoning, processed food at 130 countries. Most of our suppliers are farmers, because raw material of amino acid, which is the main product of Ajinomoto group, is agricultural crops. By this reason, we have investigated the water consumption, the water risk and the management of water for raw material by Water Footprint and WBCSD global water tool and AQUEDUCT and Water Footprint once a every fiscal year covered value chain. We have evaluated results of assessment every year at the executive board committee. [Drought impact to direct operation] We have set key targets to reduce discharged water and water consumption by 80% compared to the level of FY 2005. We have improved position of water intake as necessary, while regularly conducting maintenance of water intake. [Flood impact to direct operation] We have investigated Business Continuity Plan. As part of the investigation on the BCP, we have improved the height of plant outer wall and others. Foods and clothes are kept in our plants for operators to continue manufacturing even if supply chain stops. We have reviewed and revised Business Continuity Plan every fiscal year. [Drought and Flood impact to suppliers] The level of water risk of agricultural crop is high. There is a huge coverage area where suppliers and facilities of agricultural irrigation are located. Therefore, we have purchased raw material from a number of area and suppliers.

The risk of water scarcity which directly affect the operation exists at present. When large-scale diversion dam in the upstream region where the country border was made, there is a fear that a drought occurs in the downstream. The drought would cause a water shortage and a rise in the price of the water. Therefore we will stop operating a factory if it occurs. In order to secure the endurance of the business, we have worked on dispersing our production base all over the world.

## W4. Risks and opportunities

### W4.1

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

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

### W4.1a

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

The definition of substantive financial or strategic impact including the information on the indicator and the threshold to identify substantive change; Taking into account the business environment including political, economic, and social conditions across the globe, the Ajinomoto Group has identified Group-wide risks that require cross-organizational management based on comprehensive consideration of factors including the potential impact (<1~100<

billion-yen, 5-point scale), possibility of occurrence (<1/100-year~1/1-year, 5-point scale), and level of the risks. In addition, the Group is formulating Group-wide response measures and working to monitor and manage the progress of its response to risk on a regular basis.

Materiality items identified Group-wide risks are as follow : [Global sustainability] Climate change adaptation and mitigation, Contribution to a circular economy, Conservation of water resources, : [Food resources] Sustainable materials sourcing, Reduction of food loss and waste. Regarding our business and operations, if our factory stops operation just 1 day, this accident has been defined substantive change in our business, because the production of amino acids needs several days. Amino acids is one of the main products of Ajinomoto group. Ajinomoto group produces sold amino acid, seasoning, processed food in 130 countries. Most of our suppliers are farmers, because raw material of amino is agricultural crops.

One example of substantive impact is considered; We have an amino acid fermentation production plant in Vietnamese Mekong river basin. In the worst scenario, there is a possibility to happen to be lacking in the water used in farms and in our factories. In other words, there is a risk our factory suspends our operation.

Scope of application of the definition; These definitions are applied to direct operations and supply chain. In order to avoid the substantive financial or strategic impact, each factory has high walls water and waste water stock pond and raw material warehouse to avert flood and drought. The business continue plan activity by each factory has applied regional climate history such as flood and drought. For example, there are walls, ponds and warehouses at Ayutthaya factory in Thailand. We have made a plan of independent waste water quality standard at non-financial targets of environment. The self-standard is the severest one than any other severe standards in the world.

## W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	3	1-25	In the worst case in this basin, both of direct factory operation and raw material production are exposed to flood and drought risk.

## W4.1c

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

---

### Country/Area & River basin

Thailand

Chao Phraya

**Number of facilities exposed to water risk**

3

**% company-wide facilities this represents**

1-25

**% company's total global revenue that could be affected**

1-10

**Comment**

In the worst case in this basin, both of direct factory operation and raw material production are exposed to flood and drought risk.

## W4.2

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

---

**Country/Area & River basin**

Thailand

Chao Phraya

**Type of risk & Primary risk driver**

Physical

Flooding

**Primary potential impact**

Supply chain disruption

**Company-specific description**

The method for identifying the impact "Supply chain disruption"; The Ajinomoto Group established the Management Risk Committee to enhance its capacity to respond to accidents and incidents. The Group takes measures grounded in proactive risk prevention and the Ajinomoto Group Risk Management Basic Policy: "By promoting strategic risk management, we make the Ajinomoto Group resilient to risks, and increase the Group's value."

Each organizational unit and group company appoints a person responsible for risk management (general manager) and risk personnel who conduct their own management using the PDCA cycle. Aggregating and analyzing these bottom-up risks gives a clear overview of risk trends across the Ajinomoto Group.

In the face of dynamically and rapidly changing macro business conditions such as global politics, economics, and social issues, the group also supplements this bottom-up approach with 16 significant thematic group-wide risks, which require cross-organizational management, including geopolitical macro environmental risk, global climate change risk, and so on.

How the impact identified will uniquely affect their direct operations; The factories in Thailand are important base of amino acid and food production of Ajinomoto group. Amount of production and sales and profit at these factories account for over 10% of Ajinomoto group of the world. So when flood occur in Thailand, the group is affected sales and profit by not continuing production while some days.

**Timeframe**

1-3 years

**Magnitude of potential impact**

Medium-high

**Likelihood**

Likely

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

100,000,000,000

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

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

**Explanation of financial impact**

The factories in Thailand are important base of amino acid and food production of Ajinomoto group. Amount of production and sales and profit at these factories account for over 10% of Ajinomoto group of the world. Sales of Ajinomoto group is approximately 1000 billion JPY. Therefore, we calculate potential financial impact 100 billion JPY.

**Primary response to risk**

Amend the Business Continuity Plan

**Description of response**

[Strategies] 1. Monitoring drought and flood, rise of the price of the water, water intake restriction: (1) Consideration of the production technique which reduces the amount of consumption of water. (2) The technological development to reuse use water. / We have implemented in Ajinomoto group Zero Emission Plan about these (1),(2). Deterioration of the water quality: We have developed technology for improvement of water quality. [Cost] Our environment related investment is more than one billion yen a year. We had installed 1 meter high wall than initial design at Ayutthaya factory in Thailand. Because Ayutthaya factory had experienced not foreseen flood. Ayutthaya factory had spent additional expenditure about 95 mTHB (about 260,000,000 yen) as this higher wall.

**Cost of response**

1,000,000,000

### Explanation of cost of response

Our environment related investment is more than one billion yen per year. Our expenditure for Research and Development is more than 30 billion yen per year. Our factory in this area had been badly affected by a flood in 2011, and operation stopped at the time. Therefore we judge that the risk of a flood is high. We paid more about 260,000,000 yen as the flood cost of measures. This cost is one-off.

## W4.2a

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

---

#### Country/Area & River basin

Thailand  
Chao Phraya

#### Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Physical  
Flooding

#### Primary potential impact

Supply chain disruption

#### Company-specific description

The method for identifying the impact "Supply chain disruption"; The Ajinomoto Group established the Risk Management Committee to enhance its capacity to respond to accidents and incidents. The Group takes measures grounded in proactive risk prevention and the Ajinomoto Group Risk Management Basic Policy: "By promoting strategic risk management, we make the Ajinomoto Group resilient to risks, and increase the Group's value."

Each organizational unit and group company appoints a person responsible for risk management (general manager) and risk personnel who conduct their own management using the PDCA cycle. Aggregating and analyzing these bottom-up risks gives a clear overview of risk trends across the Ajinomoto Group.

In the face of dynamically and rapidly changing macro business conditions such as global politics, economics, and social issues, the group also supplements this bottom-up approach with 16 significant thematic group-wide risks, which require cross-organizational management, including geopolitical macro environmental risk, global climate change risk, and so on.

How the impact identified will uniquely affect their direct operations; The factories in Thailand are important base of amino acid and food production of Ajinomoto group. Amount of production and sales and profit at these factories account for over 10% of

Ajinomoto group of the world. So when flood occur in Thailand, the group is affected sales and profit by not continuing production while some days.

**Timeframe**

1-3 years

**Magnitude of potential impact**

Medium-high

**Likelihood**

Likely

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

100,000,000,000

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

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

**Explanation of financial impact**

The factories in Thailand are important base of amino acid and food production of Ajinomoto group. Amount of production and sales and profit at these factories account for over 10% of Ajinomoto group of the world. Sales of Ajinomoto group is approximately 1000 billion JPY. Therefore, we calculate potential financial impact 100 billion JPY.

**Primary response to risk**

Direct operations  
Include in Business Continuity Plan

**Description of response**

1. We have secured a raw material supplier in more than one area. The cost is less than 5% rise of the raw material costs for this. There is almost no financial influence. 2. We have researched and developed new production technology. Our expenditure for Research and Development is more than 30 billion yen per year. These theme are (1) reducing major raw materials use by maximizing bacterial productivity, (2) reducing auxiliary materials use and water discharge and so on. We're freed by this measure from raw material risk by water risk.

**Cost of response**

1,000,000,000

**Explanation of cost of response**

1. We have purchased a raw material from various areas for risk dispersion. 2. We have researched and developed new production technology for decrease raw materials and water consumption. We have embarked on following theme to reduce risk. (1) utilization

of the resources un-using for bagasse of sugarcane etc. (2) research and development of utilization of the alga for which we don't depend on food resources. This cost is recurring.

## W4.3

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

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

## W4.3a

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

---

### Type of opportunity

Efficiency

### Primary water-related opportunity

Improved water efficiency in operations

### Company-specific description & strategy to realize opportunity

By installing the new system with high specification, we are able to decrease the amount of water withdrawals. By reducing the amount of water withdrawals, we have improved water efficiency and reduced our cost for production by reduction of water flow. For example, Ajinomoto Vietnam had installed some water economize systems to decrease water withdrawals from 27 million tonnes in 2005 to 1.7 million tonnes in 2016.

### Estimated timeframe for realization

1 to 3 years

### Magnitude of potential financial impact

Medium

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

Yes, a single figure estimate

### Potential financial impact figure (currency)

5,000,000,000

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

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

### Explanation of financial impact

There became much more quantity of the amino acid producing in our company than any other companies more effectively. Our plants installed waste treatment system with

high specification. Regarding amino acid, we have two advantages comparing with other companies. First one is that the amino acid we produce has the good quality. Second one is that we have the knowledge about how to utilize amino acid. We make an effort for the spread of feed and market development with an amino acid in the drought area by uniting the validity of this amino acid for a customer. Explanation of feed contained amino acid (low protein feed) is follow. Soybean meal contents of Low protein feed which is supplemented industrial manufactured amino acid instead of essential amino acid of soybean meal is over 10% lower than conventional feed. As coordinating metabolic energy, amount of wheat in low protein feed are over 20% higher than conventional feed. However, soybean meal water consumption inventory over 1000 (m<sup>3</sup>/t-raw material) is 3 times higher than wheat water consumption inventory a few hundreds (m<sup>3</sup>/t-raw material), soybean meal content of low protein feed is over 10% lower than conventional feed, therefore water footprint of low protein feed is lower than conventional feed. Water risk will become higher, pig farmers change to apply low protein feed and feed use amino acid supply by Ajinomoto group will be increase more. Therefore potential financial impact will be 5 billion JPY.

## W5. Facility-level water accounting

### W5.1

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

---

**Facility reference number**

Facility 1

**Facility name (optional)**

Ayutthaya factory

**Country/Area & River basin**

Thailand

Chao Phraya

**Latitude**

14.35

**Longitude**

100.58

**Located in area with water stress**

Yes

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

2,110

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

About the same

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

2,110

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

2,060

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

About the same

**Discharges to fresh surface water**

2,060

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

50

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

Higher

**Please explain**

This factory data at previous year were withdrawals 2210 (mega-liters), discharges 2210 (mega-liters), consumption 0 (mega-liters). The Ajinomoto group has used industrial water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 10% difference data from previous year is accident error.

**Facility reference number**

Facility 2

**Facility name (optional)**

Kamphaeng Phet factory

**Country/Area & River basin**

Thailand

Chao Phraya

**Latitude**

16.47

**Longitude**

99.53

**Located in area with water stress**

Yes

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

3,080

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

About the same

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

3,080

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

1,450

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

About the same

**Discharges to fresh surface water**

1,450

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

1,630

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

Higher

**Please explain**

This factory data at previous year were withdrawals 3030 (mega-liters), discharges 1500 (mega-liters), consumption 0 (mega-liters). The Ajinomoto group has used industrial water meter that accuracy is plus-minus 5% at 100% scale. Therefore the group consider that under 10% difference data from previous year is accident error.

**Facility reference number**

Facility 3

**Facility name (optional)**

Phra Pradaeng factory

**Country/Area & River basin**

Thailand

Chao Phraya

**Latitude**

13.66

**Longitude**

100.53

**Located in area with water stress**

Yes

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

1,310

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

About the same

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

1,310

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

850

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

Much higher

**Discharges to fresh surface water**

850

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

460

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

Much lower

**Please explain**

This factory data at previous year were withdrawals 1380 (mega-liters), discharges 410 (mega-liters), consumption 970 (mega-liters). At previous fiscal year, our water accounting system had been accident error in Phra Pradaeng factory.

## **W5.1a**

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

**Water withdrawals – total volumes**

---

**% verified**

Not verified

### **Water withdrawals – volume by source**

---

**% verified**

Not verified

### **Water withdrawals – quality**

---

**% verified**

Not verified

### **Water discharges – total volumes**

---

**% verified**

Not verified

### **Water discharges – volume by destination**

---

**% verified**

Not verified

### **Water discharges – volume by treatment method**

---

**% verified**

Not verified

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

---

**% verified**

Not verified

### **Water discharge quality – temperature**

---

**% verified**

Not verified

### **Water consumption – total volume**

---

**% verified**

Not verified

### **Water recycled/reused**

---

**% verified**

Not verified

## 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	<ul style="list-style-type: none"> <li>Description of business dependency on water</li> <li>Description of business impact on water</li> <li>Description of water-related performance standards for direct operations</li> <li>Description of water-related standards for procurement</li> <li>Reference to international standards and widely-recognized water initiatives</li> <li>Company water targets and goals</li> <li>Commitment to align with public policy initiatives, such as the SDGs</li> <li>Commitments beyond regulatory compliance</li> <li>Commitment to water-related innovation</li> <li>Commitment to stakeholder awareness and education</li> <li>Commitment to water stewardship and/or collective action</li> <li>Commitment to safely managed Water,</li> </ul>	<p>Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water is used for direct amino acid production operation such as dilution of raw material and cleaning for amino acid crystal. We have recognized that a great deal of good fresh water is used for indirect production such as cultivation of agricultural crop for raw material and steam for sterilization of equipment. Therefore, we create and disclose a few kinds of policies including our way of thinking on water. These policies cover company-wide and describe performance standards for whole life cycle. Because, we need a great deal of good fresh water which participates directly in our products. These policies describe performance standards for supplier, procurement and contracting best practice. Because, it is important for us that we purchase agricultural crops for raw material by dependence of water. In addition, we carry on a dialog with external and internal stakeholders and experts. Cooperation with our suppliers, our customers and local communities are important for us to settle water risk. By this reason, we regard customer education as important theme for us. In addition, we also recognize offering safe water, sanitation and hygiene to our employee are important.</p>

	Sanitation and Hygiene (WASH) in the workplace Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	
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## 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
Director on board	The Group sets Management Risk Committee and Environmental Committee under the control of the Executive Committee. Our director on board is the chair of Management Risk Committee. We recognize risk management as an important instrument for internal control, which is a part of management responsibilities. In conjunction with group management strategies and individual business strategies, the Group takes necessary actions to enhance response capabilities against significant risks. Taking into account the business environment and political, economic, and social conditions around the globe, the Ajinomoto Group has identified and compiled Group-wide risks that require cross-organizational management. The group recognize that our risks are geopolitical macro environmental risk, global climate change risk, reputation risk, and legal risk. Among our risks, we also consider global climate change risk and water related issues because our main raw materials are crops dependence to water. The chair of Management Risk Committee has approved revised our targets of water conservation at the beginning of this year.

### W6.2b

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

Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain

Row 1	Scheduled - all meetings	<p>Monitoring implementation and performance</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding strategy</p> <p>Reviewing and guiding corporate responsibility strategy</p> <p>Setting performance objectives</p>	<p>The Group sets Management Risk Committee and Environmental Committee under the control of the Executive Committee. Our director on board is in charge of this management committee. These committees contents report to board meeting. Ajinomoto group conducts the “Environmental Activities” by using the environmental management system as a key tool under the “Group Shared Policy on Environment”. The scope of the Environmental Activities include the direct business activities and suppliers, and other stakeholders. The Group sets "Environmental Committee" under the control of the Executive Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose “Group Shared Policy on Environment” and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the “Group Shared Policy on Environment”. (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.</p>
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## 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)**

Safety, Health, Environment and Quality committee

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Half-yearly

**Please explain**

The Group sets "Management Risk Committee" and "Environmental Committee" under the control of the Executive Committee in order to deliberate policies and measures

relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose “Group Shared Policy on Environment” and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the “Group Shared Policy on Environment”. (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Risk committee

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Quarterly

**Please explain**

The Management Risk Committee established by the executive committee has managed the risk of water. Senior vice president is the chair of the Management Risk Committee.

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

Chief Executive Officer (CEO)

**Responsibility**

Managing water-related risks and opportunities

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

Quarterly

**Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose “Group Shared Policy on Environment” and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the “Group Shared Policy on Environment”. (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Business unit manager

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Half-yearly

**Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose "Group Shared Policy on Environment" and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the "Group Shared Policy on Environment". (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Environment/Sustainability manager

**Responsibility**

Assessing water-related risks and opportunities

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

Half-yearly

**Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose "Group Shared Policy on Environment" and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the "Group Shared Policy on Environment". (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Facilities manager

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Half-yearly

#### **Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose "Group Shared Policy on Environment" and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the "Group Shared Policy on Environment". (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Process operation manager

#### **Responsibility**

Both assessing and managing water-related risks and opportunities

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

Half-yearly

#### **Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose "Group Shared Policy on Environment" and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the "Group Shared Policy on Environment". (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

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

Procurement manager

#### **Responsibility**

Both assessing and managing water-related risks and opportunities

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

Half-yearly

#### **Please explain**

The Group sets "Environmental Committee" under the control of the Management Committee in order to deliberate policies and measures relating to Environmental Activities. The Responsibilities of the Environmental Committee are as follow: (1) To propose "Group Shared Policy on Environment" and the targets of Environmental Activities. (2) To propose a medium- and long-term plan and a single year plan under the "Group Shared Policy on Environment". (3) To deliberate about actions to be taken to solve basic issues on the Environmental Activities. (4) To review the current status of the Environmental Activities. (5) To establish, amend and abolish self-regulatory standards. (6) To deliberate about any other important issues with regard to Environmental Activities.

## 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	The evaluation indicators and variation range in compensation for the achievement of the 2020-2025 New Medium-term Management Plan (hereinafter "New Medium-Term Management Plan") will be revised and will include necessary changes due to the extension of this System. The ratio of performance-linked compensation at the point that the targets are met, including short- and medium-term, to the total amount of compensation for Officers, etc. is 50%, which is unchanged. The amendment and continuance of this system has been deliberated and reported on by the compensation advisory committee and are considers appropriate. Details of the link to company performance. Evaluation indicators (5%): ESG targets (Reduce water use in the manufacturing process. Water use reduction rate: FY 2030 reduce by 80% vs. FY 2018.

## W6.4a

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

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Board chair Board/Executive board Director on board Corporate executive team	Reduction of water withdrawals Reduction in consumption volumes	Ajinomoto group produces amino acid, processed food and seasoning. We have recognized that a great deal of good fresh water is used for direct amino acid production operation such as dilution of raw material and cleaning for amino acid crystal. We have recognized that a great deal of good fresh water is used for indirect production

	Chief Executive Officer (CEO)	Improvements in efficiency - direct operations	such as cultivation of agricultural crop for raw material and steam for sterilization of equipment. The evaluation indicators and variation range in compensation for the achievement of the 2020-2025 New Medium-term Management Plan (hereinafter “New Medium-Term Management Plan”) will be revised and will include necessary changes due to the extension of this System. The ratio of performance-linked compensation at the point that the targets are met, including short- and medium-term, to the total amount of compensation for Officers, etc. is 50%, which is unchanged. The amendment and continuance of this system has been deliberated and reported on by the compensation advisory committee and are considers appropriate. Details of the link to company performance. Evaluation indicators (5%): ESG targets (Reduce water use in the manufacturing process. Water use reduction rate: FY 2030 reduce by 80% vs. FY 2018.
Non-monetary reward	No one is entitled to these incentives		Non-monetary rewards are for employees only.

## W6.5

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

- Yes, direct engagement with policy makers
- Yes, trade associations
- Yes, funding research organizations

## W6.5a

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

Ajinomoto group has adopted the term ASV (The Ajinomoto Group Creating Shared Value) to refer to the economic value we have consistently created since our founding by resolving social issues through our business. The group feels confident that the evolution we have made with ASV will help us realize sustainable growth that is befitting of a global company. Going forward, we will forge ahead with our FY2020–2025 New Medium-Term Management Plan, with ASV evolution underpinning our core.

We aim for the FY 2020–2025 MTP by cooperating with Japan business Federation and Consumer Goods Forum. These association affect to governor policy by touching notions. Ministry of Economy, Trade and Industry in Japan had discussed about new policy idea of water-related with Ajinomoto.

National Institute for Environmental Studies had interviewed our water-related risk assessment ways for investigating renewal of their water risk assessment tool.

When we have recognized anti-logy of the Group effort, we will return to former production method or raw material and so on.

## 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)

 integrated\_report\_2019\_E.pdf

## W7. Business strategy

### W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	<p>Which water issues are integrated; The Group aim for reduction 80% water usage at plants per production volume by FY 2030 from FY 2005 on the Integrated Target for 2025. How they are integrated into the business plans; By carrying on the aspiration of our founding through our "Food" and "Amino Science" businesses, we are aiming to become a solution-providing company for food and health issues that can grow sustainability and contribute to a healthy future for humanity and the earth. Our mission is to fulfill our social responsibilities by leveraging the entire value chain. Thus, we actively aim to contribute to the resolution of issues related to "health and well-being," "food resources," and "global sustainability" for all stakeholders. The Group produces the amino acids used fresh surface water for dilution of raw material and so on.</p> <p>How they are integrated into the plan; We decided to pursue initiatives to address these concerns under the</p>

			<p>integrated target that combine both financial and non-financial targets. To realize sustainable growth through ASV (Ajinomoto Shared Value) and become a company that is even more essential for society, we have established the integrated targets including reduction target of water usage, which centers on ASV value creation stories.</p> <p>Explain Why the time horizon chosen was selected with a rationale unique to your company; We set the environmental target including water reduction target which aims to the year of 2030 referred from SDGs.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>Which water issues are integrated; The Group aim for reduction 80% water usage at plants per production volume by FY 2030 from FY 2005 on the Integrated Target for 2025.</p> <p>How they are integrated into the plan; We decided to pursue initiatives to address these concerns under the integrated target that combine both financial and non-financial targets. To realize sustainable growth through ASV(Ajinomoto Shared Value) and become a company that is even more essential for society, we have established the integrated targets including reduction target of water usage, which centers on ASV value creation stories. The Ajinomoto Group Environment Plan has established target values for pollutant load in wastewater (10 ppm or less for BOD and 5 ppm or less for TN) which are stricter than regulations around the world. To achieve these challenging targets, the Group is improving performance in wastewater treatment by modifying existing treatment facilities, developing more efficient processes, the use of water from cooling towers for indirect cooling applications, recirculating water on-site.</p> <p>Explain Why the time horizon chosen was selected with a rationale unique to your company; We set the environmental target including water reduction target which aims to the year of 2030 referred from SDGs.</p>
Financial planning	Yes, water-related issues are integrated	11-15	<p>Which water issues are integrated; There is the target of conservation of water resources among the integrated targets. The Group aim for reduction 80% water usage at plants per production volume by FY 2030 from FY 2005 on the Integrated Target for 2025.</p> <p>How they are integrated into the plan; Ajinomoto group aims for reduce financial risk 8 billion yen through results of our contribution of the global sustainability. The management indicators adopted are as follows. For</p>

			<p>financial targets, we will continue to realize profit growth. Such growth will act as a milestone for becoming a solution-providing company for food and health issues for 2030. For non-financial targets, we will focus on contributing to healthy living for humankind, as mentioned in the ASV value creation stories. At the same time, we will pursue a policy of proactively engaging ourselves in the United Nations' Sustainable Development Goals (SDGs) and other efforts related to the international consensus on ESG. One of non-financial target is the mid-long term environmental targets which includes the water reduction target. Explain Why the time horizon chosen was selected with a rationale unique to your company; We set the environmental target including water reduction target which aims to the year of 2030 referred from SDGs.</p>
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## 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)**

110

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

1

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

-3

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

-1

**Please explain**

CAPEX has increased, because of starting the renewal of old equipment. OPEX is the same as that of previous year.

## W7.3

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

Use of climate-	Comment
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	related scenario analysis	
Row 1	Yes	<p>In May 2019, the Ajinomoto Group endorsed the recommendations of TCFD. The Ajinomoto Group's business domain of products ranges from seasonings and coffee to frozen foods. The Group's operation is considered to be affected by climate change in many ways, such as a major natural disaster halting its business activities, affecting its ability to procure raw materials and fuel, and altering consumption of its products.</p> <p>In FY 2019, the Group conducted a scenario analysis of the potential impact from climate change on global umami seasoning AJI-NO-MOTO®. The Group determined that a 2 °C rise in the average temperature would have relatively small impact on the main raw materials including water as well as demand for the product, so that these will not seriously affect the Group's profit. However, the risk of environmental taxes for the fermentation business as a whole including MSG is around 8 billion yen to create a low-carbon society.</p>

### W7.3a

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

Yes

### W7.3b

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

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	2DS RCP 2.6	<p>The Ajinomoto Group views climate change at the management level as both a risk and an opportunity. To track and improve the Group's environmental performance, the Management Risk Committee and Environmental Committee under the Executive Committee monitor the Group's progress toward attaining target indicators and consider necessary measures.</p> <p>In May 2019, the Ajinomoto Group endorsed the recommendations of TCFD.</p> <p>The Ajinomoto Group's business domain</p>	<p>The Group plans to conduct scenario analysis for other raw material in FY 2020.</p> <p>The Ajinomoto Group's business domain of products ranges from seasonings and coffee to frozen foods. The geographic range of its operations spans the globe. Climate change can impact the Group's operations in many ways, such as a major natural disaster halting its business activities, affecting its ability to procure raw materials and fuel, and altering consumption of its</p>

		<p>of products ranges from seasonings and coffee to frozen foods. The geographic range of its operations spans the globe. Climate change can impact the Group's operations in many ways, such as a major natural disaster halting its business activities, affecting its ability to procure raw materials and fuel, and altering consumption of its products. In FY 2019, the Group conducted a scenario analysis of the potential impact from climate change on global umami seasoning AJI-NO-MOTO®. The Group determined that a 2 °C rise in the average temperature would have relatively small impact on the main raw materials including water as well as demand for the product, so that these will not seriously affect the Group's profit. However, the risk of environmental taxes for the fermentation business as a whole including MSG is around 8 billion yen to create a low-carbon society. The findings reconfirmed the need to continue converting to renewable energy sources and increase the Group's corporate resilience.</p>	<p>products. In FY 2019, the Group conducted a scenario analysis of the potential impact from climate change on global umami seasoning AJI-NO-MOTO®. The Group determined that a 2 °C rise in the average temperature would have relatively small impact on the main raw materials including water as well as demand for the product, so that these will not seriously affect the Group's profit. However, the risk of environmental taxes for the fermentation business as a whole including MSG is around 8 billion yen to create a low-carbon society. The findings reconfirmed the need to continue converting to renewable energy sources and increase the Group's corporate resilience. Therefore, we set a target of Water use reduction rate: FY 2030 reduce by 80% vs. FY 2018. The Group is continuously developing water saving process, and introduce new water saving technology.</p>
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## W7.4

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

#### Row 1

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

Yes

#### Please explain

We anticipate that the increased global food demand with increased population will make securing raw material more difficult in the future. We would like to demonstrate to the top management that continued resource-saving fermentation technologies helps Ajinomoto in securing business opportunities by natural capital argument. We have compared two scenarios of "AJI-NO-MOTO®" produced at Ayutthaya factory in Thailand. One is status quo, which uses edible biomass for the raw material, another is the case with Research and Development to enable efficient use of non-edible biomass for the raw material. At first, we have calculated Carbon and Water footprint and farm land area for raw material crop as both scenarios. We have converted from these data to monetary environmental impact by minimum and maximum economic value. Finally,

we have assessed sensitive monetary impact analysis about the technologies in terms of natural capital.

## 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 Site/facility specific targets and/or goals Basin specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Ajinomoto Co., Inc. is a company that produces food seasonings, processed foods, sweeteners, amino acids and pharmaceuticals. Therefore, water resource is indispensable resource for our business activities. We identify "water resources" in one of priority themes and act for correspondence, the management that is appropriate to be able to minimize load to environment about improvement of effectiveness for the supply of water in all bases treating water, water intake, the drainage. At the production base, we set the aim of the water consumption basic unit per quantity of production regularly, and the grasp of monitoring, the effect in the monthly evaluates it.

### 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**

Risk mitigation

**Description of target**

We had set on non-financial targets of environment. We have made a target reduction of the amount of the used water per the production 80 % to fiscal year 2005 with a target to 2030. We set it as a company-wide target. We had achieved 98% in fiscal year 2019. [98% = (Reduction 78%) / (Target 80%)]

**Quantitative metric**

% reduction per unit of production

**Baseline year**

2005

**Start year**

2017

**Target year**

2030

**% of target achieved**

98

**Please explain**

We have made a target reduction of the amount of the used water per the production 80 % to fiscal year 2005 with a target by the plan. We had achieved 98% in fiscal year 2019. [98% = (Reduction 78%) / (Target 80%)]

**Target reference number**

Target 2

**Category of target**

Other, please specify  
Conserve forest as source of water

**Level**

Brand/product

**Primary motivation**

Increase freshwater availability for users/natural environment within the basin

**Description of target**

Recharge rate of drinking water into forest.  
Forest conservation at water sources.  
Ajinomoto AGF, Inc. production bases, AGF Suzuka, Inc. and AGF Kanto, Inc., withdraw water from the Suzuka River and Arato River (a tributary of the Tone River). Their sources are conserved by forests located in the foothills of the Suzuka Mountains and the south foothills of Mount Akagi, respectively. The companies are continuously engaged in the Forest of Blendy® initiative aimed at conserving these forests. By fiscal 2025, Ajinomoto AGF, Inc. aims to expand the area of these forests five-fold compared to their March 2017 size, and supply all water used in Blendy® bottled coffee and other production from Forest of Blendy® groundwater

(recharge volume). As of the end of fiscal 2018, the two forests' contracted areas combined covered approximately 22 ha, about 4.2 times the original size. In fiscal 2019, the company plans to expand and enhance the forest maintenance activities.

**Quantitative metric**

Other, please specify  
Over 100%

**Baseline year**

2015

**Start year**

2016

**Target year**

2025

**% of target achieved**

85

**Please explain**

Recharge rate of drinking water into forest.  
Forest conservation at water sources.  
Ajinomoto AGF, Inc. production bases, AGF Suzuka, Inc. and AGF Kanto, Inc., withdraw water from the Suzuka River and Arato River (a tributary of the Tone River). Their sources are conserved by forests located in the foothills of the Suzuka Mountains and the south foothills of Mount Akagi, respectively. The companies are continuously engaged in the Forest of Blendy® initiative aimed at conserving these forests. By fiscal 2025, Ajinomoto AGF, Inc. aims to expand the area of these forests five-fold compared to their March 2017 size, and supply all water used in Blendy® bottled coffee and other production from Forest of Blendy® groundwater (recharge volume). As of the end of fiscal 2018, the two forests' contracted areas combined covered approximately 22 ha, about 4.2 times the original size. In fiscal 2019, the company plans to expand and enhance the forest maintenance activities.

## 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**

Shared value

## Description of goal

Explanation for the level chosen; Ajinomoto Co., Inc. is a company that produces food seasonings, processed foods, sweeteners, amino acids and pharmaceuticals.

Therefore, it is important for us to set the company-wide target on watershed remediation and habitat restoration, ecosystem preservation and tackle to solve the problem on the ecosystem as the Ajinomoto group, because our business activities have an great impact on ecosystem.

Detail on why this goal is important to the company and How the company is implementing the goal across their chosen level; To ensure that its businesses are contributing to the environment and delivering value to customers, we quantify the environmental value of even more of its products and services across the entire supply chain. We are determined to take the lead in addressing social issues by proposing unique contributions to the environment related to food. Our initiatives on sustainable palm oil are still in the early stages overall. Our products use palm oil-derived ingredients of various specifications and the ease of procuring certified versions of these ingredients varies widely.

## Baseline year

2005

## Start year

2017

## End year

2030

## Progress

We had formulated non-financial targets of environment to reflect social trends and expectations, as well as to strengthen its basic commitment to the environment. We aims to make the most of its businesses to help resolve the issues facing humankind in the 21st century. It also mandates greater focus on conserving biodiversity, and tasks Research and Development divisions with incorporating an environmental approach into their research strategies. To ensure that its businesses are contributing to the environment and delivering value to customers, we will quantify the environmental value of even more of its products and services across the entire supply chain. We are determined to take the lead in addressing social issues by proposing unique contributions to the environment related to food. The Group's products use palm oil-derived ingredients of various specifications and the ease of procuring certified versions of these ingredients varies widely. MB and Book and Claim-certified palm oil accounted for only 25% of palm oil use in 2019.

Ajinomoto group long-term vision is "Secure food resources for the next generation, contribute to protection of natural environment include ecosystems and biodiversity, achieve sustainable procurement." The group aims for sustainable procurement 100% of palm oil and paper by FY 2020 as above vision. We have monitored ratio of certified palm oil and paper.

**Goal**

Other, please specify  
Obeying the compliance

**Level**

Company-wide

**Motivation**

Other, please specify  
Waste water quality standard

**Description of goal**

BOD : Less than 10ppm Total Nitrogen: Less than 5ppm We had made a plan of non-financial targets of environment. In this Plan, we establish a self-standard which is severer than any other standards about waste water quality in the world. The reason for adopting this goal is to improve reputational risk. The Group factories have measured every day BOD and total-nitrogen of their treated waste water before discharge to confirm preserving the Group voluntary standard and prevent water pollution. The Group head quarter has collected monthly BOD and total-nitrogen data of the Group factories to manage how much achieved. We check this goal every year.

**Baseline year**

2005

**Start year**

2017

**End year**

2030

**Progress**

We had made the plan which achieves the standard at all facilities. In 2015, 75% of our facilities have achieved the standard.

## W9. Verification

### W9.1

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

No, we are waiting for more mature verification standards and/or processes

## W10. Sign off

### W-FI

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

Ajinomoto Group aim for “Genuine Global Specialty Company” to become a global top 10 company that grows sustainably through ASV. Ajinomoto group is implementing following items. (ASV (Ajinomoto group Shared Value): ASV represents our unchanging commitment, with our stakeholders and businesses, we help solve society’s issues, leading to the creation of economic value.) 1. Contribute to the future progress of humanity and the earth 2. Possess our own industry-leading technologies and business domains 3. Assemble a group of diverse, globally capable talent 4. Achieve the business and profit scale of a global company 5. Meet global efficiency standards to generate profit

Expansion of business portfolio with new business pillars which launch integrated food solutions business. Deepen our deliciousness technologies - Deeper understandings of biological mechanism for deliciousness (Mechanism of each of taste, flavor and texture. Mechanism of interaction among taste, flavor and texture.) - Technologies to control deliciousness freely (Simulation and control tech (Retronasal aroma, etc). Acquisition of key ingredients and establishment of natural production methods.) - Technologies to optimize deliciousness for local preferences (Analysis of preference in each country. Optimal applications adapted to local preferences.) Establish key account sales team - Form customer-centric sales structure via internal and external collaboration - Establish the teams globally through external partnerships

Sweeteners Pursue specialties with retail business, and reduce costs. - Reorganize the brand portfolio to clarify focus of investments, expand sales to food services (low-carb menus, etc) - Reduce manufacturing and SG&A costs, and expand sales of products with price premium Amino-science Specialty products with health functions of amino acid - New health functions of amino acids and plant materials discovered over a century of research, and their safety, usefulness and mechanisms are supported by scientific evidence. Shift from small-molecules to med./large-molecules - Medium/Large-molecules: Invest in Fill and Finish and launch ADC business. - Small-molecules: Integrate with medium/large-molecules business and build external partnerships for wider range of service offerings

Ajinomoto group has made environmental long-term plans as follow. To decrease 50% of amount of CO2 emission from FY 2018 to FY 2030 as Scope 1 & 2. To decrease 24% of intensity CO2 emission per product from FY 2018 to FY 2030 as Scope 3. Reduction of the amount of the used water per the production 80 % to fiscal year 2005 Reduction of the amount of waste water per the production 80 % to fiscal year 2005.

### W10.1

**(W10.1) Provide details for the person that has signed off (approved) your CDP water response.**

	Job title	Corresponding job category
Row 1	Representative Director and Corporate Senior Vice President	Director on board

## W10.2

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

No