Welcome to your CDP Water Security Questionnaire 2021

W0. Introduction

W0.1

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

The AGC Group has an established global business platform with 238 subsidiaries and business bases in Japan/Asia, Europe, and the Americas. We endeavour to create new value in the areas of glass, electronics, chemicals, and ceramics, while taking advantage of our world-class material technology, an extensive customer base, and advanced production techniques that we have developed over the 110 years of our corporate history. Our Group has set the Group Vision "Look Beyond." This is the corporate philosophy on which all the activities of the Group are founded. Under this Group Vision, we have Our Mission to describe value that our Group should offer to the world, and represents the reason why the AGC Group exists.

[Our Mission]
"AGC, an everyday essential part of our world—AGC's unique materials and solutions make people's lives better around the world every day."
Note also that our Group Vision "Look Beyond" describes the most important values to be shared across the whole Group and the founding spirit to be handed down from generation to generation and shared by all Group members.

[Our Shared Values]
Our values are innovation & operational excellence, diversity, the environment, and integrity.

[Our Spirit]
"Never take the easy way out, but confront difficulties."

Operating glass and chemicals businesses that use a huge volume of resources and energy, including water, our Group has chosen the environment as one of our shared values under the Group Vision. Based on the trusting relationship with our customers as our foundation, since the inception we have been addressing social issues by carrying out research and development with a long-term vision and generating new business in response to demands of the time. Our products include glass for buildings and homes t, solar power generation mirrors, and green refrigerants that contribute to realization of an eco-friendly smart city.
In the manufacturing process, we have been actively reducing the overall environmental impact by fully conforming to environment-related laws and regulations, reducing greenhouse gases

(GHG), and minimizing industrial waste landfilling. Taking advantage of the capabilities of our own unique materials and solutions, we will continue to fulfil our mission "AGC, an everyday essential part of our world" and contribute to realization of a sustainable global environment and society.
In the area of climate change issues, we set a target in 2014 to enable our energy-saving and energy-generating products to offset Group's annual CO2 emissions by six times by 2020. We have mostly achieved this target as a result of reducing CO2 emissions in business activities and putting efforts into promoting and increasing sales of energy-saving and energy-generating products including energy-saving glass and eco-friendly next generation low GWP refrigerants. We announced in the new Medium-Term Management Plan that we will promote AGC plus-2023 and build a foundation to realize our long-term management strategy, Vision 2030. In response to the demand for striking a good balance between business growth and realization of a sustainable society, in addition to setting a goal to fulfil the financial target as we always do, we have decided to work toward our sustainability targets in all business activities based on our understanding of key opportunities and risks the Group faces and have chosen "realization of a sustainable global environment" as our important theme, as well as actively working on initiatives towards reducing water risks in our value chain. To realize a sustainable global environment, our goal is carbon neutrality in 2050. Milestone targets for 2030 are 30% reduction of GHG emissions from 2019 and 50% reduction of GHG emissions per unit of sales* (*GHG emissions per unit of sales = GHG emissions/sales). We consider principal water risks such as floods, high tides, and droughts to be the effects of climate change, and we will manage these risks through our efforts to achieve this goal.
To achieve these targets, we will promote energy-efficient oxygen combustion methods and introduce a booster to reduce fuel use in melting glass for the glass melting process. We will also accelerate conversion of heat from glass melting into electricity. Furthermore, we will help society achieve net zero GHG emissions by making high-performance energy-saving glass and fluorine electrolyte polymers for fuel cell membranes available.

Forward-looking statements
Answers to this questionnaire may contain forward-looking statements based on current assumptions and predictions by AGC Group management. Various known and unknown risks, uncertainties, and other factors may produce significant differences between the actual results, financial state, development, and business results in the future and the prediction provided in this document. Such factors include those listed in the AGC public report available on the AGC website (www.agc.com). We assume no responsibility for updating these forward-looking statements or adjusting these statements to future events or development.

W-CH0.1a

(W-CH0.1a) Which activities in the chemical sector does your organization engage in?

W0.2

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

	Start date	End date

Reporting year	January 1, 2020	December 31, 2020

W0.3

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

Austria
Belgium
Brazil
Canada
China
Czechia
France
Germany
Hungary
Indonesia
Italy
Japan
Mexico
Morocco
Netherlands
Philippines
Poland
Portugal
Republic of Korea
Russian Federation
Singapore
Slovakia
Spain
Taiwan, Greater China
Thailand
Turkey
United Kingdom of Great Britain and Northern Ireland
United States of America
Viet Nam

W0.4

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

JPY

W0.5

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

Companies, entities or groups over which financial control is exercised

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Small scale non-manufacturing sites	The AGC Group Environmental Management Working Rule that we apply to all AGC Divisions and the AGC Group , including sub-subsidiaries, provide an overview of our Groupwide environmental activities. Based on the business details and the scale and environmental impact thereof, the Rule provides the environmental activity category of our sites and what the environmental activities must conduct depending on the Category. Category 1 sites feature the types of production equipment stipulated by the Rule and use at least 30,000 GJ of energy a year. Category 2 sites do not install such types of equipment, use less than 30,000 GJ a year, have 50 or more employees, or despite having less than 50 employees, environmental impact assessment results indicate environmental risks. Category 3 sites do not install the production equipment stipulated by the Rule, have no more than 50 workers, and no environmental risks are indicated in environmental impact assessment results. Category 3 business sites are not part of the AGC Group's compilation of water-related and other data, because the Rule stipulate that Category 3 sites are out of the Environmental Performance Data collection scope. Sites that match the definition of Category 3 are small-scale branches and offices, and we judged that they have nearly zero impact on the environment. Of all sites, 5% or less fall under Category 3. Their use of water is limited to daily purposes and is very little compared to the total volume of water used by the AGC Group. We also judged that the presence of water resources or flood risks at site locations do not directly impact our businesses.

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	Vital	Vital	[Direct use] The AGC Group uses good quality freshwater to

quality freshwater available for use			polish precision glass, lens, and other materials, and to produce caustic soda. Polishing allows for maintaining customer-designated product quality and freshwater is the raw material for caustic soda, which means it is not easy for us to substitute the water with lower quality water or use smaller quantities in either process. We thus judged that good quality freshwater is vital to our operation. Low quality water is also unacceptable from cost and energy-saving aspects. Good quality freshwater will thus remain vital to us. [Indirect use] The AGC Group's suppliers use good quality water in processes where they treat and wash the raw materials they deliver to the Group. Freshwater is thus vital to the Group's operation in an indirect manner too.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Vital	[Direct use] The AGC Group uses a lot of hot equipment such as glass melting furnaces and ceramics firing furnaces that requires temperatures ranging from several hundred to thousand degrees. When the equipment is running, we need to keep it high-temperature and simultaneously cool its external wall to a normal temperature to maintain it, and this process uses large volumes of water. Also, if each AGC Group company site operates a fuel-consuming onsite power generator facility, that facility uses large volumes of water. We thus judged that recycled water, brackish water, and other types of water used for cooling purposes are vital to the Group's operation. Our presumption is that the production process will still require the operation of high-temperature equipment even in the event of a successful innovation of a fossil fuel-free technology in the near future in conjunction with GHG reduction. This means the Group will continue to use cooling water. Cooling water may no longer be needed if the development of next-generation technology renders high-temperature equipment unnecessary in glass or ceramics production.

			[Indirect use] Recycled water, brackish water, and other types of water are vital to the AGC Group's indirect operation, because suppliers of the Group need high-temperature equipment to produce the raw material of glass and ceramics.

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%	To promote sustainable use of water resources, each AGC Group site regularly measures and controls the volume of water use. Regardless of operation types, such as production site or office, the Group monitors sites that match the definition of Category 1 and 2 stipulated in the aforementioned AGC Group Environmental Management Working Rule (manufacturing sites, non-manufacturing sites with 50 or more workers, and sites at which environmental impact assessment results show environmental risks), even when legal requirements relating to the ascertainment of water withdrawal volumes do not apply. Using flowmeters, we monitor water withdrawal volume of sites monthly, bimonthly, quarterly, annually, and so forth, whichever is appropriate for the site. We either use a flowmeter installed by the site or the water supplier.
Water withdrawals – volumes by source	100%	To reliably comply with the limit in water withdrawal stipulated in regions where AGC sites are located and to both identify and control the impact on the value chain, the AGC Group ascertains the water withdrawal status by resource, categorizing it to clean water, industrial water, and groundwater. Regardless of operation types, such as production site or office, the Group monitors sites that match the definition of Category 1 and 2 stipulated in the aforementioned AGC Group Environmental Management Working Rule (manufacturing sites, non-manufacturing sites with 50 or more workers, and sites at which

		environmental impact assessment results show environmental risks), even when legal requirements relating to the ascertainment of the source of the used water withdrawal do not apply. Using flowmeters, we monitor water withdrawal volume of sites monthly, bimonthly, quarterly, annually, and so forth, whichever is appropriate for the site. We either use a flowmeter installed by the site or the water supplier.
Water withdrawals quality	100%	The AGC Group provides fully-functioning, safely managed WASH services for all employees, and to control product quality, the Group determines the optimal water quality depending on use and wastes no water in the withdrawal process. When no high-quality water necessary in a certain process is available, the Group purifies water in its plant and uses it.
Water discharges – total volumes	100%	To promote sustainable use of water resources, each AGC Group site measures and controls water discharge volumes at a predetermined frequency. Regardless of operation types, such as production site or office, the Group monitors sites that match the definition of Category 1 and 2 stipulated in the aforementioned AGC Group Environmental Working Rule (manufacturing sites, non-manufacturing sites with 50 or more workers, and sites at which environmental impact assessment results show environmental risks), even when legal requirements relating to the ascertainment of water discharge volumes do not apply. Using flowmeters, we monitor water withdrawal volume of sites monthly, bimonthly, quarterly, annually, and so forth, whichever is appropriate for the site. We either use a flowmeter installed by the site or the water supplier.
Water discharges – volumes by destination	100%	To promote sustainable use of water resources, each AGC Group site regularly measures and controls wastewater volumes. Regardless of operation types, such as production site or office, the Group monitors sites that match the definition of Category 1 and

		2 stipulated in the aforementioned AGC Group Environmental Management Working Rule (manufacturing sites, non-manufacturing sites with 50 or more workers, and sites at which environmental impact assessment results show environmental risks), even when legal requirements relating to the ascertainment of wastewater volumes by destination do not apply. Using flowmeters, we monitor wastewater volume by destination of sites monthly, bimonthly, quarterly, annually, and so forth, whichever is appropriate. We use a flowmeter installed by the site, or the water supplier, or the owner of the leased building.
Water discharges – volumes by treatment method	100%	The wastewater associated with all AGC Group business activities is discharged and its volume is recorded after we treat it as per details of legal requirements and agreements applied to each site.
Water discharge quality – by standard effluent parameters	100%	We discharge wastewater upon treating it as per requirements and meeting standards set by each site, based on a fundamental principle to comply with the standards stipulated by legal regulations and agreements applied to each AGC Group company and site. The sites for which water discharge monitoring is necessary are ISO 14001-certified and thus we ensure the regulatory requirement compliance.
Water discharge quality – temperature	100%	We measure the temperature of wastewater as per details of legal requirements and agreements applied to each AGC Group site.
Water consumption – total volume	100%	The AGC Group primarily uses water as raw material of caustic soda. We calculate the water consumption volume based on the proportion of caustic soda shipment and water usage. This consumption volume is calculated by deducting wastewater from water withdrawals.
Water recycled/reused	100%	We measure the volume of recycled and reused water as per details of legal requirements and agreements that are applied to each site. To promote the effective use of water resources at the AGC Group's sites, the AGC Group as a whole encourages the use of recycled water and water cascading. This has caused most

		production sites to use recycled water and water cascading in one way or another.
The provision of fully-functioning, safely managed WASH services to all workers	100%	We ensure a sense of security by making regular analyses to check that water for daily purposes, such as drinking water, conforms to each country's water quality standards. This is to provide AGC Group employees around the world with proper WASH services from an occupational safety and health standpoint.

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	92,070	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or "Much lower." Given that the 2020 values of results were up 11% from 2019, the Group issued an "About the same" judgment.
Total discharges	87,249	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or "Much lower." Given that the 2020 values of results were up 11% from 2019, the Group issued an "About the same" judgment.
Total consumption	4,821	Higher	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or "Much lower." Given that the 2020 values of results were up 27% from 2019, the Group issued a "Higher" judgment. This increase was caused by a rise in the production volume of caustic soda, the raw material of which is water.

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	Identification tool	Please explain
Row 1	No	WRI Aqueduct	Assessment results from 2014 that used WRI's Aqueduct showed that none of the AGC Group sites had an overall assessment indicating extremely high water stress (>80%). However, given that we identified some sites with an overall assessment of medium-level water stress (40–80%), we interviewed managers of those sites and confirmed whether authorities have provided instructions and that the sites have no operational issue in their water withdrawal. We are currently re-assessing the water risk of roughly 500 AGC Group sites. For this effort, in addition to an assessment with the revised WRI Aqueduct Water Atlas, we conducted screening with such materials as Aqueduct Floods (WRI), the Flood Hazard Map for World (JRC), the Global Assessment Report on Disaster Risk Reduction (GAR) 2015 (UNDRR), and the Kasaneru (lit. Superimposing) Hazard Map (Ministry of Land, Infrastructure, Transport, and Tourism [MLIT]). The results showed no sites with explicitly high overall risks, but we plan to use questionnaires for detailed studies on sites that pose relatively high risks. Through this process, we can identify high-risk sites and their issues in detail, and take measures for the risks.

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	546	Much lower	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or

				"Much lower." Given that the 2020 values of results were down 84% from 2019, the Group judged the results are "Much lower." We are currently examining what caused this significant year-on-year decrease.
Brackish surface water/Seawater	Relevant	84,648	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or "Much lower." Given that the 2020 values of results were up 12% from 2019, the Group judged the results are "About the same." This volume is unlikely to fluctuate unless the output changes.
Groundwater – renewable	Relevant	782	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as "Much higher" or "Much lower." Given that the 2020 values of results were up 3% from 2019, the Group judged the results are "About the same." This volume is unlikely to fluctuate unless the output changes.
Groundwater – non-renewable	Not relevant			The AGC Group does not use non-renewable groundwater. This stance is unlikely to change.

Produced/Entrained water	Not relevant			The AGC Group does not withdraw produced water. This stance is unlikely to change.
Third party sources	Relevant	5,361	Much higher	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as “Much higher” or “Much lower.” Given that the 2020 values of results were up 112% from 2019, the Group judged the results are “Much higher.” We are currently examining what caused this significant year-on-year increase.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	1,028	Lower	Each site is working to reduce, recirculate, and streamline freshwater use, due to the important role of freshwater as high-purity washing water and as raw material for caustic soda production. For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as “Much higher” or “Much lower.” Given that the 2020 values of results were down 24% from 2019, the Group judged the results are “Lower.”

				We are currently examining what caused this significant year-on-year decrease.
Brackish surface water/seawater	Relevant	85,539	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as “Much higher” or “Much lower.” Given that the 2020 values of results were down 12% from 2019, the Group judged the results are “About the same.” This volume is unlikely to fluctuate unless the output changes.
Groundwater	Not relevant			The AGC Group does not discharge wastewater to underground locations. This is because we cannot eliminate the risk of soil contamination occurring from unpredictable causes. This volume is unlikely to increase.
Third-party destinations	Relevant	2,474	About the same	For assessments on the values of water-related and other environment-associated results, the AGC Group defines an increase or decrease of 20% year-on-year as “Much higher” or “Much lower.” Given that the 2020 values of results were up 10% from 2019, the Group judged the results are “About the same.” This volume is unlikely to fluctuate unless the output changes.

W1.2j

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

	Relevance of treatment	Volume (megaliters/year)	Comparison of treated volume with	% of your sites/facilities/operations this volume applies to	Please explain

	level to discharge		previous reporting year		
Tertiary treatment	Relevant	350	This is our first year of measurement	Unknown	We judge how to treat the wastewater discharged from our business based on relevant legal regulations, qualities, and destinations, but we do not monitor it by treatment type. We do not treat seawater, which accounts for 96% of the wastewater. This means the remaining 4% (3,502 ML) is the sum of the water that we discharge after primary, secondary, and tertiary treatment, or discharge to a third party without giving these

					types of treatment. The volume 350 ML is our estimation, postulating that no more than 10% of the 3,502 ML received advanced tertiary treatment. Treatment type-based monitoring is scheduled to start from the next fiscal year.
Secondary treatment	Relevant	1,400	This is our first year of measurement	Unknown	We judge how to treat the wastewater discharged from our business based on relevant legal regulations, qualities, and destinations, but we do not monitor it by treatment type. We do not treat seawater, which accounts for 96% of the wastewater.

					This means the remaining 4% (3,502 ML) is the sum of the water that we discharge after primary, secondary, and tertiary treatment, or discharge to a third party without giving these types of treatment. The volume 1,400 ML is our estimation, postulating that about 40% of the 3,502 ML received secondary treatment. Treatment type-based monitoring is scheduled to start from the next fiscal year.
Primary treatment only	Relevant	1,400	This is our first year of measurement	Unknown	We judge how to treat the wastewater discharged from our business based on

					relevant legal regulations, qualities, and destinations, but we do not monitor it by treatment type. We do not treat seawater, which accounts for 96% of the wastewater. This means the remaining 4% (3,502 ML) is the sum of the water that we discharge after primary, secondary, and tertiary treatment, or discharge to a third party without giving these types of treatment. The volume 1,400 ML is our estimation, postulating that about 40% of the 3,502 ML received

					primary treatment. Treatment type-based monitoring is scheduled to start from the next fiscal year.
Discharge to the natural environment without treatment	Relevant	85,539	About the same	Less than 1%	The seawater that we used to indirectly cool such equipment as onsite power generators is what we discharge into the natural environment untreated. Most of the seawater we withdraw is meant for these indirect cooling purposes. Of our wastewater to sea in 2020, 9,328 ML was for cooling the newly installed onsite power generators that we operated in 2020.

					This volume is unlikely to fluctuate unless the output changes.
Discharge to a third party without treatment	Relevant	350	About the same	1-10	We discharge untreated domestic wastewater (i.e., not the water used in the production process) to third-party destination if the destination has the capacity to treat domestic wastewater, such as the public sewage system. The remaining 4% (3,502 ML) apart from seawater indicates the sum of the water discharged after receiving primary, secondary, and tertiary treatment, or water

					discharged to a third party without undergoing these types of treatment. The volume 350 ML is our estimation, postulating that about 10% of the 3,502 ML required no treatment and was discharged to a third party. Treatment type-based monitoring is scheduled to start from the next fiscal year.
Other	Not relevant				As far as we are currently aware, the AGC Group only discharges water after conducting primary, secondary, and tertiary treatment; or to the natural environment ; or a third party.

W-CH1.3

(W-CH1.3) Do you calculate water intensity for your activities in the chemical sector?

W1.4

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

Yes, our customers or other value chain partners

W1.4c

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

On our website, we provide customers and business partners with data on the AGC Group's water withdrawal volume, wastewater volume, and other information. We also established the AGC Group Integrated Green Procurement Guideline and have shared it with the following business partners:

1. Manufacturers of raw materials and parts that have a direct quality impact on the AGC Group's products
2. Sellers of the raw material and parts that have a direct quality impact on AGC Group's products as the administrator of the manufacturer
3. Outsourcing manufacturer of AGC Group's products

We request value chain partners to submit the following documents to confirm their participation in the AGC Group Integrated Green Procurement Guideline:

1. disclosure of the load on the environment caused by chemical substances in products and raw materials; and
2. disclosure of the reduction and substitution of substances in products and raw materials that create load on the environment.

As an internal endeavor, the AGC Group Purchasing Policy provides how the Group selects business partners. Our key selection and assessment criteria for business partners prioritize those who are endeavoring to realize each item of the Request for Cooperation in Sustainable Procurement, in addition to their appropriateness of management and technical level. The Request has 22 items grouped under the following 3 categories:

1. legal compliance, fairness, and integrity;
2. environment, safety, and quality (this is where we request partners to take steps to protect the environment and resources, including water); and
3. human rights and labor.

In relation to the Request, we annually send our Questionnaire on Sustainable Procurement (literal translation) to major business partners for them to make a 5-scale assessment on themselves and related parties, regarding items about sustainable procurement endeavors. The AGC Group checks the extent of the partners' efforts accordingly.

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-CH3.1

(W-CH3.1) How does your organization identify and classify potential water pollutants associated with its activities in the chemical sector that could have a detrimental impact on water ecosystems or human health?

W-CH3.1a

(W-CH3.1a) Describe how your organization minimizes adverse impacts of potential water pollutants on water ecosystems or human health. Report up to ten potential pollutants associated with your activities in the chemical sector.

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Every three years or more

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
Other

Tools and methods used

WRI Aqueduct
WWF Water Risk Filter
Environmental Impact Assessment
Regional government databases
Internal company methods
External consultants
National-specific tools or standards
Other, please specify

Flood hazard map for World(JRC), Global Assessment Report on Disaster Risk Reduction(GAR)2015(UNDRR)

Comment

Each site assesses water risks when necessary, as part of the environmental impact assessment. Furthermore, during the water risk assessments ongoing at all the AGC Group sites, we discuss the necessity and frequency of these assessments. We may assess water risks of the AGC Group as a whole every 5 to 6 years.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Every three years or more

How far into the future are risks considered?

Unknown

Type of tools and methods used

Enterprise Risk Management

Tools and methods used

Other, please specify

Knowledge inside the AGC Group

Comment

We assess the presence of risks through the supply chain questionnaire that we send for the AGC Group Integrated Green Procurement Guideline and the AGC Group Purchasing Policy.

Other stages of the value chain

Coverage

None

Comment

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	The AGC Group's businesses use a certain amount of water resources to cool glass manufacturing equipment, wash electronic products, dilute chemicals, for partial use in raw materials, and other purposes. With this situation as a backdrop, it is important for the Group to have water available in watershed areas of company sites. The Group uses WRI's Aqueduct for water-related risk identification. From 2020, we have additionally been using other international assessment tools such as the WWF's Water Risk Filter or data maps of countries and regions to conduct more accurate assessments.
Water quality at a basin/catchment level	Relevant, always included	The AGC Group's businesses use a certain amount of water resources to cool glass manufacturing equipment, wash electronic products, dilute chemicals, for partial use in raw materials, and other purposes. With this situation as a backdrop, it is important for the Group to have water available in qualities that are appropriate for continuing businesses. The Group uses WRI's Aqueduct for water-related risk identification. From 2020, we have additionally been using other international assessment tools such as the WWF's

		Water Risk Filter or data maps of countries and regions to conduct more accurate assessments.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	When establishing a new site, the AGC Group endeavors to pick a production plant site in a low water-risk and stable-climate area by assessing water and other environmental impacts. There has been no conflict with stakeholders, because when necessary we take proper agreement-based steps with them.
Implications of water on your key commodities/raw materials	Relevant, always included	The AGC Group uses large amounts of washing water for glass manufacturing, and we need high-purity washing water especially when polishing precision glass and lens. Water is also used as raw material for caustic soda production. Water-related risk assessments thus always cover the impact that water has on our key commodities and raw materials. We will continue environmental impact assessments to ascertain potential water shortage risks in areas where our manufacturing sites are situated.
Water-related regulatory frameworks	Relevant, always included	The AGC Group's businesses use a certain amount of water resources to cool glass manufacturing equipment, wash electronic products, dilute chemicals, and for other purposes. We are building a system for reviewing law compliance levels so that each site can reliably comply with laws. Given that future climate change or economic growth could result in stronger regulatory frameworks, our environmental impact assessment and water risk assessment also incorporate regulatory trends seen in countries and regions.
Status of ecosystems and habitats	Relevant, always included	The AGC Group's businesses use a certain amount of water resources to cool glass manufacturing equipment, wash electronic products, dilute chemicals, for partial use in raw materials, and other purposes. After proper on-site treatment, we discharge wastewater from our production sites into public sewage systems, rivers in the local area, and sea areas. Our wastewater treatment is thus strictly controlled, considering the possibility of impacting the habitat of animals and plants and the ecosystem wherein AGC Group sites are located. Our notable internal endeavor is the development of a wastewater risk assessment and analysis tool, achieved by the wastewater countermeasure project that was launched in 2019 consisting of equipment engineers. The purpose of the tool is to prevent trouble such as off-site leakage by identifying and analyzing risks in each overflow. Helping build a society in harmony with nature has been set as one of the AGC Group's environmental targets, and

		we are accordingly undertaking activities by incorporating climate change and the conservation of biodiversity into this target.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Each site conducts monitoring based on regulations of the region to supply daily purpose water that is of proper quality and allow for use of sewage systems. Pursuant to the AGC Group Occupational Health and Safety Working Rules , we internally improve the health of our employees, create comfortable working environments for them, and undertake other types of health and safety activities.
Other contextual issues, please specify		

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	If we fail to sufficiently take water-related measures or to supply our products smoothly to customers, we will face the risk of hurting our brand image and losing the opportunity to sell our products to customers. None of the Aqueduct-based water risk assessments made on the AGC Group's sites identified sites with significantly large risks. Still, we plan to advance our water risk control by re-analyzing our scenario and checking issues existing in the future and the entire supply chain, including customers. The AGC Group shares water risk information with customers and end users on the website, and also provides customers with information on the Group's water if necessary. Moreover, the Group actively participates in water-related study meetings and the like organized by customers.
Employees	Relevant, always included	The AGC Group has about 50,000 employees working around the world. Our employees are one of our most valuable assets, and their health is one of the critical elements that support their lives. Our business cannot be sustained without our employees. We provide them with clean drinking water at staff cafeterias and resting rooms, and clean water supply for toilets, baths, washing machines and emergency shower rooms. In areas with high natural disaster risks, including Japan, we store drinking water as an emergency supply for contingencies. If we cannot supply proper water for our employees, that turns into a significant business continuation risk. Moreover, we provide internal training about the environment,

		including water, because employee efforts are vital to achieving future water-related targets. As a new training initiative, we distribute on our internal website a series of environmental issue-themed educational videos that last about 3 minutes to raise employee awareness. We have developed the videos in Japanese, English, and Chinese, and are planning to make Indonesian, Thai and other versions as well.
Investors	Relevant, always included	We recognize that investors, which directly tie in with our business continuity, are important for our business. If we fail to sufficiently take water-related measures, we will face the risk of hurting our brand image and sales. Also, if some water risks turn into a reality, we face the risk of impacting the investment-related decisions of investors. The AGC Group shares water risks with investors on such sources as the AGC Group website, the AGC Integrated Report, and the Sustainability Data Book.
Local communities	Relevant, always included	The AGC Group defines "local communities" as residents in the neighborhood of each site. Disagreements with local communities could affect the Group's production and reputation, and turn into risks. This is why the water risk assessment includes good relationship with local communities. We actively communicate with local communities around our sites to promote accurate understanding of our business activities, and deepen our ties with and contribute to the development of local communities. Each site promotes various activities tailored to the conditions in the community, and host regular dialogue meetings, site tours for local residents and children, events, and similar initiatives.
NGOs	Relevant, always included	Various NGOs send questionnaires to the AGC Group. Negative assessments from NGOs could affect the AGC Group's brand image and reputation, which is why our water risk assessment includes good relationship with NGOs. We consider that by offering proper response to the questionnaires and other materials, we can gain engagement and accurate understanding of our businesses.
Other water users at a basin/catchment level	Relevant, always included	We withdraw the freshwater for our businesses mainly from rivers. Disagreements with water users in watershed areas could affect the AGC Group's production and reputation, and turn into risks. This is why the water risk assessment includes good relationship with other users in watershed areas. We consider that no competition exists with other stakeholders, because the Group's key plants stand in areas with low water risks. Also, we have opportunities to discuss water-related future topics and risks through such occasions as conferences

		at plant site areas as well as our communication with local residents and government agencies.
Regulators	Relevant, always included	Failure to comply with legal regulations could cause pollutants to be discharged into the environment and adversely affect the surrounding local communities. The government may penalize us as well. The AGC Group confirms the status of regulatory compliance through an internal audit and includes this in the water risk assessment. Wastewater from our sites is treated properly before discharge, pursuant to laws and regulations such as the Water Pollution Prevention Act and agreements with the national government and local community. We are obligated to maintain compliance with water-related regulatory frameworks by recognizing them and making proper responses. Specifically, we gather information from government and regulatory information from consultants. We also communicate with the regulator through industry groups, carefully follow regulatory trends, and respond to changes. To make responses by ascertaining details about information on legal regulations and/or amendments, we attend seminars hosted by the regulator.
River basin management authorities	Relevant, always included	Failure to comply with arrangements with the management authority of the watershed area and regulations enforced in the region could cause pollutants to be discharged into the environment and adversely affect the surrounding local communities. This is why the water risk assessment includes good relationship with other users in watershed areas. The AGC Group's production sites comply with regulations enforced by the management authority of the watershed area, sign an agreement when necessary, and engage in necessary wastewater monitoring and other activities.
Statutory special interest groups at a local level	Relevant, always included	Disagreements with statutory special interest groups could affect the AGC Group's production and reputation, and turn into risks. The Group's production sites dialog with residents and government agencies of surrounding communities by promoting risk communication on topics that include the relationship with statutory special interest groups in the region.
Suppliers	Relevant, always included	Water risks in the businesses of suppliers could affect the AGC Group's production and reputation, and turn into risks. If we consequently fail to supply our products smoothly to customers, we will face the risk of hurting our brand image and losing the opportunity to sell our products to customers. None of the Aqueduct-based water risk assessments made on the AGC Group's sites identified sites with significantly large

		risks. Still, we plan to advance our water risk control by re-analyzing our scenario for the future and the entire supply chain, including suppliers, and checking issues. Regarding the environmental impact experienced by suppliers, we share the AGC Group Integrated Green Procurement Guideline and request the suppliers to submit the following documents to confirm their participation in the Guideline: 1. disclosure of the load on the environment caused by chemical substances in products and raw materials; and 2. disclosure of the reduction and substitution of substances in products and raw materials that create load on the environment.
Water utilities at a local level	Relevant, always included	Local-level water utilities supply large volumes of water to the AGC Group's production sites. Some water utilities run public sewage facilities and some AGC production sites discharge wastewater to the sewage. Water risks in water utilities could affect AGC's production and reputation, and turn into risks. A local-level water utility measures wastewater from the Group's production site to confirm that the discharge is appropriate. In such cases, the production site simultaneously samples the wastewater, requests a third party to analyze it to confirm the analysis value, and verifies the value measured by the local-level water utility.
Other stakeholder, please specify		

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.

For the purpose of developing and operating our risk management system as well as that of the subsidiaries, the AGC Group has stipulated the basic policy, roles, and responsibility for such development and operation in the AGC Group Enterprise Risk Management Basic Policies in line with the Regulation for Enforcement of the Companies Act Section 4 Article 100 Paragraph 2 "Rules and other Systems Related to Management of Risk of Loss." Development and operation of a risk management system here means (1) identification of risks and then development and operation of procedures and a system to prevent the emergence of such risks and (2) identification of risks and then development and operation of a method or system to respond to the emergence of such risks.

AGC Group's basic approaches to enterprise risk management are as follows:
a. Involvement of management
The AGC Group positions enterprise risk management as daily management control, and therefore, top management actively gets involved in the Group's enterprise risk management. More specifically, from the total group optimization point of view, management sets the basic

enterprise risk management policy for the Group, monitors management initiatives, and runs the PDCA cycle for the Group as a whole.

b. AGC Group's efforts into enterprise risk management
The AGC Group as a whole works on enterprise risk management. More specifically, based on the basic policy set by management, each in-house company, strategic business unit (SBU), and the Corporate Division promote efforts on enterprise risk management including their responsible affiliates. Meanwhile, for key risks that must be managed by the whole Group, the Corporate Planning General Division works to centrally and comprehensively grasp the management state of such risks including responses to emerging risks.

c. Securing effectiveness and efficiency of enterprise risk management
The AGC Group aims to make integrated risk management both effective and efficient. More specifically, we will promote enterprise risk management as a unified and highly effective initiative in which the Group policy and focus areas of enterprise risk management are shared, and a simple, sufficient, and highly effective initiative in which the level of impact of risks on management, probability of emergence of risks, and business size are considered.

The scope of AGC Group's enterprise risk management has been set based on 3. System to control risk of damage of the AGC Group (Risk Management System) stipulated in the Corporate Policy over Internal Control.

Development and operation of a risk management framework
The AGC Group defines any risks that are expected to have a significant impact on AGC Group management if they emerge as key risk factors and has developed and is operating a mechanism to grasp the state of managing such risks across the Group. Key risks are reviewed and set regularly while taking into consideration their level of impact to the Group’s management, should they emerge, and the possibility of emergence. Among key risks, each in-house company and SBU analyzes risks in business operations and considers measures against them for each business and project. Management then monitors these risks as necessary. For risks associated with compliance, environment, accident, and quality, in-house companies and divisions, primarily SBUs, work to develop various measures to raise their risk management level. At the same time, the Corporate Division, which manages the downside risks listed above provides advice and support for the efforts by in-house companies and SBUs by means of creating and announcing guidelines and providing training. In-house companies and divisions, mainly SBUs, regularly self-inspect their downside risk management level, and management monitors the inspection result. Specific rules on development and operation of the risk management mechanism described above are stipulated in the AGC Group Risk Management Implementation Rules (literal translation) and are implemented.

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, only within our direct operations

W4.1a

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

For risks including those in our Group's business, we have identified matters that may have a serious impact on investors' decisions. When losses occur due to a disaster or an accident, we recognize that such an event will have a serious impact on investors' decisions and disclose the information of such event, in line with the rules on timely information disclosure set forth by the Tokyo Stock Exchange, if the losses exceed whichever is the smaller amount (9.8 billion JPY in 2020) between 3% of the net assets or 30% of the recurring profit and current net income.

1. Short to medium-term risks
For short to medium-term risks, we have formulated the AGC Group Enterprise Risk Management Basic Policies based on the Risk Management System described in the Annual Securities Report. These policies are our Group's basic risk management system policies, and we have a risk management and crisis response system in place in line with these policies.

<Risk management>
In accordance with the internal rules, we define risk factors important for our Group, and the risk management state is periodically discussed and monitored by our Management Committee and Board of Directors. For individual risks in the Group's business operations, each Corporate Division, in-house company and strategic business unit (SBU) carries out risk analysis for respective business operations and projects and considers risk response measures. As necessary, these risks are discussed by the Management Committee and Board of Directors. For risks associated with our Group's compliance, environment, accidents, and quality, each responsible division at our company creates and announces guidelines and carries out training and audits as necessary. Note that, key risk factors are re-examined regularly in accordance with their level of impact on Group management should they emerge and the possibility of emergence.

<Responses to risks that emerged>
In line with the internal rules and as a preparation for unforeseen events that may have a serious impact on the Group's management performance and finances, we have a crisis management report line in place to report the situation quickly and entirely and share with the CEO under the “Bad News First” approach. In addition, we have established a system in which the Group Taskforce Headquarters can be set up immediately at the CEO's discretion to allow a quick and appropriate initial response.

2. Long-term risks

In consideration of global social issues, future risk trends, and social issues that our customers address, we identified in the Medium-Term Management Plan key opportunities and risks that may influence long-term direction of company management and corporate value as our Group's material issues. We then set sustainability goals that aim to take advantage of opportunities and respond to risks. As a body to make decisions on sustainability initiatives, we have set the Sustainability Committee with the CEO as the chairperson and the CTO, CFO, and division heads as members. Under supervision of the Board of Directors, the Sustainability Committee decides how to handle key risks and deliberates on future measures while taking into account the progress toward the goal.

<Climate change issues including water risks>
Trends toward decarbonization have been gaining momentum since the Paris Agreement in 2015, and stricter energy-related policies, laws, and regulations are expected, and at the same time, social demand for companies to achieve net zero greenhouse gas emissions have been heightened. Facing these risks, our Group has set our vision for 2050 that we "aim at achieving net zero GHG emissions from our business activities and contribute to realizing net zero carbon emissions globally by taking advantage of our products and technology." To realize the 2050 vision, our Group will make efforts to implement greenhouse gas emissions reduction measures appropriate for emission sources, such as development of manufacturing techniques and equipment with low amounts of greenhouse gas emissions. Also, taking this section as a key opportunity, we will strive to create a business model that contributes to increased sales of products that save or generate energy during their life cycle and wider use of renewable energy.

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	0	Less than 1%	

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

Number of facilities exposed to water risk

0

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

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

Japan

Other, please specify

Mainly sea areas

Type of risk & Primary risk driver

Physical

Pollution incident

Primary potential impact

Brand damage

Company-specific description

Many of the AGC Group's key plants stand along the coast, and in some cases they discharge wastewater into the sea. Each plant treats industrial wastewater and discharges it by complying with legal limits, but we cannot eliminate the possibility of various factors causing us to accidentally discharge pollutants. In such cases, we could directly contaminate seawater. Moreover, a single plant often features multiple overflows: this means different risks exist depending on the wastewater-discharging equipment, and the risks need to be managed appropriately.

Timeframe

More than 6 years

Magnitude of potential impact

Medium

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Responses are made in each business area. We have not calculated company-wide impact.

Primary response to risk

Improve maintenance of infrastructure

Description of response

The Production Technology Division (a Headquarters division specializing in production technology) is endeavoring to roll out overflow risk assessments to each plant.

Wastewater subcommittee sessions of a production technology project composed of plant supervisors, held between November 2019 to June 2020, developed the Wastewater Risk Assessment Table for universal use within the AGC Group. With this Table, to each plant overflow we give scores weighted by such conditions as wastewater quality, hazardous substance sensor, shutoff equipment, bypass equipment, and destination type, then calculate the risk assessment score, and thereby identify high-risk overflows. We used this on a trial basis at five domestic plants, and from the results we developed the Wastewater Risk Analysis Table, which becomes necessary when a plant receives a high-risk assessment. With the Wastewater Risk Analysis Table, we can examine the current situation of risk level, solution, residual risk, and other aspects as to hazardous events that were identified through the Wastewater Risk Assessment Table, and consider what tangible and intangible measures should be taken.

From June 2020 onwards, we used the two Tables as part of utility diagnoses conducted by the Production Technology Division on domestic and overseas plants, identified and analyzed risks, and thereby developed measures for each site. COVID-19 made it difficult for us to visit plants for utility diagnoses in 2020. Still, through four on-site visits and one on-line visit, we confirmed the responses that the five assessed plants in Japan made. We also virtually briefed three domestic plants anew, and then visited these sites to confirm their responses. The pandemic is preventing us from immediate overseas rollout of the diagnoses, but we will develop case studies for diagnoses that have been completed in Japan to introduce the overflow risk assessment and begin by on-line assessments, and then visit the sites to confirm their responses when we can once again travel abroad.

We plan to continue this overflow risk assessment effort as part of the Production Technology Division’s utility diagnosis.

Cost of response

Explanation of cost of response

Responses are made in each business area and we do not know the company-wide cost.

W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	We do not specify water risks in the value chain per se, but each site develops its business continuity plan (BCP) and makes responses so that they can continue their business when exposed to site-specific risks. The BCP contains responses for the value chain. We currently do not foresee risks that could cause substantial financial or strategical impact. However, given that such factors as future water risks associated with climate change may not have been taken into consideration, we are planning to have the AGC Group as a whole specify water risks for the value chain too, including predictions for the future.

W4.3

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

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

W4.3a

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

Type of opportunity

Products and services

Primary water-related opportunity

Increased sales of existing products/services

Company-specific description & strategy to realize opportunity

We, the AGC Group, developed and manufactures SELEMION, a hydrocarbon type ion exchange membrane in our chemicals business. An application of this ion exchange

membrane is desalination by electrodialysis. SELEMION can desalinate industrial wastewater to a low enough level for the wastewater to be reused, thereby contributing to reducing the volume of water withdrawal. SELEMION can also perform its functions in various other applications, such as producing drinking water by desalinating or denitrifying well water, desalinating wastewater from the activated sludge process for recycling, and desalinating leachate from landfills. Therefore, from the perspective of water restoration, this product can contribute to reducing water risks from multiple directions. Since entering the membrane business in 1950, the AGC Group as a pioneer in ion membranes has manufactured and sold SELEMION through continuous technological development, and has contributed to customers' reuse of water. We advertise SELEMION on our own website, as an action to realize opportunity. The FY2020 net sales in our chemicals business, including SELEMION, amounted to 451.2 billion JPY, and hence we recognize that customers are satisfied with SELEMION.

Estimated timeframe for realization

Current - up to 1 year

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)

560,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The net sales of our chemicals business in 2023 is expected to go up around 24% from 2020. We thus expect the net sales of our chemicals business including SELEMION to increase to 560 billion JPY (2023) from 451.2 billion JPY (2020).

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Commitment to align with public policy initiatives, such as the SDGs Commitment to stakeholder awareness and education Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	AGC Group Environment Policy: At AGC Group we recognize that our businesses activities use a large amount of resources and energy. In line with the AGC Group Vision Look Beyond, we have set the "environment" as one of our company's shared values and we are committed to taking actions accordingly. We will also contribute to creating a sustainable society as an outstanding player in the global materials and parts industry by efficiently utilizing limited resources and energy and by taking into account our impact on the natural environment, including climate change and biodiversity. We see water as one of the "large amount of resources" mentioned in this Policy, and an element that significantly impacts climate change and biodiversity. Through raw material, washing, and cooling applications, water resources such as large amounts of freshwater and seawater are vital to maintaining our businesses. We recycle the water we withdrew as much as possible, and for off-site discharge, we take necessary purification steps to prevent hazardous substances from leaking into the local area.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	At the Board Meeting, the Chairperson (Director), the CEO (Representative Director and President), the CFO and CCO (Representative Director and Senior Executive Vice President), and the CTO (Director and Senior Executive Officer) discuss with outside directors to make important decisions on how the AGC Group will address risks and opportunities brought by climate change. At the Board of Directors

	Meeting, the CEO takes the ultimate responsibility for decisions on climate change-related measures. In addition, the CEO, CFO, and CTO are responsible for executing measures to respond to climate change-related risks and opportunities including water risks in the area of their responsibility. Climate change, including water risks, is a theme regarded as a material issue within the AGC Group that promotes sustainability. The Group perceives it as an element that brings key business opportunities and risks. For this reason, policies and issues related to climate change that influence the entire Group are discussed at not only the Board of Directors Meeting but also at the Sustainability Committee chaired by the CEO. The Sustainability Committee is under control of the Management Committee. Its activities include drafting of sustainability policies with the primary focus on climate change related issues, promotion of risk management, and controlling of information disclosure. Note also that the Sustainability Committee, chaired by the CEO, discusses the AGC Group strategy related to sustainability management including climate change and water risks. Based on the discussion result, the CEO reports the AGC Group climate change strategies as necessary at the Board of Directors Meeting. Climate-change reports including water risks made by the CEO in this fiscal year are as follows: ● Creation and public announcement of the AGC Group medium-and-long-term GHG emissions reduction target ● Creation of the roadmap with strategies and measures to achieve the milestone for 2030 set in the AGC Group mid-and-long-term GHG emissions reduction target

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives	Recognition of climate change issues including water risks as important problems influencing corporate continuity has been established in society and the economy. Under these circumstances, at the AGC Group too, the Directors understand that they have obligations to make efforts to not only respond to climate change risks and opportunities but also to adapt to and mitigate climate change issues.

		Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	We recognize that physical and transitional risks are the specific examples of climate change that have a significant influence on our business because of its nature. It is impossible for us to deny that there is also an influence of other risks including market risks, policy risks, and reputational risks. Following a director's duty of loyalty to their company stipulated by the Companies Act of Japan, where the AGC Group head office is located, our Directors are required to report any fact that may cause losses to the company and are responsible for creating a risk management system to fulfil their responsibility to monitor and manage such problems for the company. They understand that climate change issues can be one of the factors of such problems, and the Board of Directors monitors, as necessary, key risks and opportunities brought by climate issues. In 2019, we identified long-term key opportunities and risks for the AGC Group, which would become the basis of sustainability targets. In 2020, we chose AGC Group's major solutions and materials that would match the eight key opportunities identified in 2019 and then divided them into three types of social value: contribution to the realization of a sustainable global environment, contribution to the realization of safe and comfortable urban infrastructure, and contribution to the realization of safe and healthy lifestyles. For key risks, we chose AGC Group's major corporate activities corresponding to the five types of social values identified in 2019 and categorized them into three types of social value: contribution to the realization of a sustainable global environment, contribution to the maintenance of a healthy and secure society, and contribution to realization of fair and safe workplaces. Social value thus obtained was reported to the Board of Directors by the General Manager of the Sustainability Division. In response to the report, the Board of Directors in 2020 approved implementation of the GHG Reduction Target Setting Project (literal translation)

			and had a role in the carbon neutrality target setting as announced in the press release in 2021. The AGC Group World Wide will endeavor to reduce GHG emissions as a broad goal for mitigating the impact of water risks. As a measure to be implemented based on the TCFD scenario analysis result, we adopted a mechanism for verifying the profitability of future carbon costs in investment projects (carbon cost simulation). Also, the Management Committee deliberates on the risk of covering carbon costs in business and capital investment projects. The Board of Directors also recognize this risk if the subject investment needs discussion and resolution.

W6.3

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

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

Chief Executive Officer (CEO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The AGC Group EHSQ Management Regulations stipulate that the CEO is the top manager of EHSQ management including climate change and water risks.
Responsibility of the CEO is as follows:
(1) Create EHSQ management-related policy including climate change
(2) Appoint an EHSQ manager
(3) Secure resources for EHSQ management
(4) Review EHSQ management
(5) Establish a communication process for EHSQ management

At an EHSQ management review, the CEO receives a report on AGC's strategy on climate change and water risks from the GM of the EHSQ Division and issues instructions to each division head. The Sustainability Committee chaired by the CEO deliberates on the AGC Group's strategy on climate change.

Note that, in FY2020, the CEO instructed the division in charge of the environment at the head office to consider implementing internal carbon pricing as a part of the action plan to accelerate the Group's anti-climate change and water risk measures.

At the Sustainability Committee meeting held in 2020, adoption of the mechanism for simulating carbon costs in investment projects was discussed and approved with the future vision of fully implementing internal carbon pricing.
Also, the Sustainability Committee and Board of Directors discussed and decided on the target of achieving net zero carbon emissions in 2050 and 2030 milestone targets.

The CEO's position within the framework of the AGC corporate governance is described in:
AGC Integrated Report 2021, "Corporate Governance," pp. 74-79
https://www.agc.com/company/agc_report/pdf/agc_report_2021.pdf

AGC Group's environmental management system is described in:
Sustainability Data Book 2020, p. 61
https://www.agc.com/csr/pdf/agc_sus_jp_2020.pdf

W6.4

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

	Provide incentives for management of water-related issues	Comment
Row 1	No, not currently but we plan to introduce them in the next two years	

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?

The AGC Group’s Long-Term Management Strategy Vision 2030 sets forth both the present management’s vision for the year 2030 and strategies for its achievement. Considering the demand to both grow our business and achieve a sustainable society, the Vision provides that we will work toward our sustainability targets in various business activities and contribute to solving the following five social issues:
realizing a safe and comfortable urban infrastructure;

realizing safe and healthy lifestyles;
realizing a sustainable global environment;
creating fair and safe workplaces; and
maintaining a healthy and secure society.
As a direct and indirect activity pursuing influence on public policies to solve these social issues, we dispatch our employees to the Flat Glass Manufacturers Association of Japan and the Japan Chemical Industry Association. Moreover, given that the AGC Group understands water-related and other environmental policies, and offered our opinion by way of relevant industry associations, we consider that consistency between public policies and business strategies is ensured through industry associations.
Staff dispatched from AGC serve as industry association board members, and the direction toward which industry groups aim align with our business strategies. Also, close opinion exchanges between industry associations and the national government render inconsistencies unlikely to arise among our business strategies, industry association policies, and public policies. In case of inconsistencies between our business strategies and public policies, relevant parties from the AGC (corporate EHSQ General Division), industry associations, and government discuss to consider solutions.
The Asahi Glass Foundation was originally established as the Asahi Foundation for Chemical Industry Promotion in 1933, to commemorate the 25th anniversary of the founding of AGC Inc. Today, the foundation is mainly engaged in two activities: granting research in innovative scientific and technological fields, and awarding the Blue Planet Prize to people or organizations that make significant contributions to solving environmental problems. Environmental conservation is one of the most pressing of the global issues humankind faces. In 1992, the year of the Earth Summit, the Asahi Glass Foundation established the Blue Planet Prize, an international award presented to individuals or organizations in recognition of outstanding contribution to scientific research that has helped provide solutions to global environmental problems. Looking back, winners were selected from various research fields: global warming, climate change, biodiversity, hydrology, and elements of the social system such as economics and law. With a scientific viewpoint in mind, the target of this prize has shifted from warnings on the environment, given through observations and analyses, to solution-geared action based on prediction and cross-sectoral collaboration. With these activities, the Asahi Glass Foundation contributes to creating a society and civilization in which humankind can enjoy true prosperity.

W6.6

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

No, but we plan to do so in the next two years

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	16-20	Since 2019, based on future trends in global social issues and risks, as well as the social issues and other challenges that customers are tackling, the AGC Group has been identifying key opportunities and risks that could affect corporate value and the long-term direction of our business management. As a result, we have identified long-term social issues that we should be aware of, classifying them into 10 key opportunities and risks. (“Addressing change response” and “Using resources effectively” were identified as items that fall under both key opportunity and risk categories.) Water-related issues are considered as part of climate change. How water issues are integrated into business plans: The AGC Group Vision Look Beyond has "Environment" as one of our shared values. As water is ubiquitous and vital in all areas, it is important to ascertain water risk conditions in each area and promote corresponding measures. Why the timescale was selected: The AGC Group has been implementing environmental management based on AGC Environmental Indicators since 2006, and is endeavoring to reach the target for 2025.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	Since 2019, based on future trends in global social issues and risks, as well as the social issues and other challenges that customers are tackling, the AGC Group has been identifying key opportunities and risks that could affect corporate value and the long-term direction of our business management. As a result, we have identified long-term social issues that we should be aware of, classifying them into 10 key opportunities and risks. (“Addressing change response” and “Using resources effectively” were identified as items that fall under both key opportunity and risk categories.) Water-related issues are considered as part of climate change. How water issues are integrated into business plans: The AGC Group Vision Look Beyond has "Environment" as one of our shared values. As water is ubiquitous and vital in all areas, it is

			important to ascertain water risk conditions in each area and promote corresponding measures. Accordingly, necessary sites have each established medium and long-term water-related targets, and the AGC Group World Wide ascertains the status of target achievement. Why the timescale was selected: The AGC Group has been implementing environmental management based on AGC Environmental Indicators since 2006, and is endeavoring to reach the target for 2025.
Financial planning	Yes, water-related issues are integrated	16-20	Since 2019, based on future trends in global social issues and risks, as well as the social issues and other challenges that customers are tackling, the AGC Group has been identifying key opportunities and risks that could affect corporate value and the long-term direction of our business management. As a result, we have identified long-term social issues that we should be aware of, classifying them into 10 key opportunities and risks. (“Addressing change response” and “Using resources effectively” were identified as items that fall under both key opportunity and risk categories.) Water-related issues are considered as part of climate change. How water issues are integrated into business plans: Water-related issues are key opportunities to market technologies and products that contribute to solving water issues. We also respond to the key risk of water-related issues by, as provided below, assessing risks and incorporating large-scale risk measures into financial plans: 1. EHSQ Division assesses water risks using the World Resources Institute’s Aqueduct and relevant information of each production plant; 2. EHSQ Division reports the assessment results to each in-house company at the AGC Group EHS Committee, hosted by the Corporate EHSQ General Division; and 3. each in-house company implements measures against water risks according to capital investment rules, if necessary. Why the timescale was selected: The AGC Group has been implementing environmental

			management based on the AGC Environmental Indicator since 2006, and is endeavoring to reach the target for 2025.

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)

13.9

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

-20.6

Water-related OPEX (+/- % change)

0.2

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

10.2

Please explain

We have not disclosed financial data pertaining only to water-related expenditure; thus the numbers presented here are changes from the previous year and estimations for the next year, derived from data of our business overall. Water use is vital to all AGC Group businesses and is associated with nearly every part of the Group's equipment. Every business uses water for washing and cooling purposes, and in addition to that, our chemicals business uses water for raw materials. This is why we estimate roughly the same level of cost trend for our businesses in general and water.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

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	IEA B2DS IEA Sustainable Development Scenario Nationally determined contributions (NDCs)	Increased drought risks from future climate change could cause authorities to introduce tax for water resources or limitations to water withdrawal, forcing us to shut down our operations.	We are assessing water risks by adopting a new method and data. Using the results, we will ascertain the water risk of each site and accordingly investigate in detail the measures of sites standing in high-water risk areas, verify the effect of the measures, and make considerations/take measures if insufficiencies exist. This effort includes taking responses for the supply chain

W7.4

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

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

With the impacts of floods, storm surges, and droughts associated with climate change, there are possible risks such as higher water prices and supply chain disruptions. In response to this, we are considering the institutional design and operation of carbon pricing and water pricing.

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	Targets are monitored at	Under the Environment Project 2025 that launched in 2020, we started our activities with a water-related target that aims to have all high-water risk sites take measures

	Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals Brand/product specific targets and/or goals Country level targets and/or goals Basin specific targets and/or goals	the corporate level	by 2025. In this activity, we first assessed the water risks of all global sites to identify which one is exposed to high water risks. The assessment has two phases: the first assesses risks based on the locational information of the site, and the second assesses actual risks by sending a questionnaire to sites identified in the first phase through locational information. In addition to an assessment with the revised WRI Aqueduct Water Atlas, currently phase one uses such materials as Aqueduct Floods (WRI), the Flood Hazard Map for World (JRC), the Global Assessment Report on Disaster Risk Reduction (GAR) 2015 (UNDRR), and the Kasaneru (lit. Superimposing) Hazard Map (Ministry of Land, Infrastructure, Transport, and Tourism). With these materials, this phase makes a five-scale assessment on locational information-based flooding, high tide, and drought risks using data from the 2°C limit and 4°C increase scenarios. The second phase sends questionnaires to the roughly 20% sites at which present or future risks were found through the first assessment, and confirms such details as measures to be taken and stakeholder relations for the actual flooding, high tide, and drought risks. Based on questionnaire results, sites at which high risks were identified again are to take measures by 2025.

W8.1a

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

Target reference number

Target 1

Category of target

Other, please specify

Mitigating risks to our sites associated with the occurrence of flooding, drought, and high tide.

Level

Company-wide

Primary motivation

Risk mitigation

Description of target

All high-water risk sites taking measures by 2025

Quantitative metric

Other, please specify

Baseline year

2020

Start year

2020

Target year

2021

% of target achieved

0

Please explain

The AGC Group's current target is to have all high-water risk sites take measures by 2025. To reach this target, risk assessments to identify high-risk sites are currently underway. This process made us acutely aware of the need to conduct scenario analyses again, and we are planning to carry them out. If results of risk assessments and scenario analyses reveal an index particularly worth paying attention to in all AGC Group areas, we may adopt that index as a new target.

W9. Verification

W9.1

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

Yes

W9.1a

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

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Volume of water withdrawal and of wastewater	AA1000AS	SGS-based third party verifications are underway. (The verification process is ongoing as of July 2021)

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.

W10.1

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

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

W10.2

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

Yes