GlobalFoundries Inc. - Water Security 2022

W0. Introduction

W0.1

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

GlobalFoundries (GF) is one of the world's leading semiconductor foundries. We manufacture complex, feature-rich integrated circuits that enable billions of electronic devices that are pervasive throughout nearly every sector of the global economy. With our specialized manufacturing processes, vast library of intellectual property, and differentiated technologies, GF serves a broad range of customers that includes the global leaders in semiconductor design.

GF's differentiated services and technology and feature-rich solutions enable our customers to develop innovative products for an increasingly wide variety of applications across broad markets. We unlock value for our customers by helping drive technology in multiple dimensions, making their products more intelligent and intuitive, more connected and secure, and more powerful and energy efficient.

Semiconductor technology is central to our global economy and vital to the fabric of everyday life. GF's feature-rich chips are in the laptop computers, smartphones, smart devices, and automobiles we use every day. They are in the high-speed wireless networks, data centers, and multimedia tools that enable video conferencing in our homes, schools, and businesses and help humanity stay connected. As technology continues to accelerate and yield incredible new innovations and advancements, semiconductors will remain at the heart of this progress.

Since GF's founding in 2009, we have invested more than $23 billion in our company to build a global manufacturing footprint with multiple state-of-the-art facilities across three continents, offering customers the flexibility and security their supply chains require. We currently operate five manufacturing sites, called fabs, in: Dresden, Germany; Singapore; Malta and East Fishkill, New York; and Burlington, Vermont. These world-class manufacturing sites across three continents provide the scale, technology differentiation, and geographic diversification that we believe are critically important to our customers' success. Our scaled footprint also gives us the flexibility and agility to meet the dynamic needs of our customers around the globe, help them mitigate geopolitical risk, and provide greater supply chain certainty.

Semiconductor manufacturing is among the most complex and sophisticated manufacturing processes in the world. Requiring a strictly controlled environment called a cleanroom, the process includes a sequence of hundreds to thousands of processing steps in which electronic circuits are gradually built on a silicon surface. The resulting chips can be the size of a fingernail, or smaller, and feature billions of nanoscopic transistors.

We focus on manufacturing feature-rich semiconductors that enable our customers to create devices that connect, secure and process data, and efficiently power the digital world around us. To solve our customers' most complex challenges, we offer a broad range of sophisticated technology platforms that leverage our extensive patent portfolio and deep technical expertise in digital, analog, mixed-signal, RF and embedded memory. Our manufacturing expertise is complemented by a global network of R&D, design enablement, and customer support operations.
GF's mission is to innovate and partner with our clients to deliver technology solutions for humanity. As we manufacture semiconductors around the globe, we are deeply committed to ethical and responsible business practices. At GF, corporate responsibility is fundamental to our company and the value we provide to our customers.

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 2021	December 31 2021

W0.3

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

Germany
Singapore
United States of America

W0.4

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

USD

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

No

W0.7

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

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, a Ticker symbol	GFS

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Important	Primary direct use: Semiconductor manufacturing processes use water, specifically ultrapure water (UPW). UPW is further purified from incoming fresh water or recycled from UPW previously used in the manufacturing process, specifically in wafer cleaning processes. Availability of sufficient amounts of good quality freshwater is therefore important to GF operations. Primary indirect use: Semiconductor manufacturing uses a number of ultrapure wet chemicals in defined high purity grades. It is understood that the manufacture of these materials requires the availability of sufficient amount of good quality freshwater. Therefor the availability of sufficient amounts of good quality freshwater is rated as important for indirect use.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	Primary direct use: Semiconductor manufacturing processes use water, specifically ultrapure water (UPW). UPW is further purified from incoming fresh water or recycled from UPW previously used in the manufacturing process, specifically in wafer cleaning processes. GF has extensive water reclaim (recycling and reuse) programs in place at our manufacturing facilities. Water recycling is the process that feeds previously used UPW back into the UPW purification plant. Availability of sufficient amounts of our own recycled water from GF on-site water recycling plants is

	Direct use importance rating	Indirect use importance rating	Please explain
			therefore important to GF operations. Availability of brackish or produced water is not important. Primary indirect use: Semiconductor manufacturing uses a number of ultrapure wet chemicals in defined high purity grades. It is understood that the manufacture of these materials requires the availability of sufficient amount of good quality freshwater, and potentially of recycled water. Availability of brackish or produced water is not important. Therefor the availability of sufficient amounts of recycled, brackish and/or produced water available for indirect use is rated neutral.

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%	Water withdrawals are monitored at each GF manufacturing site through automated water meters. At minimum quarterly, water withdrawals by sites are rolled up to compile a corporate quarterly total volume of water withdrawn.
Water withdrawals – volumes by source	100%	Water withdrawal volumes by source are monitored at each GF manufacturing site through automated water meters. At minimum quarterly, water withdrawals by site and by source are rolled up to compile a corporate quarterly total volume of water withdrawn by source.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Water quality is very important to GF. Water, specifically, ultrapure water (UPW) is necessary for semiconductor manufacturing and must be treated to very high purity levels,

	% of sites/facilities/operations	Please explain
		removing particles, ions, and dissolved gases before it can be used. Therefore, the quality of incoming water (i.e. water withdrawal) is constantly monitored.
Water discharges – total volumes	100%	Water discharges are monitored at each GF manufacturing site through automated meters. At minimum quarterly, water discharge by site is rolled up to compile a corporate quarterly total volume of water discharge.
Water discharges – volumes by destination	100%	Water discharges by destination are monitored at each GF manufacturing site through automated meters. At minimum quarterly, water discharge by site and by destination is rolled up to compile a corporate quarterly total volume of water discharge
Water discharges – volumes by treatment method	100%	Water discharges by treatment method are monitored at each GF manufacturing site through automated meters.
Water discharge quality – by standard effluent parameters	100%	Water quality parameters are controlled as per wastewater permits and/or regulatory requirements in place at all sites. Wastewater permits or procedures for each site clearly define the water quality parameters and the frequency and methods of controls as well as action plans in case of exceedance.
Water discharge quality – temperature	100%	Temperature parameters are controlled as per wastewater permits in place at all sites.
Water consumption – total volume	100%	Calculated quarterly by subtracting the quarterly total of water discharge from the quarterly total of water withdrawal for all GF manufacturing sites.
Water recycled/reused	100%	Volumes of water recycled in our own water recycling plants as well as the water reused are monitored at each GF manufacturing site through automated meters. At minimum quarterly, volumes of water recycled and water reused are rolled up to compile a corporate quarterly total.
The provision of fully-functioning, safely managed WASH services to all workers	100%	GF sites provide full access to water, adequate sanitation and hygiene for all workers.

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	26798	Lower	While GF production output increased materially from 2020 to 2021, GF total water withdrawal decreased by 1.8% in 2021 as compared to 2020. During 2021, GF implemented water conservation projects, that annually conserve more than 950 megaliters of water withdrawn and which contributed to a decrease in total water withdrawal by more than 400 megaliters in 2021 as compared to 2020 even while production volume was materially higher in 2021 than in 2020. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").
Total discharges	23549	About the same	In 2021, total water discharge remained about the same as compared to the 2020 value. During 2021, GF implemented water conservation projects, that annually conserve more than 950 megaliters of water withdrawn and which contributed to a decrease total water withdrawal by more than 400 megaliters in 2021 as compared to 2020 even while production volume was materially higher in 2021 than in 2020. The above-mentioned 2021 water conservation projects mainly focused on water reclaim and reduction of water consumption, so therefore while water withdrawal was reduced, total water discharges remained about the same from 2020 to 2021. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").
Total consumption	3249	Much lower	In 2021, total water consumption was much lower compared to 2020. GF calculates water consumption as the delta between total water withdrawal and total water discharged in our water balance. Water consumption in semiconductor manufacturing is water that evaporates from process via the controlled air exhausts. Water is not incorporated into products. During 2021, GF implemented water conservation projects that annually conserve more than 950 megaliters of water withdrawn and which contributed to a decrease in total water withdrawal by more than 400 megaliters in 2021 as compared to 2020 even while production volume was materially higher in 2021 than in 2020. The above-mentioned 2021 water conservation projects mainly focused on water reclaim and reduction of water consumption, so therefor while water withdrawal was reduced, total water discharges remained about the same from 2020 to 2021. This led to a decrease in water consumption of more than 400 megaliters as well, which is a higher percentage of the total water consumption value. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows:

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
			changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").

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	No	<Not Applicable>	<Not Applicable>	WRI Aqueduct	GF manufacturing sites are not located in, and do not withdraw water from, areas that are assessed as high water stress areas. GFs uses the World Resources Institute's (WRI) "Aqueduct Water Risk Atlas", specifically the dataset on "baseline water stress" (part of the overarching indicator category "physical risk") in our annual assessment to determine whether our manufacturing sites are located in, or withdraw water from, high water stress areas. Reflecting the WRI assessment, three GF manufacturing sites (Singapore, Malta, NY and East Fishkill, NY) in are located in areas currently assessed with a baseline water stress of "Low". Two GF manufacturing sites are located in areas with a baseline water stress of either "Low to Medium" (Burlington, VT), or "Medium to High" (Dresden, Germany). No GF manufacturing site is located in areas assessed with a baseline water stress of "High" or "Extremely High", defined respectively as a range from 40 percent to 80 percent and a ratio above 80 percent of total water withdrawals to available renewable surface and groundwater supplies. (Baseline water stress is expressed as the ratio of total water withdrawals to available renewable surface and groundwater supplies. Higher values indicate more competition among user).

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	Not relevant	<Not Applicable>	<Not Applicable>	No direct withdrawal for use at GF manufacturing sites
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	No direct withdrawal for use at GF manufacturing sites
Groundwater – renewable	Relevant	847	Higher	Groundwater withdrawal as a source for water supply is only relevant to the GF site in East Fishkill, NY. It is used in some cases to supplement the municipal water supply. Renewable groundwater withdrawal increased by 4% in 2021 as compared to 2020. The increase was due to a need to supplement municipal water supply during 2021. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").
Groundwater – non-renewable	Relevant	1263	Lower	Groundwater withdrawal as a source for water supply is only relevant to the GF site in East Fishkill, NY. It is used in some cases to supplement the municipal water supply. Non-renewable groundwater withdrawal decreased by 3% in 2021 as compared to 2020. The decrease was due to a smaller need to supplement municipal water supply with non-renewable groundwater during 2021. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	No direct withdrawal for use at GF manufacturing sites.
Third party sources	Relevant	24688	Lower	Third party water sources are GF's major water withdrawal source. Water withdrawal from third party sources decreased by 1.8 % in 2021 as compared to 2020. During 2021, GF implemented water conservation projects, that annually conserve more than 950 megaliters of water withdrawal and which contributed to a

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
				decrease in third party water withdrawal by more than 400 megaliters even while production volume was materially higher in 2021 than in 2020. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").

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	7694	Lower	Wastewater to fresh surface water is only relevant to two of GF's sites: Fab 9 (Burlington, VT, USA) and Fab 10 (East Fishkill, NY, USA) discharge directly to surface waters following a rigorous combination of industrial and biological treatment processes. The total discharge to fresh surface water decreased by 3.5% as compared to 2020. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	GF does not discharge to brackish surface water / seawater
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	GF does not discharge to groundwater.
Third-party destinations	Relevant	15855	Higher	In 2021, water discharge to third party destinations was 1.8% higher than in 2020. (Here, GF applies a classification of changes of reporting year values to the preceding year

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
				values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").

W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	23474	About the same	100%	At each of our manufacturing sites, we operate permitted wastewater treatment systems to manage effluent from production areas. These facilities treat the wastewater to meet regulatory requirements prior to discharge. Sanitary wastewater from GF sites with the exception of GF Fab 9 and Fab 10 is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities. The total volume of waste water discharged in 2021 was about the same as in 2020. While the volume of wastewater may change from year to year, there is no change in the scope of wastewater treatment applicability. (Here, GF applies a classification of changes of reporting year values to the preceding year values as follows: changes that are within a variation of +/ - 1% are considered to be "about the same"; changes higher than +/- 1% but not higher than +/-10% are considered as "higher" / "lower"; changes higher than +/- 10% are considered "much higher" / "much lower").

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Secondary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Not relevant to GF, as all production wastewater is routed through tertiary treatment prior discharge. Sanitary wastewater from GF sites with the exception of Gf Fab 9 and Fab 10 is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities.
Primary treatment only	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Not relevant to GF, as all production wastewater is routed through tertiary treatment prior discharge. Sanitary wastewater from GF sites with the exception of Gf Fab 9 and Fab 10 is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Not relevant to GF, as all production wastewater is routed through tertiary treatment prior discharge. Sanitary wastewater from GF sites with the exception of Gf Fab 9 and Fab 10 is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities.
Discharge to a third party without treatment	Relevant	75	Please select	Please select	Sanitary water discharge with the exception of Fab 9 and Fab 10, is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities.
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Not relevant to GF, as all production wastewater is routed through tertiary treatment prior discharge. Sanitary wastewater from GF sites with the exception of GF Fab 9 and Fab 10 is not treated in GF's own wastewater treatment, but sent to third party (municipal) wastewater treatment facilities.

W1.3

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

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	6585000000	26798	245727.293081573	GF anticipates continued improvement to normalized water withdrawal efficiency. To drive increase in water withdrawal efficiency, in 2022 we have set a new goal to improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025. (The Manufacturing Index (MI) is derived from the number of wafers manufactured, the number of masking steps in our fabrication processes (reflecting process complexity), and the total area of wafers produced.)

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

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

1-25

% of total procurement spend

76-100

Rationale for this coverage

GF annually engages with its "major" suppliers via Responsible Business Alliance (RBA) tools and platforms.
The composition of the annual GF major supplier list is based on documented criteria that are related to supplier category, supplier spend, supplier facility location, and nature of supplier business.
The 2021 GF major supplier list covered suppliers with a cumulative spend of more than 80 percent in the primary commodities, which include silicon wafer, electronic grade and specialty
chemical suppliers, manufacturing tool suppliers, mask suppliers, and outsourced manufacturing — mostly outsourced test and assembly (OSAT) suppliers.

The suppliers of capital goods (manufacturing tools) and the suppliers of the chemicals / materials / gases that we use in semiconductor manufacturing, are the suppliers that account for the majority of our supply chain water use and impact. The same consideration applies to our outsourced test and assembly (OSAT) suppliers who have a higher water use and water impact than other service suppliers.

The aim of the annual RBA major supplier engagement is:
a) to assess the risks at GF's major suppliers for nonconformance to the RBA Code, including its environmental and water related requirements (using RBA SAQs (Self Assessment Questionnaires) and RBA Audit tools), and
b) to better understand / quantify and drive environmental sustainability throughout our supply chain: The annual RBA Environmental Survey includes questions on supplier water use, discharge, water recycling, water risk assessments, water strategies and water targets.

GF identified major suppliers are incentivized to report the requested RBA information, including the water related information, because RBA information reporting to GF feeds into GF's Total Supplier Rating. Failure to report or incomplete reporting results in loss of score.

Impact of the engagement and measures of success

Impact of engagement:
The annual major supplier engagement allows GF to assess whether there are risks at GF's major suppliers for non-conformance to the RBA Code, including its environmental and water related requirements. This risk is assessed using RBA SAQs (Self Assessment Questionnaires) and RBA Audit Information.
The annual RBA Environmental Survey that GF major suppliers are required to complete includes questions on water use, discharge , water recycle and reuse volumes, water policy and water targets as well as the level of ambition of these targets. GF staff analyzes the information and reduction strategies/ targets to better understand supplier best practices.

Incentive:
The annual results of the RBA Code conformity assessment and verification process are included in our Global Supplier Ratings process, which scores supplier performance with regard to Quality, Cost, Operations, Service, Technology and Business Continuity / Compliance. Failure to be in non-conformance to the RBA Code, and failure to provide requested RBA information results in a lower supplier score.

Success is measured by :
a) the number of major supplier sites (in percent) with a high risk to be in non-conformance to the RBA Code: The target is 0% of major suppliers with a (confirmed) high risk to be in non-conformance to the RBA Code, including its environmental and

water related requirements. In 2021, GF obtained RBA SAQs for 198 major supplier sites, with zero SAQs scored at a high risk to be in non-conformance to the RBA Code. Of the 21 RBA audits performed at GF major supplier sites in 2020-2021, there were zero priority finding on environmental provisions (including water related provisions) of the RBA Code.
b) the number of major suppliers with completed reporting on their water numbers and reduction targets (in percent). The target is to drive a maximum of major suppliers to complete reporting on their GHG emissions and reduction targets.

Comment

The % of spend is not exactly 80%, but in the 80% range. It is more than 80% of spend in the primary commodities: Silicon wafer, electronic grade and specialty chemical, manufacturing tools (suppliers in this category covered more than 70 % of spend), mask suppliers, and outsourced manufacturing (OSAT).
The number of suppliers is related to the number of suppliers in the primary commodities: Silicon wafer, electronic grade and specialty chemical suppliers, manufacturing tool suppliers, OSATs.

W1.4b

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

Type of engagement

Innovation & collaboration

Details of engagement

Encourage/incentivize innovation to reduce water impacts in products and services

% of suppliers by number

Less than 1%

% of total procurement spend

Less than 1%

Rationale for the coverage of your engagement

Certain GF service suppliers are more specialized in water technology than GF. GF and suppliers jointly benefit from innovative ideas and concepts to implement additional water savings solutions and drive GF water conservation and water recycling and share the success.
For example, in 2021, GF Singapore worked with a supplier on the “Century Water Reclamation” project to build and operate a waste water reclaim system to increase overall reclaim ratio- and capture and recycle / reuse water that previously could not be captured for recycled or reuse and were discharged into public sewerage via waste water treatment.
The reclaimed wastewater from the GF SGP Fab 7 and 7G condensate, slurry and DI (deionized water) reject streams now passes through activated carbon, ceramic filtration and catalytic treatment before being used in cooling towers and point-of-use scrubbers. (This project was funded by a grant from the Singapore Public Utilities Board (PUB).)

Impact of the engagement and measures of success

For this engagement the beneficial water-related outcome is related to a reduction of annual water use / water withdrawal. The success is measured in the volume of water conserved - this project reduces the volume of water withdrawal by 613 megaliters annually. The success is shared between GF and the supplier.

Comment

none

W1.4c

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

Customers: GF is working with our customers to enable them to understand their supply chain water impact. For example, GF is sharing our water withdrawal, water discharge, water recycling data but also water targets and strategies.
GF is benefitting from that engagement with a better understanding of customer expectations which in turn informs GF water strategy.
Measure of success is customer satisfaction.

GF also works with customers and R&D companies that are part of our partner community to explore how GF's technology can be applied to water management / water conservation solutions.
For example, in 2021 GF Dresden partnered with a number of German companies and R&D organizations (SmartSystems Hub, Sensry GmbH, Telekom, Infineon Dresden, Coderitter and the Fraunhofer Institute (ENAS) as innovation partners on a project to develop failure prevention and predictive maintenance on critical parts (valves) in GF's own ultrapure water (UPW) systems based on an "edge AI'' application. The aim was to predict the failure of a control valve within the UPW supply using robust data and thereby detecting and preventing supply interruptions at an early stage. A solution that uses a GF 22FDX technology (an industrial IoT device) was successfully demonstrated.

University R&D projects:
GF is actively partnering with universities (e.g. Clarkson University, Cornell University, and others) as well as other semiconductor companies in R&D projects on various EHS aspects of semiconductor manufacturing processes. In 2021, with other industry partners GF sponsored 13 such university research projects, with a large share on projects that are water-related. This includes projects that research novel wastewater separation and pollutant treatment processes, improved wastewater analytical techniques, and the evaluation of chemical process alternatives to reduce the amount of specific water pollutants.

Measure of success is successful completion of funded projects, with useful results for GF.

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

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Value chain stage

Direct operations

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

1 to 3 years

Type of tools and methods used
Other
Tools and methods used
Internal company methods
Scenario analysis
Contextual issues considered
Water availability at a basin/catchment level
Water quality at a basin/catchment level
Implications of water on your key commodities/raw materials
Water regulatory frameworks
Status of ecosystems and habitats
Access to fully-functioning, safely managed WASH services for all employees
Stakeholders considered
Customers
Employees
Investors
Local communities
Regulators
Suppliers
Water utilities at a local level
Comment
GF manages risk at the enterprise, business function and manufacturing site levels to meet our commitments to customers, shareholders, the community and employees.
Risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. Water-related risks are generally included. Risks are aligned via a common risk scoring matrix and results roll up into a list of top enterprise-wide risks. During this process, risks are prioritized and mitigation strategies are identified, validated and measured.
A focused TCFD aligned assessment of climate-related risks, including water-related implications was conducted in early 2022. The most significant risks identified are those that may have substantive impact and were analyzed further in a qualitative scenario-based analysis.

W3.3b

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

GF manages risk at the enterprise, business function and manufacturing site levels to meet our commitments to customers, shareholders, the community and employees.
Risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. Water-related risks are generally included. Risks are aligned via a common risk scoring matrix and results roll up into a list of top enterprise-wide risks. During this process, risks are prioritized and mitigation strategies are identified, validated and measured.

GF manages risk at the enterprise, business function and manufacturing site levels to meet our commitments to employees, customers, the community and shareholders and other stakeholders that also include suppliers, water utility providers and regulatory authorities.
Risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. Risks are aligned via a common risk scoring matrix and results roll up into a list of top enterprise-wide risks. During this process, risks are prioritized and mitigation strategies are identified, validated and measured. Water-related risks are generally included. Usually, these include the following aspects:
· Water availability and quality at a basin/catchment level: This is relevant because semiconductor manufacturing processes use water, specifically ultrapure water (UPW). UPW is further purified from incoming fresh water or recycled from UPW previously used in the manufacturing process, specifically in wafer cleaning processes. Availability of sufficient amounts of good quality water at local level is therefore important to GF operations. Similarly, semiconductor manufacturing uses a number of ultrapure chemicals in defined high purity grades. It is understood that their manufacture requires the availability of sufficient amounts of good quality freshwater.
· Water related regulatory frameworks: These define the requirements for water withdrawal and wastewater discharge at our manufacturing sites and are therefore relevant and included.
· Status of ecosystems and habitats: Depending on individual manufacturing site's water sources and wastewater discharge destinations, this may be relevant, for example, where a GF site's water use and discharge may have impact on regional ecosystems and habitats. It is therefor relevant and included.
· Access to fully functioning, safely managed WASH services for all employees: All of GF sites have fully functioning, safely managed WASH services for all employees in place. This is a legal requirement at each of our sites, and our EHS Policy commits us to a beyond compliance approach.

A focused TCFD aligned assessment of climate-related risks, including water-related implications was conducted in early 2022. The most significant risks identified are those that may have substantive impact and were analyzed further in a qualitative scenario-based analysis. In regards to water-related implications, the following risks (acute physical risk for GF operations, chronic physical risk for GF operations, acute physical risk in GF supply chain) were assessed with none of the evaluated risks to present material water-related impacts in the short-term to mid-term.

World Resources Institute's (WRI) "Aqueduct Water Risk Atlas Assessment
GF manufacturing sites are not located in, and do not withdraw water from, areas that are assessed as high water stress areas. Reflecting the WRI assessment, three GF manufacturing sites (Singapore, Malta, NY and East Fishkill, NY) in are located in areas currently assessed with a baseline water stress of "Low". Two GF manufacturing sites are located in areas with either a baseline water stress of "Low to Medium" (Burlington, VT), or "Medium to High" (Dresden, Germany). No GF manufacturing site is located in areas assessed with a baseline water stress of "High" or "Extremely High", defined respectively as a range from 40 percent to 80 percent and a ratio above 80 percent of total water withdrawals to available renewable surface and groundwater supplies.
Evaluating future water stress scenarios for our GF manufacturing sites locations using the Water Risk Atlas shows a greater than "High" water stress for Singapore. GF is well aware of this scenario, addressing it by sourcing the Singapore PUB-supplied NEWater at our Singapore site and by continuing to drive water conservation and recycling projects at GF Singapore.

W4. Risks and opportunities

W4.1

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

No

W4.1a

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

GF defines "substantive financial or strategic impact" as an impact that has a high probability to manifest a significant impact to the business.
GF uses risk severity and vulnerability to determine if a potential risk is significant considering impacts on:
- GF property, operations, and business continuity,

- GF personnel;
- upstream supply chain, utilities, and materials cost and continuity, and/or
- compliance, regulatory and quality related, and resulting reputational risks.

A risk that exceeds a defined threshold of risk severity and vulnerability combined is considered to be a substantive risk.

W4.2b

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	At GF, risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. Water related risks are generally included. As per response to W4.1a, GF defines "substantive financial or strategic impact" as an impact that has a high probability to manifest a significant impact to the business. GF uses risk severity and vulnerability to determine if a potential risk is significant -a risk that exceeds a defined threshold of risk severity and vulnerability combined is considered to be a substantive risk. The following impacts are considered: - GF property, operations, and business continuity, - GF personnel; - upstream supply chain, utilities, and materials cost and continuity, and/or - compliance, regulatory and quality related, and resulting reputational risks. Water-related risks in GF's direct operations have not been prioritized at the level of significant (substantive) risks to date.

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	At GF, risks are identified through a variety of assessment methodologies conducted by both internal and external resources. The frequency of these assessments depends on risk type but is typically annual. Water related risks are generally included. As per response to W4.1a, GF defines "substantive financial or strategic impact" as an impact that has a high probability to manifest a significant impact to the business. GF uses risk severity and vulnerability to determine if a potential risk is significant -a risk that exceeds a defined threshold of risk severity and vulnerability combined is considered to be a substantive risk. The following impacts are considered: - GF property, operations, and business continuity, - GF personnel;

	Primary reason	Please explain
		- upstream supply chain, utilities, and materials cost and continuity, and/or - compliance, regulatory and quality related, and resulting reputational risks. Water-related risks in our upstream supply chain have not been prioritized at the level of significant (substantive) risks to date.

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?

No

W4.3b

(W4.3b) Why does your organization not consider itself to have water-related opportunities?

	Primary reason	Please explain
Row 1	Opportunities exist, but none with potential to have a substantive financial or strategic impact on business	GLOBALFOUNDRIES manufacturing sites are located around the globe, implying a spread of risk – regional risks or threats should impact only a fraction of our operations. Moreover, GF manufacturing sites are located outside of high baseline water stress regions (as per WRI Aqueduct Water Risk Atlas), representing an opportunity in regards to resilience against water-related risks. To date water-related opportunities have not been assessed systematically in regards to a potential substantive financial or strategic impact on business.

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	GF's Global EHS Policy and Standards are the foundation of our multisite ISO 14001 certified Environmental Management System. The GF Global EHS Standards are performance standards that incorporate what GF believes are best practices for global adoption across GF operations. They include requirements for resource conservation (including water conservation), wastewater, groundwater and stormwater management.

	Scope	Content	Please explain
		Description of water-related performance standards for direct operations Company water targets and goals Commitments beyond regulatory compliance Other, please specify (EHS Policy)	GLOBALFOUNDRIES EHS Policy is based on the following principles: - Beyond Compliance - Sustainable Manufacturing - Forward-thinking - Stakeholder Engagement Our 2022 CSR Report describes the relevance of water to our business (i.e. our business dependence on water), GF's management approach to waste water, groundwater and stormwater management, as well as our water goal. Our new water goal is to further improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025.

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
Board-level committee	The Board oversees the Company's ESG matters - including water related matters- and programs through the ARCC (Audit, Risk & Compliance Committee): The ARCC is mandated by the Board to oversee the integrity of financial statements, financial filings and disclosures; compliance with legal and regulatory requirements (including oversight of the Ethics & Compliance program); the effectiveness of our accounting and internal systems and controls (including the company's internal audit function); the risk management function; approval of related party transactions; GF's ESG programs - including water related programs- ; cybersecurity, privacy, and information technology; and the independence, qualifications, appointment, remuneration and performance of the company's external auditors. The Board has approved GF's new water goal in 2022 to improve water use efficiency by achieving a normalized water use of 0.32 liters/MI or less by 2025.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Reviewing and guiding strategy	The Board's Audit, Risk and Compliance Committee (ARCC) reviews strategy and performance towards GF's ESG goals, including on water use and water conservation.

W6.2d

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

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	Criteria used to assess competence of at least one board member on water-related issues are based on Board Members relevant experience or skills, such as industry experience, financial skills or leadership skills. For example, relevant experience or skills on water-related issues includes leadership experience in companies with documented actions to integrate ESG (Environmental, Social and Governance) considerations into their decision making. Relevant experience or skills on water-related issues also includes relevant industry experience and leadership in companies whose business model primarily is to drive clean technologies, sustainable development and, or renewable energy advancement.	<Not Applicable>	<Not Applicable>

W6.3

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

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

Sustainability committee

Responsibility

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

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

GF 's Stewardship Committee is responsible for setting strategic direction (including approving water goals), conducting management reviews, and providing guidance and approval regarding ESG related topics. These include GF's EHS and CSR management systems, climate risk mitigation, Human Capital Development, Diversity & Inclusion, and Supplier Responsibility. The Stewardship Committee membership includes executives representing the Legal, Finance, Manufacturing, Human Resources, Communications, Technology, Supply Management, and Customer Design Enablement organizations.
The Stewardship Committee has approved GF's new water goal in 2022 to improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025.

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, trade associations

W6.5a

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

As according to the mechanisms within our ESG governance structure: The Global EHS & CSR Director and/or the Chief Ethics and Sustainability Officer are included in all such efforts to ensure a consistent position. Strategic decisions and position taking are presented for review and approval to GLOBALFOUNDRIES Stewardship Committee. The Stewardship Committee is responsible for setting strategic direction, conducting management reviews, and providing guidance and approval regarding ESG related topics, including water-related topics.

W6.6

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

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

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Water related issues are not assessed as having a significant influence.
Strategy for achieving long-term objectives	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Water related issues are not assessed as having a significant influence.
Financial planning	Yes, water-related issues are integrated	5-10	Water related issues are integrated as part of strategic utility cost considerations, such as investment costs for water conservation projects.

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)

108

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

138

Water-related OPEX (+/- % change)

0

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

0

Please explain

Water related CAPEX were 8 % higher in 2021 than in 2020. These were mainly related to water related projects in our Fab 1 and Fab 8 (as also reported in our 2022 CSR report, page 59 of https://gf.com/wp-content/uploads/2022/06/GF-CRR-22.pdf) Water related CAPEX is forecasted to increase by more than 35 percent from 2021 to 2022 as we build a new 300mm fab on our Singapore campus.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	In early 2022, GF conducted a TFCD-aligned climate risk assessment and a qualitative scenario analysis that utilized selected low and high emissions scenarios.

W7.3a

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

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Climate-related	In early 2022, GF conducted a TFCD-aligned climate risk assessment and a qualitative scenario analysis that utilized selected low and high emissions scenarios (Transition scenarios: IEA STEPS, EIA SDS; physical climate scenarios: SSP5-8.5, SSP1-2.6) to analyze selected potential climate-related risk areas. These included acute physical risk for GF operations, chronic physical risk for GF operations, acute physical risk in GF supply chain.	Potential water-related outcomes were implied in the qualitative scenario analysis for the potential climate related physical risks included in the qualitative scenario analysis: Acute physical risk for GF operations, chronic physical risk for GF operations, acute physical risk in GF supply chain. We do not expect any of the evaluated risks to present material impacts in the short-term (within the next 2 years) to mid-term (2-5 years). As water-related outcomes were implied in the analysis, we also do not expect any significant water related outcomes in the short-term (within the next 2 years) to mid-term (2-5 years).	Based on the analysis results, as we do not expect any of the evaluated risks to present material impacts in the short-term (within the next 2 years) to mid-term (2-5 years), we also do not expect any significant water related outcomes in the timeframe covered. Our business strategy will continue to focus on water efficiency.

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

GF manufacturing sites each use an internal water price to assess water conservation projects. Because GF manufacturing sites are located around the globe, local water context differs significantly from region to region and from site to site, so that the water prices used are specific to each GF manufacturing facility.

W7.5

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

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	<Not Applicable>	Judged to be unimportant, explanation provided	GF has a strong focus on water conservation for our manufacturing operations and has set goals for improving water efficiency. Technologies from GF are helping to address some of the world's most pressing climate, resource sustainability and societal challenges. While GF products may enable solutions to water related challenges, GF products do not use water in the use phase of the life cycle. Therefor, at this stage, GF does not classify any current products / or services as low water impact.

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	Targets are monitored at the corporate level	Water targets are set at the corporate level. Sites / facilities build specific targets that roll into the corporate targets. Progress to the corporate water target is monitored quarterly at corporate level. Our Journey to Zero is the leading theme of GF's approach to environmental sustainability. It represents GF's commitment to grow responsibly while continuously minimizing our impacts on the environment. Our water targets are set with a primary focus on increasing our water use / water withdrawal efficiency, for example Gf has set a new goal (published in GF 2022 CSR report) to improve water use efficiency by achieving a normalized water use of less than or equal to 0.32 liters / MI (Manufacturing Index) by 2025. For comparison the 2021 GF water use / water withdrawal efficiency was 0.38 liters / MI .

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

Cost savings

Description of target

Reduce annual water use by 340,000 cubic meters (m3) by end of 2021 as compared to a 2018 baseline (time frame 2018 - 2021).

Quantitative metric

Absolute reduction in total water withdrawals

Baseline year

2018

Start year

2019

Target year

2021

% of target achieved

100

Please explain

At YE 2021, GF had executed projects that annually save more than 1,486,000 m^3 of water, exceeding our original savings goal. Key projects in 2021 included:

-The GF Dresden site implemented a project in 2021 to significantly increase the recycling rate of its ultrapure water recycling plants from 50 percent to 75 percent. This led to significant municipal water savings of more than 300,000 m^3;

- GF Singapore completed the Fab 7/7G 300mm "Century Water Reclamation" project resulting in significant water savings. This project conserves 613,000 m^3 of water annually by reclaiming wastewater from selected wastewater streams.

- In 2020, Fab 8 installed a Reverse Osmosis treatment system for a wastewater stream containing hydrofluoric acid. This allowed for more efficient management of the waste stream, but also allowed the treated water to be reused in facilities systems. In 2021, the process was further optimized, leading to a combined annual savings of approximately 308,000 m^3.

Target reference number

Target 2

Category of target

Water use efficiency

Level

Company-wide

Primary motivation
Cost savings
Description of target
Reduce normalized water consumption as measured in Liter / Manufacturing Index (MI) by 10 percent as compared to a 2018 baseline (time frame 2018 - 2021).
(The Manufacturing Index (MI) is derived from the number of wafers manufactured, the number of masking steps in our fabrication processes (reflecting process complexity), and the total area of wafers produced.)
Quantitative metric
Other, please specify (Reduce normalized water withdrawal by 10 % as measured in Liters per Manufacturing Index (MI).)
Baseline year
2018
Start year
2019
Target year
2021
% of target achieved
100
Please explain
At YE 2021, GF had executed projects that annually save more than 1,486,000 m^3 of water, exceeding our original savings goal (see detail also above in explanation to Target 1).
These water conservation projects enabled to GF to decrease normalized water withdrawal from 2018 to 2021 while there was significant production growth during the same time.

Target reference number
Target 3
Category of target
Water use efficiency
Level
Company-wide
Primary motivation
Reduced environmental impact
Description of target

The target is: Improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025.
(The Manufacturing Index (MI) is derived from the number of wafers manufactured, the number of masking steps in our fabrication processes (reflecting process complexity), and the total area of wafers produced.)

Quantitative metric

Other, please specify (The target is: Improve water use efficiency by achieving a normalized water use of 0.32 liters /MI or less by 2025. The normalization unit is our Manufacturing Index.)

Baseline year

2020

Start year

2022

Target year

2025

% of target achieved

62

Please explain

This new target was set in early 2022 and GF has not specifically reported its progress to the target. However, GF already achieved a portion of this new goal in 2021.
At YE 2021, GF had executed projects that annually save more than 1,486,000 m^3 of water (see detail also above in explanation to Target 1). The portion of these water conservation projects completed in 2021, enabled to GF to decrease the normalized of water withdrawal in 2021 compared to the 2020 baseline for this new goal.

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 do not currently verify any other water information reported in our CDP disclosure

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.

We have no other comment.

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	Chief Ethics & Sustainability Officer	Chief Sustainability Officer (CSO)

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