Givaudan SA - Water Security 2023

W0. Introduction

W0.1

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

Givaudan is shaping the future of food, fragrances and beauty, by becoming the innovation and co-creation partner of choice to our customers.

We maintain our leadership position by challenging ourselves daily, inspiring our partnerships across the globe and serving our customers with heart and soul. With our two business activities, Taste & Wellbeing and Fragrance & Beauty, we provide customers with a broad range of solutions that match consumer demands for clean label, organic and natural ingredients in addition to being their creative partner of choice. Our value proposition reflects the Company's purpose of creating for happier, healthier lives, with love for nature.

Touching people's lives ten times per day
Together with our customers in the food, beverage, consumer goods and fragrance industries, we create products that delight consumers the world over. From your favourite drink to your daily meal, from prestige perfumes to laundry care, Givaudan is there, inviting you to engage your senses, every day, enjoying moments of delight.

Committed to innovation and sustainable growth
With our heritage stretching back over 250 years, we have a long history of creating and innovating scents and tastes. We are at the forefront of innovation, with 7,3% of annual turnover invested in research, exploring and uncovering new and exciting ingredients and technologies to add to our vast palettes and portfolios.

Co-creation and collaboration with customers and partners enable us to innovate and develop game-changing products and solutions. We have a global co-innovation network of accelerators and incubators enabling us to leverage the entrepreneurial and innovative ideas that start-ups have to offer. In addition, we partner with many of the prominent players in the industry to expand and augment innovative thinking, and accelerate the pace and quality of ideation with key suppliers.

We are committed to driving purpose-led, long-term growth with the intention of increasing our positive impact on the world by innovating in sustainable solutions while showing our love for nature and leading the way to improve happiness and health for people.

W-CH0.1a

(W-CH0.1a) Which activities in the chemical sector does your organization engage in?
Specialty organic chemicals
Other, please specify (Fragrances and Flavors)

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	October 1 2021	September 30 2022

W0.3

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

Argentina
Australia
Belgium
Brazil
Chile
China
Egypt
France
Germany
Hungary
India
Indonesia
Italy
Japan
Malaysia
Mexico
Morocco
Netherlands
Singapore
South Africa
Spain
Sweden
Switzerland
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.

CHF

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Acquisitions in 2022	The recent acquisitions, which occurred in 2022 are currently excluded and will be integrated in scope in the following year. We have the following procedure when there are acquisitions: - If the acquisition of the company is done in the first half of the year, then their environmental data (including water data) is integrated the following year. - If the acquisition of the company is done in the second half of the year, then their environmental data (including water data) is integrated the year after the following year. This procedure has been externally verified and assured.

W0.7

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

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	CH0010645932

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	- Direct use: the primary use of water in our direct operations is dedicated to cleaning of processing equipment and a very small part is used as ingredient in the manufacturing of our products. For both applications the quality and the availability of the water is important. Indeed, without access to sufficient amount of water or good enough water quality, our equipment could be required to stop operating due to non conformance to cleaning regulation or to risk of contamination between products. - Indirect use: the primary use of water in our indirect operations is related to raw materials coming from agriculture which rely on water availability for irrigation. We also use synthetic raw materials, requiring water for their production. Water availability and quality is therefore important to sustain our sourcing. The quality and the availability of certain raw materials is directly related to sufficient amounts of good quality freshwater for use. Without access to sufficient water some key supply chains are at risk of disruption. In addition, most of the final products (which contain fragrances and/or flavours) need water to be used, such as soap, laundry detergent or food. Poor quality water or limited water availability can restrict demand from consumers and impact our business. We expect future water dependency for our direct and indirect use to stay at a high level because we expect demand for natural ingredients to continue increasing over the next few years, requiring us to use more freshwater in direct and indirect operations in the future.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	-Direct use: currently the primary use of recycled water in our direct operations is for small volumes running scrubbers at some locations. All our facilities have currently access to fresh water in sufficient quantity and quality. However, maintaining access to fresh water is requiring more attention year by year as the water stress level is rising and impacting our operations. This is why it is important to have sufficient amounts of recycled, brackish and/or produced water available for use. Recycling water is viewed as an opportunity to mitigate risks in our operations. - Indirect use: along our supply chain, the primary use of the recycled, brackish and produced water is for industries that produce some of our raw materials and in agriculture. This is important for us as these supply chains are at risk of disruption if they do not have access to sufficient amount of recycled, brackish and/or produced water when there is no opportunity to use fresh water. It is also the case for those of our customers who operate in water stress areas and are forced to develop innovative solutions to recycle water or reuse it efficiently. With the global increase of water stress level over the world, we expect the direct and indirect water dependency on recycled and/or produced water to stay at a high level (important). The growing population demand adds pressure on the existing /(renewable) water sources which will need to be supported by recycled and produced water to comply with the increasing global demand.

W1.2

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

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Monthly	We measure the total volumes of water withdrawals through meter-readings and/or data from water bills at the minimum on a monthly basis. We have multiple frequencies of measurement across our different sites and some of them even have continuous or daily measurements in place. The data are then reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	Water withdrawal data is used to monitor performances and evaluate water risks in operations. Givaudan's Environmental Data Reporting and Analysis standards are based on the Global Reporting Initiative (GRI) Standards framework, they cover proper reporting practices and requirements regarding water withdrawal for all Givaudan manufacturing facilities worldwide. Training sessions are conducted regularly on site during environmental visits and e-learning material is accessible to all stakeholders regarding data reporting and monitoring - which include water withdrawal. We report water withdrawals at 100% of our manufacturing sites.
Water withdrawals – volumes by source	100%	Monthly	We measure the volumes of water withdrawals by source through meter-readings and/or data from water bills at the minimum on a monthly basis. We have multiple frequencies of measurement across our different sites and some of them even have continuous or daily measurements in place. The data are then reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	The volume of water withdrawal per source is monitored to evaluate the water risks encounter per water source for each manufacturing facility of Givaudan. Givaudan's standards define reporting practices and requirements regarding water withdrawal by source for all locations worldwide. The reporting framework includes 6 water sources: municipal, ground water, surface water, rainwater collected, seawater and wastewater from another organisation (only in our site in Vernier where wastewater from the municipality is collected and treated throughout our wastewater treatment plant). 100% of our manufacturing facilities report water withdrawal by source and the numbers are consolidated by category for reporting.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Quarterly	TDS is measured at least every 3 months in a laboratory with a gravimetric analysis or by means of the electrical conductivity which is then correlated to the amount of TDS. Data are reported quarterly by the local data reporter in our online platform before being assured and verified by external audits on a 3 year rolling cycle.	Givaudan's operations rely on water withdrawal quality criteria for compliance and quality reasons. Water withdrawal quality is accounted for and measured through analyzing the total dissolved solids (TDS) measurements of the water. Ad-hoc site specific measures on microbiological parameters and other quality criteria are also taking place. Here we report the data published externally as per TDS analysis based on Global Reporting Initiative (GRI) Standards framework. 100% of our manufacturing facilities report water withdrawal quality based on the TDS and the numbers are consolidated by category for reporting.

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water discharges – total volumes	100%	Monthly	We measure and/or calculate the total volumes of water discharged through meter-readings and/or data from service supplier bills at the minimum on a monthly basis. We have multiple frequencies across our different sites and some of them even have a continuous or daily measurement in place. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	The total volume of water discharges is monitored to evaluate the water impact of each manufacturing facility of Givaudan. Givaudan's standard on Environmental Data Reporting and Analysis covers proper reporting practices and requirements regarding water discharges for all Givaudan locations worldwide. Training sessions are conducted regularly on site during environmental visits and e-learning material is accessible to all stakeholders regarding data reporting and management - which include water discharges. Rain water is separated from the water stream when it is not used in operations in several of our facilities. We report water discharges at 100% of our manufacturing sites.
Water discharges – volumes by destination	100%	Monthly	We have different measurement methods: water meter readings, service supplier bills and/or calculation using estimation based on water withdrawal amount at the minimum on a monthly basis. We have multiple frequencies across our sites and some have a continuous or daily measurement in place. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	The volume of water discharges by destination is monitored to evaluate the impact of each manufacturing facility of Givaudan on each water bodies. As part of Givaudan's standard on Environmental Data Reporting and Analysis based on Global Reporting Initiative (GRI) Standards framework, several classifications have been established to segregate water discharged either to an open water course (environment) or into a sewer system (treatment facility) or a combination of both (depending on the quality of waste water). The volumes discharged are measured at 100% of our manufacturing locations.
Water discharges – volumes by treatment method	100%	Monthly	We have different measurement methods: water meter readings, service supplier bills and/or calculation using estimation based on water withdrawal amount and the type of treatment at the minimum on a monthly basis. Some of our sites have a continuous or daily measurement in place. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	As part of Givaudan's standard on Environmental Data Reporting and Analysis based on GRI Standards framework, further classifications have been established to segregate water discharged either after on-site pre-treatment or followed by a treatment in a biological waste water treatment plant on site or at a municipal waste water treatment plant. As for the volume by destination, the volumes discharged by treatment method are measured at 100% of our manufacturing locations.
Water discharge quality – by standard effluent parameters	100%	Daily	The frequency of measurement of the standard effluent parameters varies across the parameters, local legislations and different types of treatment and discharges destination types. See an example for our site of Vernier, in Switzerland, in the next column. The daily frequency has been selected as per COD measurement frequency in this case.	Water discharge quality is monitored to ensure no negative impact downstream and to evaluate efficiency of our waste water treatment facilities. As per Givaudan standard on Environmental Data Reporting and Analysis based on GRI Standards, the quality is monitored through COD (Carbon Oxygen Demand) to ensure compliance with local discharge regulation for each site. Givaudan sites that discharge into open water courses report COD quarterly before being assured by external audits conducted every year with verification based on a 3 years rolling cycle. The measurement methodology is country specific but for example in Vernier, Switzerland we measure COD with 0.45 micron filtered sample, combined catalytic oven for TOC (Total Organic Carbon) and acid reaction for IC (Inorganic Carbon). COD = TOC-IC (standard method 5310 B) on a daily basis. As of Q4 2020 the quality types as per GRI 303 (2018) standard are also tracked: Fresh Water (≤1,000 mg/L TDS) and Other Water (>1,000 mg/L TDS).
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	100%	Daily	The frequency of measurement of such effluent parameters varies across the parameters, local legislations and different types of treatment and discharges destination types. See examples for our sites of Kemptthal, in Switzerland and Naarden, in the Netherlands in the next column. The daily frequency has been selected as per most representative measurement frequency of nitrates and phosphates.	Water discharge quality is measured and monitored to ensure no negative impact on the downstream water has occurred. In addition to specific local regulation requirements, we have also established an internal wastewater standard which is setting the minimal global requirements of frequency of measurement and maximal quantitative values per type of discharged water qualities. The measurement methodology is country specific but for example in Kemptthal, Switzerland we measure nitrates on a weekly basis and phosphates on a daily basis. As another example, for instance, in our site in Naarden, in the Netherlands, we measure nitrates and phosphates on an every other day basis.
Water discharge quality – temperature	100%	Daily	The temperature of the water discharged is measured using thermometer on the discharge water flow. This measure is done at least once a day. Some of our sites have a continuous measurement in place.	Water discharge temperature is measured and monitored to ensure no negative impact on the downstream water has occurred. The temperature data are monitored and reported to the local authorities according to local regulation requirement frequency (usually monthly).
Water consumption – total volume	100%	Monthly	We measure and/or calculate the total volumes of water consumption (withdrawal - discharge) through meter-readings and/or data from service supplier bills at the minimum on a monthly basis. We have multiple frequencies across our sites and some have a continuous or daily measurement in place. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with verification based on a 3 years rolling cycle.	The water consumption is monitored as an indicator of water efficiency for all our manufacturing facilities. The water consumption is calculated based on other data collected according to the standard on Environmental Data Reporting and Analysis based on Global Reporting Initiative (GRI) Standards framework. The total water consumption = Water total withdrawal - total water discharge is monitored at 100% of our manufacturing locations. It is based on water balance calculation for each facility.
Water recycled/reused	100%	Monthly	We collect this information via meter reading or by using extrapolation based on running time of the processes reusing water. The data are measured on a monthly basis and then consolidated in quarterly volume data of water recycled/reused. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured by external audits conducted every year with onsite verification based on a 3 years rolling cycle as per our Sustainability assurance process.	The amount of water recycled/reused is monitored as part of the indicators of water efficiency for our manufacturing facility. According to Givaudan's standard on Environmental Data Reporting and Analysis based on Global Reporting Initiative (GRI) Standards framework, all water recycled/reused is monitored and reported.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Monthly	The provision of WASH services is measured by weekly or monthly (depending the site location) visits conducted on sites by internal employees to review, as part of the Environmental, Health and Safety (EHS) contacts, the status of the WASH services. These visits are documented in EHS contact reports monitored by site management team on a monthly basis. Finally, the WASH services are internally audited via our Responsible Care Management System on a 3 year rolling cycle by our global EHS teams.	WASH is essential for our manufacturing facility to operate efficiently and effectively according to Givaudan's Environmental, Health and Safety (EHS) Policy. We provide access to WASH services to 100% of our facilities.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	10677	Higher	Mergers and acquisitions	Higher	Mergers and acquisitions	As Givaudan's approach to water stewardship is local and focused on risk areas, overall total withdrawals, don't reflect the efforts we have made in 2022. Indeed, for our 11 sites in water-stress areas we observe a decrease of -2.5% in water withdrawals and a -9% decrease in water intensity. The reason for the global increase is mainly the inclusion of new acquisitions as well as some variability in production volumes. For projections, we estimate total water withdrawals to be "much higher" in 5 years based on the trends that we are currently observing with a potential increase between 10 and 15% due to: 1) Acquisitions will be included in the portfolio. 2) Our business continues to expand rapidly and more water is needed to operate. This estimation accounts for the target growth rate (double the business by 2030) and uses the water withdrawal variation data of the past 5 years. It is a conservative estimation because it doesn't factor in water efficiency improvement projects. As we progress in our commitments on water efficiency, we anticipate this increase to plateau in 2025 and onward as our long term water strategies will be gradually met and efficiency will be increased. As a general rule we characterized a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".
Total discharges	9690	Higher	Mergers and acquisitions	Much higher	Mergers and acquisitions	The reason for the global increase of water discharge from last is mainly due to the inclusion of new acquisitions as well as some variability in production volumes. We estimate total water discharge to be "much higher" in 5 years with a potential increase between 10 and 15% as it is closely linked to water withdrawals due to: 1) Acquisitions will be included in the portfolio. 2) Our business continues to expand rapidly and more water is needed to operate. This estimation accounts for the target growth rate (double the business by 2030) and uses the water discharge variation data of the past 5 years. It is a conservative estimation because it doesn't factor in water efficiency improvement projects as it is hard to quantify the impact of future projects and that currently many manufacturing sites already operate at a near a maximum water efficiency. As a general rule we characterized a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".
Total consumption	987	About the same	Maximum potential volume reduction already achieved	About the same	Maximum potential volume reduction already achieved	We estimate total water consumption to be "maintained" in the following 5 years as the water consumed to manufacture our products is already near maximum efficiency, are products have all low water content. As a general rule we characterized a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	1-10	About the same	Increase/decrease in efficiency	About the same	Increase/decrease in efficiency	WRI Aqueduct	Reasoning for the threshold definition: Using the WRI Aqueduct and the indicator of Baseline Water Stress (the same indicator is also available in the WWF Water Risk Filter) we identified that 6% of our water withdrawals are located in water stressed areas. This tool measures the ratio between total annual water withdrawals and total available annual renewable supply, accounting for upstream consumptive use. A higher percentage indicates more competition among users. Based on these results we defined the threshold of a region/area being considered as an area with water stress if they are facing a Baseline Water Stress > 40%: "Extremely high (>80%)" or "High (40-80%)" and we selected the sites that are categorized officially under the list of facilities in water stress areas. Internal calculation methodology: The calculation of the percentage of water withdrawn from sites in water stress areas is done by dividing the total water withdrawal from the sites facing water stress (nominator) by the total water withdrawal of the company (denominator). It represents about 6% of Givaudan's total water withdrawal and 13.7% of the manufacturing facilities (number of manufacturing facilities with water stress divided by total number of manufacturing facilities). Compared to 2021, Givaudan's water withdrawal from water stress areas was slightly reduced with an evolution of -1% which we characterize to be "about the same". With the integration of our latest acquisitions we foresee water withdrawals to be higher, but given the trend regarding water stress level around the world, and the specific focus we bring to ensure our sites in these areas have significant improvement on water efficiency, we expect the overall water withdrawals to remain stabilized in areas with water stress, characterizing this evolution as "about the same" in the coming 5 years. As a general rule we characterized a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	5639.5	Much higher	Increase/decrease in business activity	Fresh surface water is used for cooling purposes in European facilities. With about 50% of the total withdrawal of Givaudan in 2022 it is a relevant water source. The amount consumed is influenced by product portfolio, weather conditions and efficiency in the processes. Surface water from rivers and rainwater is included here. With one facility in Vernier, Switzerland responsible for 90% of this consumption we can attribute the reason for change to the evolution in cooling needs due to changes in product mixes and meteorological conditions. It is not foreseen to have a relevant amount of fresh surface water withdrawal increase due to recent acquisitions. As a general rule, we consider achange <2% as "about the same", a changes between 2% and 10% as "lower"/"higher" and a change >10% as "much higher"/"much lower".
Brackish surface water/Seawater	Relevant	0.38	Much lower	Increase/decrease in efficiency	Only 1 site is using this source of water withdrawal.
Groundwater – renewable	Relevant	1515.93	Higher	Mergers and acquisitions	Groundwater supplies about a third of our facilities', it is therefore considered to be relevant. There is an 9.12% increase compared to 2021. As a general rule, we consider a change <2% as "about the same", a changes between 2% and 10% as lower"/"higher" and a change >10% as "much higher"/"much lower".
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	This type of discharge is is not used by Givaudan therefore, it is not relevant. Except if a future acquisition would lead to include this discharge in our reporting there is no reason for this to become relevant for Givaudan in the future.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Produced water is not relevant for our company because it represents a very small amount (less than 1%) in one of our facility. This amount is included in the discharged water. We are currently assessing the possibility to include this water source in our reported figures as we foreseen an increase of the water produced due to new businesses that are joining Givaudan thanks to recent acquisitions.
Third party sources	Relevant	3295.03	Lower	Increase/decrease in efficiency	Third party sources (municipal water) represent about 37% of Givaudan's water supply. This source is therefore relevant. The quantity of water supplied from third party decreased between 2021 and 2022 with a change of 5.5%. As a general rule, we consider a change <2% as "about the same", a changes between 2% and 10% as "lower"/"higher" and a change >10% as "much higher"/"much lower".

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	6421	Higher	Increase/decrease in business activity	This category encompasses water discharged to the surface water with and without biological treatment in our facilities. It is our main water discharged destination, therefore this destination is relevant. In 2022, there was an increase in the quantity of water discharged to fresh surface water of 7.2% compared to 2021, which is considered higher. As a general rule, we consider a change <2% as ""about the same", changes between 2% and 10% as ""lower""/""higher" and a change >10% as ""much higher""/""much lower"."
Brackish surface water/seawater	Relevant	401.45	Lower	Increase/decrease in efficiency	This category encompasses water discharged to the seawater with and without biological treatment in our facilities. In 2022, there was a decrease in the quantity of water discharged to brackish surface water/seawater of 4.7% compared to 2021, which is considered lower. As a general rule, we consider a change <2% as ""about the same", changes between 2% and 10% as ""lower""/""higher" and a change >10% as ""much higher""/""much lower"."
Groundwater	Relevant	140	Much higher	Mergers and acquisitions	This category encompasses water discharged to the groundwater with and without biological treatment in our facilities. In 2022, there was an increase in the quantity of water discharged to groundwater of 79% compared to 2021, which is considered much higher. 33% of the total water discharged to the ground comes from new acquisitions. As a general rule, we consider a change <2% as ""about the same", changes between 2% and 10% as ""lower""/""higher" and a change >10% as ""much higher""/""much lower"."
Third-party destinations	Relevant	2726.9	About the same	Increase/decrease in efficiency	This category encompasses water discharged to external treatment facilities with and without pre-treatment at our facilities. It covers all water discharged we cannot treat directly and entirely at our facilities, therefore it is relevant. In 2022, there was a decrease in the quantity of water discharged to a third party of 0.3% compared to 2021, which is considered About the same. As a general rule, we consider a change <2% as ""about the same", changes between 2% and 10% as ""lower""/""higher" and a change >10% as ""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	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	551	Higher	Increase/decrease in business activity	1-10	This category is employed for the sites discharging to the environment after onsite wastewater treatment (with primary, secondary and tertiary treatments). This is an aggregation of local calculations of the discharges under this categorization for each of the Givaudan sites at stake. These are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all sites in LATAM, EAME and SAMEA regions has increased like-for-like (new acquisitions added in 2022 vs previously disclosed 2021 data) between 2022 and 2021 with an evolution of 10.0% which is considered higher than the previous year. This is mostly explained by an increase in water withdrawal that took place in the same period for the sites at stake. In 2022, 5 sites' water discharge was treated at the tertiary level (7% of sites) because the water is being returned to the environment after onsite wastewater treatment, meaning it is highly important that water is safe to re-enter the environment by being treated for a third time. Most of the sites at stake are chemical and ingredients sites. This treatment type is in place since Givaudan, which operates in multiple countries, follows local wastewater regulatory standards which request to put in place tertiary treatments (e.g. EU Urban Wastewater Treatment Directive). In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with. Some sites can have more than one type of waste water discharge: hence the sum of all the reported % of sites with the different categorizations is higher than 100%. In the future we expect an absolute increase in this type of water discharge due to the integration of new sites from the acquisitions which will be included next year in the portfolio. As a general rule we characterize a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.
Secondary treatment	Relevant	1628.1	About the same	Increase/decrease in efficiency	11-20	This category is for sites discharging to the environment after onsite wastewater treatment (with primary and secondary treatments). This is an aggregation of local calculations of discharges under this category for each Givaudan site at stake. These are reported quarterly and consolidated at corporate level. The total water discharge from this category across all sites in LATAM, EAME and APAC regions has increased like-for-like (new acquisitions added in 2022 vs previously disclosed 2021 data) between 2022 and 2021 by 1.8% which is considered about the same vs. previous year. This is mostly explained by the increase of efficiency in the factories' processes, since the production volume in these sites increased with a higher evolution in 2022 vs 2021. In 2022 9 sites' water discharge was treated at the secondary level (13% of sites) because the water is being returned to the environment after onsite wastewater treatment, meaning it is highly important that water is safe to re-enter the environment by being treated for a second time. Most of the sites at stake are chemical and natural ingredients sites. This treatment type is in place since Givaudan, which operates in multiple countries, follows local wastewater regulatory standards which request to put in place secondary treatments (e.g. EU Urban Wastewater Treatment Directive). In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with. Some sites can have more than one type of wastewater discharge: hence the sum of all the reported % of sites with the different categories is higher than 100%. In the future we expect an absolute increase in this type of water discharge due to the integration of new sites from the acquisitions which will be included next year in the portfolio. As a general rule we characterize a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.
Primary treatment only	Relevant	0	About the same	Increase/decrease in efficiency	11-20	This category is considered "relevant" since the sites which are having either secondary and/or tertiary treatments, need first to have a primary treatment. For a sake of simplicity, the sites which are having secondary and/or tertiary treatments are indicated under the highest level to which the discharge is treated.
Discharge to the natural environment without treatment	Relevant	4784.1	Higher	Other, please specify (The water discharged to the natural environment without treatment is mostly coming from the employment of non contact cooling water. This is depending on both the production the production volume evolution and the temperature evolution.)	11-20	This category is for sites discharging to the environment without onsite treatment. It is an aggregation of local calculations of discharges under this category for each site at stake. These are reported quarterly and consolidated at corporate level. The total water discharge from this category across all sites in LATAM, EAME and APAC regions has increased like-for-like (new acquisitions added in 2022 vs previously disclosed 2021 data) in 2022 vs 2021 by 6.9% which is higher than the previous year. This is mostly due to a similar increase in water withdrawal and production volumes between the 2 years. Givaudan, which operates in multiple countries, follows local wastewater regulatory standards for such type of discharge (e.g. EU Urban Wastewater Treatment Directive). In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with and which indicates that non-contact cooling water must never mix with any chemical used in our sites. In 2022 10 sites' water discharge was sent to the natural environment without treatment (14% of sites) since the water is mainly used for cooling purposes and is not in contact with any products, hence it is safe to re-enter the environment without treatment. This is freshwater directly withdrawn from the environment and no chemicals are introduced to it in our operations. It is used to regulate the processes' temperature and flows through uncontaminated heat exchangers. Some sites can have more than one type of wastewater discharge: hence the sum of all the reported % of sites with the different categories is higher than 100%. In the future we expect an absolute increase in this type of water discharge due to the integration of new sites from the acquisitions which will be included next year in the portfolio. As a general rule we characterize a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Discharge to a third party without treatment	Relevant	691.8	Much lower	Increase/decrease in efficiency	41-50	This category is for sites discharging to a 3rd party waste water treatment plant (WWTP) without on-site pre-treatment. It is an aggregation of local calculations of discharges under this category for each site at stake. These are reported quarterly and consolidated at corporate level. The total water discharge from this category across all sites in LATAM, NOAM, EAME, SAMEA and APAC regions has decreased like-for-like (new acquisitions added in 2022 vs previously disclosed 2021 data) in 2022 vs 2021 by -12.4% which is much lower than the previous year. This is mostly because of the reduction of water withdrawal needs for the factories' processes due to higher water efficiencies, given that in 2022 vs 2021 the production volume in these sites remained about the same. Givaudan, which operates in multiple countries, follows local wastewater regulatory standards for such type of discharge (e.g. EU Urban Wastewater Treatment Directive). This is important since the wastewater (from sanitary and/or simple process origins) which is sent for external treatment has to be adequate for the 3rd party facility treatment capabilities. In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with. In 2022 33 sites' water discharge was sent to a 3rd party without treatment (47% of sites). The 3rd party is in charge of treating the water to quality level expected for it to go back to the environment. Some sites can have more than one type of wastewater discharge: hence the sum of all the reported % of sites with the different categories is higher than 100%. In the future we expect an absolute increase in this type of water discharge due to the integration of new sites from the acquisitions which will be included next year in the portfolio. As a general rule we characterize a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".
Other	Relevant	2035.1	About the same	Increase/decrease in efficiency	41-50	This category is for sites discharging to a 3rd party waste water treatment plant (WWTP) after an on-site pre-treatment. It is an aggregation of local calculations of discharges under this category for each site at stake. These are reported quarterly and consolidated at corporate level. The total water discharge from this category across all sites in LATAM, NOAM, EAME, SAMEA and APAC regions has increased like-for-like (new acquisitions added in 2022 vs previously dis-closed 2021 data) in 2022 vs 2021 by +1.7% which is about the same than the previous year. This is mostly because of the reduction of water withdrawal needs for the factories' processes due to higher water efficiencies, given that in 2022 there was a higher production volume vs 2021. Givaudan, which operates in multiple countries, follows local wastewater regulatory standards for such type of discharge (e.g. EU Urban Wastewater Treatment Directive). This is important since the wastewater (from process origins) which is sent for external treatment has to be adequate for the 3rd party facility treatment capabilities. In parallel to local legis-lation, we have also developed an internal wastewater standard which factories need to comply with. In 2022 34 sites' water discharge was sent to a 3rd party without treatment (49% of sites). The 3rd party is in charge of treating the water to quality level expected for it to go back to the environment. Some sites can have more than one type of wastewater discharge: hence the sum of all the reported % of sites with the different categories is higher than 100%. In the future we expect an absolute increase in this type of water discharge due to the integration of new sites from the acquisitions which will be included next year in the portfolio. As a general rule we characterize a change <2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	10.5	Nitrates Phosphates	<Not Applicable>	Each site is measuring and tracking such emissions as per local requirements. Globally we track compliance against regulatory and our internal wastewater standard, however we do not consolidate such emission parameters in tonnes/year at Group level. The information shown here is referring, as an example, to the emissions to water in the reporting year for 2 of our sites: one located in Switzerland (Nitrates: 9 t/year and Phosphates: 0.02 t/year) and one located in the Netherlands (Nitrates: 0.86 t/year and Phosphates: 0.62 t/year)

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	7175000000	10677.2	671992.657250965	In line with the new 2030 water targets all sites are requested to ensure continuous improvement on water efficiency with a particular focus on the ones located in areas facing water stress (improve efficiency of 25% by 2030 from 2020 baseline). According to current budget and project plans the improvements will mostly come from cooling tower replacements, optimization of CIP/cleanings, more efficient steam generation and usage, and overall continuous improvements on processes and utilities.

W-CH1.3

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

W-CH1.3a

(W-CH1.3a) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Product type
Other, please specify (Fragrance compound)

Product name
Fragrance compound 1

Water intensity value (m3/denominator)
14.2

Numerator: water aspect
Total water withdrawals

Denominator
Ton

Comparison with previous reporting year
Higher

Please explain
Fragrance compound 1 is part of top 5 for 2022 volumes and is not equivalent to last year's Fragrance Compound 1.
The facility where this compound is manufactured saw from 2021 to 2022 an increase in production tonnage of 3%, leading to a 5.1% increase in water withdrawal, which results in a 2% higher water intensity. As a general rule we characterized a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

- In 2022, the site producing fragrance compound 1 saw a rapid growth in production due to the industrialization of new products, for these newly industrialized fragrances, the water usage is not yet optimized and smaller batches are produced but still require standard washings. As the production stabilizes we will be able to focus on continuous improvement of the production processes and reduce the amount of water used per final ton of product.

-Water intensity is monitored at site level using measurement of total water withdrawal (Numerator) and production tonnage (Denominator). With more than 100 products per site it is not possible to monitor water intensity per product but rather per facility. Therefore, we report and track water intensity at site level. All products from a facility have similar water intensity.
Internal use of the metric : As Givaudan established a 25% reduction target on water intensity by 2030 (from a 2020 baseline for sites facing water stress) this measure is our main water performance indicator in our manufacturing facilities. The metric is used internally by Operations Heads to monitor and track our progress overtime and address gaps to achieving this target. This indicator is part of quarterly management review which allows dedicating resources when deviation is observed.

-As we progress on our 25% water intensity reduction target for the sites, this will directly reflect in the water intensity of our products. We expect to reduce the water intensity of our products in the future through this target. In this specific site, the strategy to achieve further reduction of water intensity is to focus on the new processes in order to optimize their water usage bringing them to the minimum water intensity possible.

Product type
Other, please specify (Flavor)

Product name
Flavor compound 1

Water intensity value (m3/denominator)
1.5

Numerator: water aspect
Total water withdrawals

Denominator
Ton

Comparison with previous reporting year
Much lower

Please explain
Flavor compound 1 is part of top 5 for 2022 volumes and is not equivalent to last year's Flavor Compound 1.
The facility where this compound is manufactured saw from 2021 to 2022 an increase in production tonnage of 12.8%, and yet managed to reduce water withdrawal levels by 6.55% (lower) at , which results in a much lower (-17.1%) water intensity. As a general rule we characterized a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

-In 2022, the site producing flavor compound 1 worked to decrease cleaning time as well as frequency of cleaning needed which allowed to drastically reduce withdrawal levels despite the increase in production.

-Water intensity is monitored at site level using measurement of total water withdrawal (Numerator) and production tonnage (Denominator). With more than 100 products per site it is not possible to monitor water intensity per product but rather per facility. Therefore, we report and track water intensity at site level.
Internal use of the metric: As Givaudan established a 25% reduction target on the water intensity by 2030 from a 2020 baseline for sites facing water stress, this measure of water intensity is our main water performances indicator for our manufacturing facilities. The metric is used internally by Operation heads to monitor our water performances over time and track our progress in achieving this target. This indicator is part of quarterly management review which allows dedicating resources when deviation is observed.

-As we progress on our 25% water intensity reduction target for the sites, this will directly reflect in the water intensity of our products. We expect to reduce the water intensity of our products in the future through this target. In this specific site, the strategy to achieve further reduction of water intensity is to continue optimizing the cleaning

process between batch productions as this has been identified as the highest impact action.

Product type
Other, please specify (Flavor)

Product name
Flavor compound 2

Water intensity value (m3/denominator)
3.52

Numerator: water aspect
Total water withdrawals

Denominator
Ton

Comparison with previous reporting year
Much lower

Please explain
Flavor compound 2 is part of top 5 for 2022 volumes and is not equivalent to last year's Flavor Compound 2.
The facility where this compound is manufactured saw from 2021 to 2022 an increase in production tonnage of 7.3%, and yet managed to obtain a lower water withdrawal levels with a decrease of 8.5% , which results in a much lower (-14.7%) water intensity. As a general rule we characterized a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

-In 2022, the site producing flavor compound 2 installed a rainwater collection system over a 1,000 m² surface, which allows for storage and use of rain water. This resulted in a significant reduction , on the average monthly consumption of municipal supply water of the site.

-Water intensity is monitored at site level using measurement of total water withdrawal (Numerator) and production tonnage (Denominator). With more than 100 products per site it is not possible to monitor water intensity per product but rather per facility. Therefore, we report and track water intensity at site level.
Internal use of the metric: As Givaudan established a 25% reduction target on the water intensity by 2030 from a 2020 baseline for sites facing water stress, this measure of water intensity is our main water performances indicator for our manufacturing facilities. The metric is used internally by Operations heads to monitor our water performances over time and track our progress in achieving this target. This indicator is part of quarterly management review which allows dedicating resources when deviation is observed.

-As we progress on our 25% water intensity reduction target for the sites, this will directly reflect in the water intensity of our products. We expect to reduce the water intensity of our products in the future through this target. In this specific site, the strategy to achieve reduction of water intensity in 2022 was the implementation of the rainwater collection system. As of now they have significantly progressed towards their target and the next strategy for further decreasing water intensity is under definition.

Product type
Other, please specify (Fragrance)

Product name
Flavor compound 3

Water intensity value (m3/denominator)
3.52

Numerator: water aspect
Total water withdrawals

Denominator
Ton

Comparison with previous reporting year
Much lower

Please explain
Flavor compound 3 is part of top 5 for 2022 volumes and is not equivalent to last year's Flavor Compound 3.
The facility where this compound is manufactured saw from 2021 to 2022 an increase in production tonnage of 7.3%, and yet managed to obtain a lower water withdrawal levels with a decrease of 8.5% , which results in a much lower (-14.7%) water intensity. As a general rule we characterized a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

-In 2022, the site producing flavor compound 3 installed a rainwater collection system over a 1,000 m² surface, which allows for storage and use of rain water. This resulted in a significant reduction , on the average monthly consumption of municipal supply water of the site.

-Water intensity is monitored at site level using measurement of total water withdrawal (Numerator) and production tonnage (Denominator). With more than 100 products per site it is not possible to monitor water intensity per product but rather per facility. Therefore, we report and track water intensity at site level.
Internal use of the metric: As Givaudan established a 25% reduction target on the water intensity by 2030 from a 2020 baseline for sites facing water stress, this measure of water intensity is our main water performances indicator for our manufacturing facilities. The metric is used internally by Operations heads to monitor our water performances over time and track our progress in achieving this target. This indicator is part of quarterly management review which allows dedicating resources when deviation is observed.

-As we progress on our 25% water intensity reduction target for the sites, this will directly reflect in the water intensity of our products. We expect to reduce the water intensity of our products in the future through this target. In this specific site, the strategy to achieve reduction of water intensity in 2022 was the implementation of the rainwater collection system. As of now they have significantly progressed towards their target and the next strategy for further decreasing water intensity is under definition.

Product type
Other, please specify (Flavor)

Product name
Flavor compound 4

Water intensity value (m3/denominator)

0.39

Numerator: water aspect
Total water consumption

Denominator
Ton

Comparison with previous reporting year
About the same

Please explain
Flavor compound 4 is part of top 5 for 2022 volumes and is not equivalent to last year's Flavor Compound 4.
The facility where this compound is manufactured saw from 2021 to 2022 a decrease in production tonnage of -7.5%, leading to a -9.8% decrease in water withdrawal, which results in -2.4% lower water intensity. As a general rule we characterized a change <2% as "about the same“, a changes between 2% and 10% as "lower" / "higher“ and a change >10% as "much higher" / "much lower“.

-In 2022, the site producing flavor compound 4 identified a dysfunction in the water piping system which they addressed by implementation of a maintenance project. This reduced the amount of water withdrawal of the site.

-Water intensity is monitored at site level using measurement of total water withdrawal (Numerator) and production tonnage (Denominator). With more than 100 products per site it is not possible to monitor water intensity per product but rather per facility. Therefore, we report and track water intensity at site level. Internal use of the metric: As Givaudan established a 25% reduction target on the water intensity by 2030 from a 2020 baseline for sites facing water stress, this measure of water intensity is our main water performances indicator for our manufacturing facilities. The metric is used internally by Operations Heads to monitor our water performances over time and track our progress in achieving this target. This indicator is part of quarterly management review which allows dedicating resources when deviation is observed.

- As we progress on our 25% water intensity reduction target for the sites, this will directly reflect in the water intensity of our products. We expect to reduce the water intensity of our products in the future through this target. In this specific site, the first phase of the water withdrawal reduction strategy is to assess all potential inefficiencies on water usage to then define priority projects to be implemented.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	Yes	<Not Applicable>

W1.4a

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

Regulatory classification of hazardous substances	% of revenue associated with products containing substances in this list	Please explain
Candidate List of Substances of Very High Concern for Authorisation above 0.1% by weight (EU Regulation)	Less than 10%	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Candidate List of Substances of Very High Concern (UK Regulation)	Less than 10%	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Federal Water Pollution Control Act / Clean Water Act (United States Regulation)	10-20	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Water Pollution Prevention Act (Japan Regulation)	Less than 10%	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Guidelines for Controlling the Use of Key Chemical Substances in Consumer Products (China Regulation)	10-20	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Brazilian Regulatory Standards	10-20	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
Official Mexican Standards (NOMs) / National Inventory of Chemical Substances	Less than 10%	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.
List of substances (Canadian Environmental Protection Act)	10-20	As part of the chemical industry, Givaudan strives to maintain the highest standard when it comes to safe and responsible handling of hazardous materials. In alignment with our Hazmat Regulatory Compliance Standard, we assess and monitor all the hazardous materials across both our operations and supply chain. We aim to: be compliant with applicable legislation in all parts of the world, protect our customers, protect our workforce, the general public and the environment from risks associated with the handling, storage and transport of our products. We also monitor legislative developments in the area of chemical control, hazard evaluation, classification and hazard communication, occupational exposure limits, transport of Dangerous Goods and Risk Assessment.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement	Primary reason for no engagement	Please explain
Suppliers	Yes	<Not Applicable>	<Not Applicable>
Other value chain partners (e.g., customers)	Yes	<Not Applicable>	<Not Applicable>

W1.5a

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

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

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

Number of suppliers identified as having a substantive impact

47

% of total suppliers identified as having a substantive impact

1-25

Please explain

We engage our key suppliers on water security through the CDP Supply Chain Programme, and assess our suppliers impact on water security based on their responses. We assess the percentage of their operations that are water-dependent, volume of their annual water withdrawals, and whether they source their water from areas with high risk to water stress.

We use the information collected through the CDP Supply Chain Programme to assess the level of maturity of each supplier and engage accordingly: For less mature suppliers we share information and educate them, with mature suppliers, we exchange best practices to improve each other's performance and consider collaborative opportunities.

A supplier's impact on water is considered as substantive when the supplier has reported facilities with risks that have a substantive business impact. In 2022, 47 suppliers have been identified as having a substantive business impact based on the facilities they operate.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements	Comment
Row 1	Yes, water-related requirements are included in our supplier contracts	<Not Applicable>

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement
Providing fully-functioning, safely managed WASH services to all workers

% of suppliers with a substantive impact required to comply with this water-related requirement
100%

% of suppliers with a substantive impact in compliance with this water-related requirement
76-99

Mechanisms for monitoring compliance with this water-related requirement
Supplier self-assessment

Response to supplier non-compliance with this water-related requirement
Retain and engage

Comment
Our Responsible Sourcing policy details the principle and standards that Givaudan require all its suppliers to work towards, it is included in terms and conditions of the contractual agreements. Specifically to WASH, Givaudan requires all suppliers to comply with all applicable health & safety regulations and standards including providing safe and healthy workplace for workers, to implement Water Access, Sanitation and Hygiene (WASH) principles in their operations, workplaces with appropriate emergency exits, safety equipment and training appropriate to the task, as well as access to emergency medical care.

Water-related requirement
Complying with going beyond water-related regulatory requirements

% of suppliers with a substantive impact required to comply with this water-related requirement
100%

% of suppliers with a substantive impact in compliance with this water-related requirement
51-75

Mechanisms for monitoring compliance with this water-related requirement
Supplier self-assessment

Response to supplier non-compliance with this water-related requirement
Retain and engage

Comment
Our Responsible Sourcing policy details the principle and standards that Givaudan require all its suppliers to work towards, it is included in terms and conditions of the contractual agreements. Suppliers shall comply with all applicable environmental regulations and always aim to reduce their impacts on the nature and landscapes. Suppliers must implement environmental management principles which avoid any pollution of air, soils and water and conserve biodiversity and nature. Givaudan has set ambitious targets to reduce its water use. We expect all our suppliers to support these efforts by working collaboratively to provide data and information about their water use and environmental impact, and to work to reduce their overall impact, over time. As part of this, Givaudan request that suppliers comply with local wastewater treatment regulations and make sure they reduce their impact on the watershed where they operate. This includes aspects of water scarcity, quality and stress.

W1.5d

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

Type of engagement
Information collection

Details of engagement
Collect water management information at least annually from suppliers
Collect information on water-related risks at least annually from suppliers
Collect water quantity information at least annually from suppliers (e.g., withdrawal and discharge volumes)
Collect water quality information at least annually from suppliers (e.g., discharge quality, pollution incidents, hazardous substances)
Collect WASH information at least annually from suppliers

% of suppliers by number
1-25

% of suppliers with a substantive impact
100%

Rationale for your engagement
In 2022, we participated for the sixth year in the CDP Supply Chain Programme through which we ask suppliers to identify risks and opportunities associated with water, to report what their water use is and to give details on their water management strategy including targets and action they are taking to mitigate risks.
We use the following selection criteria for suppliers who we request to report:
- For raw materials suppliers: top suppliers by volume and strategic suppliers to our business.
- For indirect materials and services suppliers: top suppliers by spend in the relevant categories; those who we have the most influence over; and those with the highest potential water risks (e.g., logistics, packaging, IT/Telecom, industrial supply/equipment/maintenance and energy/utilities).
With more than 15'000 suppliers, only the most relevant suppliers were requested to report which results in 1-25% of our suppliers with whom we engage, but this represents a large % of our total procurement spend.

Givaudan also incentivizes its suppliers to report on water issues through a collaboration with the other Fragrances & Flavors (F&F) houses. Together, we educate suppliers about water stewardship and its importance in our water stewardship journey. This is done through a series of webinars hosted jointly by the four leader F&F houses, and moderated by the CDP team. At Givaudan we encourage our suppliers to attend as this as an opportunity for them to learn more on water stewardship, increase in maturity and improve the quality of their own CDP Water responses. Improving the quality of their responses means they may gain an enhanced public reputation and a higher level of understanding on how to improve their water performance. A supplier feedback webinar is also organised with the same hosts to congratulate the suppliers for their participation and share leanings, which is another incentive for suppliers to participate.

Impact of the engagement and measures of success
Using CDP's SC Water Security questionnaire, we request our suppliers to share the following information: their risks and opportunities associated with water, their water accounting systems, the details of their water management strategy including targets, and actions to reduce their impacts.
The exercise of responding to the Supply Chain module increases directly our suppliers levels of maturity and improves transparency. This in turn translates into concrete actions form their side to reduce water impacts in their operations and sometimes into good practices learning from our side.

We measure the success of our engagement with suppliers through the tracking of the following two KPIs, an increase of at least 5% is considered as the threshold of success for both KPIs.
KPI 1. We measure the success of our engagement with suppliers by the increase of supplier responses in our CDP Supply Chain programme: In 2022, 87 suppliers have responded compared to 80 in 2021. This translates in a 8.7% increase in engagement which is considered as a success. Furthermore, in 2022, 91% of our suppliers have reported active targets and goals and 87% have reported risk assessment procedures.
KPI 2. We measure the maturity of our supplier pool by calculating the percentage of suppliers with a leadership (A or A-) or management (B or B-) level: with 61% in 2022 compared to 45 % in 2021, we saw a 35% increase in maturity which is considered a success.

The collection of information is used by Givaudan to feed the supply chain water risk assessment by using primary data from our main suppliers. By promoting data reporting within our supply chain we foster water management improvement and water risk identification.

Comment
Small but constant increase for these numbers are planned for the future by including specific critical business aspects criteria for filtering with small tonnage but key raw materials.

Type of engagement
Innovation & collaboration

Details of engagement
Educate suppliers about water stewardship and collaboration

% of suppliers by number
1-25

% of suppliers with a substantive impact
100%

Rationale for your engagement
In the context of the CDP supply chain programme, Givaudan has worked in collaboration with the other Fragrances & Flavors (F&F) houses to educate suppliers about water stewardship and its importance in our water stewardship journey. The goal was to increase the number of suppliers responding to CDP and to increase the quality of the responses.
This was done through a series of webinars hosted jointly by the four leaders F&F houses, and moderated by the CDP team. A supplier feedback webinar was also organised with the same hosts to congratulate the suppliers for their participation in the programme and more importantly to explain what we will do with the data provided.
The suppliers invited to the webinar were all the suppliers included in our CDP Supply Chain Programme. The criteria Givaudan has followed to select the suppliers were the following:
- top suppliers by volume and strategic suppliers to our business
- top suppliers by spend.

Impact of the engagement and measures of success
Impact of engagement:
Our ambition is to drive action through supply chain engagement and to work in collaboration across the industry . The CDP Supply Chain programme is one of the tools that Givaudan has chosen to gain understanding of its supply chain and engage with its suppliers on water stewardship. By joining efforts with the other F&F houses and participating together in the supplier engagement webinars, not only did the numbers of suppliers engagement increased, but the importance of water stewardship in the F&F industry was decoupled.

Measure of success:
Collaboration across the industry and across sectors is important to be successful.
We measure the success of our engagement with suppliers through the webinars by the increase of supplier responses in our CDP Supply Chain programme: In 2022, 87 suppliers have responded compared to 80 in 2021. This is considered as a success.

Comment
no comment

W1.5e

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

Type of stakeholder
Customers

Type of engagement
Education / information sharing

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

Rationale for your engagement
Through tracking customer requests on all sustainability topics, we found that water is identified as a material topic for many of them, yet knowledge around water stewardship remains relatively low. Many were asking us rather basic questions about water and were not yet familiar with the notion of a corporate water footprint or various levers of action on water stewardship. We observed a general focus on carbon reduction with increasing people resources allocated to that, whereas water might not often get the same resources.

With this better understanding of our customer's maturity on water topics, we have engaged with them in many ways in order to further educate each other. This has been an opportunity for us to share our overall water stewardship approach as well as lessons in how we built it over time. We also share with our customers if any of our manufacturing sites that supply to them are in areas of high water stress, using the WRI Aquaduct Water stress tool and reflect on how to address this risk together. This in turn promotes the recognition of water as a very local topic in comparison to carbon emissions, which is much more global.
We believe it is important to engage with customers because some of their water risks are shared with us. We also saw a big opportunity to play our part in overall awareness building on this important topic. This approach lives up to our purpose ambition, as well as our intent to be the partners of choice for our customers.

Impact of the engagement and measures of success
Impact of the engagement:
In 2022 we engaged at least 50% of our customers in specific discussions on water.
Our Operations experts have also conducted 1-1 knowledge sharing meetings, where we were able to further discuss our best practices in water usage reduction at our sites over the last few years and what has worked for us.

Measures of success:
We consider the engagement a success if we have been able to answer 100% of customer requests on successfully within 5 days and/ or if we have received quantitative or qualitative feedback from customers.
In 2022 this engagement was successful with 100% of requests being responded to in a timely way as well as feedback that customers found our engagement ‘thought provoking’ and ‘useful’. These comments particularly came from smaller local and regional customers who might not have otherwise had the dedicated sustainability expertise to lead the identification of best practice on this topic.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?
No

W2.2

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

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	Yes	Fines, but none that are considered as significant Enforcement orders or other penalties but none that are considered as significant	Our organization was subjected to non significant fines and to non significant enforcement orders and other penalties during the reporting year. We consider significant regulatory violations if they are >= 0.1% than our defined high financial impact (CHF 250M - CHF 500M- cumulative impact on EBITDA over 5 years are considered as “high: severely threatened / severe reputational impact comprise).

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines
2

Total value of fines
3718

% of total facilities/operations associated
2.9

Number of fines compared to previous reporting year
About the same

Comment
We consider fines as significant if they are >= 0.1% than our defined high financial impact (CHF 250M - CHF 500M- cumulative impact on EBITDA over 5 years are considered as “high: severely threatened / severe reputational impact comprise).

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	Water is critical to our manufacturing activities and we want to lead the industry in conservation and stewardship. All products at Givaudan, finished products shipped to customers or raw materials from suppliers, are assessed to identify any possible hazard for the environment which includes water ecosystems. Furthermore, sites analyze, assess and monitor wastewater from our activities to determine water pollutants. We work to ensure that wastewater from operations is disposed in a responsible manner, we treat our effluents and monitor its quality through pH, conductivity, COD, BOD, TSS, Phosphorus, Ammoniacal nitrogen, total nitrogen, nitrites, toxicity, POX, AOX. Givaudan operates in multiple countries and follows effluents regulation of each country. An example is the EU Urban Wastewater Treatment Directive which sets such allowable limits: ≤25 mg/L for BOD, ≤125 mg/L for COD, and ≤35 mg/L for TSS. Exceeding these would indicate that the discharge is polluted as per the Directive. Alongside the processes for identifying and classifying potential water pollutants, our company-wide Water Policy takes into account our impacts on water and our obligation to demonstrate water responsibility and stewardship in our operations. The Policy outlines our values of ensuring continuous improvements in the way we manage discharge, and helps us identify potential actions that would lead to detrimental impacts over water bodies and ecosystems, so they can be avoided.	<Not Applicable>

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category
Other nutrients and oxygen demanding pollutants

Description of water pollutant and potential impacts
Chemical Oxygen Demand (COD). In all types of wastewater treatment facilities the Chemical Oxygen Demand (COD) is the reference standard to qualify the degree of contamination of the waste water. COD quantifies the amount of organic and in-organic matter in waste streams and is the main indicator for compliance with effluent quality standard internally as well as with local legislation.
In terms of pollution a high level of COD correlates with threats to human health including bacteria from organic wastes, toxic algae blooms and seafood contaminations. The waste water will also decrease the amount of dissolved oxygen available for aquatic organisms called eutrophication, a condition of natural water that can lead to the death of animal life.
The scale of the pollution will be relatively local but the potential impact can be substantial as it impacts both the environment and the health of communities in which we operate. The magnitude depends on local conditions such as type of effluent discharged, local weather conditions and is generally low and unlikely considering the preventive measures in place and full compliance with regulation.

Value chain stage
Direct operations

Actions and procedures to minimize adverse impacts
Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Beyond compliance with regulatory requirements
Industrial and chemical accidents prevention, preparedness, and response
Upgrading of process equipment/methods

Please explain
We ensure that our wastewater (WW) is compliant with local regulation and request sites to follow internal WW standard. We operate our own WW treatment plants in several sites and apply the highest preventive measures to reduce risks of negative impacts to water, such as spillages or leakages. Strict controls include regular inspections of equipment and infrastructure such as pipes to uphold high standards of leakage control, equipment and methods are regularly upgraded to maintain quality. On-site staff are provided with training on water management/safety to ensure that we operate with utmost responsibility for water, this includes emergency procedures in response to leakage and subsequent remediation of accidental soil/water contamination. We monitor our WW quality through COD analysis and reports. A great effort is also applied upstream on new substances or products developed at our sites by going throughout a number of acute aquatic toxicity test including in some cases heavy metals and micro-pollutants. The success measure is based on full compliance with local and internal WW standards. This is met when daily testing of COD levels using

water monitoring tools remains either stable, or below the maximum level required by both external and internal standards. As an example we follow the EU Urban Wastewater Treatment Directive where the allowable limit for COD is 125 mg/L. Management procedures are successful if the COD ≤ 125 mg/L for our sites in the EU.

Water pollutant category
Other nutrients and oxygen demanding pollutants

Description of water pollutant and potential impacts
Biological Oxygen Demand (BOD). In all types of wastewater treatment facilities the biological oxygen demand BOD is a pollution parameter mainly used to assess the quality of effluent or wastewater. BOD quantifies the amount of organic only matter in waste streams and is an important indicator for compliance with effluent quality standard internally as well as with local legislation. In terms of pollution a high level of BOD correlates with threats to human health including bacteria from organic wastes, toxic algae blooms and seafood contamination.
The waste water will also decrease the amount of dissolved oxygen available for aquatic organisms called eutrophication, a condition of natural water that can lead to the death of animal life.
The scale of the pollution will be relatively local but the potential impact can be substantial as it impacts both the environment and the health of communities in which we operate. The magnitude depends on local conditions such as type of effluent discharged, local weather conditions and is generally low and unlikely considering the preventive measures in place and full compliance with regulation.

Value chain stage
Direct operations

Actions and procedures to minimize adverse impacts
Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Beyond compliance with regulatory requirements
Industrial and chemical accidents prevention, preparedness, and response
Upgrading of process equipment/methods

Please explain
We ensure that our wastewater (WW) is compliant with local regulation and request sites to follow internal WW standard. We operate our own WW treatment plants in several sites and apply the highest preventive measures to reduce risks of negative impacts to water, such as spillages or leakages. Strict controls include regular inspections of equipment and infrastructure such as pipes to uphold high standards of leakage control, equipment and methods are regularly upgraded to maintain quality. On-site staff are provided with training on water management/safety to ensure that we operate with utmost responsibility for water, this includes emergency procedures in response to leakage and subsequent remediation of accidental soil/water contamination. We monitor our WW quality through BOD analysis and reports. A great effort is also applied upstream on new substances or products developed at our sites by going throughout a number of acute aquatic toxicity test including in some cases heavy metals and micro-pollutants. The success measure is based on full compliance with local and internal WW standards. This is met when weekly testing of BOD levels using water monitoring tools remains either stable, or below the maximum level required by both external and internal standards. As an example we follow the EU Urban Wastewater Treatment Directive where the allowable limit for BOD is 25 mg/L. Management procedures are successful if the BOD ≤ 25 mg/L for our sites in the EU.

Water pollutant category
Phosphates

Description of water pollutant and potential impacts
Phosphorus. High levels of phosphates in aquatic environments could result in algal blooms that can potentially lead to eutrophication. Oxygen is stripped from the water as the dead algae cells decompose, leading to anoxic conditions that can result in mass die-offs of fish and other aquatic life. The scale of the pollution will be relatively local but the potential impact can be substantial as it impacts both the environment and the health of communities in which we operate. The magnitude depends on local conditions such as type of effluent discharged, local weather conditions and is generally low and unlikely considering the preventive measures in place and full compliance with regulation.

Value chain stage
Direct operations

Actions and procedures to minimize adverse impacts
Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Beyond compliance with regulatory requirements
Industrial and chemical accidents prevention, preparedness, and response
Upgrading of process equipment/methods

Please explain
We ensure that our wastewater (WW) is compliant with local regulation and request sites to follow internal WW standard. We operate our own WW treatment plants in several sites and apply the highest preventive measures to reduce risks of negative impacts to water, such as spillages or leakages. Strict controls include regular inspections of equipment and infrastructure such as pipes to uphold high standards of leakage control, equipment and methods are regularly upgraded to maintain quality. On-site staff are provided with training on water management/safety to ensure that we operate with utmost responsibility for water, this includes emergency procedures in response to leakage and subsequent remediation of accidental soil/water contamination. We monitor our WW quality through total phosphorus analysis and reports. A great effort is also applied upstream on new substances or products developed at our sites by going throughout a number of acute aquatic toxicity test including in some cases heavy metals and micropollutants. The success measure is full compliance with local and internal WW standards. This is met when 5 times per week testing of total phosphorus levels using water monitoring tools remains ≤ maximum level required by both external and internal standards. As an example we follow the EU Urban Wastewater Treatment Directive where the limit for total phosphorus is 2 mg/L. Management procedures are successful if total phosphorus ≤ 2 mg/L for our sites in the EU.

Water pollutant category
Nitrates

Description of water pollutant and potential impacts
Nitrogen (nitrates and ammonia). High levels of ammonia and nitrate in aquatic environments could result in algae blooms that can potentially lead to eutrophication. Oxygen is stripped from the water as the dead algae cells decompose, leading to anoxic conditions that can result in mass die-offs of fish and other aquatic life. The scale of the pollution will be relatively local but the potential impact can be substantial as it impacts both the environment and the health of communities in which we operate. The magnitude depends on local conditions such as type of effluent discharged, local weather conditions
and is generally low and unlikely considering the preventive measures in place and full compliance with regulation.

Value chain stage
Direct operations

Actions and procedures to minimize adverse impacts
Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Beyond compliance with regulatory requirements
Industrial and chemical accidents prevention, preparedness, and response

Upgrading of process equipment/methods

Please explain

We ensure that our wastewater (WW) is compliant with local regulation and request sites to follow internal WW standard. We operate our own WW treatment plants in several sites and apply the highest preventive measures to reduce risks of negative impacts to water, such as spillages or leakages. Strict controls include regular inspections of equipment and infrastructure such as pipes to uphold high standards of leakage control, equipment and methods are regularly upgraded to maintain quality. On-site staff are provided with training on water management/safety to ensure that we operate with utmost responsibility for water, this includes emergency procedures in response to leakage and subsequent remediation of accidental soil/water contamination. We monitor our WW quality through total nitrogen analysis and reports. A great effort is also applied upstream on new substances or products developed at our sites by going throughout a number of acute aquatic toxicity test including in some cases heavy metals and micro-pollutants. The success measure is full compliance with local and internal WW standards. This is met when daily testing of total nitrogen levels using water monitoring tools remains ≤ maximum level required by both external and internal standards. As an example we follow the EU Urban Wastewater Treatment Directive where the limit for total nitrogen is 15 mg/L. Management procedures are successful if total nitrogen ≤ 15 mg/L for our sites in the EU.

Water pollutant category

Inorganic pollutants

Description of water pollutant and potential impacts

Total Suspended Solids (TSS). Total Suspended Solids (TSS) are small undesirable small particles present in wastewater effluents. It is considered as one of the parameters to evaluate water pollution. The suspended solids might absorb light and then cause increased water temperature and decreased oxygen. This environment is then considered polluted as it impacts negatively the biological life in water. The scale of the pollution will be relatively local but the potential impact can be substantial as it impacts both the environment and the health of communities in which we
operate. The magnitude depends on local conditions such as type of effluent discharged, local weather conditions and is generally low and unlikely considering the preventive measures in place and full compliance with regulation.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience
Beyond compliance with regulatory requirements
Industrial and chemical accidents prevention, preparedness, and response
Upgrading of process equipment/methods

Please explain

We ensure that our wastewater (WW) is compliant with local regulation and request sites to follow internal WW standard. We operate our own WW treatment plants in several sites and apply the highest preventive measures to reduce risks of negative impacts to water, such as spillages or leakages. Strict controls include regular inspections of equipment and infrastructure such as pipes to uphold high standards of leakage control, equipment and methods are regularly upgraded to maintain quality. On-site staff are provided with training on water management/safety to ensure that we operate with utmost responsibility for water, this includes emergency procedures in response to leakage and subsequent remediation of accidental soil/water contamination. We monitor our WW quality through TSS analysis and reports. A great effort is also applied upstream on new substances or products developed at our sites by going throughout a number of acute aquatic toxicity test including in some cases heavy metals and micro-pollutants. The success measure is based on full compliance with local and internal WW standards. This is met when weekly testing of TSS levels using water monitoring tools remains either stable, or below the maximum level required by both external and internal standards. As an example we follow the EU Urban Wastewater Treatment Directive where the allowable limit for TSS is 35 mg/L. Management procedures are successful if the TSS ≤ 35 mg/L for our sites in the EU.

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 an established enterprise risk management framework

Frequency of assessment
More than once a year

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
Databases
Other

Tools and methods used
SEDEX
WRI Aqueduct
WWF Water Risk Filter
Enterprise Risk Management
Internal company methods
External consultants

Contextual issues considered
Water availability at a basin/catchment level
Water quality at a basin/catchment level
Stakeholder conflicts concerning water resources at a basin/catchment level
Impact on human health
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
Other water users at the basin/catchment level

Comment
Much of the water we use in operations is for hygiene and cleaning, cooling and processing. Only a very small amount of high quality water is used as an ingredient in our products. Quality and availability are therefore important as Givaudan cannot operate without access to sufficient fresh water. We need to secure water supply and optimize water use. In parallel, our use of water generates wastewater and we need to ensure that this water is treated appropriately before being discharged

Enterprise Risk Management (ERM) is the process of assessing, treating and monitoring the effects of uncertainty that may affect the attainment of Givaudan's objectives, especially its publicly stated strategic objectives, or jeopardise Givaudan's long-term business success. Managing risk is an integral part of Givaudan's business.

In addition to the corporate ERM process, Givaudan carries out specific corporate water risks assessments to addresses physical, quality, regulatory and reputation risks. To allow a more detailed identification of the water scarcity risk which might affect the direct operations in the factories of the Group, the baseline and future (2030) water stress levels are employed. All the sites have been plotted against baseline and projected water stress levels and they have been clustered into 2 categories: key sites located in areas facing high and/or extremely high water stress and other sites. All sites needs to keep improving their water efficiencies and the former ones have additional bold targets to further improve being water quantity an even more material risk.
The other operations related water related risk such as quality, regulatory and reputation are tackled via another specific assessment focusing on compliance with regulatory and industry standards. In addition to the regulatory standards, we have developed an internal wastewater standard highlighting requirements to be fulfilled on all sites in addition to the regulatory requirements. Our ambition by 2030 is to have 100% of our wastewater discharge meeting or exceeding regulatory and industry standards.

The procedure to identify and assess water-related risks in the supply chain is based on a corporate water footprint crossed with water stress index indicators and information from the SEDEX platform, SMETA audits and internal responsible sourcing policy.

W3.3b

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

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	At company level water related risks which can have substantive financial or strategic impact for all value chain stages are identified as part of the company-wide Entreprise Risk Management (ERM) risk assessment process under the supervision of the Executive Committee. In addition, Givaudan carries out specific corporate water risks assessments based on the CEO water Mandate recommendation to allow a more detailed identification of the water risks and a specific analysis related to the context at watershed level. The following water risk aspects for Givaudan's direct operations are assessed using the WRI Aqueduct and WWF Water Risk Filter: physical (such as flooding and water stress), quality (such as water pollution), and reputation (such as noncompliance to water regulations). Givaudan also developed a Corporate Water Scarcity Index based on Life Cycle Assessment principles by consulting a third-party company. We also consulted these experts to consolidate the water scarcity risks at country level for the Givaudan's supply chain and direct operations. Our prioritised natural supply chains are evaluated through the SEDEX platform at factory level, and FSA/UEBT at farm level, and during on-site internal Vendor Quality Management audits to assess water risks in our supply chain. Givaudan also has a Business Continuity Plan (BCP) for sourcing activities covering a large range of water related risks.	Overall the following contextual issues have been included in our water-related risk assessments as they are the most relevant to Givaudan's and because it is vital that risks related to these topics are identified and managed: - Water availability and quality at a basin/catchment level - Stakeholder conflicts concerning water resources at a basin/catchment level - Implications of water on our key commodities/raw materials - Water regulatory frameworks - Status of ecosystems and habitats - Access to fully-functioning, safely managed WASH services for all employees	We consider a range of stakeholders in our water-related risk assessments in regards to who, other than Givaudan directly, could be impacted by various water-related risks we are exposed to as a Company: our employees, customers, suppliers, investors, local communities in which we operate, water regulators, water utilities at the local level, and other water users at the basin/catchment level.	A member of the EC is designated as the risk owner for each top risk identified and has the responsibility for managing the risk at the group level, these include water risks. Our Water Policy is a response to ensure water risks are managed and monitored. Operations All sites have been plotted against baseline, projected water stress levels allow to cluster in 2 categories: key sites located in areas facing high/extremely high water stress and other sites. In 2022, we have identified 11 high priority sites since they are located in areas facing high /extremely high water stress: this implies a target to improve their water efficiency by 25% and a close monitoring and follow-up on the sites's action plans to reduce water consumption, by for ex., installing water-efficiency equipment. In addition, water topics are prioritized in our operational risk management process and mitigation plan development. All other sites need to keep improving their water efficiency. Supply chain Key risk management strategies to secure sourcing of our materials include: - Raw materials sourcing integrated in the category management process and as part of ERM - structured risk mitigation strategy to anticipate raw materials supply issues and suppliers deficiencies - Collaborative projects aiming at securing the most strategic and vulnerable naturals by supporting communities from which we source key natural raw materials through social and environmental projects (ex: patchouli in Indonesia).

W4. Risks and opportunities

W4.1

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

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

W4.1a

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

Description of substantive financial impact' when identifying or assessing climate and water related risks

At company level water risks are identified as part of the company-wide ERM risk assessment process under the supervision of the EC. The risks are assessed twice annually for their long term impact (5 to 15 years).

The assessment is conducted with representatives of the divisions and all the functions of the Company. The process is conducted twice a year with quarterly monitoring of risk response measures and annual reporting to the Board.

Events are assessed for their impact on the Company and they can be risks in themselves and/or drivers for other risks. The likelihood is established as a percentage of a risk materialising over the review period. The impact is established either quantitatively as a cumulative financial impact on the Company's EBITDA or qualitatively as impact on the achievement of objectives, including reputational impact. Our rating of impact ranges from Low (little threatened / limited reputational impact), Medium (threatened / some reputational impact), High (severely threatened / severe reputational impact) and Very high (critically threatened / critical reputational impact).

"Substantive financial impact" therefore comprises for us the two categories high and very high impact.

Description of the quantifiable indicator(s) used to define water-related risks with substantive financial or strategic impact

> CHF 250M - CHF 500M cumulative impact on earnings before interest, taxes, depreciation and amortization (EBITDA) over 5 years are considered as high rating impact (severely threatened / severe reputational impact)

> CHF 500M cumulative impact on EBITDA over 5 years are considered as very high impact (critically threatened / critical reputational impact)

Description of substantive strategic impact when identifying or assessing water-related risks

We define a substantive impact on our business in this context as: cost increase, shortage of water, water quality issue or all other water related issues that could potentially impact more than 2% of a division production volumes. The production volume is highly related to the dependency of the organisation on that unit (of production) which is a great proxy to evaluate the impact on our business. The production volume is used as an average indicator for the divisional revenue which is in fact portfolio specific. The production volume is much more practical to apply in the risk assessment to illustrate a strategic risk than a financial indicator which includes other variability not linked to water risks.

Description of the indicators used to identify substantive change

- the production volume (in tons),

- the water risks metrics as proposed by WWF-DEG Water Risk Filter and WRI Aqueduct (Physical scarcity, physical quality, reputation, regulation, projected water stress level 2030, baseline water stress). Indicators ranked from 1-5 including the potential magnitude and the probability of the event to occur.

The thresholds which indicate a substantive change are:

- 2% for the production volume, expressed as a percentage of the total volume of the division coupled with one of the indicators (e.g. physical stress quantity/quality, regulation, reputation) at the highest level of risk in the local water risk assessment.

The substantive impact definition applied for both our operations and the supply chain.

As an illustrative example: We faced a potential substantive strategic impact in 2018 due to water quality issues that could adversely impact our manufacturing plant using groundwater in Jakarta. The water supply disruption occurred in Q1 2018 due to decreased water quality of groundwater well 2 which did not fulfill the local standard for use at our site. The groundwater well 2 has been closed forcing the facility to be supplied only by groundwater well 1. The water disruption supply did not affect the production volume capacity because alternative source has been found for the site. Nevertheless, in the next years we might (with high probability - level 5/5 from the WWF Water Risk Filter) face decreased water quality for operations in Indonesia impacting more than 2% of our production worldwide which is defined as substantive. Therefore an action plan was developed in order to response to this potential risk. The contingency plan for implementation includes: dig another groundwater well and build a rainwater collection system on the roof of our site (currently in the Master plan of the site).

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	11	1-25	We consider 70 manufacturing facilities in the scope of the questionnaire, 11 out of 70 represents 15.7% of facilities exposed to water risk. These 11 sites are the top ones exposed to water risk.

W4.1c

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

Country/Area & River basin

Egypt	Nile

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Mexico	Balsas

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
Another facility is located in this area (same watershed) hence it is identified as an additional potential substantive strategic impact on our business.

Country/Area & River basin

Brazil	Other, please specify (La Plata - Tiete)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected

1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

India	Other, please specify (Karnataka)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

South Africa	Limpopo

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Morocco	Other, please specify (Chaouia - Ouardigha)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
Less than 1%

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Chile	Other, please specify (Maule)

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
Less than 1%

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Mexico	Santiago

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

India	Krishna

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-10

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Spain	Guadalquivir

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
Less than 1%

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
No other facilities are located in this area (same watershed) hence not identified as additional potential substantive strategic impact on our business.

Country/Area & River basin

Mexico	Balsas

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
Less than 1%

Comment
The calculation is based on 70 manufacturing facilities. One facility in this context refers to a manufacturing site. Our risk assessment takes into account the % of the company revenue that could be affected by the water related event. Proportion figure is selected on the basis of actual production volume of site in relation to global production volume.
Another facility is located in this area (same watershed) hence it is identified as an additional potential substantive strategic impact on our business.

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

Morocco	Other, please specify (Chaouia - Ouardigha)

Type of risk & Primary risk driver

Chronic physical	Water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Based on our water risk assessment using WRI Aqueduct, we identified that our site in Casablanca (Morocco) is in an area with extremely high risk to water stress. The current (baseline) and future (2030) WRI aqueduct water stress indexes are indeed both extremely high (> 80%) for the area where this manufacturing site is located. Water access (and quality is essential) to operate this growing Givaudan manufacturing site. In this part of Morocco water supply disruption is foreseen to potentially happen and this could interrupt the site operations, reduce its capacity or jeopardize the future expected growth. About less than 1% of our divisional revenue is associated with our production site in Morocco. If water supply disruptions were to happen to our site in Morocco, we might see a decrease of at around less than 1% in our total divisional annual revenue.
Water stress increase coupled with a dependency on municipal water supply which is facing increasing pressure could put this facility at risk of disruption in production capacity.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Likely

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
115000

Potential financial impact figure - maximum (currency)
2300000

Explanation of financial impact
If water supply disruptions were to happen, we estimate the production to halt for roughly 2 months, which is equivalent to revenues of 2,300,000 CHF. This is our set maximum potential impact figure. This is unlikely since we regularly analyze the water trends in Morocco. For our minimum potential impact figure, we estimate water supply disruptions to affect few days of our operations, which is about 5% of our bimonthly revenue.

Potential financial impact figure - maximum --> in the worst case scenario a sudden lack of water might impact our Operations stopping the production for roughly 2 months. This time is needed to be capable of moving the impacted volumes to another plant of the group and/or to identify an alternative technical means to deliver the factory with the needed water.
The impact is therefore estimated as the loss of revenues coming from the factory at stake for 2 months.
1,150,000 CHF monthly revenue x 2 = 2,300,000 CHF revenue for 2 months (maximum potential impact figure)

Potential financial impact figure - minimum --> the likelihood of suddenly having no water is relatively low, since early signals can be sensed earlier on (e.g. change of local regulations, social conflicts around water, increase in water prices, other companies being affected by water shortages, impact on own wells' flows, etc.). We therefore estimated the financial impact as a threshold of 5% of the maximum impact described above.
2,300,000 CHF (revenue for 2 months) x 5% = 115,000 CHF (minimum potential impact figure)

Note: The potential financial impact related to the single example shown is below Givaudan’s threshold for a substantive financial impact. We anyhow consider this overall risk related to sites located in areas facing water stress as a potential to have a strategic or substantive impact . If we put together, for all sites located in areas facing water stress, each single site's potential financial impact we are getting to the same order of magnitude of a substantive financial impact.

Primary response to risk
Adopt water efficiency, water reuse, recycling and conservation practices

Description of response
Reduction in water withdrawal by increasing the current processes water efficiencies and then looking at means to reuse and/or recycle water is the key focus of the site. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall indeed first come from water efficiencies and then by means of reusing and/or recycling water.
In the past years (2021 and 2022) we have implemented water monitoring, conducted leakages campaigns as well as worked with our employees on site to educate the staff on the procedures on how to use water efficiently in our manufacturing activities and cleaning up of the equipment.
In terms of continuous improvement, a first action has already started looking at the improvement of the current water piping for upgrades and a 2nd step will need to focus on the potential cleaning processes improvements. This is planned for the next 2 years.
In terms of step change, the project feasibility of replacing the current cooling towers is under assessment and this important step should be taking place within the next 5 years.
In parallel with a global and ad-hoc support for this site, the plan is to organize in H2 2023 a water audit led by a 3rd party company expert in water management and treatments to identify key projects which will help the site to hit the 2030 targets and hence reduce the risk of having water stress impacting the production capacity.

Cost of response
456500

Explanation of cost of response
Cost calculation is based on:
(a) the cost of consultancy to run the water audit and identify key water savings projects (both water efficiencies and water reuse/recycle): 20,000 CHF
(b) the cost of the dedicated water workstream support this specific site (assumption of 5% of the total time dedicated to all key sites located in areas facing water stress): 6,500 CHF
(c) the cost of cooling pipings upgrades: 30,000 CHF
(d) the cost of installing new on-site water cooling towers (this solution is currently under evaluation for potential incorporation into next years budgets): 400,000 CHF
Financial figure = (a) + (b) + (c) +(d) = 20,000 + 6,500 + 30,000 + 400,000 = 456,500 CHF
Cost of additional projects will be identified, assessed and validated in due course.

W4.2a

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

Country/Area & River basin

Madagascar	Other, please specify (Pangalanes)

Stage of value chain
Supply chain

Type of risk & Primary risk driver

Acute physical	Drought

Primary potential impact
Disruption to sales due to value chain dissruption

Company-specific description
Givaudan depends on specific raw materials such as clove leaf oil and vanilla, as a source of natural ingredients. Most of the natural ingredients sourced by Givaudan are not commodities, rather specialities produced in small volumes. These ingredients are widely used in of our products and are therefore key to Givaudan's supply chain operations and revenue. In recent time, raw material supply chains are becoming more volatile, uncertain, complex and ambiguous (VUCA context). Indeed, some of the regions in which these ingredients are grown face risks of water shortages. The region surrounding Madagascar's Pangalanes canal faces a 20% increased risk of drought in December and January, and there is also a 10-15% increase in variability of weather patterns. This can mean our raw material supply is disrupted, affecting our ability to manufacture and sell our products. The supply of clove leaf oil for example, was identified at "high risk" in our ERM procedure for our supply chain, because of the magnitude of operation disruption in case of severe drought during the dry period. In case of extreme drought period, our supplier's manufacturing facility might need to stop its operations because of lack of water availability. Indeed, the supplier cannot operate without sufficient water as is essential to produce steam, to wash equipment and provide WASH services to the employee. Without access to sufficient water, the supplier's operations are disrupted and in turn Givaudan's raw materials supply is affected. As a key raw materials, the disruption of supply in clove leaf would have considerable financial impact on our business; a disruption of our monthly supply (500 tons) would cause a monthly loss of 1,000,000 chf. The strategical impact would be substantial as the lack of this raw material would drastically complexify our value chain and could impact the delivery of our customers orders.

Timeframe
1-3 years

Magnitude of potential impact
High

Likelihood
More likely than not

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
2000000

Potential financial impact figure - maximum (currency)
4000000

Explanation of financial impact
The financial impact is calculated by estimating the losses generated by 2 months of operation closure on the plant in terms of revenue for Givaudan.
(a) estimated average volume of product supply to Givaudan by month (500 tonnes)
(b) estimated average value of this product by volume (CHF 2,000)
(c) number of month of closure max (4 months)
(d) number of month of closure min (2 months)
The financial impact
Financial figure :
Maximum: (500 tonnes x CHF 2,000 x 4 months) = 4,000,000
Minimum: (500 tonnes x CHF 2,000 x 2 months) = 2,000,000

Primary response to risk

Supplier engagement	Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers

Description of response
Givaudan has a close working relationship with the company and conduct regular review and engagement discussions on several topics including supply chain disruption risks and to discuss potential shared benefits of co-investments to mitigates them.
As part of this engagement process, Givaudan has invested to install a roof rain water collection system in order to reduce the site's dependency on municipal water and groundwater availability and in the same time allowing the storage of water for the periods of drought. It represents about 3000m2 capacity with the sole use of gravity to move water streams. Thanks to this equipment, the water demand of the site are covered during the whole drought period and allows the site to operate and supply Givaudan without interruption. This solution is now fully implemented in 2022 after 2 years of engagement, project planning and installation. It has proven its capacity to mitigate the risk and has allowed to have a zero interruption season due to water availability in this particular site. We hope to implement such measures to other high-risk sites in future.

Cost of response

100000

Explanation of cost of response
This is the addition of the cost of material for the infrastructure and the piping work with an estimate work from construction supplier. The maintenance costs are not included
(a) Estimated equipment cost : 70,000 CHF
(b) Estimated installation cost: 30,000 CHF
The financial impact= (a) + (b) = 70,000 + 30,000 = 100,000

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
Resilience

Primary water-related opportunity
Increased supply chain resilience

Company-specific description & strategy to realize opportunity
Givaudan's activities are dependent upon the environment in which we operate. Our Company relies on a steady supply of more than 12,000 ingredients from across the globe, natural resources that are used in the creation of our Taste & Wellbeing and Fragrance & Beauty products. Our activities depend on biodiversity, as do the many communities we work with and look to support. In direct consequence of change /variability in precipitation and weather patterns, raw material supply chains are increasingly becoming more volatile, uncertain, complex and ambiguous (VUCA context) exposing Givaudan to disruption the supply of natural raw materials such as Vanilla, Spices or Florals. This risk also translates into an opportunity to deploy programs such as the Sourcing4Good program which not only has benefits for the ecosystems and communities we work with but also increases Givaudan's resilience. Demonstration of our resilience as a company is a financial opportunity as given the context of the past years (Covid, War in Ukraine) customers are looking for sturdy partnerships with companies that can withstand shocks ans pressures such as the ones the climate crisis presents.
In this type of program, we have the unique opportunity to train farmers/smallholders on good and sustainable agriculture practices and help them to adapt to the fast changing weather patterns, directly impacting their crop yield, drought risk management, and general water management. For Givaudan, it is a benefit to foster farmers/smallholders and secure supply chain for our iconic substances. These are long term agreements for mutual benefits.

Estimated timeframe for realization
More than 6 years

Magnitude of potential financial impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
5500000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact
Givaudan has a Purpose ambition to double our overall business (across our two divisions) by 2030 through creations that contribute to happier, healthier lives. This means doubling our revenue from 5,500 MM CHF to 11,000 MM CHF in 2030. We state this growth as financial impact for this opportunity since resilience is an essential factor for achieving this growth. In other words, if we do not make our supply chain resilient, this will directly impact our growth.

11,000,000,000/2 = 5,500,000,000 CHF increase by 2030

Type of opportunity
Products and services

Primary water-related opportunity
New R&D opportunities

Company-specific description & strategy to realize opportunity
Why this opportunity is strategic :
Givaudan customers operate in markets where consumers have high environmental sensitivity, for example in Europe. There are commercial opportunities to effectively anticipate our customers' needs and help them to respond to consumer behaviour changes. Givaudan is well positioned to take advantage of preference for low water intense products because of our initiatives on responsible sourcing and sustainable innovation (e.g. reuse and recovery of process side stream and waste).
As our customers become more environmentally aware, Givaudan has the opportunity to differentiate from its competition by staying ahead in terms of eco-design and ensuring our marketing and sales reflect the progress we make in eco-efficiency.

Action to realise the opportunity :
We have strong R&D programmes to improve intrinsic, including environmental properties of our products. Modern biotechnology techniques enable us to produce existing molecules or create new captives. In designing innovative processes, we also look at how we can reuse and recover process side streams (upcycling). By following green chemistry principles, we ensure ingredients are safe by design and that our processes make efficient use of energy and materials, while reducing water consumption and

waste.

Estimated timeframe for realization
More than 6 years

Magnitude of potential financial impact
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
150000000

Potential financial impact figure – maximum (currency)
300000000

Explanation of financial impact
1) Givaudan's global sales in 2022 were CHF 7.1 billion. We estimate the financial implications of growth of 'responsible products consumption' in a range of 100 to 200 Mio CHF, corresponding to the aggregated value of major commercial briefs we receive from key customers for selected brands with explicit and mandatory sustainable positioning.

2) Financial implications of our competitive advantage could include :
- Increased product demand and sales revenue due to visibility of our progress on GHG emission reduction and product efficiency design.
- Avoided costs to deal with more stringent regulations or fines
- Associated indirect impact on reputation.
We estimate the financial implications were this to happen to be approximately 50 Mio CHF to 100 Mio CHF/year, corresponding to our increased presence in key customer core listing.

Combining 1) and 2), the ranges for the potential financial figure are calculated as follows:
Minimum: 100,000,000+ 50,000,000 = 150 Mio CHF
Maximum: 200,000,00 + 100,000,000 = 300 Mio CHF

W5. Facility-level water accounting

W5.1

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

Facility reference number
Facility 1

Facility name (optional)
6th of October

Country/Area & River basin

Egypt	Nile

Latitude
30.09093

Longitude
31.095428

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
10.73

Comparison of total withdrawals with previous reporting year
About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
10.73

Total water discharges at this facility (megaliters/year)
10.02

Comparison of total discharges with previous reporting year
About the same

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
10.02

Total water consumption at this facility (megaliters/year)
0.71

Comparison of total consumption with previous reporting year
About the same

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the water withdrawal, as well as the discharged water, stayed about the same.
In the same period, the water consumption remained about the same. The main water consumption at the site is cleaning the blenders (Production lines) among the different batches/formulas (Change over).
The change in the water usage data is due to several actions in the facility:
- New powder blender arrangement, to decrease the cleanings.
- Increased number of production line cleanings (CIP systems) due to changes in the process.
- Reduced wash times and stopped leakages.
- Upgrade in the wastewater treatment (modifying the piping routes and small changes for the control system sequence).
The water is withdrawn from the municipal supplier and discharged directly to a municipal WWTP after pre-treatment.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 2

Facility name (optional)
Johannesburg

Country/Area & River basin

South Africa	Limpopo

Latitude
-26.068771

Longitude
28.112167

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
25.21

Comparison of total withdrawals with previous reporting year
Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
25.21

Total water discharges at this facility (megaliters/year)
11.55

Comparison of total discharges with previous reporting year
Much lower

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
11.55

Total water consumption at this facility (megaliters/year)
13.66

Comparison of total consumption with previous reporting year
Much higher

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site increased its water withdrawal by 12% which is considered higher by Givaudan. In the same period, the amount of water discharged decreased by 43% which is considered much lower. In parallel, the consumption of water increased by 491%, which is a much higher evolution. The water is withdrawn from the municipal supplier and discharged directly to the municipal WWTP after pre-treatment.
The water withdrawal increase is due to leakages, which are already in control, and a repair or replacement is already finished or planned.
The change in the discharged water is due to the improved measurement of effluent discharge.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 3

Facility name (optional)
Cuernavaca

Country/Area & River basin

Mexico	Balsas

Latitude
18.915445

Longitude
-99.176812

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
68.96

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
22.59

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
46.37

Total water discharges at this facility (megaliters/year)
66.83

Comparison of total discharges with previous reporting year
Much higher

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
66.83

Total water consumption at this facility (megaliters/year)
2.13

Comparison of total consumption with previous reporting year
Much lower

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 8.6% which is considered lower by Givaudan. In the same period, the amount of water discharged increased by 12.4% which is considered much higher. In parallel, the consumption of water decreased by 86.6%, which is considered a much lower evolution.
In this facility, during 2022 the reduction in water withdrawal was due to the identification of the main consumers (production, canteen, boilers), which lead to identify incorrect environment practices, and better work with the boiler. This helped them to have better control and less consumption.
The water is withdrawn from the municipal supplier and discharged directly to a municipal WWTP.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 4

Facility name (optional)
Jaguare

Country/Area & River basin

Brazil	Parana

Latitude
-23.542085

Longitude
-46.726719

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
39.53

Comparison of total withdrawals with previous reporting year
About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
3.34

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
36.19

Total water discharges at this facility (megaliters/year)
32.95

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
32.95

Total water consumption at this facility (megaliters/year)
6.59

Comparison of total consumption with previous reporting year
Much lower

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site increased its water withdrawal by 1.8% which is considered about the same by Givaudan . In the same period, the amount of water discharged increased by 8.8 % which is considered higher. In parallel, the consumption of water decreased by 22.9%, which is a much lower evolution.
The facility's water withdrawal increased because of the production increase.
The improvement in the water discharged category is due to a more precise calculation methodology put in place as per legal requirements from 2022 and better representing reality.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 5

Facility name (optional)
Jigani

Country/Area & River basin

India	Other, please specify (Karnataka (India))

Latitude
12.799953

Longitude
77.685257

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
19.23

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
13.2

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
5.92

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0.11

Total water discharges at this facility (megaliters/year)
6.97

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water
6.97

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
12.25

Comparison of total consumption with previous reporting year
Lower

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 7.5% which is considered lower by Givaudan. In the same period, the amount of water discharged decreased by 8.2% which is considered lower. In parallel, the consumption of water decreased 7.2%, which is considered lower.
This facility had construcion activities in 2021, which finished in 2022. Therefore the changes in water usage.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 6

Facility name (optional)
Casablanca

Country/Area & River basin

Morocco	Other, please specify (Chaouia - Ouardigha (Morocco))

Latitude
33.367222

Longitude
-7.564222

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
104.14

Comparison of total withdrawals with previous reporting year
Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
40.68

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
63.46

Total water discharges at this facility (megaliters/year)
76.38

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
76.38

Total water consumption at this facility (megaliters/year)
27.76

Comparison of total consumption with previous reporting year
Much higher

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site increased its water withdrawal by 8.5% which is considered higher by Givaudan. In the same period, the amount of water discharged increased by 5.5% which is considered higher. In parallel, the consumption of water increased by 17.7%, which is a much higher evolution. This facility's increased water usage is due to the increase of cleaning process in order to avoid contamination.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as

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Facility reference number
Facility 7

Facility name (optional)
Linares

Country/Area & River basin

Chile	Other, please specify (Maule (Chile))

Latitude
-35.851694

Longitude
-71.629417

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
63.13

Comparison of total withdrawals with previous reporting year
Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
62.68

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0.45

Total water discharges at this facility (megaliters/year)
43.15

Comparison of total discharges with previous reporting year
Much lower

Discharges to fresh surface water
25.1

Discharges to brackish surface water/seawater
18.05

Discharges to groundwater

0

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
19.98

Comparison of total consumption with previous reporting year
Much higher

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 13.7% which is considered much lower by Givaudan. In the same period, the amount of water discharged decreased by 34.1% which is considered much lower. In parallel, the consumption of water increased by 160%, which is a much higher evolution.
In 2022 this facility had increased production, which explains the change in water usage. They also implemented better flowmeters to have better measurements of water consumption.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 8

Facility name (optional)
Pedro Escobedo

Country/Area & River basin

Mexico	Santiago

Latitude
20.65339

Longitude
-100.130406

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
244.09

Comparison of total withdrawals with previous reporting year
Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
244.09

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
93.58

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
93.58

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
150.5

Comparison of total consumption with previous reporting year
Higher

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. The facility is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site increased its water withdrawal by 5.1% which is considered higher by Givaudan. In the same period, the amount of water discharged increased by 6.1% which is considered higher. In parallel, the consumption of water increased by 4.5% which is considered higher.
The change in the water usage is mainly due to new facilities, installation and start-up of a cooling tower in 2022 which generated greater water consumption, as well as the general process of water use in cooling towers, recovery of water levels that evaporates from the cooling towers.
We considered the following criteria: - changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower".
This data has been audited by a third party.

Facility reference number
Facility 9

Facility name (optional)
Pune

Country/Area & River basin

India	Krishna

Latitude
18.807

Longitude
74.294

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
26.99

Comparison of total withdrawals with previous reporting year
Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
26.99

Total water discharges at this facility (megaliters/year)
0

Comparison of total discharges with previous reporting year
About the same

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
26.99

Comparison of total consumption with previous reporting year

Much lower

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. It is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 25.5%, which is a much lower evolution. In the same period, the amount of water discharged stayed the same; the site has no discharged water due to the cutting-edge treatment system for a strong reduction of the city water usage and the total elimination of wastewater effluent into neighboring waterways: we estimate the amount of water losses as 5% of the water withdrawal figure. In parallel, the consumption of water decreased by 25.5%, which is much lower. The reduction in water consumption is a water saving project (Project Amulya):
-reduced the number of CIP
-changed backwash frequency from time based to condition based
-closed loop recirculation of cooling water in butter instead of draining the cooling water
We considered the following criteria: changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower". This data has been audited by a third party.

Facility reference number
Facility 10

Facility name (optional)
Albert Vieille Spain

Country/Area & River basin

Spain	Guadalquivir

Latitude
37.875899

Longitude
-6.092093

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
10.21

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
10.14

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0.07

Total water discharges at this facility (megaliters/year)
3.68

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water
0

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
3.68

Total water consumption at this facility (megaliters/year)
6.53

Comparison of total consumption with previous reporting year
Much lower

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. It is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 9.5%, which is a lower evolution. In the same period, the amount of water discharged decreaseed by 2.6% which is a lower evolution. In parallel, the consumption of water decreased by 12.9%, which is much lower.
These changes are due to the change in the product mix.
We considered the following criteria: changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower". This data has been audited by a third party.

Facility reference number
Facility 11

Facility name (optional)
Ungerer Oxiquimica Mexico

Country/Area & River basin

Mexico	Balsas

Latitude
19.26943

Longitude
-98.41442

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
42.07

Comparison of total withdrawals with previous reporting year
Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
41.57

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0.5

Total water discharges at this facility (megaliters/year)
27.26

Comparison of total discharges with previous reporting year
Much lower

Discharges to fresh surface water
26.66

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
0.6

Total water consumption at this facility (megaliters/year)
14.81

Comparison of total consumption with previous reporting year
Much higher

Please explain
This facility is a manufacturing site located in one area without decentralised buildings. It is located in a water-stressed area according to WWF Water risk filter indicator 1.2 - Baseline Water Stress level higher than 3. All figures are based on local measurement (meters or invoices) reported in our corporate database. In 2022, compared to 2021, the site decreased its water withdrawal by 21.9%, which is a much lower evolution. In the same period, the amount of water discharged decreaseed by 36.6% which is a much lower evolution. In parallel, the consumption of water increased by 36.4%, which is much higher.
This facility started to focus on reducing the water sent to WWTP in terms of hydraulic and organic load. Actions taken:

-The washing of areas with hoses was eliminated.
-Seal water of the vacuum pumps was cooled with chill water to avoid changing all the water in the storage tank and sent to WWTP.
-Condensates generation reductions in vacuum pumps through maintenance and repairs.
-Reductions in water used to wash production reactors.
-Reduction in steam consumption to clean hoses, funnels, filters etc.
We considered the following criteria: changes <2% are characterized as "about the same" - between 2 and 10% changes are characterized as "higher" respectively "lower" - changes > 10% are characterized as "much higher" respectively "much lower". This data has been audited by a third party.

W5.1a

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

Water withdrawals – total volumes

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices, estimation calculation) for all water withdrawal. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water withdrawals – volume by source

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices, estimation calculation) for all water withdrawal by sources. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water withdrawals – quality by standard water quality parameters

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database(meter reading, laboratory test reports, local measurement protocols, estimation calculation) for all water withdrawal quality parameters. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water discharges – total volumes

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices, estimation calculation) for all water discharged volumes. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water discharges – volume by destination

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices, estimation calculation) for all water discharged volumes by destination. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water discharges – volume by final treatment level

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices, estimation calculation) for all water discharged volumes by treatment method. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water discharges – quality by standard water quality parameters

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, laboratory test reports, local measurement protocols, estimation calculation) for all effluent parameters. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

Water consumption – total volume

% verified
76-100

Verification standard used
The standard is : ISAE3000 and the methodology is through site verification audit by a third-party organisation. The auditors conduct on site audits verifying each data sources against data reported in our corporate database (meter reading, invoices or estimated calculations) for all water consumption. The manufacturing facilities are audited on a 3 years rolling cycle ensuring full coverage of data verification.
The global figure is included in our publicly disclosed and assured 2022 Sustainability GRI Index & Integrated Report. Givaudan's standard on Environmental Data Reporting and Analysis (EDRA) covers proper reporting practices and requirements for all Givaudan locations worldwide.

Please explain
<Not Applicable>

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 the scope (including value chain stages) covered by the policy Description of business dependency on water Description of business impact on water Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to prevent, minimize, and control pollution Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Commitment to stakeholder education and capacity building on water security Commitment to water stewardship and/or collective action Commitment to the conservation of freshwater ecosystems Commitments beyond regulatory compliance Reference to company water-related targets Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	Givaudan's Water Policy is a company-wide policy, meaning it is applicable to all geographies, operations and supply chain activities. Our policy emphasises our commitment to water stewardship. As an industry leader with 250 years of heritage, we take our responsibility seriously and strive to drive a positive impact in watersheds where we source and operate. Our Water Policy therefore focuses on where and what matters most to us in terms of water-related issues, risks and opportunities. For instance, the following aspects are covered which apply to our direct operations: - securing water supply and optimising water use; and - continuously improving how we manage effluent discharge In our supply chain and communities: - reducing water risk in the supply chain - improving water quality management aspects - fostering sustainable water use at the watershed level; and - improving access to Water, Sanitation and Hygiene (WASH) Targets and goals outlined in the Policy are also aligned with the United Nations Sustainable Development Goals, specifically SDG 6 and SDG 12 where we specifically focus our attention on regarding water-related activities. Givaudan's Water Policy also covers the following criteria which are important to our overall vision of reducing our water-related impacts for the environment and our stakeholders: - Our commitment to water stewardship - Shared water challenges; water is a precious natural resource that we are committed to protecting. - Our impact on water; at Givaudan, water is essential to our production activities and to our entire value chain - Our guiding principles; Givaudan is committed to having a positive impact on water where we source and operate. Our guiding principles are driven by our purpose and follow best practices from the UN CEO Water Mandate, the United Nations Sustainable Development Goals. - Our achievements so far - Our 2030 ambitions - Means, reporting and transparency; In the means, the Water Policy outlines our commitment to water-related innovation by, for example, implementing new technologies to reuse and recycle water in our operations. It also outlines our commitment to stakeholder awareness and education by, for example, engaging our suppliers around water stewardship through our Responsible Sourcing programme, Sourcing4Good, and promoting the use of CDP Supply chain programme to share water stewardship data and monitor suppliers' performances giv-givaudan-water-policy.pdf

W6.2

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

Yes

W6.2a

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

Position of individual or committee	Responsibilities for water-related issues
Board-level committee	The entire Board of Directors (= board-level committee) has responsibility for water-related issues. The Board of Directors is the highest strategic management body of Givaudan. It sets Givaudan's strategy and the investment policy, ensures adequate operational and financial performance, manages succession planning and compensation and oversees Givaudan's internal audit, compliance and risk management and general governance matters. By steering Givaudan's purpose and strategy, the Board of Directors is involved in setting the direction for sustainability matters, including water related issues, and covering the targets. The Board of Directors is also responsible for overseeing Givaudan's Enterprise Risk Management (ERM). Linked to the new five-year strategy, a zero based risk assessment was carried out and approved by the board. The resulting ERM risk universe includes environmental risks and water related risks. The risks are discussed at the Board annually as part of the ERM discussion as well as when the situation requires. The Board of Directors was instrumental in defining the new 2021-2025 strategy 'Committed to Growth, with Purpose' about how we will deliver ambitious financial targets while also making progress in the areas of creations, nature, people and communities. In 2021, the Board approved the water-related aspects of this strategy which included our long-term water efficiency targets and revisions to the Givaudan Water Policy.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing acquisitions, mergers, and divestitures Overseeing major capital expenditures Overseeing the setting of corporate targets Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding risk management policies Reviewing and guiding strategy	The board receives two updates annually on: - the Sustainability strategy, which includes water stewardship (agenda items: Sustainability Programme, Performance and Report) The board receives annual reports on: - the Enterprise Risk Management (ERM), discussing water from a risk angle (agenda item: Risks and Opportunities) - EHS function (including water action performance) (agenda item: Report on EHS) - Include aspects of risks and performances In addition, the Board receives business updates at every Board meeting. These contain references to the consequences of water risks on the business, whenever relevant, which also give an oversight of water-related issues. These updates are mechanism to guide company business and corporate responsibility strategy. The Audit Committee receives biannual reports on Enterprise Risk Management and quarterly reports on Ethics & Compliance. This report allow to review and guide risk management policies including water risk management. Major CAPEX, acquisitions and divestitures are part of regular board's discussion. This allows overseeing acquisitions and divestiture as well as the major capital expenditures projects.

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	The Board conducts an annual self assessment to ensure that it always remains able to exercise effective oversight and leadership of the Company. The assessment starts with a confidential survey of all members organised by the Board Secretary. The results of the survey are summarised by the Chairman and discussed by the full Board. Any findings are addressed to ensure continued effectiveness. The Board receives relevant training to keep their knowledge of ESG matters current, including water-related issues. The Board considers sustainability and ESG matters, including water-related issues, an integral part of the Company's strategy. Therefore, familiarity with ESG matters is required from all Board members, as are strong ethical values. The Board's collective knowledge and expertise as well as the diversity of experience of its members are crucial assets in leading a company of Givaudan's size in a complex and fast changing environment with a multitude of stakeholders.	<Not Applicable>	<Not Applicable>

W6.3

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

Name of the position(s) and/or committee(s)
Chief Executive Officer (CEO)

Water-related responsibilities of this position
Setting water-related corporate targets
Monitoring progress against water-related corporate targets
Integrating water-related issues into business strategy

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

Please explain
The Board sets Givaudan's strategy, including on ESG topics, and has the oversight of all ESG aspects, including the sustainability strategy and targets, including climate related issues. The Board is also responsible to ensure that Givaudan's risk management, internal control and compliance systems are efficient and effective.
The Board of Directors of Givaudan has delegated the day-to-day running of Givaudan's activities, including its activities in the matter of sustainability and water to the Executive Committee.

The seven-member Executive committee (EC), led by the Chief Executive Officer (CEO), is responsible for implementing Givaudan's strategy under the supervision of the Board. The CEO is appointed by the Board and has the task of achieving the strategic objectives of the Company and determining operational priorities.

Name of the position(s) and/or committee(s)
Chief Sustainability Officer (CSO)

Water-related responsibilities of this position
Conducting water-related scenario analysis
Managing value chain engagement on water-related issues

Frequency of reporting to the board on water-related issues
Half-yearly

Please explain
Position in the corporate structure:
The Chief Sustainability Officer is a member of the Executive Committee (EC) and report to the Chief Executive Officer (CEO). In Swiss stock-traded companies, the Board of Directors delegates all day-to-day running of the activities to the EC.

Report to the board:
The Board receives two annual reports by the CSO on the Sustainability strategy, which includes water-related issues (agenda items: Sustainability Programme, Performance and Report) .

Responsibilities:
- The CSO is responsible for the Global Sustainability programme, including water-related issues. He approves strategy, direction and resources of the programme and serves as the overall executive committee sponsor.
- The CSO heads the Sustainability organisation and the Sustainability Leadership Team reports to the Global Head of Sustainability.
- The current CSO is also responsible for Global Procurement, which ensures an advanced embedding of sustainability issues in the supply chain.

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

Water-related responsibilities of this position
Assessing water-related risks and opportunities
Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
The Presidents (President Fragrance & Beauty Division and President Taste & Wellbeing Division), who are C-Suite Officers, are members of the EC and report to the CEO. In Swiss stock-traded companies, the Board of Directors delegates all day-to-day running of the activities to the EC, the equivalent of the Anglo-Saxon "C-Suite". Consequently, the Board of Directors of Givaudan has delegated the day-to-day running of Givaudan's activities.

The Board receives business updates by the Presidents at every Board meeting (quarterly). These include anything water-related which is seen to have consequences on the business, such as (real or potential) water-related risks, strategic water opportunities, and volumes and quality of water withdrawal, discharge, etc

The Presidents are responsible for assessing and managing the consequences of water related issues as they affect the divisions. This includes issues of operational continuity, supply chain, customer expectations among others.

W6.4

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

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	No specific comments

W6.4a

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

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Corporate executive team	Improvements in water efficiency – direct operations Improvements in wastewater quality – direct operations	The short term incentives for all executives include a profitability element (EBITDA) which is heavily influenced by cost efficiency. Reduction of use of water has a material cost impact. According to the Enterprise Risk Management (ERM) risk assessment process, members of the Executive Committee (EC) are given specific responsibility over the management of material issues (which include water-related issues). This is reflected in the short term incentive. The success is measured in comparison with the company strategy targets including both water efficiency and improvements in waste water quality management. The targets are to improve water efficiency by 25% on sites facing water stress compared to 2020 levels; to continuously improve water efficiency on all other sites; and to ensure that 100% of our wastewater discharge meet or exceed regulatory and industry standards. These two indicators (water efficiency and wastewater discharge quality) are chosen because they represent both the dependency of the company on water and the impact we can have on the water basin where we operate. This is why they are selected as performance indicators.	In 2022, the members of the Executive Committee (EC) are given incentives based on their performance on meeting Givaudan's targets on water efficiency and waste water quality management, which can decrease Givaudan's operational costs. The targets are to improve water efficiency by 25% on sites facing water stress compared to 2020 levels; to continuously improve water efficiency on all other sites; and to ensure that 100% of our wastewater discharge meet or exceed regulatory and industry standards.
Non-monetary reward	Other, please specify (All employees)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations Improvements in wastewater quality – direct operations	Since 2010, all employees can volunteer for their local Green Teams to further develop and update site plans with additional initiatives and deliver improved eco-efficiency. Green Teams contribute to reducing our environmental footprint by coming up with creative ideas to either improve existing operational processes or finding new ways to increase water efficiency. In this context, annual Green Team Awards are granted by the Executive Committee for successful eco-efficiency projects. Local indicators are applied to assessed water related community project but our main indicator for project in our operation is the reduction of water withdrawal for a specific facility. This measure ensures a good impact on the watershed and an improvement in the water efficiency of the site. The threshold for success is often qualitative for projects in communities. However, a decrease of more than 2% of the amount of water withdrawal per tonnes of product is considered as a success.	Our Green Teams contribute to reducing our environmental footprint by improving existing operational processes to increase water efficiency. The annual Green Team Awards are granted by the Executive Committee for successful environmental projects, including water efficiency projects. This aligns with our goal of improving water efficiency by a 25% water withdrawal rate reduction by 2030 on site facing water stress. A decrease of more than 2% of annual water withdrawal per tonne of product is considered a success, and becomes shortlisted for the Award.

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?

Process to ensure consistency:

Givaudan is represented on the board of the associations (IFRA - International Fragrance Association & IOFI - International Organization of the Flavor Industry) which strengthens our implication and influence in advancing water stewardship and ensure consistency with our company's commitments . We actively participate in the discussions bringing a progressive view on what our industry can and should do to mitigate water risk both at level of operations and notably, in the supply chain. We continuously align the activities of the two divisions and of the corporate functions around the agreed commitments and targets and we widely share within the organisation through KPIs and scorecards. This allows the company to be fully aligned internally and to speak with unitary voice on the topic inside external bodies and multi stakeholders platforms.

In case of inconsistency
In the future, in case there is an inconsistency we would escalate the matter to the board of directors of the association before anything is officially translated into policies, provide detailed insights on our claims to enable high quality discussions at board level and defend our position. We will use all established means described in the association governance (from proposing alternatives up to vetoing) so the board of directors can land on consensus for a revised industry positioning with regards to Policy makers.

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)
giv-2022-integrated-annual-report.pdf

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Givaudan bases long term business objectives on revenue increase and risk mitigation among others. Disruption in the supply of the raw materials due to water scarcity and water stress increase in some regions is a water issue integrated. The risk of a disruption in the supply or volatility of raw material prices increases our spend and decreases our revenues. It is linked with water scarcity and water stress increase in some regions. The response to the disruption in the supply of raw materials was to develop a responsible sourcing program S4G, a program included in the long term business objectives of Givaudan. In key regions, we target the direct sourcing of raw materials by working with local smallholders especially on water management improvement. It strengthens the fabric of the local economy by contributing to more stable incomes for the farmers and mitigates the risk Givaudan supply chain faces regarding water. This is an example where Givaudan included water-related issues in the business objectives by focusing efforts and resources on a long term objective of safeguarding several key supply chains. We have a milestone of 2030 with the objective of sourcing all materials and services in a way that protects people and the environment and which will continue in the 2035 strategic cycle to address the long tail of small suppliers. A time horizon of 11 to 15 years was selected as it corresponds to a time lapse that we internally define as a "long-term" horizon.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Integrated water issues: - Water supply shortage in our operations: the risk of extreme weather events in locations where we operate leading to water supply shortage and potential business interruption has a potential negative impact on the "Excellence, Innovation & Simplicity - in everything we do" enabler of our business strategy, specifically on ensuring operational reliability and efficiency - disruption in the supply of the raw materials due to water scarcity level and water stress increase in some regions has been identified as a major risk to the business. Our water stewardship program, developed via cross functional teams with key decision makers, outlines our overall strategy for monitoring and reducing water use for all sites and guides our growth strategy. It helps us put priority on places where water stress is expected. In 2022, we conducted a water audit on one site located in stress area to develop water mitigation action plans including efficiency improvements and water reuse opportunities. In the next 5 years, we expect to conduct water audits on all sites located in stress areas and to implement all measures identified on these site by 2035. A time horizon of 11 to 15 years was selected as it corresponds to what we define as a "long-term". This time frame is relevant to Givaudan as we are evolving in a sector with a relatively rapidly changing context.
Financial planning	Yes, water-related issues are integrated	11-15	Integrated water issues: - Changes in precipitation could adversely impact our operations and may negatively impact our ability to produce at competitive prices and on time which might decrease revenue. We have already experienced episodes of water supply disruption at our sites in Jaguaré, Brazil and Jigani, India. - Disruption in the supply of the raw materials due to water scarcity level and water stress increase in some regions. It has been identified as a major risk to the business and is reflected in the annual financial planning, since raw material prices impact our profitability margins. Our water stewardship program, developed via cross functional teams, outlines our overall strategy for monitoring and reducing water use for all sites and guides our growth strategy. It helps us put priority on places where water stress is expected. In 2022, we conducted a water audit on one site located in stress area to develop water mitigation action plans including efficiency improvements and water reuse opportunities. In the next 5 years, we expect to conduct water audits on all sites located in stress areas and to implement all measures identified on these site by 2035. These investments are budgeted until the year of realization of the projects, and until 2035 are embedded in the annual budget review and capital. A time horizon of 11 to 15 years was selected as it corresponds to a time lapse that we internally define as a "long-term" horizon.

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)

83

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

0

Water-related OPEX (+/- % change)

5.6

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

5

Please explain

OPEX: +6% change on like for like vs 2021. OPEX increase is due to higher water costs in water supply/treatments and because of the increase in absolute water withdrawal resulting from a higher production volume. Regarding the future, we anticipate a similar increase of +5% in 2023. In addition, OPEX will increase also due to the integration of recent acquisitions in the reporting scope.
CAPEX: significantly increased due to new projects (main capital intensive on wastewater treatment improvements in different geographies). It is complicated to segregate water projects from others because most of the time water is a part of the project (when installing a new boiler that saves water, when recovering condensate, etc. the main drivers are not water related but these also have a positive impact on water performances). According to anticipated budget and project plans the CAPEX evolution should stay flat next year: new projects on water efficiencies and cooling towers should be carried out.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	Scenario analysis is a powerful tool to imagine how nature and society can respond to the different paths of future human, environmental, economic and political development. The scenario developed for our global corporate assessment has explored the impact that the water related issues (from climate change and scarcity) and the resulting socio-economic instability of local communities can cause in our procurement activities and more generally on our business. The aim of the scenario was to explore alternative opportunities to guarantee supply, potential synergies, compromises but also scientific and technological innovations. We used a participatory approach and involved a selected group of stakeholders in the exercise.

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	Scenario analysis is a powerful tool to imagine how nature and society can respond to the different paths of future human, environmental, economic and political development. The scenario developed for our global corporate assessment has explored the impact that the water related issues (from climate change and scarcity) and the resulting socio-economic instability of local communities can cause in our procurement activities and more generally on our business. The aim of this scenario (the 2.7 degree scenario that is very likely from latest forecast and information from IPCC and other government alignments) was to explore alternative opportunities to guarantee supply, potential synergies, compromises but also scientific and technological innovations. We used a participatory approach and involved a selected group of stakeholders in the exercise. The exercise has been defined geographically (for example with the inclusion of the countries most exposed to climate change and its implications on water scarcity in particular the tropical area) and for selective crops most exposed to climate change implications and the horizon (2030, 2040, 2050) which also served as a reference. Among the main data acquired for the scenario are those relating to the crops we are buying and the characteristics of the environments of origin that could change as a result of climate change. Assumptions concerned the change of local weather patterns characteristics and impact on communities behaviors (replacing crops by other crops less affected by weather patterns or water scarcity challenges). The analysis included a number of physical risks that may occur, in particular the ones related to droughts and water shortages causing water tables level drop	We identified from our risk assessments that our sites in tropical areas, specifically India and Brazil, have high risks to water scarcity and extreme weather events. The analysis included several physical risks that may occur, particularly droughts and water shortages which may cause surface water and groundwater table levels to drop drastically by 2030. There is a high probability of supply disruptions from our sites in India and Brazil in 2030, which could affect our ability to operate, which would have the consequence to affect our long-term revenue. In addition, we have done a number of actions following the results: supplier engagement in water stewardship, understanding of irrigation needs (quantity & quality), appropriate watering infrastructures for specific crops and agronomy support to increase plants resistance to climate change and its impact on water	While our company strategy follows a five-year plan, in the case of scenarios, we have tried to project long term horizons (2030, 2040 and 2050) to help us understand what changes or specific interventions in resilience / agricultural practices should be made to our supply chain. Among the main data acquired for the scenario are those relating to the crops we are buying and the characteristics of the environments of origin that could change as a result of climate change. Changes made: After conducting our water risk assessments, we now better leverage our internal team expertise like agronomy experts (and we anticipate hiring more agronomy experts in our internal team) to research what changes or specific interventions in resilience and agricultural practices should be made to our supply chain by 2030. We also plan to consult with external experts and our suppliers on how to efficiently implement drip irrigation methods and whether to implement these methods in our sites experiencing droughts and water shortages by 2030.

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

Right valuation of water for security seems to be as important as valuation of GHG emissions for climate change issues. Introducing a direct price on water seems to be very difficult for our company due to the wide range of prices, regulations, challenges and different options around the world. We currently prefer to assess opportunity to valuate projects that save water or initiatives that lower the risks with the appropriate mechanism taken into account non business aspects as well.
At the same time however, the new 2030 water goals and targets also help us focusing and further endorsing efforts and resources (human and financial) on the sites located in areas facing water stress. We are indeed currently discussing about a future Internal Price on Water for such sites exclusively and we can build on the Internal Carbon Price experience.
Our zero water discharge plant in India is a good practical example where we can assess our business cases and methodologies for our operations.

W7.5

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

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	Yes	Low water impact product is about: - Eco-design: reducing the pressure on water resources through efficient product solutions that reduce water use over their life cycle, - water-efficiency in the manufacturing of our products: reducing our water consumption, - Water-secure supply chains with our initiatives on responsible sourcing and sustainable innovation (e.g. reuse and recovery of process side stream and waste). - Developing best agricultural practices for specific ingredients used in our products.	<Not Applicable>	We have strong R&D programmes to improve intrinsic, including environmental properties of our products. Modern biotechnology techniques enable us to produce existing molecules or create new captives. In designing innovative processes, we also look at how we can reuse and recover process side streams (upcycling). By following green chemistry principles, we ensure ingredients are safe by design and that our processes make efficient use of energy and materials, while reducing water consumption and waste. Through the Origination team within our Procurement function, we have initiatives targeting the direct sourcing of raw materials by working with local smallholder farmers especially on water management improvement. It strengthens the fabric of the local economy by contributing to more stable incomes for thousands of farmers and mitigates the risk Givaudan supply chain faces regarding water.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	Yes	<Not Applicable>
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	Yes	<Not Applicable>
Other	No, and we do not plan to within the next two years	

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number

Target 1

Category of target

Water withdrawals

Target coverage

Other, please specify (Sites facing water stress - 11 sites across the globe)

Quantitative metric

Reduction in withdrawals per unit of production

Year target was set

2021

Base year

2020

Base year figure

5.5

Target year

2030

Target year figure

4.12

Reporting year figure

4.7

% of target achieved relative to base year

57.9710144927536

Target status in reporting year
Underway

Please explain
In 2022, we collected, analysed and published internally Givaudan's water efficiency best practices. Some practical approaches to improving site water use have included switching processes that currently use municipal water to our existing cooling tower loop, meaning we were able to reduce the amount of municipal water required for cooling. Another is the installation of automatic valves to manage water needed for purging product dust from recirculating scrubber water. There are many water-saving initiatives ongoing at Givaudan sites worldwide, from on-site biological treatment of wastewater and subsequent reuse in the Netherlands to rainwater harvesting in India.

As an example, a high peak in water consumption at the Pune, India manufacturing facility, which is in a water-stressed area, led to swift action: Bringing relevant stakeholders together, the site head emphasized the need to improve the management practices around this precious resource and led a campaign to identify best practices to reduce the volume of water used. This assessment lead to the identification of multiple opportunities to improve water efficiency both in the manufacturing site and in the municipal water use of office facilities. This lead the site to established an ambitious 50% water reduction target, thus contributing and going beyond the Givaudan's Sustainability ambitions.

Our quantitative metric represents the water efficiency based on cubic meters per tonne of production.

For the 11 key sites in water stressed areas, there was an improvement of 9% in water efficiency between 2021 and 2022, this represents an overall progress of -13% towards our -25% target for 2030. Further more, in 2022 Givaudan’s global water intensity (municipal and ground water/tonne of product) was reduced by 7% against our 2020 baseline.

Target reference number
Target 2

Category of target
Water pollution

Target coverage
Company-wide (direct operations only)

Quantitative metric
Increase in proportion of wastewater that is safely treated

Year target was set
2021

Base year
2020

Base year figure
0

Target year
2030

Target year figure
100

Reporting year figure
90

% of target achieved relative to base year
90

Target status in reporting year
Underway

Please explain
This target is a company-wide target related to water pollution reduction. We are set to achieve a 100% of our wastewater discharge meeting or exceeding regulatory and industry standards by 2030. We monitor this target via parameters such as pH, chemical oxygen demand (COD), biochemical oxygen demand (BOD), fat, oil and grease (FOG), total nitrogen, total phosphorus, total organic carbon, temperature, heavy metals, etc., at least as frequently as requested by local legislation and industry standards. In parallel, we continue to develop and improve the wastewater internal standard to integrate the latest findings of our assessments. We provide our relevant employees with training to better perform in their water related activities, and to equip them in their contribution towards water pollution reduction. We are currently still assessing the baseline for this target, but and estimate that 90% of our wastewater discharge is safely treated and is compliant to our stringent wastewater standard.

Target reference number
Target 3

Category of target
Water, Sanitation and Hygiene (WASH) services

Target coverage
Company-wide (direct operations only)

Quantitative metric
Increase in the proportion of employees using safely managed drinking water services

Year target was set
2001

Base year
2000

Base year figure
99

Target year
2030

Target year figure
100

Reporting year figure
100

% of target achieved relative to base year
100

Target status in reporting year
Achieved

Please explain
The indicator used to assess the progress of this target is calculated as the percentage of facilities providing WASH to our employees.
Currently 100% of our manufacturing facilities provide WASH services to our employees and integration of the last acquisitions includes WASH aspects, which we consider to be the threshold of success.

Even though we were already at a 100% for this target in our base year (This has been stated as 99% to avoid division by 0 in column "% of target achieved relative to base year ") we maintain this this target because ensuring WASH services across all our operations is a continuous improvement activity with regular audits for exiting sites and integration projects for any potential new acquisitions. As outlined in our Human Rights policy we align to the Ethical Trade Initiative's (ETI) base code principles including those requirements related to access to water, sanitation and hygiene. We verify compliance to these standards through regular third party verification (SMETA audits) at all our manufacturing sites.

Furthermore, we seek to extend this goal beyond our operations and engage with our supply chain to insure alignment of our suppliers in this goal. Our Responsible Sourcing policy , requires all Givaudan's suppliers to implement Water Access, Sanitation and Hygiene (WASH) principles in their own operations and workplaces.

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
W6 Governance	Materiality matrix entire process has been audited and verified by third party auditors.	ISAE 3000	All the content of our 2022 Integrated Annual Report and 2022 Sustainability Sustainability report has been verified through third party/external audit.
W8 Targets	Targets and progress towards our KPIs	ISAE 3000	All the content of our 2022 Integrated Annual Report and 2022 Sustainability report, including targets and progress, has been verified through third party/external audit.
W1 Current state	Engagement initiatives	ISAE 3000	All the content of our 2022 Integrated Annual Report and 2022 Sustainability report, including engagement initiative with stakeholders and their progress, has been verified through third party/external audit.

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Value chain stage	Please explain
Row 1	Yes	Direct operations Supply chain Product use phase	In 2022, we laid the foundation with our first plastic inventory, deepening our understanding and knowledge about the role of plastic at Givaudan, and gaining information that helps us advance towards our goals. Our Plastic Book helps us better understand our detailed plastic footprint, and gives us an inventory of our plastic usage and details about its end of life. We are now better able to characterise which and how, plastics in all their forms enter through suppliers of raw materials or as consumables used in our labs or factories

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Value chain stage	Please explain
Row 1	Not assessed – but we plan to within the next two years	<Not Applicable>	we plan to do so within the next two years

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1	Yes	Direct operations Supply chain Product use phase	Regulatory	Plastic regulations are increasing world-wide, the risk of exposure to emerging regulation is high and could be substantive.

W10.4

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

	Targets in place	Target type	Target metric	Please explain
Row 1	Yes	Plastic packaging Plastic goods Microplastics Waste management	Reduce the total weight of plastic packaging used and/or produced Eliminate problematic and unnecessary plastic packaging Reduce the total weight of virgin content in plastic packaging Increase the proportion of post-consumer recycled content in plastic packaging Increase the proportion of renewable content from responsibly managed sources in plastic packaging Increase the proportion of plastic packaging that is recyclable in practice and at scale Increase the proportion of plastic packaging that is reusable Eliminate single-use plastic goods	Our plastic target is to reach 100% plastics circularity by 2030. Our strategy is focused on four main axes: reducing usage, designing our packaging to be more circular, increasing the renewable materials content and improving the system for the end of life of our plastics. A circular economy is our long-term vision for sustainable use of plastics and the key principle are: rethink, reduce and recycle.

W10.5

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

	Activity applies	Comment
Production of plastic polymers	No	N/A
Production of durable plastic components	No	N/A
Production / commercialization of durable plastic goods (including mixed materials)	No	N/A
Production / commercialization of plastic packaging	No	N/A
Production of goods packaged in plastics	Yes	N/A
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	N/A

W10.8

(W10.8) Provide the total weight of plastic packaging sold and/or used, and indicate the raw material content.

	Total weight of plastic packaging sold / used during the reporting year (Metric tonnes)	Raw material content percentages available to report	% virgin fossil-based content	% virgin renewable content	% post-industrial recycled content	% post-consumer recycled content	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	20000	% virgin fossil-based content % post-industrial recycled content	99	<Not Applicable>	1	<Not Applicable>	The plastic footprint at Givaudan is about 20 thousand tonnes, with about 15% from the packaging of the raw materials we purchase, 10% from the consumables we use, and the vast majority coming from the packaging we buy to ship our finished goods such as plastic jerrycans. In 2022, we were able to demonstrate that the circularity of our plastic consumption is currently at about 1%.

W10.8a

(W10.8a) Indicate the circularity potential of the plastic packaging you sold and/or used.

	Percentages available to report for circularity potential	% of plastic packaging that is reusable	% of plastic packaging that is technically recyclable	% of plastic packaging that is recyclable in practice at scale	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	% reusable % technically recyclable % recyclable in practice and at scale	10	20	70	As per our plastic book

W11. Sign off

W-FI

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

no additional information

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

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