

W0. Introduction

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W0.1

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**(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 10% 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

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**(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

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**(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 2020	September 30 2021

W0.3

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**(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

**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 2021	The recent acquisitions, which occurred in 2021, will be integrated in scope within the next two or three years after the acquisition. This is the necessary time to align reporting framework and to proceed to the basic integration steps required to be able to include them in the CDP reporting framework. This is why they are excluded in this reporting.

**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	<p>- 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, the equipment might be required to stop operating due to non conformance to cleaning regulation or to risk of contamination between products.</p> <p>- 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.</p> <p>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.</p>
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>- 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.</p> <p>- 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.</p> <p>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.</p>

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	Water withdrawal data is used to monitor performances and evaluate water risks in operations. Givaudan's standard on Environmental Data Reporting and Analysis based on Global Reporting Initiative (GRI) Standards framework, covers 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 intensity (m <sup>3</sup> per metric ton of production) at 100% of our manufacturing sites. We measure the total volumes of water withdrawals through meter-readings and/or data from water bills on a monthly basis. 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.
Water withdrawals – volumes by source	100%	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 standard defines reporting practices and requirements regarding water withdrawal by source for all locations worldwide. The reporting framework includes 5 water sources: municipal, ground water, surface water, rainwater collected 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. We measure the volumes of water withdrawals through meter-readings and/or data from water bills on a monthly basis. The data are reported on a quarterly basis by the local data reporter in our online platform before being assured and verified by external audits on a 3 year rolling cycle.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Givaudan's operations rely on water withdrawal quality criteria for compliance and quality reasons. Water withdrawal quality is accounted for and measured through analysing the total dissolved solids (TDS) measurements of the water. 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.
Water discharges – total volumes	100%	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 measure and/or calculate the total volumes of water discharged through meter-readings and/or data from service supplier bills on a monthly basis. 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.
Water discharges – volumes by destination	100%	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 on a monthly basis. We have different measurement methods: water meter readings, service supplier bills and/or calculation using estimation based on water withdrawal amount. 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.
Water discharges – volumes by treatment method	100%	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 on a monthly basis. 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. 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. In 2020, ten sites discharged directly water in the environment after biological treatment.
Water discharge quality – by standard effluent parameters	100%	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 – temperature	100%	Water discharge temperature is measured and monitored to ensure no negative impact on the downstream water has occurred. According to Givaudan's standard on Environmental Data Reporting and Analysis based on GRI Standards framework, the temperature of the water discharged is measured using thermometer on the discharge water flow. This measure is done at least once a day. The temperature data are monitored and reported to the local authorities according to local regulation requirement frequency (usually monthly).
Water consumption – total volume	100%	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. The total volume of water consumption is calculated on quarterly basis, in line with data being reported on a quarterly basis before being assured and verified by external audits conducted on a 3-year rolling cycle as per our Sustainability assurance process.
Water recycled/reused	100%	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. We currently have six facilities that reuse/recycle water and 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 provision of fully-functioning, safely managed WASH services to all workers	100%	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. 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.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	10236.46	Higher	<p>The total water withdrawals data reported here is the consolidation of each Givaudan manufacturing facilities' water withdrawals. These data are reported on a quarterly basis and consolidated at corporate level. The total water withdrawal across all manufacturing sites in (LATAM, NOAM, EAME and APAC ) of Givaudan regions has increase by 2.6% between 2020 and 2021.</p> <p>For example one of our facilities in the Netherlands increased its cooling water intake and discharge when changing temporary pumps to permanent ones. In addition one of our sites in the US had construction work on-site in 2021 and replaced the fire protection loop and built a new HVAC chiller building. Also while construction was going on, a contractor caused a water line break. To another site in the US, many of the smaller volume but higher complexity blends were sent. This resulted in an increase CIP washdowns in between batches which also certainly contributed to the increase.</p> <p>In the future we expect an absolute increase in water withdrawal due to the following reasons: 1) acquisitions will be included in the portfolio. Total withdrawals are going to be higher due to the addition of almost 20 facilities to the portfolio. 2) our business continues to expand rapidly and more water is needed to operate. At the same time working as per our commitments on water efficiency, we anticipate this to plateau after 2025 onwards as our long term water strategies will be gradually met and efficiency is increased.</p> <p>As a general rule, we characterised a change &lt;2% as "about the same", changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Total discharges	9229	Higher	<p>The total water discharge reported here is the consolidation of each Givaudan manufacturing facilities' water discharge. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge across all manufacturing sites in LATAM, NOAM, EAME and APAC of Givaudan regions has increased between 2020 and 2021 by 6.9%.</p> <p>For example one of our facilities in the Netherlands increased its cooling water intake and discharge when changing temporary pumps to permanent ones. In addition at one of our sites in China a pipe was broken which led to higher water discharge. At another site in Switzerland, the water withdrawal increased due to the increase in production and the change in the type of production which led to the increase in water discharge.</p> <p>In the future we expect an absolute increase in water discharge following a similar trend in water withdrawal due to the following reasons: 1) acquisitions will be included in the portfolio. Total discharges are going to be higher due to the addition of almost 20 facilities to the portfolio. 2) our business continues to expand rapidly and more water is needed to operate. At the same time working as per our commitments on water efficiency, we anticipate this to plateau after 2025 onwards as our long term water strategies will be gradually met and efficiency is increased.</p> <p>As a general rule, we characterised a change &lt;2% as "about the same", changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Total consumption	1006.74	Much lower	<p>The total water consumption reported here is an aggregation of local calculations using withdrawals minus discharges for each of the Givaudan manufacturing facilities. These data are reported on a quarterly basis and consolidated at corporate level. The total water consumption across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has decreased between 2020 and 2021 by - 25% which is considered much lower. We estimate the breakdown of consumption as follows: 30% has been incorporated into products or waste, 30% has evaporated, 30% consumed by humans for sanitation and 10% others.</p> <p>For example one of our sites in China has decreased its productivity in 2021 compared to 2020 and also upgraded the CIP from manual control to auto control. In addition, at one of our sites in Switzerland due to the increase in production and the change in the type of production the water consumption was much lower. One of our sites in India contributed to the change by implementing a project to reduce water consumption.</p> <p>In the future we expect an overall absolute decrease in water consumption as our long term water strategies will be gradually met and efficiency is increased. At the same time we see as a challenge to be addressed the quantity of water needed for cooling purposes. Part of our water withdrawal is indeed used for cooling purposes and due to the impact of climate-related hazards such as long period of droughts and increase of average temperature, we expect an ad-hoc increase of water consumption for cooling purposes.</p> <p>As a general rule, we characterised a change &lt;2% as "about the same", changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>

**W1.2d**

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	1-10	About the same	WRI Aqueduct	<p>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 5.9% of our water withdrawals are located in water stressed areas. The selection of facilities in water stress areas is done considering the above mentioned indicator called Baseline Water Stress. This measures the ratio between total annual water withdrawals and total available annual renewable supply, accounting for upstream consumptive use. In that case, a higher percentage indicates more competition among users. We consider all regions/basins as an area with water stress if they are facing a Baseline Water Stress &gt; 40%: "Extremely high (&gt;80%)" or "High (40-80%)". The calculation of the percentage of water withdrawn from areas with water stress is done by dividing the total water withdrawal from the sites facing water stress (numerator) by the total water withdrawal of the company (denominator). It represents about 5.9% of water withdrawal and 14.5% of the manufacturing facilities (number of manufacturing facilities with water stress divided by total number of manufacturing facilities). With very important acquisitions which happened in the past years and the trend regarding water stress level around the world, we foreseen this % to increase as a combination of more areas facing water stress and new acquired facilities which are located in water stress areas. Compared to 2020, Givaudan's part of water withdrawal from areas with water stress slightly reduced with an evolution of -0.3%. We consider this as about the same. As a general rule we characterised a change &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>

**W1.2h**

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	5102.2	Higher	Fresh surface water is used for cooling purposes in European facilities. With about 50% of the total withdrawal of Givaudan in 2021 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; in 2021 Givaudan however did collect neither rainwater nor water from wetlands. There is an increase of 3.4% compared to 2020 fresh surface water withdrawal. 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 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".
Brackish surface water/Seawater	Relevant	0.54	This is our first year of measurement	Only 1 site is using this source of water withdrawal and this is the first year of measurement.
Groundwater – renewable	Relevant	1390.61	Much lower	Groundwater supplies about a third of our facilities', it is therefore considered to be relevant. There is an 11% decrease compared to 2020. The change is mostly due to water savings projects implemented and optimizing cleaning processes with a big focus on several CIP (Clean In Place) improvements.  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>	This source is not used by Givaudan therefore, it is not relevant. Except if a future acquisition would lead to include this source in our reporting there is no reason for this source to become relevant for Givaudan in the future.
Produced/Entrained water	Not relevant	<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	3743.11	Higher	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 increased between 2020 and 2021 with a change of 7.5%. In 2021, there was an increase in the quantity of water discharged to a third party of 2.5% compared to 2020. This was due to two specific locations in the US where production changed - at one of the sites, many of the smaller volume but higher complexity blends were sent which resulted in an increase CIP washdowns in between batches. At the other site, there was an absolute increase in production which generated absolute increase in water discharges. 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	Please explain
Fresh surface water	Relevant	5991	This is our first year of measurement	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. Before 2021 Givaudan had a different approach to reporting water discharge, consequently this is the first year for measuring different destinations (fresh surface water, groundwater and seawater).
Brackish surface water/seawater	Relevant	421.38	This is our first year of measurement	This category encompasses water discharged to the seawater with and without biological treatment in our facilities. Before 2021 Givaudan had a different approach to reporting water discharge, consequently this is the first year for measuring different destinations (fresh surface water, groundwater and seawater).
Groundwater	Relevant	78.25	This is our first year of measurement	This category encompasses water discharged to the groundwater with and without biological treatment in our facilities. Before 2021 Givaudan had a different approach to reporting water discharge, consequently this is the first year for measuring different destinations (fresh surface water, groundwater and seawater).
Third-party destinations	Relevant	2738.26	Higher	"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 2021, there was an increase in the quantity of water discharged to a third party of 2.5% compared to 2020. This was due to two specific locations in the US where production changed - at one of the sites, many of the smaller volume but higher complexity blends were sent which resulted in an increase CIP washdowns in between batches. At the other site, there was an absolute increase in production which generated absolute increase in water discharges.  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	% of your sites/facilities/operations this volume applies to	Please explain
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	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	487.47	Higher	1-10	<p>This category is employed for the sites which are discharging to the environment after onsite waste water treatment (with primary, secondary and tertiary treatments). This is an aggregation of local calculations of the discharges under this categorisation for each of the Givaudan manufacturing facilities at stake. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has increased between 2021 and 2020 with an evolution of 3.1% which is considered higher than the previous year. This is mostly explained by an increase in surface water withdrawal that took place in the same period for the sites at stake.</p> <p>In 2021, 4 sites' water discharge was treated at the tertiary level 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.</p> <p>Givaudan follows local regulatory standards for water treatments where requested to put in place tertiary treatments. This is highly important since the water which is being returned to the environment after onsite treatment has to be safe to re-enter the environment. In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with.</p> <p>Some sites can have more than one type of waste water discharge; therefore the sum of all the reported percentages of sites with the different categorisations 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 &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Secondary treatment	Relevant	2192.94	About the same	1-10	<p>This category is employed for the sites which are discharging to the environment after onsite waste water treatment (with primary and secondary treatments). This is an aggregation of local calculations of the discharges under this categorisation for each of the Givaudan manufacturing facilities at stake. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has decreased between 2021 and 2020 with an evolution of 1.7% which is considered about the same compared to the previous year.</p> <p>Givaudan follows local regulatory standards for water treatments where requested to put in place secondary treatments. In 2021, 12 sites' water discharge was treated at the secondary level 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.</p> <p>In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with.</p> <p>Some sites can have more than one type of waste water discharge; therefore the sum of all the reported percentages of sites with the different categorisations 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 &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Primary treatment only	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<p>This category is considered "not relevant" since the sites which are having primary treatments, do also have at the same time either secondary and/or tertiary treatments. They are therefore indicated under the highest level to which the discharge is treated.</p>
Discharge to the natural environment without treatment	Relevant	4415	Much higher	11-20	<p>This category is employed for the sites which are discharging to the environment without onsite biological treatment. This is an aggregation of local calculations of the discharges under this categorisation for each of the Givaudan manufacturing facilities at stake. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has increased between 2021 and 2020 with an evolution of 15.2% which is considered much higher than the previous year. We can attribute the reason for this increase mostly due to the increase in surface water withdrawal.</p> <p>Givaudan follows local regulatory standards for water discharges directly to the environment without treatment. This is highly important since the water which is being directly returned to the environment without treatment has to be safe to re-enter the environment. In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with.</p> <p>In 2021, 9 sites' water discharge was sent to the natural environment without treatment because 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.</p> <p>Some sites can have more than one type of waste water discharge; therefore the sum of all the reported percentages of sites with the different categorisations 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 &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Discharge to a third party without treatment	Relevant	751.26	Lower	1-10	<p>This category is employed for the sites which are directly discharging to a third party waste water treatment plant (WWTP) without on-site pre-treatment. This is an aggregation of local calculations of the discharges under this categorisation for each of the Givaudan manufacturing facilities. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has decreased between 2021 and 2020 with an evolution of 4.9% which is considered lower than the previous year. This is mostly explained by the reduction of water withdrawal needed for the factories' processes due to higher water efficiencies.</p> <p>Givaudan follows local regulatory standards for water discharges to third party without treatment. This is important since the water which is sent for external treatment has to be adequate for the third party facility treatment capabilities. In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with. In 2021, 30 sites' water discharge was sent to a third party without treatment. The third party is in charge of treating the water to quality level expected for it to go back to the environment.</p> <p>Some sites can have more than one type of waste water discharge; therefore the sum of all the reported percentages of sites with the different categorisations 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 &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>
Other	Relevant	1987	Higher	1-10	<p>The other category is employed for the sites which are discharging to a third party waste water treatment plant (WWTP) after an on-site pre-treatment. This is an aggregation of local calculations of the discharges under this categorisation for each of the Givaudan manufacturing facilities. These data are reported on a quarterly basis and consolidated at corporate level. The total water discharge from this category across all manufacturing sites in LATAM, NOAM, EAME and APAC regions of Givaudan has increased between 2021 and 2020 with an evolution of 5.6% which is considered higher than the previous year.</p> <p>Givaudan follows local regulatory standards for water discharges to third party with on-site pretreatment. This is important since the water which is sent for external treatment has to be adequate for the third party facility treatment capabilities. In parallel to local legislation, we have also developed an internal wastewater standard which factories need to comply with. In 2021, 30 sites' water discharge was sent to a third party with pre-treatment, meaning it is important that the water is to the level of quality where then the third party can continue the treatment. The third party is then in charge of treating the water to level quality level expected for it to go back to the environment.</p> <p>Some sites can have more than one type of waste water discharge; therefore the sum of all the reported percentages of sites with the different categorisations 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 &lt;2% as "about the same", a changes between 2% and 10% as "lower" / "higher" and a change &gt;10% as "much higher" / "much lower".</p>

## 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	672700000	10236.47	657160.134304111	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)

13.96

### Numerator: water aspect

Total water withdrawals

### Denominator

Ton

### Comparison with previous reporting year

Higher

### Please explain

- 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 water intensity related to the manufacturing site of the flavor or fragrance compounds. All products from a facility have similar water intensity.
- 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 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. We also will continuously improve water efficiency on all other sites.
- With a change from 2020 to 2021 of about +5.2% in water intensity for this product we consider the performance to be "higher" than the previous year. Despite a decrease of -7.6% in the production tonnage, the water withdrawal did evolve with only a slight -2.8% reduction due to improvements in the operation of submersible pumps, as well as the repair of leaking steam traps in the production area. This led directly to a smaller amount of wastewater treated and discharged. As a general rule we characterised 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".
- We expect a reduction of water intensity in the future because of ongoing efforts on trying to eliminate the contamination of the condensate and to better balance the cooling water flows. In addition to this, a dedicated global workgroup composed by several departments' representatives will focus on key priority sites like this one. The aim is to provide ad-hoc support and best practice sharing in order to strategically improve the water intensity performances over the next 10 years.

### Product type

Other, please specify (Flavor)

### Product name

Flavor compound 1

### Water intensity value (m3)

0.34

### Numerator: water aspect

Total water withdrawals

### Denominator

Ton

### Comparison with previous reporting year

Lower

### Please explain

- 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 water intensity related to the manufacturing site of the flavor or fragrance compounds.



- 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 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. We also will continuously improve water efficiency on all other sites.

- With a change from 2020 to 2021 of about -2.4% in water intensity for this product we consider the intensity "lower" than last year. The production tonnage increased by +2.4%, while the water withdrawal stayed about the same. The main water consumption at the site is cleaning the blenders (Production lines) among the different batches/formulas (Change over). The consumption decreased because of the powder blender arrangement (Arranging the batch sequences) so decrease the cleaning and decrease water consumption. As a general rule we characterised a change <2% as "about the same", changes between 2% and 10% as "lower" / "higher" and a change >10% as "much higher" / "much lower".

- For future trends in this site in order to tackle this increase further cross-departmental projects between production, planning and process technology will have to be created in order to identify and implement better orders sequences minimizing the orders changeover and in turn the water needed for CIPs.

More globally we forecast for the flavour division sales and production volumes increase in the next 4 – 6 years. In addition to this, the division water intensity is also foreseen to increase due to recent acquisitions with a much higher water intensity level due to new portfolio of product. The integration of these new products in the portfolio will increase the water intensity and the strategy in place to reduce it is based on process improvements and smart production planning to avoid cleaning needs.

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#### Product type

Other, please specify (Fragrance)

#### Product name

Fragrance compound 2

#### Water intensity value (m3)

144.34

#### Numerator: water aspect

Total water withdrawals

#### Denominator

Ton

#### Comparison with previous reporting year

About the same

#### Please explain

- 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 water intensity related to the manufacturing site of the flavor or fragrance compounds. All products from a facility have similar water intensity.

- 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 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. We also will continuously improve water efficiency on all other sites.

- From 2020 to 2021 water intensity for this product stayed "about the same". The production tonnage increased by +4.2% , and the water withdrawal did evolve with a +6.6% increase too. This performance is due to the higher customer demand and the changes in type of production. As a general rule we characterised 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".

- We expect a reduction of water intensity in the future because of ongoing efforts on trying to eliminate the contamination of the condensate and to better balance the cooling water flows. In addition to this, a dedicated global workgroup composed by several departments' representatives will focus on key priority sites like this one. The aim is to provide ad-hoc support and best practice sharing in order to strategically improve the water intensity performances over the next 10 years.

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#### Product type

Other, please specify (Fragrance)

#### Product name

Fragrance compound 3

#### Water intensity value (m3)

144.34

#### Numerator: water aspect

Total water withdrawals

#### Denominator

Ton

#### Comparison with previous reporting year

About the same

#### Please explain

- 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 water intensity related to the manufacturing site of the flavor or fragrance compounds. All products from a facility have similar water intensity.

- 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 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. We also will continuously improve water efficiency on all other sites.

- From 2020 to 2021 water intensity for this product stayed "about the same". The production tonnage increased by +4.2% , and the water withdrawal did evolve with a +6.6% increase too. This performance is due to the higher customer demand and the changes in type of production. As a general rule we characterised 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".

- We expect a reduction of water intensity in the future because of ongoing efforts on trying to eliminate the contamination of the condensate and to better balance the cooling water flows. In addition to this, a dedicated global workgroup composed by several departments' representatives will focus on key priority sites like this one. The aim is to provide ad-hoc support and best practice sharing in order to strategically improve the water intensity performances over the next 10 years.

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#### Product type

Other, please specify (Flavor)

#### Product name

Flavor compound 2

**Water intensity value (m3)**

6.76

**Numerator: water aspect**

Total water consumption

**Denominator**

Ton

**Comparison with previous reporting year**

Much lower

**Please explain**

- 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 water intensity related to the manufacturing site of the flavor or fragrance compounds. All products from a facility have similar water intensity.
  - 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 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. We also will continuously improve water efficiency on all other sites.
  - With a change from 2020 to 2021 of about -13.8% in water intensity for this product we consider the performance to be "much lower" than the previous year. Despite an increase of +9.8% in the production tonnage, the water withdrawal did evolve with a -5.4% reduction which due to running mostly long campaign products in 2021 than in 2020. Long campaign products reduce in cleaning regime therefore less water is used. Also 2 additional projects have decreased the water usage at the site:
    - Reducing water contained in Spray dry's product
    - Reducing CIP contact time (cleaning process) in spray dry
- As a general rule we characterised 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".
- We expect a reduction of water intensity in the future because of ongoing efforts on trying to eliminate the contamination of the condensate and to better balance the cooling water flows. In addition to this, a dedicated global workgroup composed by several departments' representatives will focus on key priority sites like this one. The aim is to provide ad-hoc support and best practice sharing in order to strategically improve the water intensity performances over the next 10 years.
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**W1.4**

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

Yes, our suppliers

Yes, our customers or other value chain partners

**W1.4a**

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

### Row 1

#### % of suppliers by number

1-25

#### % of total procurement spend

51-75

#### Rationale for this coverage

In 2021, we participated for the sixth year in the CDP Supply Chain Programme, asking our key suppliers to provide data on water through the supply chain module of the CDP's water security questionnaire. The survey asks suppliers to identify risks and opportunities associated with water, report what their water use and give details on their water management strategy including targets and action they are taking to mitigate risks.

This group of 1-25% of our suppliers by number are requested to report on water issues because they are deemed to be the most impactful and strategic group for us to focus our water engagement efforts. As such, 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 explains the low % of suppliers but the relatively large % of total procurement spend.

Givaudan incentivizes its supplier 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, which Givaudan incentivizes our suppliers to attend so they can use this as an opportunity to start or to improve the quality of their own CDP Water responses. Improving the quality of their responses means they may gain an enhanced public reputation and may better understand how to improve their water performance. A supplier feedback webinar is also organised with the same hosts to congratulate the suppliers for their participation, which is another incentive for suppliers to participate.

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

Using CDP's water security questionnaire, we request our suppliers information on risks and opportunities associated with water, what their accounting is, details on their water management strategy such as targets, and actions to reduce their impacts.

It impacts indirectly their water management and increase transparency. In 2021, our supplier response rate was 67%, up by 16% from 2020. 91% of our suppliers have reported active targets and goals and 85% have reported risk assessment procedures.

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.

We measure the success of our engagement with suppliers through the improvement of different KPIs: (+5% is a success)

1. Supplier response rate: 67% compared to 53% in 2020.
2. Percentage of suppliers with a leadership (A or A-) or management (B or B-) is 61% compared to 45 % in 2020 which is considered a success

#### 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.

Since we have more than 15'000 suppliers, our % of suppliers by number is small but our % spend is quite important.

## W1.4b

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

#### Type of engagement

Incentivizing for improved water management and stewardship

#### Details of engagement

Water management and stewardship action is integrated into your supplier evaluation

#### % of suppliers by number

1-25

#### % of total procurement spend

51-75

#### Rationale for the coverage of your engagement

Coverage: main direct suppliers

Main direct suppliers are chosen using the following criteria: supplier's size, country risk, dependence risk, reliability of the supplier, business plan evolution, % sales for supplier, distribution network risk and material prioritisation. They are accounting for over 50% of our total volume and 18% of direct suppliers by number, which is a good measure of the impact they have on Givaudan. The rationale for this coverage of suppliers to engage with on water management/stewardship actions is because we believe they have the most substantial influence over Givaudan's overall water performance and because they are sustainable suppliers with whom we can develop long term projects and exchange good practices and expertise. Additionally, we are unable to engage on the same level with all 15,000 of our suppliers, so we believe this group to be the most appropriate to focus our efforts as to have the most impact.

This is done first by sharing our updated Responsible Sourcing Policy with all active suppliers, within which is included guidance on water use management expectations. Then via the Sedex platform and the SMETA Audits at factory level, and either SAI Platform FSA audits or UEBT audits at farm level (where applicable). Our Procurement team works closely with suppliers to guide them through their self-assessment procedure which allow Givaudan to collect key information on the supplier water management processes.

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

Impact of engagement: The Sedex self-assessment procedure gives Givaudan access to intensive information about the maturity of the supplier regarding water management. For example we collect answer about:

- % reduction targets for water
- How much water is used, on average?

These are good criteria to evaluate our suppliers and start a discussion on improvement opportunities. This allows us to identify whether water is managed in a proper way and agree on improvement actions plans where necessary. These are the beneficial outcomes of the engagement activity.  
See collaboration example in the comment box.

Measure of success: We measure success using the supplier compliance indicators included in the Sedex platform. The COVID-19 situation was challenging and meant our compliance rate of 85% at the end of 2021 remained static to the previous year, but now with this situation easing we should see progress ahead as we continue to ask suppliers to complete the self-assessment questionnaire (SAQ) on the SEDEX platform. These suppliers represent 8.5% (17 suppliers) of audited suppliers in scope, meaning that in total we worked with 94% of our direct suppliers.

#### Comment

As an example of collaboration with suppliers integrated in Sedex platform: in communities around our vanilla supply chain in Madagascar, in order to give more people access to safe drinking water, 64 wells have been built and restored as part of the Communities at Source programme. With information campaigns, the programme has also raising the villagers' awareness about health risks related to water, sanitation and hygiene.

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#### Type of engagement

Onboarding & compliance

#### Details of engagement

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

#### % of suppliers by number

76-100

#### % of total procurement spend

76-100

#### Rationale for the coverage of your engagement

Givaudan's Responsible Sourcing Policy includes our environmental requirements for our suppliers. Suppliers must apply environmental management principles, including water-related issues; the policy calls for conservation of environmental values at raw material source, and the use of best agricultural and processing techniques.

To implement the policy, we have a 3 steps approach:

1) coverage: all suppliers

We start our supplier engagement by introducing them to the Responsible Sourcing Policy by sending it to them with an email communication to explain Givaudan's position and approach. Givaudan launched an updated RS Policy in April 2021 and this approach, to cover all suppliers, continues.

2) coverage: main direct suppliers, at factory level (80% spend)

This is done via the Sedex platform, SMETA, or an equivalent protocol to ensure their sites are audited against a protocol that covers the policy requirements

3) coverage: Entire supply chain of raw materials of natural origin (NRM), beginning with prioritised raw materials.

We are mapping the supply chains of key NRM to check the practices in each supply chain against our Responsible Sourcing Policy. We aim to cover all the key suppliers in our prioritised natural raw materials supply chains by the end of 2025.

In 2021 we launched Sourcing4Good, our end-to-end responsible sourcing program designed to strengthen our approach to responsible sourcing, taking into consideration our changing business and the need to increase the scope of our program beyond NRM into the synthetics and Indirect Materials and Services categories.

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

Our Responsible Sourcing programme drives compliance and continuous improvements in the way that products are produced. It encourages suppliers to achieve high standards in health and safety, in social, environmental and business integrity.

Measure of success:

1) By the end of 2021, over 14,000 of our suppliers received the policy, including the updated policy which was launched in April 2021. We are continuously increasing on this number, including sharing with our Indirect Materials & Services (IM&S) suppliers, as we also include in this exercise the suppliers of our new acquisitions. We are no longer tracking the absolute numbers and % since the changes related to integration of new entities. Through the Sourcing4Good program, this also includes any new vendors, in a systematic way and progress of this will be monitored.

2) In total, by the end of 2019, 169 out of 200 of our top direct raw material suppliers were compliant on Sedex SMETA assessment. This represented 85% against our 100% by 2020 target. The COVID-19 situation was challenging and meant our compliance rate of 85% at the end of 2021 remained static to the previous year, but now with this situation easing we should see progress ahead as we continue to ask suppliers to complete the self-assessment questionnaire (SAQ) on the SEDEX platform. These suppliers represent 8.5% of audited suppliers in scope, meaning that in total we worked with 94% of our direct suppliers.

3) As part of the natural raw material supply chains within Sourcing4Good, we have prioritised 158 raw materials families out of our total scope of 608 raw materials families. In 2021 we focused on 51 of these 158 families, and engaged the top suppliers within each of these supply chains in our new Due Diligence Questionnaire (DDQ) tool, and, where necessary, a factory and farm audit, using the SMETA protocol at factory level, and FSA or UEBT at farm level. We have a target to reach all prioritised raw materials families in this exercise by the end of 2025.

#### Comment

The variety and complexity of our supply chains forced us to implement different approaches at different level which explain the number of indicators and measure of success shared.

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#### Type of engagement

Innovation & collaboration

#### Details of engagement

Educate suppliers about water stewardship and collaboration

#### % of suppliers by number

1-25

#### % of total procurement spend

51-75

#### Rationale for the coverage of 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 response rate in our CDP Supply Chain programme: In 2021, our supplier response rate was 67% compared to 53% in 2020. This is considered as a success.

#### Comment

no comment

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## W1.4c

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

Givaudan engages with 3 main partners over its whole value chain: suppliers, employees and customers with different methods and strategies to engage:

- Givaudan engages with its key suppliers using CDP's water security questionnaire to identify risks and opportunities associated with water and to understand their actions to reduce impact. Main prioritised direct suppliers are also audited to ensure they are compliant with Givaudan's Responsible Sourcing Policy.
- Volunteering Givaudan employees are engaged through their participation to Local Green Teams with the objective to work on water savings project through behavioural change and/or small investment/improvement initiatives. They develop environmental and social solution to improve the company performances.
- Givaudan engages with its customers by offering innovative product solutions and information on specific water-related issues. Givaudan is committed to raise awareness of its customers and promote products that consume less water, which would allow Givaudan to limit its impacts on water. Customers are important stakeholders to engage with because some of their water risks are shared with us.

The rationale for prioritisation of our value chain partners is based on the importance of each partner and the role they have for our activity. Our employees being our first and most important key partners, the provided Green team network is a great platform to develop innovative internal projects that impact the whole company.

We measure the success of our engagement through:

- progress over the number of suppliers that received our RS policy, and the engagement of our prioritised raw materials families suppliers in our S4G program
- Customer satisfaction rate and the amount of Green Team Award projects submitted. This year we increased the number of projects submitted by 30%. (10% is considered a success)
- The CDP response rate is a key indicator of engagement success.; from 53% in 2020 to 67% in 2021.

## W2. Business impacts

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### W2.1

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

No

### W2.2

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

Yes, fines, enforcement orders or other penalties but none that are considered as significant

### W2.2a

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(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**

500

**% of total facilities/operations associated**

2

**Number of fines compared to previous reporting year**

Higher

**Comment**

We consider fines as significant if they are  $\geq 0.1\%$  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

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W-CH3.1

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

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 our customers or raw materials provided by our suppliers are assessed to identify any possible hazard for the environment which includes water ecosystems. Our wastewater Managers at each facility analyse, assess and monitor our wastewater effluents from our chemical production, aiming to determine water pollutants. We work to ensure that the wastewater from our 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 below the limits of local legislations where we operate. When one or several of these indicators deviate from the standard operational value we can identify the source (location of production) of pollutant and its nature thanks to cross analysis between indicators, production planning, water flow infrastructures and water meters. This allows us to avoid discharging pollutant in the environment, stopping the source of pollution and/or applying more appropriate treatment.

All our products are classified following the GHS (Globally Harmonized System) principles of classification and labelling of chemicals and the corresponding national implementations where Givaudan operates or places its products on the market. E.g. Regulation (EC) No 1272/2008 for Europe or the Hazard Communication Standard 2012 from OSHA in the US. These define the hazard classes and categories for the chemical substances and mixtures based on their physical and chemical properties and the hazards to the human health or environment. They also describe and provide guidelines on how these hazards need to be communicated in a way that they can be easily understood by everyone to ensure the safe handling, storage and transportation and mitigate potential impact to the environment. This information is clearly visible on the label of the packaging or summarised in the SDS that is available to all users of our products.

The protocol to identify and classify potential water pollutants associated with our operation is as follows. We test samples from each production line with all reject points together. The tests include:

- TOC and TN analyses (Total Nitrogen)
- Toxicity analysis by respirometry (stratox) in the event of toxicity, confirmation of the result by an external laboratory (on 3 organisms bacteria, daphne, rotifers)
- Measurement of biodegradability according to Zahn-Wellens (std OECD 302 C)
- POX measurements

In the event of non-compliant results, the tests are carried out on each release point of the production line to identify the source or pollution.

Depending on the result of the second test: acceptance in WWTP because there is no risk for the environment or the discharge from this release point is put on a restrictive list (classification as a potential water pollution) with the need for separation if the purification conditions were temporarily not compliant or permanent external elimination process. This way we ensure the identification of the water pollutant source and their correct treatment. This process is repeated on a monthly basis or based on management of change process in production. In addition, the outlet water is analysed each month (external laboratory on three types of organisms: bacteria, daphnea and algae). The acceptable toxicity thresholds (in toxic units) have been established by this same external body and validated by the authorities.

Throughout our vendor quality management programme we audit our most strategic suppliers and we can ensure the policies for water pollutant management are very similar to our, especially in the chemical industry. In the same time, because of the very different challenges faced by other industries (i.e. agricultures, transports, retail) we also see a variety of maturity and efficiency regarding water pollutant policies in our entire value chain.

Alongside these company processes for identifying and classifying potential water pollutants, Givaudan's company-wide Water Policy takes into account the Company's 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. While our company processes for identifying and classifying potential water pollutants vary across our value chain as we have explained, the Givaudan Water Policy is applicable across the value chain, with its overarching principles applying to all our operations (including upstream, downstream, and direct operations).

**W-CH3.1a**

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

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
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Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
Chemical Oxygen Demand (COD)	Direct operations	<p>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 quantify 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.</p> <p>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 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.</p> <p>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.</p>	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	<p>We ensure that the waste water from our operations is disposed in accordance with local regulation on effluent quality standards to avoid any risk of pollution. In parallel we also request our sites to comply with the stringent internal wastewater standard.</p> <p>We operate our own wastewater treatment plants in several of our manufacturing facilities and apply the highest preventive measures to reduce the risk of negative impacts to water, such as those caused by spillage, leaching, and leakages. We have strict controls in place in these facilities which include regular inspections of equipment, machinery and other infrastructure such as pipes to uphold high standards of leakage control. On-site staff are also provided with extensive training regarding water management and safety procedures to ensure our business operates with utmost responsibility for water. Indeed, a high COD level in the discharged water could conduct to the consumption of oxygen from the ambient environment and eutrophication of the receiving environment (water body).</p> <p>We monitor our discharge water quality through Chemical Oxygen Demand (COD) analysis and reports.</p> <p>A great effort is also applied upstream on new substances or products develop at our manufacturing sites by going throughout a number of acute aquatic toxicity test which includes in some cases heavy metals and micro pollutants.</p> <p>The measure of success is based on full compliance with local water regulations as well as with our internal wastewater standard. Success of implementation of the management process is met, measured, and achieved, when daily testing of COD levels using water monitoring tools remains either stable, or below the maximum level required by the abovementioned external and internal standards.</p> <p>COD is measured on a daily basis per 0.45 micron filtered sample, combined catalytic oven measurement for TOC (total organic carbon) measurement and acid reaction for IC (inorganic carbon) measurement COD = TOC-IC (standard methods 5310 B).</p>
Biological Oxygen Demand (BOD)	Direct operations	<p>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.</p> <p>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.</p> <p>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.</p>	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	<p>We ensure that the waste water from our operations is disposed in accordance with local regulation on effluent quality standards to avoid any risk of pollution. In parallel we also request our sites to comply with the stringent internal wastewater standard.</p> <p>We operate our own wastewater treatment plants in several of our manufacturing facilities and apply the highest preventive measures to reduce the risk of negative impacts to water, such as those caused by spillage, leaching, and leakages. We have strict controls in place in these facilities which include regular inspections of equipment, machinery and other infrastructure such as pipes to uphold high standards of leakage control. On-site staff are also provided with extensive training regarding water management and safety procedures to ensure our business operates with utmost responsibility for water. Indeed, as for COD, high BOD level in water discharge could conduct to the consumption of oxygen from the ambient environment and eutrophication of the receiving environment (water body).</p> <p>We monitor our discharge water quality through Biological Oxygen Demand (BOD) analysis and reports to prevent any risk of pollution from the receiving water body.</p> <p>A great effort is also applied upstream on new substances or products develop at our manufacturing sites by going through a number of acute aquatic toxicity test which includes in some cases heavy metals and micro pollutants.</p> <p>The measure of success is based on full compliance with local water regulations as well as with our internal wastewater standard. Success of implementation of the management process is met, measured, and achieved, when weekly testing of BOD levels using water monitoring tools remains either stable, or below the maximum level required by the abovementioned external and internal standards.</p> <p>BOD is measured by oxytop respirometry over 5 days (standard method 5210 D) on a weekly basis.</p>
Phosphorus	Direct operations	<p>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</p> <p>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.</p>	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	<p>We ensure that the waste water from our operations is disposed in accordance with local regulation on effluent quality standards to avoid any risk of pollution. In parallel we also request our sites to comply with the stringent internal wastewater standard.</p> <p>We operate our own wastewater treatment plants in several of our manufacturing facilities and apply the highest preventive measures to reduce the risk of negative impacts to water, such as those caused by spillage, leaching, and leakages. We have strict controls in place in these facilities which include regular inspections of equipment, machinery and other infrastructure such as pipes to uphold high standards of leakage control. On-site staff are also provided with extensive training regarding water management and safety procedures to ensure our business operates with utmost responsibility for water. Indeed high phosphorus level in water discharge could be toxic for large vertebrates and fish, and lead to the eutrophication phenomenon of the receiving environment (water body).</p> <p>A great effort is also applied upstream on new substances or products develop at our manufacturing sites by going through a number of acute aquatic toxicity test which includes in some cases heavy metals and micro pollutants.</p> <p>The measure of success is based on full compliance with local water regulations as well as with our internal wastewater standard. Success of implementation of the management process is met, measured, and achieved, when 5 times per week testing of Phosphorus levels using water monitoring tools remains either stable, or below the maximum level required by the abovementioned external and internal standards.</p> <p>The level of Phosphorus is measured 5 times per week by colorimetry (in tank tests) offered by various external service providers.</p>
Nitrogen	Direct operations	<p>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</p> <p>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.</p>	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	<p>We ensure that the waste water from our operations is disposed in accordance with local regulation on effluent quality standards to avoid any risk of pollution. In parallel we also request our sites to comply with the stringent internal wastewater standard.</p> <p>We operate our own wastewater treatment plants in several of our manufacturing facilities and apply the highest preventive measures to reduce the risk of negative impacts to water, such as those caused by spillage, leaching, and leakages. We have strict controls in place in these facilities which include regular inspections of equipment, machinery and other infrastructure such as pipes to uphold high standards of leakage control. On-site staff are also provided with extensive training regarding water management and safety procedures to ensure our business operates with utmost responsibility for water. Indeed high nitrogen level in water discharge could be leading to algae blooms and subsequent eutrophication of the receiving environment (water body).</p> <p>A great effort is also applied upstream on new substances or products develop at our manufacturing sites by going through a number of acute aquatic toxicity test which includes in some cases heavy metals and micro pollutants.</p> <p>The measure of success is based on full compliance with local water regulations as well as with our internal wastewater standard. Success of implementation of the management process is met, measured, and achieved, when daily testing of ammonia and nitrate levels using water monitoring tools remains either stable, or below the maximum level required by the abovementioned external and internal standards.</p> <p>As for the phosphorus, the level of Nitrogen is measured by colorimetry (in tank tests) offered by various external service providers.</p>



Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
Total Suspended Solids	Direct operations	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.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	We ensure that the waste water from our operations is disposed in accordance with local regulation on effluent quality standards to avoid any risk of pollution. In parallel we also request our sites to comply with the stringent internal wastewater standard. We operate our own wastewater treatment plants in several of our manufacturing facilities and apply the highest preventive measures to reduce the risk of negative impacts to water, such as those caused by spillage, leaching, and leakages. We have strict controls in place in these facilities which include regular inspections of equipment, machinery and other infrastructure such as pipes to uphold high standards of leakage control. On-site staff are also provided with extensive training regarding water management and safety procedures to ensure our business operates with utmost responsibility for water. Indeed high Total Suspended Solids (TSS) level in water discharge could be leading to risk of fermentation and consumption of oxygen of the receiving environment (water body). A great effort is also applied upstream on new substances or products develop at our manufacturing sites by going through a number of acute aquatic toxicity test which includes in some cases heavy metals and micro pollutants. The measure of success is based on full compliance with local water regulations as well as with our internal wastewater standard. Success of implementation of the management process is met, measured, and achieved, when testing of TSS levels using water monitoring tools remains either stable, or below the maximum level required by the abovementioned external and internal standards. We measure TSS by filtration through a 0.45 micron filter: dry filter weighing, filtration of a volume of water, drying 105 ° C 1 hour, tempering in a bell and reweighing (standards methods 2540 D).

### 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  
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.

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.

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.

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**W3.3b**

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**(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.**

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 Enterprise Risk Management (ERM) risk assessment process under the supervision of the Executive Committee (EC). The risks are assessed twice a year for their long term impact (5 to 15 years) and more than once a year for their short-term (0-3 years) and medium-term (3-5 years) impact.

The assessment is conducted with representatives of the divisions and all functions of the Company. For the top Company risks, the consequences are stated in terms of impact on the EBITDA of the Group. A member of the EC is designated as the risk owner for each top Company risk. He or she has the responsibility for managing the risk on a Group-wide basis. Top risks include water risks. The Water Policy including targets and goals is a response to ensure water risks are managed and monitored.

In addition to ERM, 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. This process applies for both the operations and the supply chain as they are the most material stages of our value chain in terms of water.

**Operations**

All Givaudan manufacturing sites are included in the water risk assessment. This process is used to inform our internal decision making process. The annual mapping takes into account indicators covering all water risk aspects: physical, quality, regulation & reputation. The physical ones are from the WRI Aqueduct: Water Stress 2030, Baseline Water Stress; the WRI Aqueduct is employed because of transparency of data source and global coverage.

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 need 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. We have identified 9 sites which are the priority ones since located in areas facing high and/or extremely high water stress: this implies a close monitoring and follow-up on sites’ action plans in addition to the prioritisation of water topics in our operational risk management process and mitigation plan development.

**Supply chain**

All Supply chains are evaluated twice a year through the Enterprise Risk Management (ERM) procedure which includes risks of supply disruption, climate change and water scarcity. Givaudan also developed a corporate Water Scarcity Index based on a life cycle assessment principle the expertise of a third party company which consolidate water scarcity risk at country level and impact on Givaudan business for the whole supply chain. After identification of the risks, a mitigation plan is developed allowing to reduce the risks for the supply chain and for Givaudan.

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. Both tools were selected because of their application to a broad range of users. Givaudan also has a Business Continuity Plan (BCP) for sourcing activities covering a large range of water related risks.

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
- Origination 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).

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.

**W4. Risks and opportunities**

## W4.1

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### (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

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### (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. We do not use the term "substantive impact", but our rating of impact ranges from Low: little threatened / limited reputational impact, via Medium: threatened / some reputational impact, and High: severely threatened / severe reputational impact, to 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 substantive financial impact

CHF 250M - CHF 500M cumulative impact on EBITDA over 5 years are considered as "high: severely threatened / severe reputational impact comprise"

> CHF 500M cumulative impact on EBITDA over 5 years are considered as "very high: 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 short term (4 – 6 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 includes: propose to dig another groundwater well, built a rainwater collection system on the roof of our site (currently under assessment on the Master plan of the site).

## W4.1b

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**(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	9	1-25	We consider 62 manufacturing facilities in the scope of the questionnaire, 9 out of 62 represents 14.5% of facilities exposed to water risk. These 9 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
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##### 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 62 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
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##### 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 62 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

Brazil	Parana
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##### 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 62 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)
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**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 62 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
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**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 62 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)
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**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 62 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)
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**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 62 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
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**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 62 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
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**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 62 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.

**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**

Egypt	Nile
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**Type of risk & Primary risk driver**

Chronic physical	Water stress
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**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

The WRI aqueduct baseline indicates that water stress is high (40-80%) for the Northern River Nile region in Egypt where this Givaudan manufacturing site is located. Water access (and quality) is essential for operating this growing manufacturing site which contributes to approximately 10% of our overall production each year. Drought conditions are common in Egypt which interrupts water supply and disrupts this facility's ability to operate as normal. Future increases in temperature of between 1 and 4 degrees due to climate change could impact water supply to this facility by 20-50% which could have a severe impact on our operations and cause losses in revenue of 10-20%. This increase in water stress coupled with an unclear regulatory environment in Africa and the Middle East could lead to increased operating costs for Givaudan and lead to continued events of water stress for our facilities in the region.

As a result of this risk, Givaudan has increased its efforts to reduce water withdrawals across our operations with a focus on site exposed to water stress, which included this site in Egypt. In addition to the improvements implemented in the past 3 years, a dedicated focus is in place for water withdrawal reduction at this site in the Northern River Nile region in Egypt, as per our 2030 water target to improve water efficiency by 25% on sites facing water stress.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

Medium-high

**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)**

730600

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

14612000

**Explanation of financial impact**

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.

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.

Therefore, the financial impact figures were calculated the following ways:

(Max) 14,612,000 CHF = 7,306,000 CHF (operating revenues at this factory) \* 2 months of production disruption

(Min) 730,600 CHF = 14,612,000 (max financial impact) \* 5%"

**Primary response to risk**

Adopt water efficiency, water reuse, recycling and conservation practices



### Description of response

Reduction in water withdrawal: in addition to the improvements implemented in the past years, a dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water. A big focus has already started on the CIP (Clean In Place) and cleaning processes. In parallel with a global and ad-hoc support for this site, the plan is to organize 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.

The facility has already built two water spare tanks on site with a capacity for each of them of 34,5 m3. These tanks successfully mitigated short term the issue to cover the need for water during water supply disruption.

### Cost of response

46500

### 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 building spare tanks: 20,000 CHF (cost of internal resources and external resources to build and maintain the water tanks for the next 10 years --> (c') cost internal and external resources: 3,000 CHF; (c'') cost equipment: 14,000 CHF; (c''') maintenance over 10 years: 3,000 CHF --> financial figure = (c') + (c'') + (c''') = 3000 + 14,000 + 3000 = 20,000 CHF = (c)
- Financial figure = (a) + (b) + (c) = 20,000 + 6,500 + 20,000 = 46,500

Cost of additional projects will be identified, assessed and validated in due course.

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### Country/Area & River basin

Mexico	Balsas
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### Type of risk & Primary risk driver

Chronic physical	Water stress
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### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The current and future (2030) WRI aqueduct water stress indexes are between extremely high (> 80%) and high (40-80%) 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 Mexico water supply disruption has already happen and this could interrupt the site operations, reduce its capacity or jeopardize the future expected growth. Water stress increase coupled with an unclear regulatory evolution and price increase could put this facility at risk of disruption in production capacity.

### Timeframe

More than 6 years

### Magnitude of potential impact

Medium-high

### 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)

1301300

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

26026000

### Explanation of financial impact

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.

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.

### Primary response to risk

Secure alternative water supply

### Description of response

The short term response of the site to this risk was to invest in a new on-site deep well which could ensure meet the needs of the factory.

In parallel the site has organized a multi-departmental workshop on water savings initiatives and many interesting ideas have been captured especially on water efficiencies on cleaning activities and possibility to recuperate and reuse water. These ideas are in the process of being assessed in terms of costs and results and will then be prioritized accordingly.

An identified additional project is also to improve the overall site water metering.

### Cost of response

446000

### Explanation of cost of response

- (a) Cost of investment for deep well 396,000 CHF.
  - (b) Planned cost for improved water metering 50,000 CHF
- No operational costs considered in the financial figure.

Financial figure = (a) + (b) = 396,000 + 50,000 = 446,000

Cost of additional projects will be identified, assessed and validated in due course.

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### Country/Area & River basin

Brazil	Parana
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### Type of risk & Primary risk driver

Chronic physical	Water stress
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### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The current WRI aqueduct baseline water stress is high (40-80%) for the area where this manufacturing site is located. Water access (and quality is essential) to operate this growing Givaudan manufacturing site.  
Water stress increase coupled with an unclear regulatory evolution and price increase could put this facility at risk of disruption in production capacity: temporarily interrupting the site operations, reducing its capacity or jeopardizing the potential growth. The site has already experienced water challenges in the past.

### 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)

484300

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

9686000

### Explanation of financial impact

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.

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.

### Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

### Description of response

Reduction in water withdrawal: in addition to the improvements implemented in the past years, a dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water. A big focus has already started on the CIP (Clean In Place) and cleaning processes and the possibility to harvest rainwater is considered to due the existence of reservoirs.

In parallel with a global and ad-hoc support for this site, the plan is to organize 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

126500

### 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) high level estimation of rainwater harvesting (assumption of existing reservoirs, piping and water treatment needed): 80,000 CHF

Financial figure = (a) + (b) = 20,000 + 6,500 + 100,000= 126,500

Cost of additional projects will be identified, assessed and validated in due course.

## Country/Area & River basin

India	Other, please specify (Karnataka)
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## Type of risk & Primary risk driver

Chronic physical	Water stress
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### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The current and future (2030) WRI aqueduct water stress indexes are extremely high (>80%) for the area where this manufacturing site is located. Water access (and quality is essential) to operate this Givaudan manufacturing site.

Water stress increase coupled with an unclear regulatory evolution and price increase could put this facility at risk of disruption in production capacity: temporarily interrupting the site operations, reducing its capacity or jeopardizing the potential growth. The site has already identified water as a material topic for business continuity and extensive water savings projects have been implemented so far in parallel of the "Zero Liquid Discharge" status.

### Timeframe

More than 6 years

### Magnitude of potential impact

Medium-high

### 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)

1265167

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

25303333

### Explanation of financial impact

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.

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.

### Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

### Description of response

Reduction in water withdrawal: the site has worked hard on water withdrawal savings so far by eradicating underground water losses, piping upgrade, harvesting rainwater, reusing water with treatment for flushing and gardening, CIP (Clean In Place) automation, etc.

In addition to the many improvements already implemented in the past years, a dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water. Main water usages are CIP (Clean In Place), domestic purposed and cooling, where there is a potential opportunity to replace an evaporative cooling tower.

In parallel with a global and ad-hoc support for this site, the plan is to organize 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

26500

### 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

Financial figure = (a) + (b) = 20,000 + 6,500 = 26,500

Cost of additional projects will be identified, assessed and validated in due course.

## Country/Area & River basin

South Africa	Limpopo
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## Type of risk & Primary risk driver

Chronic physical	Water stress
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### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The current and future (2030) WRI aqueduct water stress indexes are between extremely high (> 80%) and high (40-80%) 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 South Africa water supply disruption is foreseen to potentially happen and this could interrupt the site operations, reduce its capacity or jeopardize the future expected growth. Water stress increase coupled with an unclear regulatory evolution, price increases and a deteriorating municipal infrastructure 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)

178200

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

3564000

### Explanation of financial impact

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.

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.

### Primary response to risk

Secure alternative water supply

### Description of response

The short term response of the site to this risk is to considering to invest in a new on-site deep well which could ensure meet the needs of the factory. This option is coupled with the implementation of tweaks to reduce consumption and with the project of upgrading the site RO (Reverse Osmosis).

In parallel the site is looking at additional low hanging fruits initiatives to optimize the water consumption mainly focusing on CIP (Clean in Place) automation and water recovery and starting to analyze the group's water best practices for meaningful on-site implementation. These ideas are in the process of being assessed in terms of costs and results and will then be prioritized accordingly. To bring to the attention of the top management additional potential water improvements, the plan is also to organize 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

406500

### 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 investment for deep well (high level estimation): 350,000 CHF
- (d) the cost of the RO upgrade: 30,000 CHF

Financial figure = (a) + (b) + (c) = 20,000 + 6,500 + 350,000 + 30,000 = 406,500

Cost of additional projects will be identified, assessed and validated in due course.

### Country/Area & River basin

Morocco	Other, please specify (Chaouia - Ouardigha)
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### Type of risk & Primary risk driver

Chronic physical	Water stress
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### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The current and future (2030) WRI aqueduct water stress indexes are 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.

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)**

10850

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

217000

**Explanation of financial impact**

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.

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.

**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. In addition to the improvements implemented in the past years (water monitoring and leakages campaigns), a dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water. A first action has already started looking at the improvement of the current water pipings for upgrades, especially for the cooling water ones. A 2nd step will need to focus on the potential cleaning processes improvements. In parallel with a global and ad-hoc support for this site, the plan is to organize 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**

56500

**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

Financial figure = (a) + (b) + (c) = 20,000 + 6,500 + 30,000 = 56,500

Cost of additional projects will be identified, assessed and validated in due course.

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**Country/Area & River basin**

Chile	Other, please specify (Maule)
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**Type of risk & Primary risk driver**

Chronic physical	Water stress
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**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

The current and future (2030) WRI aqueduct water stress indexes are between extremely high (> 80%) and high (40-80%) for the area where this manufacturing site is located. Water access (and quality is essential) to operate this growing Givaudan manufacturing site.

Water stress increase coupled with high dependency from own wells water extractions submitted to licenses (unclear regulatory evolutions), potential price increases for the remaining needs covered by municipal water could put this facility at risk of disruption in production capacity and/or jeopardize the future expected growth.

**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)**

11650

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

233000

**Explanation of financial impact**

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.

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.

**Primary response to risk**

Adopt water efficiency, water reuse, recycling and conservation practices

**Description of response**

A dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water.

First actions bringing indirect water related benefits have already started to be evaluated looking at the improvements of the current boiler with a new burner and a replaced softened water system. The site is also starting to analyze the group's water best practices for meaningful on-site implementation.

In parallel with a global and ad-hoc support for this site, the plan is to organize 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**

63500

**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 boiler related improvements: 37,000 CHF

Financial figure = (a) + (b) + (c) = 20,000 + 6,500 + 37,000 = 63,500

Cost of additional projects will be identified, assessed and validated in due course.

**Country/Area & River basin**

Mexico	Santiago
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**Type of risk & Primary risk driver**

Chronic physical	Water stress
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**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

The current and future (2030) WRI aqueduct water stress indexes are 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 Mexico water supply disruption has already happened and this could interrupt the site operations, reduce its capacity or jeopardize the important future expected growth. Water stress increase coupled with an important site development and growth, strong industrial increase in the neighboring areas and high dependency from own wells water extractions submitted to licenses (unclear regulatory evolutions) could put this facility at risk of disruption in production capacity.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

Medium-high

**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)**

1365667

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

**Explanation of financial impact**

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.

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.

**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. In addition to the improvements implemented in the past years (water leakages campaigns, water monitoring and water reuse for gardening purposes), a dedicated focus is in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. This reduction shall first come from water efficiencies and then by means of reusing and/or recycling water.

The site has also been working on optimizing its energy consumption and some of these energy driven projects also bring indirect water related benefits. An example is the condensate recovery initiative.

In parallel with a global and ad-hoc support for this site, the plan is to organize 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. This external view is expected to identify additional water related opportunities on top of the ones identified by the local Green Team composed by Engineering, EHS, Production, Controlling and Continuous Improvement colleagues.

**Cost of response**

201500

**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 condensate heat recovery project: 175,000 CHF

Financial figure = (a) + (b) + (c) = 20,000 + 6,500 + 175,000 = 201,500

Cost of additional projects will be identified, assessed and validated in due course.

**Country/Area & River basin**

India	Krishna
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**Type of risk & Primary risk driver**

Chronic physical	Water stress
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**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

The current and future (2030) WRI aqueduct water stress indexes are between extremely high (> 80%) and high (40-80%) 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 India water supply disruption is foreseen to potentially happen and this could interrupt the site operations, reduce its capacity or jeopardize the future expected growth.

Water stress increase coupled with unclear regulatory evolutions and potential price increases (water is supplied via the industrial park entity) could put this facility at risk of disruption in production capacity and/or jeopardize the future expected growth.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

Medium-high

**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)**

666650

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

13333000

**Explanation of financial impact**

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.

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.

#### Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

#### Description of response

The site is one of the best in class within the company with regard to water management. The site top management has been very committed to the water topic and scarcity, setting ambitious target of water reduction already in the past to anticipate increased water needs related to the increased production volumes. The site ran a cross functional project which, following dedicated measuring campaigns, led to the identification of various initiatives (tweaking of production planning sequencing to decrease needs of cleanings, closed loop water systems, recovery and reuse of water) which were successfully implemented and allowed to reduce by half the site water efficiency. Some of these initiatives also allowed at the same time to decrease the usage of site energies (and CO2 emissions). The site has received for this Water Saving project the Givaudan Annual Team Award for 2021. To note also that the site has implemented rain water harvesting to recharge the ground water table. In addition to the many improvements already implemented, a dedicated focus will still be in place for this site since located in an area facing water stress. As per 2030 water goals, 25% of water withdrawal efficiency reduction is requested to the site between 2020 and 2030. Main water improvement opportunities are still available in the liquid compounding area. In parallel with a global and ad-hoc support for this site, the plan is to organize 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 further reduce the risk of having water stress impacting the production capacity.

#### Cost of response

36500

#### 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 Water Saving project: 10,000 CHF

Financial figure = (a) + (b) = 20,000 + 6,500 + 10,000 = 36,500

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)
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#### Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Acute physical	Drought
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#### Primary potential impact

Disruption to sales due to value chain disruption

#### 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 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 was identified as "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. As a key component of our raw material this risk is directly affecting our own operations and creating a financial substantive and strategic impact on our business.

For example; during drought period, the supplier manufacturing facility might need to stop its operations because of lack of water availability. Indeed, the supplier cannot operate without sufficient water. The water is essential to produce steam, wash equipment and provide WASH services to the employee. Without access to sufficient water, the operations are disrupted and Givaudan's raw materials supply as well.

#### 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
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**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 of collector using gravity only to move water stream. Thanks to this equipment, the water needs for the site are covered during the whole drought period and allows the site to operate and supply Givaudan without interruption. In the past 2 years the solution has proven its capacity to mitigate the risk and allow having zero interruption due to water availability in this particular site, therefore no disruption to production in the drought periods of 2020 or 2021. 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**

Most of the natural ingredients sourced by Givaudan are not commodities, rather specialties produced in small volumes. In recent time, raw material supply chains are becoming more volatile, uncertain, complex and ambiguous (VUCA context). Disruption in the supply of the raw materials we require due to change in precipitation patterns, water access and extreme variability in weather pattern is likely to happen putting Givaudan at risk. We have seen this significant increase of supply risk on iconic product such as Vanilla, Spices and Florals portfolio. Therefore, increased supply chain resilience is the unique opportunity considered strategic for Givaudan to secure supply chain for iconic substances.

One action to realise the opportunity would be to train farmers/smallholders on sustainable agriculture practices in order for them to adapt in the fast changing weather patterns and their impact on crop yield, drought, water management. For Givaudan, it is a benefit to foster farmers/smallholders and secure supply chain for our iconic substances.

Here are different examples of the strategy in action :

Origination programmes are in place with a solid social and environmental dimensions: reforestation programmes, training and opportunity development for workers in securing product collection networking and improve water efficiency.

In parallel, Givaudan, as part of its "sourcing at origin" programme is working on strategic partnerships for supply chain collaboration and backward integration capacity development through exploration of new territories and increase of attractiveness of local agricultural operations.

**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)

25000000

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

<Not Applicable>

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

<Not Applicable>

### Explanation of financial impact

The attractiveness through improved supply chain practices is not necessarily mainstream today. Indeed besides the many big leading customers being very explicit and engaged commercially on more sustainable supply chains, the vast majority of customers are satisfied by more conventional supply chains. This is why the commercial opportunity is covering only a part of our turnover, thus the conservative value of 25 MioCHF mentioned. We know that this part will only increase as consumers demands for more sustainable products will drive a higher engagement of Givaudan customers, this is why we expect this value to increase steadily over the coming years. Beyond this opportunity it is essential to understand that the investments we make in our supply chains (for example with our "sourcing at origin programme") are directly contributing to making our own business model and company more sustainable, even if it does not translate directly today to more sales opportunities. The 25 MioCHF is calculated by adding up the main new briefs received with sustainability credentials made explicit by our key customers as "must have".

### 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.

Example:

Givaudan utilizes the method of upcycling materials to realize this opportunity. Our portfolio of upcycled materials increased in 2021 with for example, our Active Beauty business launching Omegablue®. Omegablue® is a cosmetic ingredient created from upcycled wild bilberries. Traditionally used in the food industry for their juice and sugar, bilberries are also an excellent source of anthocyanidins, which are extracted from the pulp and fruit skin for the supplement and pharmaceutical industries. The tiny seeds of the berries contain up to 20% of linoleic acid (omega-6) and  $\alpha$ -linolenic acid (omega-3) in an optimal ratio. Both are known for their capabilities to improve hydration and skin barrier functionality.

This ground-breaking 'upcycling' approach helps us to reduce waste and minimise our environmental impact, in line with our commitment to sustainability and consumers' demand for products that are both highly effective and produced in a responsible way. Customers also provided positive feedback both about the product and the brand's efforts to utilize upcycled ingredients."

### 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 2021 were CHF 6.7 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 sustainable positioning.

2) Financial implications of our competitive advantage could include :

- Increased product demand and sales revenue due to visibility of our progress on water stewardship 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), this means that the potential financial figure ranges from 150 Mio CHF (100 +50) and 300 Mio CHF (200 + 100)

## W5. Facility-level water accounting

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### W5.1

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(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
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**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)**

10.03

**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**

10.03

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

0.7

**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 2021, compared to 2020, the water withdrawal, as well as the discharged water, stayed about the same.

In the same period a decrease of 8% in water consumption happened, which is considered lower. The main water consumption at the site is cleaning the blenders

(Production lines) among the different batches/formulas (Change over). The consumption decreased because of the powder blender arrangement (Arranging the batch sequences) so decrease the cleaning and decrease water consumption.

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.

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**Facility reference number**

Facility 2

**Facility name (optional)**

Johannesburg

**Country/Area & River basin**

South Africa	Limpopo
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**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)**

22.42

**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**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

22.42

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

20.12

**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**

20.12

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

2.3

**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 2021, compared to 2020, the site increased its water withdrawal by 5% which is considered higher by Givaudan. In the same period, the amount of water discharged increased by 26% which is considered much higher. In parallel, the consumption of water decreased by 58%, which is a much lower evolution. This relevant decrease, in addition to the above mentioned reasons, is also due to less direct production related activities. The water is withdrawn from the municipal supplier and discharged directly to the 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 3

**Facility name (optional)**

Cuernavaca

**Country/Area & River basin**

Mexico	Balsas
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**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)**

75.4

**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**

75.4

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

59.5

**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**

59.5

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

15.9

**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 2021, compared to 2020, the site increased its water withdrawal by 11.8% which is considered much higher by Givaudan. In the same period, the amount of water discharged increased by 27.9% which is considered much higher. In parallel, the consumption of water decreased by 23.9%, which is a much lower evolution.

In this period the site increased the number of operative employees due to the production forecast and the number of contractors increased due to the Demolition and Building project, which increased the use of services like showers, bathrooms and the canteen.

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.

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**Facility reference number**

Facility 4

**Facility name (optional)**

Jaguare

**Country/Area & River basin**

Brazil	Parana
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**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)**

38.8

**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**

5.6

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

33.2

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

30.3

**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**

30.3

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

8.5

**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 2021, compared to 2020, the site decreased its water withdrawal by 7.7% which is considered lower by Givaudan and due to the transfer of production technology to another factory in Argentina. In the same period, the amount of water discharged decreased by 15.7% which is considered much lower and due to the upgrade of the wastewater treatment process. In parallel, the consumption of water increased by 38.4%, which is a much higher evolution.

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.

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**Facility reference number**

Facility 5

**Facility name (optional)**

Jigani

**Country/Area & River basin**

India	Other, please specify (Karnataka (India))
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**Latitude**

12.799953

**Longitude**

77.685257

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

&lt;Not Applicable&gt;

**Oil & gas sector business division**

&lt;Not Applicable&gt;

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

20.8

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

Higher

**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**

6.6

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

1

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

7.6

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

Much higher

**Discharges to fresh surface water**

7.6

**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)**

13.2

**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 2021, compared to 2020, the site increased its water withdrawal by 4.7% which is considered higher by Givaudan. In the same period, the amount of water discharged increased by 14.0% which is considered much higher. In parallel, the consumption of water stayed about the same.

The increase of water withdrawal and water discharge was due to the following activities at the site:

- The construction of a new warehouse: Increase in the number of contract workmen engaged for the activity during the period.
- Construction of new road inside the plant premise
- Testing of hydrant lines

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))
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**Latitude**

33.367222

**Longitude**

-7.564222

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

&lt;Not Applicable&gt;

**Oil & gas sector business division**

&lt;Not Applicable&gt;

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

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**

36.6

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

59.4

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

72.4

**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**

72.4

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

23.6

**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 2021, compared to 2020, the site decreased its water withdrawal by 6.1% which is considered lower by Givaudan. In the same period, the amount of water discharged decreased by 13.1% which is considered much lower. In parallel, the consumption of water increased by 24.6%, which is a much higher evolution.

The water consumption is much higher because of the production volume increase. The withdrawal and the discharge are lower mainly due to the wastewater treatment facility shut down coupled with a reduction of wash times.

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 7

**Facility name (optional)**

Linares



**Country/Area & River basin**

Chile	Other, please specify (Maule (Chile))
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**Latitude**

-35.851694

**Longitude**

-71.629417

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

&lt;Not Applicable&gt;

**Oil & gas sector business division**

&lt;Not Applicable&gt;

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

73.1

**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**

72.4

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0.7

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

65.5

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

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

65.5

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

7.7

**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 2021, compared to 2020, the site increased its water withdrawal by 8.1% which is considered higher by Givaudan. In the same period, the amount of water discharged increased by 27.2% which is considered much higher. In parallel, the consumption of water decreased by 52.6%, which is a much lower evolution.

The site had an increase in production in 2021 in terms of its liquid component, which is reflected in the change of water withdrawal and discharge since the higher production of liquid components directly impacts the washing of equipment involved in the operation. These washes are carried out by flooding the tanks.

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
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**Latitude**

20.65339

**Longitude**

-100.130406

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

&lt;Not Applicable&gt;

**Oil & gas sector business division**

&lt;Not Applicable&gt;

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

232.2

**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**

232.2

**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)**

88.2

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

Lower

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

42.2

**Discharges to groundwater**

46

**Discharges to third party destinations**

0

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

144

**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 2021, compared to 2020, the site decreased its water withdrawal by 2.8% which is considered lower by Givaudan. In the same period, the amount of water discharged decreased by 4.8% which is considered lower. In parallel, the consumption of water stayed about the same.

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
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**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)**

36.2

**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**

36.2

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

1.8

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

About the same

**Discharges to fresh surface water**

1.8

**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)**

34.4

**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 2021, compared to 2020, the site decreased its water withdrawal by 25.9%, which is a much lower evolution. In the same period, the amount of water discharged stayed about 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 neighbouring waterways: we estimate however the amount of water losses as 5% of the water withdrawal figure. In parallel, the consumption of water decreased by 25.9%.

The reduction in water consumption is a result of several undertaken activities:

- Identify product sequence to dry clean instead of wet clean
- Usage of ETP treated water followed by water recovery system for boiler
- MGF & ACF backwash frequency changed from time based to condition
- Reduction of CIP number by consolidating existing customer orders

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.

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**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 2021 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 2021 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 2021 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 2021 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 2021 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 2021 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 2021 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 2021 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

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### W6.1

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

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

### W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	<p>Description of business dependency on water</p> <p>Description of business impact on water</p> <p>Description of water-related performance standards for direct operations</p> <p>Description of water-related standards for procurement</p> <p>Reference to international standards and widely-recognized water initiatives</p> <p>Company water targets and goals</p> <p>Commitment to align with public policy initiatives, such as the SDGs</p> <p>Commitments beyond regulatory compliance</p> <p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace</p> <p>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>Givaudan's Water Policy is a company-wide policy, meaning it is applicable to all geographies, operations and supply chain activities.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>- securing water supply and optimising water use; and</li> <li>- continuously improving how we manage effluent discharge</li> </ul> <p>In our supply chain and communities:</p> <ul style="list-style-type: none"> <li>- reducing water risk in the supply chain</li> <li>- improving water quality management aspects</li> <li>- fostering sustainable water use at the watershed level; and</li> <li>- improving access to Water, Sanitation and Hygiene (WASH)</li> </ul> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>- Our commitment to water stewardship</li> <li>- Shared water challenges; water is a precious natural resource that we are committed to protecting.</li> <li>- Our impact on water; at Givaudan, water is essential to our production activities and to our entire value chain</li> <li>- 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.</li> <li>- Our achievements so far</li> <li>- Our 2030 ambitions</li> <li>- 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</li> </ul> <p>GIV_GivaudanWaterPolicy.pdf</p>

**W6.2**

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

Yes

**W6.2a**

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

Position of individual	Please explain
Board-level committee	<p>The entire Board of Directors (= board-level committee) has responsibility for water-related issues.</p> <p>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.</p> <p>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.</p> <p>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 2020, 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."</p>

**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 Overseeing acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding business plans Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy	<p>The board receives two updates annually on:</p> <ul style="list-style-type: none"> <li>- the Sustainability strategy, which includes water stewardship (agenda items: Sustainability Programme, Performance and Report)</li> </ul> <p>The board receives annual reports on:</p> <ul style="list-style-type: none"> <li>- the Enterprise Risk Management (ERM), discussing water from a risk angle (agenda item: Risks and Opportunities)</li> <li>- EHS function (including water action performance) (agenda item: Report on EHS) - Include aspects of risks and performances</li> </ul> <p>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.</p> <p>The Audit Committee receives biannual reports on Enterprise Risk Management and quarterly reports on Ethics &amp; Compliance. This report allow to review and guide risk management policies including water risk management.</p> <p>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.</p>

**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 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 Operating Officer (COO)

**Responsibility**

Assessing future trends in water demand  
Assessing water-related risks and opportunities  
Managing water-related risks and opportunities

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

Quarterly

**Please explain**

The COOs ( COO Fragrance & Beauty Division and COO Taste & Wellbeing Division), who are C-Suite Officers with the responsibility for sales, 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 COOs 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 COOs 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.

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

Chief Sustainability Officer (CSO)

**Responsibility**

Assessing future trends in water demand  
Assessing water-related risks and opportunities  
Managing water-related risks and opportunities

**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.

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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

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W6.4a



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

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Corporate executive team	Improvements in efficiency - direct operations Improvements in waste water 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.
Non-monetary reward	Other, please specify (All employees)	Reduction of water withdrawals Improvements in efficiency - 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.

**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 veto-ing) 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\_2021\_ReportingSuite\_6.pdf

**W7. Business strategy**

**W7.1**

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	<p>Givaudan based its long term business objectives on revenue increase and risk mitigation among others criteria.</p> <p>Water issues integrated:</p> <ul style="list-style-type: none"> <li>- disruption in the supply of the raw materials due to water scarcity and water stress increase in some regions:</li> </ul> <p>The risk of a disruption in the supply or volatility of raw material prices which increases the spend and thereby decreases our revenues has been linked with water scarcity level and water stress increase in several regions.</p> <p>Examples of how are they integrated into the plan:</p> <p>The response to the disruption in the supply of the raw materials in some regions was to develop a global strategic programme through the Origination team within our Procurement function which was included in the long terms business objectives of Givaudan. These initiatives targets 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.</p> <p>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</p> <p>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. This time frame is relevant to Givaudan business.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>Integrated water issues:</p> <ul style="list-style-type: none"> <li>- 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 &amp; Simplicity - in everything we do" enabler of our business strategy, specifically on ensuring operational reliability and efficiency</li> <li>- disruption in the supply of the raw materials due to water scarcity level and water stress increase in some regions:</li> </ul> <p>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.</p> <p>Ex: To ensure the delivery of high quality products and services that are cost-effective, safe, sustainable and in a timely manner and due to the increasing number of unforeseeable events that impact us and our partners, we have put in place a water stewardship program. This program outlines our overall strategy for monitoring and reducing water consumption and guides our growth strategy. It helps us put priority on places where water stress is expected, carrying out risk assessments to develop water mitigation action plans including efficiency improvements and water reuse opportunities.</p> <p>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.</p>
Financial planning	Yes, water-related issues are integrated	11-15	<p>Integrated water issues:</p> <ul style="list-style-type: none"> <li>-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 experienced episodes of water supply disruption at our sites in Jaguaré, Brazil and Jigani, India. Water scarcity (low groundwater levels) is subjected to an increase in frequency in the future.</li> <li>- Disruption in the supply of the raw materials due to water scarcity level and water stress increase in some regions</li> </ul> <p>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.</p> <ul style="list-style-type: none"> <li>- Water targets:</li> </ul> <p>Plans to reach our environmental targets are developed via cross functional teams with key decision makers and are embedded in the annual budget review and capital.</p> <p>Examples of how are they integrated into the plan:</p> <ul style="list-style-type: none"> <li>-The risk of extreme weather events in locations where we operate leading to water supply shortage and potential operation continuity issues is addressed in our business continuity plans. This impacts operating costs through cost of the business continuity plan to anticipate transfers due to operations continuity issues.</li> </ul> <p>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. This time frame is relevant to Givaudan as we are evolving in a sector with a relatively rapidly changing context.</p>

**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)**

45

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

0

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

6

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

5

**Please explain**

OPEX: +6% change on like for like vs 2020. The 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 2022. In addition, OPEX will increase also due to the integration of recent acquisitions in the reporting scope.

CAPEX: it almost doubled because of new projects, including a relevant one on a new deep well in one of our Mexican sites. It is complicated to segregate water projects from others because most of the time water is a part of the project (i.e. when installing a new boiler that saves water, when recovering condensate, etc. the main drivers are not water related but these projects 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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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</p>	<p>Main water related outcomes were : supplier engagement in water stewardship, understanding of irrigation needs (quantity &amp; quality), appropriate watering infrastructures for specific crops and agronomy support to increase plants resistance to climate change and its impact on water</p>	<p>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.</p> <p>Changes made: we now better leverage our growing internal team expertise like agronomy experts to define key areas to look into, bring external support if required and collaborate with suppliers where required for example where drip-irrigation make sense, where it does not as drip irrigation do not help the plant resilience to cope with rapid lowering of the water table due to droughts and water availability shortages</p>

**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 value projects that save water or initiatives that lower the risks with the appropriate mechanism taken into account non business aspects as well. 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 have recently implemented the ICP (Internal Carbon Price) mechanism and water valuation will benefit from this assessment.

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	<p>Low water impact product is about:</p> <ul style="list-style-type: none"> <li>- Eco-design: reducing the pressure on water resources through efficient product solutions that reduce water use over their life cycle,</li> <li>- water-efficiency in the manufacturing of our products: reducing our water consumption,</li> <li>- Water-secure supply chains with our initiatives on responsible sourcing and sustainable innovation (e.g. reuse and recovery of process side stream and waste).</li> <li>- Developing best agricultural practices for specific ingredients used in our products.</li> </ul>	<Not Applicable>	<p>We have strong R&amp;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.</p> <p>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.</p>

**W8. Targets**

**W8.1**

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	<p>Company-wide targets and goals</p> <p>Site/facility specific targets and/or goals</p> <p>Basin specific targets and/or goals</p>	<p>Targets are monitored at the corporate level</p> <p>Goals are monitored at the corporate level</p>	<p>Targets and goals are set based on the focus areas defined in the sustainability and the company strategy. These focus areas reflect both the materiality of the topic for the company and our aspiration for a sustainable development.</p> <p>The setup of the water target is the conjecture of reducing water related risks and to align our commitments to the sustainable development goals as best practices. Reducing water intensity globally but at facility/Basin level is key to address water risks in our operations in addition to risk mitigation plans (business continuity) at facility level that must be deployed.</p> <p>In parallel of setting targets we conduct regular assessment to ensure that targets and goals reflect geographic, regulatory, and other contextual factors. It might happen that water related risks evolve or that important changes happen in our operation requesting an adjustment of the targets to best align with contextual factors.</p> <p>Each focus area of our strategy is monitored using at least one target which in this case is on water intensity. Several goals are defined with a more qualitative aspect reflecting the aspirations and the vision of the company. The goals have also the objective to link water related aspects with other key topics of the company and key stakeholders. In this case WASH and risk mitigation are framed into goals as they concern an ambition more than a specific target to meet and they impact directly some key stakeholders (employees and communities where we operate).</p> <p>All data necessary to track the progress over these targets and goals are reported on a quarterly basis and consolidated at corporate level to ensure proper monitoring and correction if deviation is observed.</p> <p>Water goals and aspirations evolve inline with the strategic business plans when water use scheme change drastically. As an example, the development of biotechnologies in our industry can lead to increase demand for water withdrawal but reduce the impact in terms of potential pollutant content in waste water. These changes are taken into account with the company materiality assessment (conduct every tree years) and the local water risk assessment conduct as part of the business continuity plan.</p>

**W8.1a**

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

**Target reference number**

Target 1

**Category of target**

Water withdrawals

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

This target is a global corporate target related to water efficiency and reduce withdrawal.

The target is: -25% water per tonne of product by 2030 (use of municipal and groundwater, baseline 2020) on sites facing water stress

As a manufacturing company, efficient processes are part of our DNA which apply to water as well. We have a small amount of water consumption so it was more material to focus our attention on reducing the withdrawal in order to mitigate the risk related to water stress at basin level.

**Quantitative metric**

% reduction per unit of production

**Baseline year**

2020

**Start year**

2021

**Target year**

2030

**% of target achieved**

16

**Please explain**

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.

In 2021, Givaudan's overall water intensity (municipal and groundwater/tonne of product) remained flat against 2020. Focusing on the key sites located in water-stressed areas, there was an important improvement with a decrease of 4% since 2020 for the same indicator. The 4% decrease represents 16% of the target.

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**Target reference number**

Target 2

**Category of target**

Water pollution reduction

**Level**

Company-wide

**Primary motivation**

Reduced environmental impact

**Description of target**

This target is a company-wide target related to water pollution reduction. The target is to achieve 100% of our wastewater discharge meeting or exceeding regulatory and industry standards by 2030, especially those related to reducing water pollution. This is measured by the proportion (%) of wastewater that is safely treated, and year-over-year reductions in water pollution.

**Quantitative metric**

% proportion of wastewater that is safely treated

**Baseline year**

2020

**Start year**

2021

**Target year**

2030

**% of target achieved**

90

**Please explain**

The target is that our wastewater meets or exceeds regulatory and industry standards and 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 2021, we have developed a stringent internal wastewater standard to go beyond regulatory requirements. We are still assessing the baseline and estimate that 90% of our wastewater discharge is safely treated and is compliant to our stringent wastewater standard.

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**W8.1b**

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

**Goal**

Providing access to safely managed Water, Sanitation and Hygiene (WASH) in workplace

**Level**

Site/facility

**Motivation**

Water stewardship

**Description of goal**

Access to water and sanitation is a basic human right, and as a responsible company, we must provide a WASH access to all our employees and collaborators. Providing WASH at the workplace is important for Givaudan to ensure that all of our employees and collaborators have good working conditions.

Givaudan is implementing this goal via our Responsible Care EHS Policy. This is part of the EHS policy to ensure all our manufacturing facility provide WASH services, including all those facilities acquired in recent years.

**Baseline year**

2000

**Start year**

2001

**End year**

2030

**Progress**

- The indicator used to assess the progress is 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.
- Our goal is to keep 100% of our manufacturing facilities with WASH services.

Givaudan considers these activities to be successful if 100% of our manufacturing facilities provide WASH services to our employees. This is measured through the EHS internal audits, which include questions about the availability of WASH facilities.

**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 2021 Integrated Annual Report and 2021 GRI 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 2021 Integrated Annual Report and 2021 GRI 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 2021 Integrated Annual Report and 2021 GRI Sustainability report, including engagement initiative with stakeholders and their progress, has been verified through third party/external audit.

**W10. Sign off**

**W-FI**

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

no additional information

**W10.1**