

W0. Introduction

W0.1

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

Corbion is a leading food ingredients and biobased chemicals company. We market our products through a worldwide network of sales offices and distributors, and have a global supply chain with manufacturing facilities in the US, Thailand, Brazil, the Netherlands, and Spain. Our innovation centers are located across the globe and our headquarters is based in the Netherlands

In 2020, Corbion generated annual sales of € 986.5 million and had a workforce of 2,267 FTE. Corbion is listed on Euronext Amsterdam.

At Corbion we distinguish between three lines of business, each with a different set of characteristics: Sustainable Food Solutions, Lactic Acid & Specialties and Incubator. These business units are supported company-wide by globally managed R&D, operations, and business support functions.

W-CH0.1a

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

Specialty organic chemicals

W-FB0.1a

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

Processing/Manufacturing

W0.2

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

	Start date	End date
Reporting year	January 1 2020	December 31 2020

W0.3

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

- Brazil
- Netherlands
- Spain
- Thailand
- United States of America

W0.4

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

EUR

W0.5

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

Companies, entities or groups over which financial control is exercised

W0.6

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

No

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	For Corbion sufficient amounts of available good quality freshwater is vital for our direct operations because it is an essential ingredient in many of our food and chemical products. Freshwater is also vital for many heating, cooling and cleaning processes. Without access to good quality freshwater we would not be able to continue making our products and would have to use alternative methods to have access to water of sufficient quality. Our future use of good quality freshwater in our direct operations is expected to grow in line with our organic production growth. However, we do expect to be able to reduce our need of good quality freshwater by switching to recycled, brackish and/or produced water where possible, reducing our dependency on good quality freshwater. As a biobased company Corbion relies on many agricultural raw materials to produce our products. The need for sufficient amounts of good quality freshwater by our agricultural suppliers makes indirect water use also of vital importance to Corbion. We expect our indirect use of good quality freshwater to grow in line with our organic production growth.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	Currently Corbion only uses small amounts of recycled, brackish and/or produced water in its direct operations to help reduce freshwater intake. Even though this water is substitutable by good quality freshwater, production processes depend on a continuous supply of good quality water, making this type of water also important for Corbion. We expect the use of this type of water to increase over time as we are looking to further reduce our direct freshwater intake and increase our water circularity. Sufficient amounts of recycled and/or produced water are important for our indirect water use. Our suppliers use this type of water for the irrigation of their crops. We expect that this type of water might become more important over time as rainfall patterns could change due to climate change and more irrigation might be needed.

W-FB1.1a

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

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Sugar	41-60	Sourced	The largest percentage of our revenue is related to sugar. Sugar is the main agricultural raw material for lactic acid production in Thailand, Brazil, the Netherlands and Spain. To calculate this figure, we looked at the % of revenues from all products derived from sugar from sugar cane or sugar beet. 49% of our revenue comes from products derived from sugar (from cane and/or beet). A product can contain more than one key agricultural commodity, meaning that the cumulative percentages of revenue dependent on any of the four commodities can be higher than 100%.
Palm oil	10-20	Sourced	We have categorized our products into palm and non-palm derived. Palm oil and palm derivatives are used in the production of our emulsifiers and functional blends. To calculate this figure, we looked at the % of revenues from all products that are derived from, contain, or could contain palm oil or palm oil derivatives. Based on this methodology 14% of our revenue comes from products containing palm oil. A product can be derived from more than one key agricultural commodity, meaning that the cumulative percentages of revenue dependent on any of the four commodities can be higher than 100%.
Soy	21-40	Sourced	Soy oil is the main raw agricultural material for the production of emulsifiers in the US. It is also used in the production of our functional blends. To calculate this figure, we looked at the % of revenues from all products that are derived from, contain, or could contain soy. 22% of our revenue comes from products containing soy. A product can contain more than one key agricultural commodity, meaning that the cumulative percentages of revenue dependent on any of the four commodities can be higher than 100%.
Maize	21-40	Sourced	Dextrose obtained from corn (maize) is a raw material for the production of lactic acid in USA. Corn and products containing corn are also used in the production of our emulsifiers and functional blends. To calculate this figure, we looked at the % of revenues from all products that are derived from, contain, or could contain corn or corn derivatives. 33% of our revenue comes from products containing corn. A product can contain more than one key agricultural commodity, meaning that the cumulative percentages of revenue dependent on any of the four commodities can be higher than 100%.

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%	Corbion actively manages all water withdrawals from all manufacturing sites. Information is collected based on flow-meters (continuously) or invoices (per invoice). The data is reported quarterly to the sustainability department. Any changes with regards to previous reporting periods have to be explained on a case-by-case basis.
Water withdrawals – volumes by source	100%	Corbion actively documents the source of all withdrawn water. We source water from groundwater (renewable), fresh surface water, and third-party sources (municipal water and purchased steam). The data is reported quarterly to the sustainability department. Any changes with regards to previous reporting periods have to be explained on a case-by-case basis.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Water quality is monitored and managed locally at each manufacturing site and the data is stored at the site level. The testing for each site is subject to local conditions and regulations and the data is stored on site. Some sites rely on data provided from municipal testing.
Water discharges – total volumes	100%	Corbion actively manages all water discharges from all manufacturing sites. Information is collected based on flow-meters (continuously) or invoices (per invoice). The data is reported quarterly to the sustainability department. Any changes with regards to previous reporting periods have to be explained on a case-by-case basis.
Water discharges – volumes by destination	100%	Corbion actively manages all water discharges from all manufacturing sites. Water is either treated on site and consequently discharged back into the original source (groundwater - renewable, or fresh surface water) or discharged to a third-party destination (municipal treatment facility). The data is reported quarterly to the sustainability department. Any changes with regards to previous reporting periods have to be explained on a case-by-case basis.
Water discharges – volumes by treatment method	100%	Corbion actively manages all water discharges from all manufacturing sites. Water is either treated on site and consequently discharged back into the original source (groundwater - renewable, or fresh surface water) or discharged to a third-party destination (municipal treatment facility). The data is reported quarterly to the sustainability department. Any changes with regards to previous reporting periods have to be explained on a case-by-case basis.
Water discharge quality – by standard effluent parameters	100%	Water quality data is measured and monitored at all of our manufacturing sites. The water effluent measurements tracked and recorded may differ at site level due to local regulations and discharge destination e.g. pH, COD, BOD, temperature, or TSS. The frequency of testing is also determined at site level with many sites measuring monthly.
Water discharge quality – temperature	100%	Water temperature data is measured and monitored at each of the sites. The frequency of testing is determined at site level depending on local regulations and permits with many sites measuring monthly.
Water consumption – total volume	100%	Corbion actively manages all water withdrawn and all water discharged. Water consumption is then calculated subtracting the water discharged from the water withdrawn (C = W - D).
Water recycled/reused	Not relevant	This aspect is currently not relevant to Corbion because we do not operate in areas where water is a scarce commodity and required water is easily available in the desired quantities and quality. We are, however, in the process of re-evaluating the significance of recycled/reused water for Corbion as part of our participation in the Science Based Targets Network Corporate Engagement Program.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Corbion provides clean safe water at every facility to ensure the health and safety of all employees. This is continuously monitored at every facility.

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	4793.47	Higher	Corbion uses water as a part of its operations in temperature control (steam and cooling water), product dilution, cleaning, and other WASH services. Cooling water can be withdrawn in large quantities and is returned in similar volumes to its original source nearby with negligible losses or variation in quality. In 2020 withdrawals increased by 11%. This is mainly due to production increases at our sites in Montmeló, Spain and Rayong, Thailand. Future water use is also expected to increase due to production expansions. In the short term our facility in Blair, Nebraska, USA will see increased production and corresponding rise in water withdrawals and in the longer term our new factory in Rayong, Thailand (operational in 2023) will significantly increase our water withdrawals. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.
Total discharges	3772.16	About the same	The total discharge of water remained about the same since the previous reporting year, only going up by about 4%. This is due to the fact that production volume has increased and more water is consumed by making our materials. Future water discharge is expected to rise in line with our production capacity. This means that in the short term a minor increase is expected due to the expansion of our site in Blair, Nebraska, USA and a significant increase is expected when our new facility in Rayong, Thailand becomes operational in 2023. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.
Total consumption	1021.31	Much higher	The total water use in Corbion operations is obtained by adding together the water use, including water loss, that is reported from each manufacturing site. Corbion calculates this using the formula Consumption = Withdrawals – Discharges. Corbion's total water consumption was much higher compared to the previous year because our production volume was higher (especially for Lactic Acid, which is relatively water intensive). We consumed approximately 47% more water in 2020 than we did in 2019. Our direct water consumption is tied into our production volumes. Because of a rising demand for our products and expanding capacity future water consumption is projected to increase in line with our output. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher

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	11-25	About the same	WRI Aqueduct	Corbion uses the WRI Aqueduct tool to assess our sites for their current and future water stress. By putting in the coordinates of each of our sites into the WRI Aqueduct and assessing each site for water stress and water depletion we determined that two of our sites are located in water stressed areas. These are Montmeló, Spain and Totowa, New Jersey, USA. These two sites together represent just under 16% of our water withdrawals. Corbion also uses the WRI Aqueduct tool to monitor potential developments of water risk at each of our sites. Compared to the previous reporting year the withdrawals from water stressed areas has remained the same. Water consumption from water stressed areas has dropped by 20%. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.

W-FB1.2e

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

Agricultural commodities	The proportion of this commodity produced in areas with water stress is known	The proportion of this commodity sourced from areas with water stress is known	Please explain
Sugar	Not applicable	Yes	Corbion sources sugar derived from sugarcane and sugar beets from a multitude of countries. Using the WRI aqueduct tool we have identified sourcing locations that are considered to be water stressed in Thailand and Brazil.
Palm oil	Not applicable	Yes	For palm oil, we focus on RSPO certification, which also includes management of water related topics. From our suppliers we know the countries from which our palm oil (derivative) is sourced. However we do not know the sourcing regions beyond country level for the majority of our sourced volume. Therefore we have performed the analysis based on country level water stress data using the WRI aqueduct country rankings. We know this is not exhaustive and not always representative for the true water stress, but we do not have the leverage within the palm oil supply chain to provide more detailed information.
Soy	Not applicable	Yes	Corbion sources it's soy from the USA. More specifically from Iowa, Missouri, Kansas and Nebraska. According to the WRI aqueduct tool the specific areas within these states that we source from are currently not considered water stressed.
Maize	Not applicable	Yes	Corbion sources dextrose derived from maize from Iowa, USA. According to the WRI aqueduct tool this area is currently not considered water stressed.

W-FB1.2g

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

Agricultural commodities	% of total agricultural commodity sourced from areas with water stress	Please explain
Sugar	26-50	Corbion sources its sugar from multiple countries including Brazil, France, the Netherlands, Thailand, and the USA. There are regions in Brazil and Thailand where we source sugar that are considered to be water stressed by WRI Aqueduct. In total 47% of all sugar we source comes from water stressed areas. 1% of our total sourced volume comes from an area with extremely high water stress, however, 100% of this sugar is Bonsucro certified, implying good (water) management practices in line with local conditions and availability. It is expected that we will continue sourcing sugar in similar quantities from these areas in the foreseeable future. Sugar sourced from water stressed areas in Thailand may rise when our new factory in Rayong, Thailand will become operational in 2023, however, this will likely not change the percentage sourced from water stressed areas. Being aware of the potential risks of sourcing sugar from water stressed areas we explicitly include this in our climate risk assessments in line with the TCFD (see W7.3). We also include this information in our Security of Supply assessment to monitor any potential risks and/or issues on the short term.
Soy	0%	Corbion sources it's soy from the USA. More specifically from Iowa, Missouri, Kansas and Nebraska. These areas are not considered to be water stressed regions by WRI Aqueduct. We do not expect to source from other locations in the near future. Although currently these areas are not considered water stressed we continue monitoring any potential changes in our climate risk assessments in line with the TCFD (see W7.3).
Maize	0%	Corbion sources it's maize from Iowa, USA. This is not considered to be a water stressed region by WRI Aqueduct. We do not expect to source from other locations in the near future. Although currently Iowa is not considered a water stressed area we continue monitoring any potential changes in our climate risk assessments in line with the TCFD (see W7.3).
Palm oil	26-50	The majority of our palm oil is sourced from Indonesia and Malaysia, 50% and 35% respectively. Indonesia sees medium-high water stress on a country level and Malaysia is considered to have low water stress. Because most of Indonesia is considered at least medium-high water stress with most deviations upwards we consider our palm oil sourced from Indonesia as coming from water stressed areas.

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	2535.77	Higher	Fresh surface water is important to Corbion because it is used for cooling and production processes at 4 of our 13 manufacturing facilities. Fresh surface water withdrawals have risen by 14% compared to last year. The majority of our freshwater withdrawals are at our Rayong, Thailand site where withdrawals increased due to an increase in production (capacity), accounting for the majority of the increase. The additional increase was at our site in Orindiúva, Brazil. These increases were partly offset by reduced surface water withdrawals in Campos, Brazil and Gorinchem, the Netherlands. Withdrawals of surface water are expected to remain roughly the same until the new facility in Rayong, Thailand becomes operational in 2023. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	Corbion does not use brackish surface water or seawater in any of its operations. There are no future plans to rely on these sources.
Groundwater – renewable	Relevant	821.65	Higher	Groundwater is important to Corbion because it is used for cooling and production processes at 3 of our 13 manufacturing facilities. In Montméló, Spain and Peoria, Illinois it is our main source of water while in Orindiúva, Brazil it is used to supplement our surface water withdrawals. Groundwater withdrawals have risen by 14% compared to last year. This is mostly attributable to increased withdrawals at our site in Montméló, Spain. These increased withdrawals were due to increased production volume. Future withdrawals are expected to stay the same. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Corbion does not use non-renewable groundwater in any of its operations. There are no future plans to rely on these sources.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	Corbion does not use produced or entrained water in any of its operations. There are no future plans to rely on these sources.
Third party sources	Relevant	1436.06	About the same	Corbion's use of third party sources comes mainly from the use of municipal water and to a lesser extent from purchased steam. Municipal water suppliers are used at a majority of Corbion manufacturing sites. Either as the primary source of water or to supplement groundwater and surface water. It is not used in Orindiúva, Brazil and Campos, Brazil. Use of municipal water and purchased steam has risen by 4%, which is attributable to variations in production with an overall upwards trend. Production growth and variations are also considered to drive use of municipal water in the future.

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	854.5	Much higher	Last year we made an allocation error wrongly assigning the discharge of one manufacturing site to third-party destinations where it should have been to fresh surface water. This accounts for all of the increase. For both sites together that discharge to fresh surface water has fallen by 2% over the reporting year.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	We do not discharge any water directly to brackish surface water or seawater.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	We do not discharge any water directly to groundwater
Third-party destinations	Relevant	2917.66	Much lower	Last year we made an allocation error wrongly assigning the discharge of one manufacturing site to third-party destinations where it should have been to fresh surface water. This accounts for all of the decrease. For all sites together that discharge to third-party destinations has risen by 6% due to higher withdrawal volumes that are in turn due to higher production volumes.

W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	764.96	This is our first year of measurement	21-30	Before potentially polluted water is discharged directly into the environment it has to undergo either secondary or tertiary treatment depending on the level of pollution and local regulatory requirements. At some plants water is still discharged to a third party treatment facility after undergoing on-site tertiary treatment.
Secondary treatment	Relevant	1735.28	This is our first year of measurement	41-50	Before potentially polluted water is discharged directly into the environment it has to undergo either secondary or tertiary treatment depending on the level of pollution and local regulatory requirements. At many plants water is still discharged to a third party treatment facility after undergoing on-site secondary treatment.
Primary treatment only	Relevant	913.73	This is our first year of measurement	11-20	At some sites that face less polluted wastewater streams the wastewater only undergoes primary treatments on-site. However, water that has only undergone primary treatment is always sent to a third party treatment facility and never discharged directly into the environment.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Most of our water is discharged to third party treatment plants. Any water discharged directly into the environment is treated in compliance with regulatory requirements.
Discharge to a third party without treatment	Relevant	358.19	This is our first year of measurement	1-10	Although the majority of our water is discharged to third party treatment facilities industrial wastewater is always treated before being sent onwards to a third party location. Only unpolluted cooling water is discharged untreated at several sites.
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	

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

Specialty organic chemicals

Product name

Total production volume of top 5 specialty organic chemicals. Due to competition reasons we do not disclose product specific information.

Water intensity value (m3)

1.12

Numerator: water aspect

Total water withdrawals

Denominator

Ton

Comparison with previous reporting year

Please select

Please explain

The water withdrawals for our top 5 chemical products is calculated as a weighted average from the water usage reported in the Bill of Materials and the volume of each product produced in 2020. Compared to the previous reporting year the water consumption was about the same as there were no production changes. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.

W-FB1.3

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

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Sugar	Not applicable	Yes	We source all of our cane sugar from mills in Brazil and Thailand. These mills in turn provide us with the locations of the farms they source from. In calculating the water intensity we follow the Blue Water Footprint methodology as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600) we can calculate the total water withdrawals for irrigation for our sourced sugar based on the regions of origin. Final value is an average of the blue water footprint in our different sourcing regions.
Palm oil	Not applicable	Yes	We source palm oil as both primary and secondary oleochemicals. Because of the complicated supply chain of palm oil we base our water intensity on the sourcing location data provided by our key suppliers. This location data is on accurate up to the country level. In calculating the water intensity we follow the Blue Water Footprint methodology as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600) we can calculate the total water withdrawals for irrigation for our sourced sugar based on the countries of origin. Final value is an average of the blue water footprint in our different sourcing regions.
Soy	Not applicable	Yes	We source all of our soy from the US. Our suppliers provide us with region based sourcing data. In calculating the water intensity we follow the Blue Water Footprint methodology as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600) we can calculate the total water withdrawals for irrigation for our sourced soy based on the regions of origin. Final value is an average of the blue water footprint in our different sourcing regions.
Maize	Not applicable	Yes	We source all of our maize from the US. Our suppliers provide us with region based sourcing data. In calculating the water intensity we follow the Blue Water Footprint methodology as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600) we can calculate the total water withdrawals for irrigation for our sourced maize based on the regions of origin. Final value is an average of the blue water footprint in our different sourcing regions.

W-FB1.3b

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

Agricultural commodities

Sugar

Water intensity value (m3)

47

Numerator: Water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

About the same

Please explain

Water intensity for sourced sugar is based on the total water withdrawals for irrigation. This is in line with the Blue Water Footprint methodology for agricultural materials as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600). We calculate the total water withdrawals for irrigation based on the sourcing locations. Average water intensity is update yearly based on the distribution of sourcing regions from our suppliers for that year. Water intensity per ton of product is used to decouple the intensity from variations in sourcing volumes. We use this information for our work with the Science Based Targets Network Corporate Engagement Program. Water intensity is about the same compared to the previous reporting year because the distribution of sourcing regions from our suppliers has remained the same and there have been no updates to the database. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.

Agricultural commodities

Soy

Water intensity value (m3)

340.5

Numerator: Water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

Much higher

Please explain

Water intensity for sourced soy is based on the total water withdrawals for irrigation. This is in line with the Blue Water Footprint methodology for agricultural materials as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600). We calculate the total water withdrawals for irrigation based on the sourcing locations. Average water intensity is update yearly based on the distribution of sourcing regions from our suppliers for that year. Water intensity per ton of product is used to decouple the intensity from variations in sourcing volumes. We use this information for our work with the Science Based Targets Network Corporate Engagement Program. Water intensity is much higher in 2020 compared to the previous reporting year because the distribution of sourcing regions has been updated in our most recent assessment. Sourcing regions are Iowa, Nebraska, Kansas, and Missouri, US. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.

Agricultural commodities

Maize

Water intensity value (m3)

2

Numerator: Water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

About the same

Please explain

Water intensity for sourced maize is based on the total water withdrawals for irrigation. This is in line with the Blue Water Footprint methodology for agricultural materials as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600). We calculate the total water withdrawals for irrigation based on the sourcing locations. Average water intensity is update yearly based on the distribution of sourcing regions from our suppliers for that year. In 2020 all of our maize was sourced from Iowa, US. Water intensity per ton of product is used to decouple the intensity from variations in sourcing volumes. We use this information for our work with the Science Based Targets Network Corporate Engagement Program. Water intensity is about the same compared to the previous reporting year because the distribution of sourcing regions from our suppliers has remained the same and there have been no updates to the database. Corbion has chosen that a difference of +/-5% will represent about the same, +5-30% will be higher, and +30% or more will be much higher and vice versa for lower.

Agricultural commodities

Palm oil

Water intensity value (m3)

0.15

Numerator: Water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

This is our first year of measurement

Please explain

Water intensity for sourced palm oil is based on the total water withdrawals for irrigation. This is in line with the Blue Water Footprint methodology for agricultural materials as developed by the Water Footprint Network. Using the datasets from the Water Footprint Network (Mekonnen, M.M. & Hoekstra, A.Y. (2011) The green, blue and grey water footprint of crops and derived crop products, Hydrology and Earth System Sciences, 15(5): 1577-1600). We calculate the total water withdrawals for irrigation based on the sourcing locations. Average water intensity is update yearly based on the distribution of sourcing regions from our suppliers for that year. In 2020 the distribution was

50% from Indonesia, 35% from Malaysia, and 15% from the rest of the world. Water intensity per ton of product is used to decouple the intensity from variations in sourcing volumes. We use this information for our work with the Science Based Targets Network Corporate Engagement Program. There is no comparison to last year because this is our first year of measurement.

W1.4

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

Yes, our suppliers

W1.4a

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

Row 1

% of suppliers by number

Less than 1%

% of total procurement spend

1-25

Rationale for this coverage

Corbion's key raw materials are derived from agricultural sources so our approach is based on continuous improvement in sustainable agriculture practices. In 2020 we started a partnership with Cargill (our key supplier of dextrose in the US) and Practical Farmers of Iowa to promote regenerative agricultural practices. The main focus of this partnership is on improving soil health, which will also positively impact water use and quality. Because this is a partnership there is no need for specific incentives, we have determined mutual benefits for the project before entering into the partnership.

Impact of the engagement and measures of success

Improved water use and quality in our dextrose supply chain. Because this is a partnership we collect data together with our Tier 1 supplier (Cargill) from our Tier 2 suppliers (farmers) to assess progress on soil health on an annual basis. For this specific partnership the goal is to reach and impact farmers collectively amounting to 20% of our sourcing area. Data is collected on an annual basis. This is a pilot project and the data will be used to determine the potential and value of scaling up our efforts.

Comment

W1.4b

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

Type of engagement

Innovation & collaboration

Details of engagement

Encourage/incentivize suppliers to work collaboratively with other users in their river basins
Other, please specify (certification, carbon footprint reduction through sustainable agriculture practices)

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for the coverage of your engagement

Corbion has joined the Science Based Targets initiative and our Science Based target includes Scope III emissions related to key agricultural raw materials. We are currently engaging with these suppliers to raise awareness on climate change, and on sustainable agriculture as a way to reduce CO2 emissions, water security risks etc. We discuss opportunities for the suppliers to reduce their emissions and to improve their resilience regarding water-related risks. This includes certification.

Impact of the engagement and measures of success

As a measure of success, we use the % of certified raw materials and/or % audited against Corbion's responsible sourcing requirements. We also monitor the CO2 emissions. We consider our engagement to be successful if the % of certified/audited materials increases, and the CO2 emissions decrease.

Comment

W2. Business impacts

W2.1

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

No

W2.2

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

No

W3. Procedures

W-CH3.1

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

All sites need to measure and report their standard water pollutants to the environmental report such as COD, Nitrogen, heavy metals, as well as water temperature and pH. All our sites have an on-site waste water treatment plant or send the waste water to a third party for treatment. Beyond that, each process change needs to be reviewed through a risk assessment to determine risk of potential pollutants going into ground- and surface water. Each new chemical requires approval permit that allows the affected department, the quality manager, and the EHS manager to review the new chemical. We use SDS (safety data sheets) as a first step to identify if a certain material is a pollutant. If the chemical was a potential water pollutant it would be placed in the storm water pollution prevention plan, and a plan would be created to prevent the chemical from reaching any water source.

All our lactic acid derivatives sites comply to ISO 14001 Environmental management system with water risk assessment being reviewed annually as a part of it.

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
Nitrogen	Direct operations	Nitrogen-based compounds are used as nutrients in our fermentation. It can reach rivers and lakes through improper treatment of our effluents or incidents. it can have high impact to the eutrophication in the water ecosystem at certain concentration level and it might have toxic impact to aquatic life as a result of eutrophication.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Samples of waste water effluent are taken regularly to control the effluent quality. Limits of chemicals in the waste water are determined by local regulations. We do have measures to prevents spillage and leakage in our loading and unloading areas.
Phosphorus	Direct operations	Phosphorus-based compounds are used as nutrients in our fermentation. It can reach rivers and lakes through improper treatment of our effluents or incidents. it can have high impact to the eutrophication in the water ecosystem at certain concentration level and it might have toxic impact to aquatic life as a result of eutrophication.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Samples of waste water effluent are taken regularly to control the effluent quality. Limits of chemicals in the waste water are determined by local regulations. We do have measures to prevents spillage and leakage in our loading and unloading areas.
heavy metals (Arsenium, Cadmium, Chrome, Cobalt, Lead, Nickel, Zink)	Direct operations	Heavy metals may be present as impurities in our production process. They may be highly toxic even in small quantities. That is why it is of utmost importance to measure their concentration and prevent them from reaching the freshwater	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Samples of waste water effluent are taken regularly to control the effluent quality. Limits of chemicals in the waste water are determined by local regulations. We do have measures to prevents spillage and leakage in our loading and unloading areas.
COD/BOD	Direct operations	High oxygen concentration can affect aquatic life	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	
Lactic acid	Distribution network	Lactic acid which is produced in Corbion is classified as a corrosive substance. We need to consider this during packaging and transportation to prevent leakage and spillage. . Each transport provider receives transport cards that clarify what the risks are of transporting this chemical (risk of water and soil pollution) and are instructed how to use and handle the product.	Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use	

W-FB3.1

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

All sites need to measure and report their standard water pollutants to the environmental report such as COD, Nitrogen, heavy metals, as well as water temperature and pH. All our sites have an on-site waste water treatment plant or send the waste water to a third party for treatment. Beyond that, each process change needs to be reviewed through a risk assessment to determine risk of potential pollutants going into ground- and surface water. Each new chemical requires an approval permit that allows the affected department, the quality manager, and the EHS manager to review the new chemical. We use SDS (safety data sheets) as a first step to identify if a certain material is a pollutant. If the chemical was a potential water pollutant it would be placed in the storm water pollution prevention plan, and a plan would be created to prevent the chemical from reaching any water source.

We comply with legal requirements with regards to the discharge of water pollutants at all our sites. This is done through a combination of onsite and offsite treatment of effluents. Our food production facilities (Totowa and Peoria) have not identified pollutants that could have a detrimental impact on water ecosystems. At our Totowa site discharge water quality is monitored through regular grab sampling by a third-party and consecutively send to a third party treatment facility. At our Peoria site we discharge to a third party treatment facility that monitors water quality. In addition we also monitor solids, PH and oil sheen for any water discharged into the river.

Potential impacts in our supply chain are addressed via our responsible sourcing program; the topic is included in our supplier code and in specific raw material policies. We request our suppliers to sign the supplier code/specific policies, we audit our high risk suppliers and we purchase part of the high risk raw materials certified (RSPO, Bonsucro).

All our chemical production facilities have more extensive discharge quality testing due to higher pollution risk. All our lactic acid derivatives sites comply to ISO 14001 Environmental management system with water risk assessment being reviewed annually as a part of it.

W-FB3.1a

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

Potential water pollutant

Fertilizers

Activity/value chain stage

Agriculture – supply chain

Description of water pollutant and potential impacts

Impacts of the use of fertilizers in our supply chain may include the pollution of watercourses and groundwater.

Management procedures

Change raw material inputs

Follow regulation standards

Other, please specify (Suppliers code of conduct, certification, supplier audits)

Please explain

All our suppliers need to meet our supplier code. We source our main agricultural raw materials responsibly, and therewith ensure the use of fertilizers is according to external standards. All our palm oil and primary oleochemicals are RSPO certified. For our sugarcane we use Bonsucro certification and our own Sugar cane code. We request our suppliers to sign the supplier code/specific policies, we audit our high risk suppliers and we purchase part of the high risk raw materials certified (RSPO, Bonsucro). In case of non-compliance and/or the identification of specific risks we will put in place a risk mitigation plan. This can mean either working together to increase compliance or switching to another supplier (mix).

Potential water pollutant

Pesticides and other agrochemical products

Activity/value chain stage

Agriculture – supply chain

Description of water pollutant and potential impacts

Potential impacts of the use of agrochemicals in our supply chain include the pollution of water ecosystems and aquatic life. Pesticides may be spread to other species and negatively affect them.

Management procedures

Change raw material inputs

Follow regulation standards

Other, please specify (Supplier code of conduct, certification, supplier audits)

Please explain

All our suppliers need to meet our supplier code. We source our main agricultural raw materials responsibly, and therewith ensure the use of fertilizers is according to external standards. All our palm oil and primary oleochemicals are RSPO certified. For our sugarcane we use Bonsucro certification and our own Sugar cane code. We request our suppliers to sign the supplier code/specific policies, we audit our high risk suppliers and we purchase part of the high risk raw materials certified (RSPO, Bonsucro). In case of non-compliance and/or the identification of specific risks we will put in place a risk mitigation plan. This can mean either working together to increase compliance or switching to another supplier (mix).

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management

Tools and methods used

Water Footprint Network Assessment tool

WRI Aqueduct

COSO Enterprise Risk Management Framework

Other, please specify (we use Life Cycle Assessments to understand the impact of our operations on water, we use scenario analysis in line with the TCFD to identify potential future water-related risks)

Comment

Corbion's multi-disciplinary company-wide risk identification process is based on annual workshops with the executive+ committee in order to identify critical risks for all our business activities. As part of this process, interviews are held and a selection of risks are voted on. To provide specific input regarding water-related risks, we use tools on the market such as Water footprint network and WRI aqueduct. We also perform Life Cycle Assessments and currently some 63% of our production volume is covered by a Life Cycle Assessment. This also informs us about water-related risks. Finally, specific water-related risks are connected to climate change. To provide specific input regarding climate- and water-related risks and opportunities to the company-wide risk identification process, climate-risk workshops are held with the leadership teams (including VP Finance, VP Operations, VP Business Development, Sr Innovation Director, Sr Director Sustainability and CSSO) to review and rate risks and opportunities for relevant future scenarios. In these workshops, the impact and likelihood of potentially relevant risks and opportunities are evaluated. Climate- and water-related opportunities that are aligned with Corbion's ambition are prioritized based on the business case, financial reward, alignment with our capabilities and technical feasibility.

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management

Tools and methods used

Water Footprint Network Assessment tool

WRI Aqueduct

COSO Enterprise Risk Management Framework

Other, please specify (we use SEDEX Radar tool, Reprisk and Life Cycle Assessments to identify potential water-related issues related to our supply chain, we use scenario analysis in line with the TCFD to identify potential future water-related risks)

Comment

Corbion's multi-disciplinary company-wide risk identification process is based on annual workshops with the executive+ committee in order to identify critical risks for all our business activities. To provide specific input regarding water-related risks in our supply chain, we use tools on the market, including WRI aqueduct. We also use more general supplier screening tools such as SEDEX (including their new RADAR tool which includes water as a topic) and Reprisk. We also perform Life Cycle Assessments and currently some 63% of our production volume is covered by a Life Cycle Assessment. This also informs us about water-related risks. Finally, specific water-related risks are connected to climate change. To provide specific input regarding climate- and water-related risks and opportunities to the company-wide risk identification process, climate-risk workshops are held with the leadership teams (including VP Finance, VP Operations, VP Business Development, Sr Innovation Director, Sr Director Sustainability and CSSO) to review and rate risks and opportunities for relevant future scenarios. In these workshops, the impact and likelihood of potentially relevant risks and opportunities are evaluated. Climate- and water-related opportunities that are aligned with Corbion's ambition are prioritized based on the business case, financial reward, alignment with our capabilities and technical feasibility.

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

We have not assessed water risks in other stages of our value chain. While our customers are dependent on the availability of water like we are, this issue is more difficult for us to address and therefore we focus our efforts on areas where we can make an impact.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	This aspect is included in our primary tool, WRI aqueduct and is relevant to Corbion due to the need for water for our production process and the reliance of our suppliers on water for agriculture. It is also covered for both our direct operations and supply chain in our climate change risk and opportunity scenario analyses. Currently water availability is not seen as a significant risk.
Water quality at a basin/catchment level	Relevant, always included	This aspect is included in our primary tool, WRI aqueduct and is relevant to Corbion due to the need for water of good quality for our production process and the reliance of our suppliers on water for agriculture. Currently water quality is not seen as a significant risk.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Any threats to a continuous water supply are relevant to Corbion because we depend on a continuous good quality water supply for most of our operations and the provision of WASH services. Stakeholder conflicts concerning water are monitored using Reprisk. Currently stakeholder conflicts are not seen as a significant risk.
Implications of water on your key commodities/raw materials	Relevant, always included	Part of our risks assessment includes an analysis of the sourcing regions for our key agricultural materials for water risks, using WRI aqueduct and our Security of Supply assessment. For Corbion, agricultural raw materials are highly relevant to our business so this is therefore always included. Currently we have identified some potential impacts related to our key raw materials. However, they have not been categorized as significant at this point in time.
Water-related regulatory frameworks	Relevant, always included	Corbion aims for full compliance with regulations globally, this is monitored by our EHS departments at the manufacturing sites. Emerging risks related to regulations are included in the enterprise risks management process using the COSO ERM framework. Regulatory developments are also monitored in our climate related risk and opportunity assessments. Currently water-related regulatory frameworks are not seen as a significant risk. However, regarding regulatory issues we always aim to be in compliance and are therefore currently working to increase our level of detail for water-related reporting.
Status of ecosystems and habitats	Relevant, sometimes included	Through our work with the Science Based Targets Network Corporate Engagement Program we are starting to include this in our water risk assessments. Because we are a biobased company the status of ecosystems and habitats is particularly important for our security of supply. The planning is to always include this in our assessments within the next to years. Because we have currently only sporadically assessed the status of ecosystems and habitats we classify it as Relevant, sometimes included until it will be fully embedded in the water risk assessment.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	This aspect is included in our primary tool, WRI aqueduct and is relevant to Corbion because of our high standards regarding labor conditions and to meet our purpose to 'Preserve Health'. It is also monitored using the SEDEX radar tool and corresponding audits. We are currently able to provide WASH services to all our employees and see no risks to being able to provide these services in the future.
Other contextual issues, please specify	Not relevant, explanation provided	We have not identified relevant other contextual issues.

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Customers are included because our dependencies go both ways: we have a significant impact on our customers and they on us. We engage with our customers through regular interaction and provide training on appropriate use of our products, including water related applications or risks where applicable.
Employees	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Employees are included because they are key to everything we do. Not in the least are they responsible for the execution of our purpose Preserve What Matters. This includes preserving water and water ecosystems. We engage with our employees through regular (mandatory) training programs and (voluntary) awareness sessions. Our employees are our first line of defense when it comes to safe use of our product and avoidance of spills. We also encourage water saving practices when it comes to on-site WASH-services.
Investors	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Investors are included because as a publicly listed company we are inevitably intertwined. Our actions have an impact on their portfolio value while their actions impact our market valuation. We engage with our investors both directly through our investor relations department and indirectly through channels such as ESG-scores and questionnaires such as CDP. By engaging with our investors we can align on (emerging) material topics for action and disclosure. Water is one of these emerging topics and we aim to increase our level of action and disclosure in the upcoming years.
Local communities	Relevant, sometimes included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Local communities are sometimes included in our water-related risk assessments. So far we have not identified material water-related risks that impact local communities, but as our knowledge on this front deepens we continue to include them in our assessments. Because we have not currently identified water-related risks that impact the local communities we do not engage with them specifically on water-related issues. However, we do engage with local communities on location specific topics which sometimes include water.
NGOs	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Through our participation in the Corporate Engagement Program of the Science Based Targets Network at least one NGO is always included when we consider water-related risks. All of our water-related policies and actions are now mirrored against the best available scientific benchmarks. As for other NGOs, we do not actively reach out but are always open for dialogue and collaboration on local basin issues.
Other water users at a basin/catchment level	Relevant, sometimes included	At this stage, we do not consider these stakeholders specifically. They could become relevant depending on the local situation and we may consider to do this in the future. Currently there are a few sites where we interact with other water users because we operate on the same site and share some facilities (e.g. a water treatment facility).
Regulators	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? For all water-related actions we aim to comply with local regulatory standards. Therefore regulators are always relevant in our water risk assessments. We engage with regulators by following any (pending) updates to regulations and taking action to stay in compliance.
River basin management authorities	Relevant, sometimes included	We interact with river basin management authorities when this is necessary for our operations. This can be when they are the issuing party for required permits. For example at our site in Gorinchem, the Netherlands we withdraw water for cooling purposes directly from the Linge river. Management of this water source falls under the authority of Waterschap Rivierenland who also issues the required permits.
Statutory special interest groups at a local level	Not relevant, explanation provided	We have not identified any relevant statutory special interest groups at the local level. If at some point in the future such a group will become relevant to Corbion we will include this in our assessment.
Suppliers	Relevant, always included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Suppliers are included because they are an essential part of our value chain, without them we cannot function. They also have a significant impact on our water footprint. We engage with them on different levels and focus most of our water-related engagement on our agricultural suppliers. Engagement ranges from questionnaires, to certificates, to active collaboration. For example with our dextrose (corn) suppliers we engage together with Cargill to promote regenerative agricultural practices, part of which is sustainable water management to put less stress on the water basins and reduce exposure to drought.
Water utilities at a local level	Relevant, sometimes included	Our key stakeholders have been identified on the basis of two questions: 1. On which stakeholders does Corbion have a significant impact? 2. Which stakeholders have a significant impact on Corbion? Local water utilities are relevant stakeholders for all of our sites that use and/or discharge water to the local water utilities. This applies to all but one of our manufacturing sites. We engage with them to ensure consistent supply of sufficient quality water and to make sure we are in compliance regarding volume and quality of our discharged water.
Other stakeholder, please specify	Not relevant, explanation provided	We have not identified any other relevant water-related stakeholders.

W3.3d

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

To provide specific input regarding water-related risks, our primary tools are WRI aqueduct, Water Footprint Network, Life Cycle Assessments and Scenario Analysis. WRI aqueduct is used to assess the water risks at a basin level for all of our manufacturing sites and key agricultural commodities. The Water Footprint Network is used to assess the impact of our key agricultural commodities. In case of severe water stress we aim to reduce our impact and dependencies accordingly. Currently we do not operate in, nor source from areas with severe water stress. By assessing the water footprint of our key commodities we get more insight into the potential exposures to droughts and extreme weather events. This information allows us to better select our raw material suppliers and sourcing regions. Life cycle assessments allow us to monitor the product water footprint and communicate this with suppliers and investors so that they can manage their exposure. Currently 63% of our product range (by volume) is covered by LCA. Scenario analysis is used to estimate potential (emerging) future water risks along the entire value chain. Using this tool in line with the TCFD requirements we are able to test and adjust our strategy to climatic changes before they pose significant risks. For more detail on the application of scenario analysis please refer to our response to CDP Climate.

Water-related risks are managed in the same way as other risks. Corbion has defined a governance model that identifies clear reporting and accountability structures in line with the Dutch Corporate Governance Code. The Executive Committee is responsible for:

- identifying and analyzing the risks associated with Corbion's strategy and activities;
- establishing the risk appetite, as well as ensuring that mitigating measures are being put in place;
- the design, implementation, and operation of Corbion's internal risk management and control systems; and
- monitoring the operation of the internal risk management and control systems and assessing the design and effectiveness thereof.

The Board of Management discusses the effectiveness of the design and operation of the internal risk management and control systems with the Audit Committee and the Supervisory Board annually. For each significant risk, a risk owner is appointed, who will further determine the impacts of the risk and manage the root causes and mitigation actions. The progress in risk mitigation is discussed on an ongoing basis between business management and Board of Management.

Corbion applies the 3-lines-of-defence model for internal controls. The first line (line management) is responsible for the operational effectiveness of the internal control framework. The second line coordinates, advises, and monitors line management regarding their responsibilities for internal control. The third line is internal audit independently reviewing the control framework.

W4. Risks and opportunities

W4.1

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

No

W4.1a

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

A definition of 'substantive financial or strategic impact' when identifying or assessing water-related risks

Part of the control environment is the definition by the Executive Committee of the risk appetite of the company. Our risk appetite is the amount of risk we are willing to accept to achieve our strategic goals. This requires adequate understanding and awareness of potential risks and their magnitude within the company. The level of risk appetite is set by the Executive Committee. Corbion utilizes a 6 category impact scale for risks. Category 5&6 (major and catastrophic) are considered to be substantive. This definition applies to both direct operations and our supply chain.

A description of the quantifiable indicator(s) used to define substantive financial or strategic impact

As a financial metric, any (cumulative) EBITDA impact >15M euro is considered to be substantial, or (estimated) direct or indirect losses are larger than 50% of the risk appetite or a(n estimated) share price decline of >5%. Our risk appetite for strategic risks can be summarized as follows: innovations, innovation platform initiatives, mergers and acquisitions, joint ventures etc.: balancing risk and rewards to achieve our strategic growth targets. Water-related risks are part of our risk assessment and assessed in our formal risk identification process. For regulatory risks we have a low risk appetite.

An example of substantive impact considered

We have currently not identified any water-related risks that have a potentially substantive impact on Corbion. Closest to having a substantive impact is the flooding of the Missouri river disrupting supply at our Blair facility. The estimated maximum impact of such an event ranges from 9mln - 11mln euros. Details can be found in our climate risk assessment (also see C2.3a).

W4.2b

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	We are using the WRI Aqueduct tool to prioritize (chronic) water risks for our direct operations. Sites in high and extreme high risk regions, based on the WRI Aqueduct overall water risk assessment, would be assessed for potential financial consequences in a detailed risk assessment to determine the potential financial impact on Corbion business and to determine our strategic response. Based on the WRI Aqueduct overall water risk assessment none of the 12 Corbion sites is in the High or Extremely high water risk area. The assessment results are as follows : 4 Corbion sites are in the low (0-1) water risk area, 6 sites are in the low-medium (1-2) water risk area, 2 sites are in the medium-high (2-3) water risk area. Water risks related to extreme weather events (acute risks) are monitored through our Enterprise Risk Management and scenario analysis in line with the TCFD recommendations. One example of an identified acute risk is flooding of the Missouri river to cause disruptions at our Blair facility. Estimated impacts hereof are not considered substantial with an estimated maximum impact range of €9mln - €11mln (see C2.3a for more details).

W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	We are using WRI Aqueduct tool to prioritize water risks for our main agricultural suppliers. Sourcing locations in high and extreme high risk regions, based on the WRI Aqueduct overall water risk assessment, would be assessed for potential financial consequences in a detailed risk assessment to determine the potential financial impact on Corbion business and to determine our strategic response. Based on the WRI Aqueduct tool, our sugar in Thailand is sourced from areas with low, medium-high, and extremely high (<1% of total supply) water stress, our sugar in Brazil from low-medium and medium-high water risk areas. Glucose and soy in US are from a low water risk area. We are reassessing the water risk in our supply chain in an annual basis, to cover potential changes resulted from a change in suppliers. The sugar sourced from areas with extremely high water stress is not considered posing a substantive risk because of two reasons: (1) it constitutes less than 1% of our total supply, meaning it can be diversified easily and (2) all of the sugar sourced from these areas is 100% Bonsucro certified, indicating good water risk awareness and management practices.

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 resilience to impacts of climate change

Company-specific description & strategy to realize opportunity

Agricultural raw materials are a key part of our business model. We see climate change as an important change driver and For our soy sourcing, Corbion has partnered with Truterra, LLC, the sustainability business of Land O'Lakes and a leader in scaling-up private-sector conservation solutions. The Truterra™ Insights Engine allows farmers and downstream value chain partners to measure sustainability progress and trends in real time at field level. The digital platform creates a framework for continuous improvement while also benchmarking against yield and profitability, ensuring customized, scalable on-farm conservation solutions that both protect our natural (water) resources and are good for the farmer. Our collaboration with Truterra focuses on implementing regenerative agriculture practices such as cover crops, no or reduced tillage, and managed livestock grazing. These practices will have impacts on building climate resiliency by reducing GHG emissions, improving soil health and water resources. Specific to water, cover crops and no-till agriculture play a particularly helping role in improving water infiltration and water quality.

Estimated timeframe for realization

4 to 6 years

Magnitude of potential financial impact

Low

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)

200000

Potential financial impact figure – maximum (currency)

550000

Explanation of financial impact

Our collaboration with Truterra currently covers an area equivalent to 20% of our total supply. Assuming an increase in resilience of 20-50% against failed harvests which would increase prices by 20% this would translate to a reduced financial risk equivalent to 0.8-2% of our procurement spent on Soy.

Type of opportunity

Resilience

Primary water-related opportunity

Increased supply chain resilience

Company-specific description & strategy to realize opportunity

At the moment, only a negligible amount (<1% of sugar) of Corbion's agricultural raw materials (e.g. sugar cane, corn, soy, palm) are sourced from very high water risk areas. This may change in the future as a consequence of Climate change. To be prepared for this, Corbion takes a pro-active approach and we have a responsible sourcing program that aims to implement sustainable agricultural practices, such as Bonsucro certification for sugar (the sugar we currently source from high risk areas is Bonsucro certified). This pro-active approach can be an opportunity for Corbion to ensure that we work with suppliers that are well-prepared and therefore more resilient to potential impacts of climate change. Together with Bonsucro we are working with suppliers of sugar (e.g., Mitr Phol) to increase sustainability performance of their sugarcane plants. Mitr Phol has been a supplier to Corbion since 2007, with more than 30,000 cane growers in its supply chain. Mitr Phol committed several years ago to promoting modern farming methods and technologies to its suppliers, using Bonsucro as a platform for collaboration, and guided by its Standards. Consequently, Mitr Phol Modern Farm was launched about six years ago to allow sugarcane farmers to see modern methods in action and learn how to implement them in their own operations. We have collaborated with them in several initiatives, such as adjusting the space between sugarcane plants and better controlling truck traffic. We have also implemented techniques for maintaining loosened soil, and a GPS system for controlling large agricultural machines. These initiatives provided Mitr Phol with several benefits, such as more efficient use of (water) resources and significantly reduce carbon emissions. In terms of our soy sourcing, Corbion has partnered with Truterra, LLC, the sustainability business of Land O'Lakes and a leader in scaling-up private-sector conservation solutions. The Truterra™ Insights Engine allows farmers and downstream value chain partners to measure sustainability progress and trends in real time at field level. The digital platform creates a framework for continuous improvement while also benchmarking against yield and profitability, ensuring customized, scalable on-farm conservation solutions that both protect our natural (water) resources and are good for the farmer. The farmers in our sourcing area will benefit from improved data to make conservation decisions relevant to their farm.

Estimated timeframe for realization

More than 6 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

We have not estimated the financial impact

W6.1

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

No, but we plan to develop one within the next 2 years

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	Under the chairmanship of the Chief Executive Officer, the members of the Executive Committee have the overall responsibility for sustainability and decide on the strategy and targets. The Executive Committee shares responsibility for developing objectives and the strategy, determining the risk profile, and implementing strategic and operational policies . The CEO is given these responsibilities because sustainability is key to Corbion's strategy and therefore responsibilities are integrated in the highest management level. Due to Corbion's reliance on water for its fermentation processes and its agricultural raw materials, water is a relevant topic in our sustainability strategy. An example of a water management related decision made by the CEO is the decision to partner with Truterra, LLC to improve, amongst other things, water management in our soy supply chain.

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	<ul style="list-style-type: none"> Reviewing and guiding annual budgets Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Setting performance objectives 	Annually, there are two formal meetings with the full Executive Committee (ExCo), where sustainability is discussed. The ExCo members have informal meetings as well, these cover whatever important matters arise, varying from sustainability to risks or profits. The information provided by the ExCo and sustainability manager gives the board oversight on whether objectives are being reached and what the difficulties are in those areas. When deciding on major capital expenditures sustainability criteria are taken into consideration. This provides the board with oversight on the issues they might face and what possibilities there are for improvement or what options there are to improve the (sustainability) performance of Corbion.

W6.3

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

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

Chief Executive Officer (CEO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

Under the chairmanship of the Chief Executive Officer, the members of the Executive Committee have the overall responsibility for sustainability and decide on the strategy and targets. The CEO gets scheduled quarterly updates on sustainability which always include any decisions related to water management. Reports focus, among other things, on strategic water management decisions, process improvements and investments. Water related responsibilities of the CEO stretch from strategic decisions within the supply chain (e.g. our collaboration with Truterra) to decisions on water targets. The CEO has these responsibilities because sustainability is key to Corbion's strategy. Because Sustainability is at the heart for Corbion's offerings it is logical that all key players within Corbion's management carry responsibility for delivering on sustainability.

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

Other C-Suite Officer, please specify (Chief Science and Sustainability Officer)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

Under the chairmanship of the Chief Executive Officer, the members of the Executive Committee have the overall responsibility for sustainability and decide on the strategy and targets. The Executive Committee consists of the CEO, CFO, the CSSO (Chief Science & Sustainability Officer), the Chief Operations Officer, the Chief Human Resources Officer, the President of Sustainable Food Solutions, the President Lactic Acid & Specialties and the President Algae Ingredients. The Senior Director Sustainability provides recommendations to the Executive Committee (semi-annual), regarding sustainability, including water-related topics. The Senior Director Sustainability reports to the CSSO. For Corbion, sustainability and climate change offer opportunities and are a driver for innovation, hence the strong involvement of the CSSO.

W6.4

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

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

W6.5

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

No

W6.6

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

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

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Currently our water related business objectives are aimed at risk mitigation. We are using WRI Aquaduct tool and scenario analysis to prioritize water risks for our direct operations and supply chain. We aim to use water sustainably based on the local conditions. In operations water related issues are integrated based on the WRI Aquaduct overall water risk assessment. Issues will be addressed if a site is located in high or extremely high water risk areas. None of the 12 Corbion sites is located in such an area. The assessment results are as follows: 4 Corbion sites are in the low (0-1) water risk area, 6 sites are in the low-medium (1-2) water risk area, 2 sites are in the medium-high (2-3) water risk area. In our supply chain we focus on water stress. Issues will be addressed if we source from regions with high or extremely high water stress. Based on the WRI Aquaduct tool, most of our sugar in Thailand is sourced from areas with medium-high (2-3) water stress, our sugar in Brazil from low-medium (1-2) and medium-high (2-3) water risk areas. 1% of our sugar supply in 2020 was from an area with extremely high water stress. However, all of this sugar was Bonsucro certified implying good (water) management practices in line with local conditions. Corn and soy in the US are from a low water risk area. We are reassessing the water risk in our supply chain on an annual basis, to cover potential changes resulted from a change in suppliers.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Because none of our sites is currently located in a high or extremely high water risk area there is no need for direct mitigation plans. In the long term we aim to keep our site's water use within local limits. To anticipate this we perform scenario analysis to identify any changes in water availability and water related extreme weather events in a timely manner. We have also joined the SBTN Corporate Engagement Program as we aim to quantify our fair share of (future) water use and set targets accordingly. In our supply chain we also aim to source raw materials that have been grown or produced with respect for the local water conditions. As an example, in 2020 we sourced 1% of our sugar from an area in Thailand with extremely high water stress. However, all of this sugar was Bonsucro certified implying good (water) management practices in line with local conditions. Also, in the US we have partnered with Truterra, LLC to promote regenerative agricultural practices in our soy supply chain. This also includes more sustainable water management. For our Corn supply chain we have partnered with Cargill for the same purposes.
Financial planning	Yes, water-related issues are integrated	11-15	Because water related issues have the potential to become financially significant in the future because of e.g. climate change they are integrated in our long term financial planning. For example, we invest in the promotion of regenerative agriculture project in our partnerships with Truterra and Cargill. These are currently pilot projects, but they might be extended. We also invest in certification schemes such as Bonsucro to ensure good (water) management practices in our supply chain. If necessary we will also invest within our direct operations to keep our water use within proportion of the local conditions (mitigation) and to protect our assets from water-related threats such as floods (adaptation).

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)

0

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

1500

Water-related OPEX (+/- % change)

0

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

0

Please explain

Explanation why CAPEX and OPEX has remained the same: Water related capital and operational costs have been the same when comparing 2 consecutive years. What the water-related expenditure (CAPEX and/or OPEX) was for: Some examples of water related expenses that are constant over years are water quality tests and groundwater monitoring to evaluate possible contamination. An example of CAPEX is a modification in our downstream processing (purification) in our site in Brazil. In 2019 we made changes in the VDU system saving approx. 10.000m3/year. This year (2020) we made a similar alteration which reduced water use also by approx. 10.000m3/year. In both 2021 and 2022 similar alterations are planned in smaller evaporators saving approx. 5.000m3/year each. Explanation of anticipated forward trend for CAPEX: Currently Corbion is constructing a new plant in Rayong, Thailand. This new plant will include a wastewater treatment plant boosting our water-related CAPEX expenditures significantly.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	We use RCP2.6 qualitatively to determine potentially relevant transition events that could be a risk or opportunity. This included events such as implementation of (local) carbon pricing, changing demand for e.g. meat and biobased plastics, and stakeholder pressure to reduce GHG emissions in line with the 1.5 pathway. RCP 8.5 was used (quantitative) to determine potentially relevant events for the 'business as usual' scenario, specific to the relevant Corbion locations. This included events such as storms, floods and droughts. The results of this scenario analysis and the potential risks and opportunities that were identified have informed our Advance 2025 strategy update and business plans for the next 5 years. This includes among others the decision to implement a breakthrough technology for lactic acid production with a significantly lower carbon footprint in Thailand.

W7.3a

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

Yes

W7.3b

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

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify (RCP 8.5)	RCP 8.5 was used (quantitative) to determine potentially relevant events for the 'business as usual' scenario, specific to the relevant Corbion locations. This included events such as storms, floods and droughts. Increased frequency of extreme weather (storms & floods) could cause a disruption to our manufacturing & distribution network, either because of a direct impact on our own manufacturing sites, or through disruption of the supply of raw materials. An example of a historic incident is the flooding of the Missouri river near to our facility in Blair, Nebraska, USA. We expect this to happen again in the near future (<10y) with a high likelihood.	Corbion undertakes several activities to mitigate and control the risks of internal disruption due to extreme weather events. All of these mitigation measures are already implemented or currently being implemented. Furthermore, biannually recurring scenario analysis workshops should help in timely identifying emerging risks that need mitigation plans and/or measures. Examples of mitigation plans/measure that are in place or being implemented are: - Business continuity and crisis management plans including contingency sourcing are in place with ongoing evaluation, based amongst other things on highly credible incident identifications for each site. - Appropriate customer and supplier agreements are in place to limit exposure whilst leveraging supplies. - Residual risks are adequately insured including assets and business continuity risks. - Corbion has a global footprint, with manufacturing locations spread over the globe (Asia, Europe, North America and South America). Supply chain disruptions can be managed by increasing production at one of our other manufacturing sites.

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, and we do not anticipate doing so within the next two years

Please explain

No internal price on water is currently integrated into Corbion's operations.

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	Our company sets no targets or goals	<Not Applicable>	<Not Applicable>

W8.1c

(W8.1c) Why do you not have water target(s) or goal(s) and what are your plans to develop these in the future?

	Primary reason	Please explain
Row 1	We are planning to introduce a target or goal within the next two years	Based on our initial water risk assessment we have identified no high water risk in our direct operations nor in our supply chain. Therefore, we consider that the development of water-related targets is not our immediate business priority. On the other hand, we are reviewing our approach and updating the risk assessment on an annual basis and may consider setting a target in the future. As a first step on the way to setting a (science based) water target we have joined the Corporate Engagement Program from the Science Based Target Network. We are now actively pursuing the opportunity to set a science based water target within the next two years in line with the SBTN timeline.

W9. Verification

W9.1

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

Yes

W9.1a

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

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	water withdrawal at each Corbion site	Other, please specify (GRI standard)	We report according the water-related KPIs from the GRI standard

W10. Sign off

W-FI

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

W10.1

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

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

W10.2

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

No

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	986500000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

No

SW1.1

(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

No facilities were reported in W5.1

SW1.2

(SW1.2) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	Yes, for all facilities	

SW1.2a

(SW1.2a) Please provide all available geolocation data for your facilities.

Identifier	Latitude	Longitude	Comment
Brazil - Campos	-21.75873	-41.326718	The geolocation data for all Corbion manufacturing sites has been provided.
Brazil - Orindiuva	-20.182654	-49.349197	The geolocation data for all Corbion manufacturing sites has been provided.
Netherlands - Gorinchem	51.84	4.99	The geolocation data for all Corbion manufacturing sites has been provided.
Spain - Montmelo	41.55	2.26	The geolocation data for all Corbion manufacturing sites has been provided.
Thailand - Rayong	12.73	101.05	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Blair	35.51	-78.32	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Totowa	40.89	-74.23	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Dolton	41.63	-87.61	The geolocation data for all Corbion manufacturing sites has been provided.
USA - East Rutherford	40.82	-74.09	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Grandview	38.87	-94.55	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Tucker	33.85	-84.17	The geolocation data for all Corbion manufacturing sites has been provided.
USA - Peoria	40.7	-89.58	The geolocation data for all Corbion manufacturing sites has been provided.
Brazil - Araucaria	-25.55	-49.4	The geolocation data for all Corbion manufacturing sites has been provided.

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization’s products or services.

Product name

Multiple products

Water intensity value

63.44

Numerator: Water aspect

Water withdrawn

Denominator

Total withdrawals in megaliters

Comment

This is a volume based assessment on plant level. Values apply to the total volume of products supplied to Flowers Food in 2020.

Product name

Multiple products

Water intensity value

14.07

Numerator: Water aspect

Water consumed

Denominator

Total consumption in megaliters

Comment

This is a volume based assessment on plant level. Values apply to the total volume of products supplied to Flowers Food in 2020.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Customers	Public	<Not Applicable>

Please confirm below

I have read and accept the applicable Terms