

# Welcome to your CDP Water Security Questionnaire 2023

## W0. Introduction

## W<sub>0.1</sub>

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

Ingredion Incorporated is a Fortune 500 global ingredient solutions company with 2022 net sales of \$7.9 billion. We turn corn, tapioca, potatoes, stevia, grains, fruits, and vegetables into value-added ingredients and biomaterials for the food, beverage, brewing and other industries. Headquartered in Westchester, IL, Ingredion employs approximately 11,700 people world-wide and operates global manufacturing, R&D, and sales offices in four business segments: North America, South America, Asia Pacific, and Europe, Middle East, and Africa ("EMEA"). Our product lines include starches, both food-grade and industrial based, sweeteners, such as glucose and fructose syrups, stevia, and maltodextrins, plant-based proteins, animal feed products, and edible corn oil. Our products are derived primarily from the processing of corn and other starch-based materials, such as tapioca, potato, and rice. We continue to expand our product portfolio through capital investments and acquisitions. We are making investments through our plant-based protein product lines, including pulse-based concentrates, flours and isolates. We believe our approach to production and service, focusing on local management and production improvements of our worldwide operations, provides us with a unique understanding of the cultures and product requirements in each of the geographic markets in which we operate, bringing added value to our customers through innovative solutions. At the same time, our corporate functions allow us to identify synergies and maximize the benefits of our global presence. We have a global network of more than 500 scientists working on research and development in 32 Ingredion Idea Labs® innovation centers. Activities include plant science and physical, chemical and biochemical modification to food formulations, food sensory evaluation, and development of non-food applications such as starch-based biopolymers. In addition, we have product application technology centers that direct our product development teams worldwide to create product application solutions to better serve the ingredient needs of our customers.

Our people are our strength. We take pride in continuing to be recognized by reputable third parties as an employer of choice, leading and operating with a purpose, making values-based decisions, and creating positive change in global communities. In 2022, Ingredion was recognized by Fortune magazine for the 13th consecutive year as one of the World's Most Admired Companies. We are proud to be included on the Bloomberg Gender-Equality Index for the fifth consecutive year and, for the second consecutive year, have earned a near-perfect



score on the Human Rights Campaign Corporate Equality Index. These distinguished awards and rankings are recognition and validation for our ongoing efforts to live our purpose and values. In 2022, Ingredion published its 12th annual sustainability report and our second DEI Report, which highlight progress made across all programs in our All Life sustainability platform. From electricity sourcing to water use, we have committed to using science in the setting of our targets. Our carbon reduction targets were developed using the Science Based Target initiative (SBTi) methodology, which was validated in 2022 as aligned with a well-below two degrees Celsius pathway. Our strategy to reduce Scope 1 and 2 emissions includes several pathways including site energy efficiency improvements, conversion from coal to natural gas, renewable biomass energy, biogas utilization from anaerobic wastewater treatment, on-site solar, and renewable electricity procurement. We have led productive, company-wide conversations around other environmental impact reduction objectives, as well as collaboration with our customers around supply chain (Scope 3) emissions. We have worked significantly to divert waste from landfill, including 13 facilities at zero-waste status. Better understanding the ways to measure and reduce the carbon emissions of our agricultural suppliers is another way we're striving to reduce our overall environmental impact. We continue to work with our agricultural and non-agricultural suppliers to improve sustainability across our supply chain and deliver on the expectations of our stakeholders. We use Sustainable Agriculture Initiative ("SAI") Platform protocols to evaluate where we source crops and for our goals of sustainable agriculture. Our plant-based proteins were also recognized for sustainability by the World Plant Based Awards in 2022. Ingredion is committed to operating with integrity and maintaining high ethical standards everywhere we do business. We recognize the rights of all people to fair and decent work, clean water, and to be treated with dignity and respect. As a signatory to the Global Compact, we are committed to aligning our global operations with universally recognized principles on human rights, labor, anti- corruption, and the environment.

## W-FB0.1a/W-AC0.1a

(W-FB0.1a/W-AC0.1a) Which activities in the food, beverage, and tobacco and/or agricultural commodities sectors does your organization engage in?

Processing/Manufacturing

## W<sub>0.2</sub>

### (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, 2022	December 31, 2022

#### W<sub>0.3</sub>

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

Brazil

Canada

China

Colombia



Germany

Malaysia

Mexico

Pakistan

Peru

Republic of Korea

Thailand

United Kingdom of Great Britain and Northern Ireland

United States of America

## W<sub>0.4</sub>

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

USD

## W<sub>0.5</sub>

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

Companies, entities or groups over which operational control is exercised

## W<sub>0.6</sub>

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

Yes

### W0.6a

#### (W0.6a) Please report the exclusions.

Exclusion	Please explain
Non-manufacturing facilities not co-located at manufacturing sites	Water use is not significant at these sites compared to manufacturing locations. In most cases, water is provided through the lease and managed in multi-tenant buildings by a landlord or property manager. Using standard factors per worker, withdrawals from non-manufacturing locations are estimated to total <0.008% of Ingredion's total withdrawals in 2022.
A leased, 25-acre farm used primarily for research and development	Water use is not significant compared to manufacturing locations. The farm is not irrigated and relies on rainwater. Water use is estimated to be <0.0002% of Ingredion's total water withdrawals.
Facilities that were acquired during 2022 and did not operate as	We allow newly acquired facilities one year to understand our systems and expectations around reporting. These facilities will be integrated into Ingredion's reporting systems and reported in future years. In 2022 Ingredion had two acquisitions that are excluded: Ingredion completed



Ingredion for the entire	the acquisition of a manufacturing facility located in Ahmedabad, India
year	and in Nashik, India. These facilities will be reported on in our 2023
	disclosure.

## W0.7

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

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	US4571871023

## W1. Current state

## W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Vital	We use fresh water in our direct processes and for boiler feed water to make steam necessary for our manufacturing operations. Sufficient quantities of fresh water are needed for our operations and the quality is important but not vital because most of our facilities treat incoming water prior to use. Good quality freshwater is a competitive advantage because in-plant treatment costs, prior to use are reduced. Future freshwater dependency for our direct operations is expected to continue to be important because water is an integral raw material in our operations. Sufficient quantities of indirect use, good quality freshwater used for irrigation is rated as vital because agricultural products are a critical raw material in our supply chain. Access to adequate quantities of fresh water through either direct rainfall or irrigation is critical for crop yield. Future freshwater dependency for our indirect use (supply chain) will continue to be vital because our raw material agriculture products are dependent on freshwater availability.



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## W-FB1.1a/W-AC1.1a

(W-FB1.1a/W-AC1.1a) 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
Maize/corn	61-80	Sourced	Corn, primarily yellow dent, is the primary basic raw material we use to produce starches and sweeteners. We contract directly with growers for some of our specialty grains such as waxy and high amylose corn. In other cases, we purchase corn as a commodity through brokers and do not have direct contact with growers. Corn comprises approximately 74% of our crop usage globally, while cassava makes up an additional 8%. The remaining mix is comprised



			of multiple crops such as potato, rice, pulses, stevia, and blueberries, etc
Other crop commodity, please specify Cassava	Less than 10%	Sourced	Cassava root (i.e., tapioca) is sourced from growers and used to produce tapioca starches at our manufacturing locations in the Asia-Pacific region, Brazil and Colombia. Cassava comprises approximately 8% of our crop usage globally, while corn is the majority at 74%. The remaining mix is comprised of multiple crops such as potato, rice, pulses, stevia, and blueberries, etc.

## W1.2

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

	% of	Frequency of	Method of	Please explain
	sites/facilities/operations	measurement	measurement	
Water withdrawals – total volumes	100%	Monthly	Total water withdrawals are measured using various methods depending on the site, including direct measurement (e.g., flow meters) or mass balances. Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. 100% of sites are monitored for this aspect.	Water withdrawal rates are important to our operational stability, cost structure and sustainability goals. This will continue to be relevant into the future. Tracking and reducing water withdrawal is one of our company sustainability goals.
Water withdrawals – volumes by source	100%	Monthly	Water withdrawals by source are measured using various methods	Water withdrawal volumes by source, including municipal, groundwater and



			depending on the site, including direct measurement (e.g., flow meters) or mass balances. Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. 100% of sites are monitored for this aspect.	surface water, are important to understand due to potential impacts to the local environment, as well as potential risk from drought or changing regulations. This will continue to be a relevant aspect into the future.
Water withdrawals quality	100%	Monthly	Water quality testing for potable water parameters occurs a minimum of annually. Measurement and analysis are in accordance with standard methods as specified in site permits and often in accordance with the World Health Organization (WHO) guidelines. WHO includes recommended limits on a variety of parameters including metals (e.g., arsenic, barium, chromium), organics (e.g., benzene, toluene,	solutions provider, understanding the quality of our process water is



			xylene) and other	
			parameters.	
Water discharges – total volumes	100%	Monthly	Water discharge total volumes are measured using various methods depending on the site and may include direct measurement or mass balance. Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. 100% of sites are monitored for this aspect.	Monitoring discharges by volume and source is important to understanding risks and vulnerabilities, as well as cost control. This will continue to be a relevant aspect into the future.
Water discharges – volumes by destination	100%	Monthly	Water discharge total volumes are measured using various methods depending on the site and may include direct measurement or mass balance. Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. 100% of sites are monitored for this aspect.	Monitoring discharges by destination and volume is important to understanding potential impact to the environment as well as the potential impact of emerging regulations.
Water discharges – volumes by treatment method	100%	Monthly	Water discharge volumes by treatment method are measured using various	Monitoring water discharge volume by treatment method along with treatment



			methods depending on the site and may include direct measurement or mass balance. Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. 100% of sites are monitored for this aspect.	efficiency is necessary to make Scope 1 CO2 emission estimates, and to understand potential offsite impacts as well as potential impact of emerging regulations. This will continue to be relevant into the future.
Water discharge quality – by standard effluent parameters	100%	Monthly	Each manufacturing site enters monthly data into a corporate database. Water effluent discharge parameters are measured in accordance with site-specific regulations and follow standard lab testing procedures. Most permits require monitoring of wastewater discharge flow rates, and effluent quality for biological oxygen demand, total solids, pH and other parameters.	We monitor and track standard effluent parameters as a measure of plant efficiency; for regulatory compliance; and, in addition to discharge volume and destination, to understand potential impacts to the local environment. This will continue to be a relevant aspect into the future. In addition, we have set a target to reduce Chemical Oxygen Demand 10% from our wastewater discharges by the end of 2030.
Water discharge quality – emissions to	26-50	Monthly	Priority substances are measured in	Our sites track and monitor the concentration of



water (nitrates,			accordance with	priority substances
phosphates,			site-specific	at a facility level.
pesticides,			permit	We currently do
and/or other			requirements at	not report a
priority			each site. Limits	corporate
substances)			in site permits for	inventory for
			direct discharge	priority
			are set based on	substances. This
			regulatory (e.g.,	will continue to be
			NPDES permit)	a relevant aspect
			requirements and	into the future.
			to not significantly	
			change quality	
			objectives of the	
			receiving stream.	
			Permit limits for	
			discharge to	
			sewer systems for	
			additional	
			treatment are set	
			by the sewer	
			authority. 100% of	
			sites are	
			monitored for this	
			aspect.	
Water discharge	100%	Monthly	Temperature is	We track and
quality –	1.00%	, morning	measured in	monitor the
temperature			accordance with	discharge
tomporataro			site-specific	temperature of
			permit	non-contact
			requirements at	cooling water and
			each site.	other wastewater,
			Temperature	as required by
			limits in site	regulatory permit,
			permits for direct	on monthly basis.
			discharge are set	This will continue
			based on	to be a relevant
			regulatory (e.g.,	aspect into the
			NPDES permit)	future.
			requirements to	iului6.
			not significantly	
			-	
			change the ambient	
			ambient	
			tomporative of	
			temperature of the receiving	



			stream (limits	
			may be seasonal). Permit limits for discharge to sewer systems for additional treatment are set by the sewer authority and are generally in the 35 to 40 °C range. 100% of sites are monitored for this aspect.	
Water consumption – total volume	100%	Monthly	Each of our manufacturing sites enters this data into a corporate database on a monthly schedule. Water consumption is measured through various methods including direct readings (e.g., flow meters) and mass balances. 100% of sites are monitored for this aspect.	on our company sustainability goals. This will continue to be relevant into the future.
Water recycled/reused	76-99	Monthly	We tracked water recycling/reuse at approximately 82% of our sites in 2022. We currently measure recycling in a variety of ways on a monthly schedule,	little guidance on what should be considered water recycling/reuse in our industry because reuse of



			including direct	corn wet mills
			measurement	operate. For
			(e.g. flow meters)	example, water
			or mass balance	from our starch
			calculations.	washing process
				is reused in
				multiple
				processing steps.
				However, our
				definition and
				tracking
				categories
				emphasize water
				recycled and
				reused that is not
				part of our
				traditional design.
				This creates more
				value to us
				through easier
				identification of
				opportunities and
				best practices.
				Tracking new
				water
				recycling/reuse,
				beyond that
				integral to site
				operations will be
				a relevant aspect
				into the future.
The provision of	100%	Yearly	The Sedex	We are dedicated
fully-functioning,			Members Ethical	to the welfare of
safely managed			Trade Audit	our employees
WASH services			(SMETA) includes	and business
to all workers			an evaluation of	associates; and,
			WASH services.	therefore, this
			100% of sites	aspect will
			have been	continue to be
			audited to	relevant.
			SMETA, and new	
			acquisitions will	
			continue to be	
			folded into our	
			existing program	
			chisting program	



as they are
integrated into the
business. SMETA
audits are
conducted at
least every three
years for each of
our manufacturing
sites by an
independent,
third-party auditor
using the criteria
mandated by
SEDEX. 100% of
sites are
monitored for this
aspect.

## W1.2b

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

	Volume (megaliters/ye ar)	Compariso n with previous reporting year	Primary reason for comparison with previous reporting year		Primary reason for forecast	Please explain
Total withdrawal s	116,584	About the same	Increase/decrea se in business activity	Lower	Increase/decrea se in efficiency	In comparison to 2021, our 2022 total withdrawals were within +/-10%. We consider +/-10 % variance to be about the same when making year over year comparison



Total	104,113	About the	Increase/decrea	Lower	Increase/decrea	s. The volume of water withdrawn remained about the same. Operational efficiencies improved slightly as production volumes increased from pandemic lows. The numbers for withdrawal, discharges and consumptio n balance. Total water withdrawals are anticipated to decrease as we approach 2030 and our water reduction strategy is achieved. In
discharges	107,110	same	se in business activity	20001	se in efficiency	comparison to 2021, our 2022 total discharges were within +/-10%. We consider +/- 10 %



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				variance to
				be about
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				year
				comparison
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				volume of
				water
				discharged
				remained
				about the
				same.
				Operational
				efficiencies
				improved
				slightly as
				production
				volumes
				increased
				from
				pandemic
				lows.
				The
				numbers for
				withdrawal,
				discharges
				and
				consumptio
				n balance.
				Total water
				discharges
				are
				anticipated
				to decrease
				as we
				approach
				2030 and
				our water
				reduction
				strategy is
				achieved.
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Total	12,471	About the	Increase/decrea	Lower	Increase/decrea	In
consumptio		same	se in business		se in efficiency	comparison
n			activity		,	to 2021, our
			,			2022 total
						consumptio
						n was
						within +/-
						10%. We
						consider +/-
						10 %
						variance to
						be about
						the same
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						year comparison
						s. The
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						about the
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						Operational efficiencies
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			anticipated
			to decrease
			as we
			approach
			2030 and
			our water
			reduction
			strategy is
			achieved.

## W1.2d

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

	Withdraw als are from areas with water stress	% withdra wn from areas with water stress	Compari son with previous reporting year	Primary reason for comparison with previous reporting year		Primary reason for forecast	Identificat ion tool	Please explain
Ro w 1	Yes	1-10	About the same	Increase/decr ease in business activity	Lower	Increase/decr ease in efficiency	WWF Water Risk Filter	To determine if our manufactu ring sites are located in water stressed areas, we mapped our locations on the WWF Water Risk Filter. Approxima tely 5 percent of our total water intake as



				indicated
				by the
				WWF
				Water Risk
				Filter was
				identified
				from areas
				with either:
				1) annual
				average
				monthly
				net water
				depletion
				equal to or
				greater
				than 75%,
				or 2)
				seasonal
				water
				depletion
				equal to or
				greater
				than 75%
				(one or
				more
				months).
				In
				compariso
				n to 2021,
				our 2022
				total
				discharges
				were
				within +/-
				10%. We
				consider
				+/-10 %
				variance to
				be about
				the same
				when
				making
				year over
				year
				compariso



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## W-FB1.2e/W-AC1.2e

(W-FB1.2e/W-AC1.2e) For each commodity reported in question W-FB1.1a/W-AC1.1a, 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
Maize/corn	Not applicable	Yes	We do not produce maize (corn) but rather source it from various farms across the globe. To determine if the corn we source is grown in water stressed basins, we identified the region where our sourced corn is grown and mapped it using the WWF Water Risk Filter from areas with either: 1) annual average monthly net water depletion equal to or greater than 75%, or 2) seasonal water depletion equal to or greater than 75% (one or more months)
Other commodities from W-FB1.1a/W- AC1.1a, please specify Cassava	Not applicable	Yes	We do not produce cassava but rather source it from various farms primarily in Thailand, but also smaller amounts from Colombia. To determine if the cassava we source is grown in water stressed basins, we identified the region where our sourced cassava is grown and mapped it using the WWF Water Risk Filter from areas with either: 1) annual average monthly net water depletion equal to or greater than 75%, or 2) seasonal water depletion equal to or greater than 75% (one or more months)

## W-FB1.2g/W-AC1.2g

(W-FB1.2g/W-AC1.2g) What proportion of the sourced agricultural commodities reported in W-FB1.1a/W-AC1.1a originate from areas with water stress?



Agricultural commodities	% of total agricultural commodity sourced from areas with water stress	Please explain
Maize/corn	1-10	We assessed the locations of our corn suppliers using the WWF Water Risk Filter Map and identified that <10% of our purchased maize was grown in areas having either annual average monthly net water depletion equal to or greater than 75%, or seasonal water depletion equal to or greater than 75% (one or months). The percentage was calculated using the total metric tons of corn sourced from areas meeting the above criteria. 60 percent of the identified crops in water stressed areas were from areas with seasonal water depletion (one or months), while 40% were from areas with annual average water depletion. As we continue to raise awareness around this metric, we anticipate maintaining or reducing this trend.
Other sourced commodities from W-FB1.2e/W-AC1.2e, please specify Cassava	51-75	We source cassava from various farms primarily in Thailand, but also smaller amounts from Colombia. Central Thailand experiences a typical tropical Savannah wet/dry seasonal climate. As such there are seasonal periods with little rain fall as well as periods with abundant rainfall. These periods generally fall in the same months each year and farmers compensate for these periods as part of their normal operations, mitigating risk to our business. We assessed the locations of our cassava suppliers using the WWF Water Risk Filter Map and identified that 51-75% of cassava was sourced from areas the WWF classifies as having seasonal water depletion (equal to or greater than 75% in one or months). We did not identify any Cassava sourced from areas having an annual average monthly net water depletion equal to or greater than 75%. As we continue to raise awareness around this metric, we anticipate maintaining or reducing this trend when we select areas to source cassava.

## W1.2h

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



	Relevanc e	Volume (megaliters/year )	Compariso n with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	73,716	About the same	Increase/decreas e in business activity	Fresh surface water is measured at all our sites and is relevant to our operations because we use fresh water in our processes and for boiler feed water to make steam necessary for our manufacturing operations. In comparison to 2021, our total 2022 withdrawal of fresh water was approximately 5% higher. We consider +/- 10% variance to be about the same when making year over year comparisons. Water withdrawals remained about the same while our production increased as



			we continue to recover from the slowdown related to the COVID-19 pandemic. Operational efficiencies increased as customer demand increased.
Brackish surface water/Seawater	Not relevant		Ingredion does not use brackish surface water/seawate r and we do not expect this to change in the future. Brackish water is not an important aspect of our operations as it would only be used if no other water sources were available. Future use of this water source is also not expected to be important due to the difficulty to treat the water to an acceptable level for food quality.



Groundwater – renewable	Relevant	18,110	About the same	Increase/decreas e in business activity	Groundwater withdrawal volumes are measured at all sites and we have verified approximately 90% of our total groundwater is renewable. We believe the remaining 10% is also renewable but are seeking an authoritative reference. In comparison to 2021, our total 2022 withdrawal of renewable groundwater was approximately 3% less. We consider +/- 10% variance to be about the same when making year over year comparisons.
Groundwater – non-renewable	Not relevant				Ingredion does not use Groundwaternon-renewable. Sites that use groundwater are located within renewable



					groundwater sources. We do not anticipate this to change in the future.
Produced/Entraine d water	Not relevant				The moisture content of our agricultural raw materials represents <1.5% of the water intake and is not considered relevant when considering other water intake sources.
Third party sources	Relevant	24,758	About the same	Increase/decreas e in business activity	Water supplied by third party sources is measured at all our sites (where present) and is relevant to our operations because we use fresh water in our processes and for boiler feed water to make steam necessary for our manufacturing operations. In comparison to 2021, our total 2022 withdrawal of



		water from
		third parties
		was 7%
		higher. We
		consider +/-
		10% variance
		to be about
		the same
		when making
		year over year
		comparisons.

## W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	75,799	About the same	Increase/decrease in business activity	Discharge to fresh surface water is relevant at our sites that treat wastewater for discharge in accordance with regulations. Stormwater runoff from many sites is also discharged to fresh surface water. In comparison to 2021, our total 2022 discharges were up approximately 5%. Water intensity remained about the same while our production increased slightly



					as we continue to recover from the slowdown related to the COVID-19 pandemic. We consider +/-10% variance to be about the same when making year over year comparisons. We anticipate that the discharge surface water will remain about the same in future years as efficiencies in water use may offset increased production rates.
Brackish surface water/seawater	Not relevant				Discharge to brackish surface water/seawater is not relevant because Ingredion does not discharge to brackish surface water/seawater. We do not anticipate this changing in the future.
Groundwater	Relevant	2,915	Higher	Increase/decrease in business activity	We do not discharge water directly to groundwater through injection wells. The volume discharged to groundwater represents irrigation of land



Third party	Palayant	25 300	About the	Increase/decrease	both onsite and offsite. In comparison to 2021, 2022 discharges were approximately 10% higher likely due to increased production.  Overall, irrigation is a small percentage of our water discharge volume. We consider +/-10% variance to be about the same when making year over year comparisons. We anticipate that the discharge volume to groundwater will remain about the same in future years as efficiencies in water use may offset increased production rates.
Third-party destinations	Relevant	25,399	About the same	Increase/decrease in business activity	Third party water source volumes, generally municipal water suppliers, are measured at all applicable sites. In comparison to 2021, our 2022 water from third party sources was within +/- 10% of 2021.



			We consider +/-
			10% variance to
			be about the
			same when
			making year over
			year
			comparisons. We
			anticipate that
			the discharge
			volume to third
			parties will
			remain about the
			same in future
			years as
			efficiencies in
			water use may
			offset increased
			production rates.
 -	<u> </u>	<u> </u>	<u> </u>

## W1.2j

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

	Relevan ce of treatme nt level to dischar ge	Volume (megaliters/y ear)	Comparis on of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/opera tions this volume applies to	Please explain
Tertiary treatment	Relevant	2,829	About the same	Increase/decre ase in business activity	1-10	Discharge of water treated by tertiary treatment increased approximat ely 1% between 2022 and 2021. Tertiary treatment



		includes
		membrane
		s for salt
		removal,
		Dissolved
		Air
		Floatation
		(DAF) units
		for
		precipitatin
		g
		Phosphoro
		us, and
		additional
		chemical
		dosing to
		remove
		sulfates
		after
		anaerobic
		treatment.
		These
		facilities
		also have
		primary
		and
		secondary
		treatment
		systems.
		Ingredion
		considers
		changes
		with +/-
		10% to be
		about the
		same.
		Secondary
		treatment
		includes
		aerobic
		and
		anaerobic
		treatment.



Coosinda	Dolovert	15 060	Lliada c ::	In ove en = /-l = =	44 50	Diaghana
Secondar	Relevant	15,263	Higher	Increase/decre	41-50	Discharge
У				ase in		of water
treatment				business		treated by
				activity		secondary
						treatment
						increased
						by 12% in
						2022 vs
						2021.
						Secondary
						treatment
						includes
						aerobic or
						anaerobic
						digestion
						facilities, or
						а
						combinatio
						n of both.
						Ingredion
						considers
						changes
						with +/-
						10% to be
						about the
						same.
Primary	Relevant	9,023	About the	Increase/decre	31-40	Discharge
treatment			same	ase in		of water
only				business		treated by
				activity		primary
						treatment
						decreased
						by 1% in
						2022 vs
						2021.
						Primary
						treatment
						includes
						рН
						adjustment
						and
						removable
						of settle-
						able solids.
						Ingredion
						greaton



Discharg e to the natural environm ent without treatment	Not relevant					considers changes with +/- 10% to be about the same.  We do not discharge process wastewater to the environme nt without treatment.
Discharg e to a third party without treatment	Relevant	42	Higher	Increase/decre ase in efficiency	1-10	Discharge of untreated water to a third party treatment facility increased by 12% in 2022 vs 2021. Ingredion facilities that do not have onsite wastewater treatment will discharge process waste water to local municipalities for treatment. Our discharges conform to regulatory



						limits for pollutants set forth by the local jurisdiction. Ingredion considers changes with +/- 10% to be about the same.
Other	Relevant	76,955	About the same	Increase/decre ase in business activity	11-20	This represents non-contact single pass cooling water that is treated, as applicable, to meet local regulatory requiremen ts. Discharge of non-contact single pass cooling water increased by 5% in 2022 vs 2021. Ingredion considers changes with +/-10% to be about the same.



## W1.2k

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

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	Please explain
Row 1	0	Nitrates Phosphates	Ingredion monitors and track priority effluent parameters at a local facility level and we do not roll up this information into a corporate inventory at present.

## W1.3

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

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	7,946,000,000	116,584	68,156.8654360804	Ingredion has water reduction goals to reduce water consumption by 2030 vs a 2019 base year. It is anticipated that our water withdrawal efficiency will increase as we make significant progress towards our goals.

## W-FB1.3/W-AC1.3

## (W-FB1.3/W-AC1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a/W-AC1.1a?

al		Water intensity information for this sourced commodity is collected/calculated	Please explain
Maize/cor n	Not applicable	Yes	We do not produce agricultural commodities. For sourced specialty corn in the US, we collect water intensity information through the Field to Market program based on data entered by our suppliers. Field to Market uses this data to generate an Irrigation Water Use metric to assess the overall efficiency of irrigation water applied in terms of



			incremental crop yield improvement. This metric was designed to consider the water factor most directly under the grower's control – the efficiency of water supplied through irrigation. The grower can compare their efficiency against other growers and regional averages to make improvements. Ingredion is also a member of the SAI Platform which is in the process of developing a metrics module to collect on-farm data. When finalized, Ingredion anticipates utilizing it globally with our growers. In other cases, we purchase corn as a commodity through brokers and do not have direct contact with growers or access to this information. As we look to the future, as part of our commitment to the AgWater challenge we commit to demonstrating our progress through the measurement and reporting of water quality and water efficiency improvements on an annual basis.
Other commoditi es from W-FB1.1a/W-AC1.1a, please specify Cassav a	Not applicable	Yes	We do not produce agricultural commodities. We have estimated the water intensity of cassava based on published data. A literature review (https://www.thaiscience.info/Journals/Article/CMJS/10990726.pdf) indicated that the average water intensity is approximately 399-599 m3/ton of cassava grown in Thailand which produces ~70% of the world market share of cassava. Approximately 80% of the water is from precipitation.  We are seeking partners similar to Field to Market in locations outside the US to assist with more specific data collection from Cassava suppliers. We anticipate having information within the next two years. Ingredion is also a member of the SAI Platform and they are in the process of developing a module to collect on-farm data. We anticipate utilizing this mechanism to collect on-farm data from our cassava growers. We train growers through the Thailand Model Farmer program to be more efficient users of fertilizers and pesticides, which has a positive impact on runoff from rainwater that might get into local waterways. As we look to the future, as part of our commitment to the AgWater challenge we commit to demonstrating our progress through the measurement and reporting of water quality and water efficiency improvements on an annual basis.



## W-FB1.3b/W-AC1.3b

(W-FB1.3b/W-AC1.3b) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3/W-AC1.3 that you source.

### **Agricultural commodities**

Maize/corn

#### Water intensity value (m3/denominator)

0.11

#### **Numerator: Water aspect**

Other, please specify Acre-inch

#### Denominator

Other, please specify
Thousand Bushels of Corn

#### Comparison with previous reporting year

About the same

#### Please explain

Water Intensity is calculated from data collected by suppliers in the Field to Market program. Volume is calculated as the depth of irrigated water applied across the total irrigated field areas ratioed to the total field acreage in the program (irrigated and non-irrigated) expressed as acre-inch per thousand corn bushels grown (0.11 acre-inch/thousand bushels). Of the total acres in the data collection program, ~3.6% were irrigated. The average volume of water/acre was lower in 2022 compared to 2021 due to different weather conditions in the irrigated fields and improvements in soil health due to better practices meaning more resilience and less irrigating. We anticipate that water use for Field to Market suppliers will decrease over time as a result of customer collaboration and suppliers being able to measure and compare irrigation efficiencies. Further to this, our commitment to the AgWater challenge has set the stage for deeper collaboration within our agricultural supply chain, which includes utilizing the Farm Sustainability Assessment (FSA) to identify region and crop-specific practices such as those that promote soil health, improve nutrient management, and reduce irrigation.

#### **Agricultural commodities**

Other sourced commodities from W-FB1.3/W-AC1.3, please specify Cassava

#### Water intensity value (m3/denominator)

399



#### **Numerator: Water aspect**

Total water consumption

#### Denominator

Tons

#### Comparison with previous reporting year

About the same

#### Please explain

We do not have supplier specific quantitative information for this commodity. However, a literature review\* indicated that the average water intensity of cassava is approximately 399 m3/ton of cassava grown in Thailand. Thailand produces approximately 70% of the world market share of cassava. The majority (approximately 80%) of the water is from precipitation. While, we do not have supplier specific water intensity data, cassava growers are taught the importance of water management through the Model Farmer Program. We anticipate that water use will decrease over time as a result of education, awareness, and implementation of water management strategies. Further to this, our commitment to the AgWater challenge has set the stage for deeper collaboration within our agricultural supply chain, which includes utilizing the Farm Sustainability Assessment (FSA) to identify region and crop-specific practices such as those that promote soil health, improve nutrient management, and reduce irrigation. \*(https://www.thaiscience.info/Journals/Article/CMJS/10990726.pdf)

### W1.4

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

	Products contain hazardous substances	Comment
Row 1	No	Ingredion's product portfolio does not contain any hazardous substance compounds.

#### W1.5

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

	Engagement
Suppliers	Yes
Other value chain partners (e.g., customers)	Yes

### W1.5a

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

#### Row 1



#### Assessment of supplier impact

Yes, we assess the impact of our suppliers

#### Considered in assessment

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

# Number of suppliers identified as having a substantive impact 20,000

# % of total suppliers identified as having a substantive impact 26-50

#### Please explain

We assess the water security impact of our diverse network of global farms. Given water stressors due to climate-change, it is critical to maintain a resilient agri-business supply chain and understand how our growers manage water resources - both consumption and quality.

We have a goal to sustainably source 100% of our Tier 1 priority crops (Corn, Cassava, Potatoes, Pulses, and Stevia) by the end of 2025. Through our sustainable sourcing program, we collect grower information on climate/water related issues and use it to evaluate the suppliers to source from and where to deploy resources to help drive improvements. As part of our commitment to the AgWater challenge we are ensuring a million acres of crops in our supply chain are under regenerative practices, particularly for growers in extremely high water-stress geographies.

#### W1.5b

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

	Suppliers have to meet specific water-related requirements	
Row	Yes, suppliers have to meet water-related requirements, but they are not included in our	
1	supplier contracts	

#### W1.5c

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

#### Water-related requirement

Complying with going beyond water-related regulatory requirements



# % of suppliers with a substantive impact required to comply with this waterrelated requirement

76-99

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

51-75

#### Mechanisms for monitoring compliance with this water-related requirement

Off-site third-party audit

Supplier self-assessment

Supplier scorecard or rating

#### Response to supplier non-compliance with this water-related requirement

Retain and engage

#### Comment

To qualify our corn as sustainable we utilize the Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment platform, or a benchmark program equivalent. The FSA platform acts as the starting point for identifying sustainability elements in our agricultural supply chain. The FSA is divided into three types of questions: Essential, Intermediate and Advanced and a negative response to any essential questions automatically disqualifies the farm from being considered sustainable. Recognizing that different global regions may face unique local challenges (Infrastructure, government policy, access to raw material inputs, economic challenges, etc), Ingredion may engage with suppliers who have not met the requirements set forth in the sustainability assessment process and help identify a pathway for improvement. At the end of 2022, 48% of our crops have been certified as sustainable - this represents approximately 55% of our farm suppliers.

## W1.5d

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

#### Type of engagement

Information collection

#### **Details of engagement**

Collect water management information at least annually from suppliers

#### % of suppliers by number

1-25

#### % of suppliers with a substantive impact

1-25

#### Rationale for your engagement



Water resilience related to agricultural operations have a material impact on our business and it is critical that we work to better understand our suppliers' practices around stewardship. The purpose of this engagement is to encourage the uptake of sustainable agriculture practices that help reduce climate change and water stress. Through Field to Market we track water and carbon footprint of farm-level activity and can provide farmers with a comparison of their metrics versus other farmers in their areas. We collect water and carbon emission information annually on our growers using Field to Market's Fieldprint Calculator in conjunction with data collected via Ingredion's "Sell your corn" web platform and our Ag Software partner MyFarms. The environmental data collected through this platform will allow us to determine the positive environmental impacts (e.g. lower carbon emissions, lower water use) of our sustainable agriculture efforts. By having accurate, representative, and transparent farm-level data Ingredion can strategically pursue opportunities to collaborate on projects that deliver tangible Water and CO2 reductions as part of our overall sustainable agriculture program. Further to this, through our sustainable sourcing program, we collect grower information on water management utilizing the Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment platform. As part of the sustainability assessment, the survey requires our suppliers to disclose essential elements of their water management strategy. We use this information to evaluate which suppliers we will source from and where to deploy resources to help drive improvements.

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

We collect water intensity information from our agricultural suppliers through the Field to Market program based on data entered by our suppliers. Field to Market uses this data to generate an Irrigation Water Use metric to assess the overall efficiency of irrigation water applied in terms of incremental crop yield improvement. This metric was designed to consider the water factor most directly under the grower's control – the efficiency of water supplied through irrigation. The grower can compare their efficiency against other growers and regional averages to make improvements. In 2022, Ingredion collected field level quantitative data on fields producing 691,727 metric tons of our 10.6 million metric tons global footprint. We will continue to track trends over time, as growing conditions vary greatly year to year. We anticipate that water use for Field to Market suppliers will decrease over time as a result of customer collaboration and suppliers being able to measure and compare irrigation efficiencies. This is the ultimate measure of success. Going forward we also plan to increase data collection with increased specialty contracting and data collection through a sourcing partner.

As part of our commitment to the AgWater Initiative we aim to demonstrate our progress through the measurement and reporting of water quality and water efficiency improvements on an annual basis. We aim to determine effective and appropriate water metrics for all of our sourcing regions in the coming years.

#### Comment



### W1.5e

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

#### Type of stakeholder

Customers

#### Type of engagement

Innovation & collaboration

#### **Details of engagement**

Collaborate with stakeholders on innovations to reduce water impacts in products and services

#### Rationale for your engagement

We continue to see regenerative agriculture as an important component of our sustainability strategy, helping both to build more climate resilient farms in our supply chain, but also as a mechanism to reduce the agricultural Scope 3 emissions of both Ingredion and our customers. As such, we continued to look for opportunities for new or expanded regenerative agriculture projects with our growers, and customers.

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

In 2022, Ingredion once again partnered with Unilever and fertilizer manufacturer Yara on a program to optimize fertilizer use to reduce CO2e emissions, and maximize grower yields. Growers in five locations were provided with tailored fertilizer programs meant to optimize the timing and type of fertilizer used on their corn fields. The purpose of the custom plan is to allow growers to reduce the amount of fertilizer used by reducing losses due to volatilization and denitrification. This will allow level-to-increased yields versus typical practices while maintaining input margins for the growers. Based upon the data from the trial locations, growers using the new fertilizer products saw a 27.5% reduction in CO2E based on calculations from the cool farm tool, and a 10.3% increase in yield vs baseline and check fields.

On top of that, Ingredion has worked with other customers to scope out regenerative agriculture projects in North and South America which are expected to launch in 2023 and beyond. Some of these projects will look to leverage further collaboration with SWOF and grant funding from the US Department of Agriculture's (USDA) Partnership for Climate-Smart Commodities program.

Type of stakeholder

Customers

Type of engagement



#### Education / information sharing

#### **Details of engagement**

Share information about your products and relevant certification schemes

#### Rationale for your engagement

We engage with customers through CDP Supply Chain and with customers who wanted to better understand the water footprint of our operations associated with the manufacturing of their products. The size of engagement represents some of our larger customers.

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

Most of the impact between Ingredion and our customers has been to share information and raise awareness on our mutual goals toward mitigating climate risk. Many of our customers are just asking for data. In other cases, customers are interested in identifying opportunities to reduce that carbon footprint. For example, Ingredion has mapped our agricultural supply chain relative to sourcing for various customers and we continue to work and share information with respect to improvement projects at the farm level. We measure success through positive feedback from our customers.

### Type of stakeholder

Other, please specify NGO - World Wildlife Fund

#### Type of engagement

Innovation & collaboration

#### **Details of engagement**

Collaborate with stakeholders on innovations to reduce water impacts in products and services

#### Rationale for your engagement

In 2021, Ingredion became part of the new cohort of the Ceres and World Wildlife Fund's AgWater Challenge, which is designed to promote more sustainable water use across agricultural supply chains. Ingredion's commitment includes making sure a million acres of crops in our supply chain are under regenerative practices, particularly for growers in extremely high water-stress geographies. We see these regenerative practices as the primary mechanism for promoting sustainable water management among our farmer suppliers.

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

In 2022, we progressed to having over 50,000 acres in regenerative agriculture projects, mostly through our collaboration with PepsiCo. As we continue to scale up our efforts, we are aspiring to have more than 100,000 acres under regenerative programs by the end of 2023. This will keep us on track to meet our 2030 AgWater Challenge commitments.



# W2. Business impacts

# W2.1

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

# W2.2

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

	Water-related regulatory violations	Comment
Row 1	No	In 2022, Ingredion was not subject to any substantive fines/enforcement orders/ penalties

# **W3. Procedures**

# W3.1

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

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified
Row 1	Yes, we identify and classify our potential water pollutants	Ingredion performs a multipronged assessment to identify water pollutants. At a local level, each of our manufacturing facilities have qualified EH&S professionals who assess the impact of jurisdictional regulatory requirements and report up corporately through regional level environmental directors.  At a corporate level, our Corporate Water/Wastewater Engineering Excellence team provides support to all sites in water/wastewater materiality. In addition to having membership from our local manufacturing facilities, corporate participation includes members of our global EH&S team and corporate sustainability teams. The Engineering Excellence team identifies and classifies hazards that are common across our sites. Our teams will also utilize external trade associations (such as the Corn Refiners Association), and consultancy services to assist in identifying and classifying pollutants.  An example of a guiding policy we will use is from our Canadian sites, which are required to comply with the Provincial Water Quality



Objectives (PWQO) which establishes water quality criteria and thresholds for pollutants. A metric defined by the PWQO that is material to our operations is Phosphorous – sites must ensure these limits are met to avoid adversely impacting the receiving waterway. These metrics are also reflected on the facility's operational permit.

## W3.1a

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

#### Water pollutant category

Other nutrients and oxygen demanding pollutants

#### Description of water pollutant and potential impacts

Discharge of organic material from waste effluents can lead to a reduction of dissolved oxygen (DO) in the receiving watercourse, thus leading to destruction/harm of the local water environment. Organic wastes are measured as Chemical Oxygen Demand (COD) or Biological Oxygen Demand (BOD). COD/BOD waste is created through many different pathways such as; spills and leaks, non-condensable residues from the evaporation process, equipment cleaning/sanitization processes, and from process filtration backwashes.

#### Value chain stage

Direct operations

#### Actions and procedures to minimize adverse impacts

Resource recovery

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

#### Please explain

Ingredion requires all sites to comply with local regulatory requirements as it relates to process wastewater discharges. Many Ingredion facilities have on-site primary, secondary, and/or tertiary treatment facilities to ensure discharged COD is within regulatory requirements. In 2021 Ingredion has also initiated a new sustainability goal to reduce COD discharges from the process by 10% vs a 2019 base year. Improving the resource recovery efficiency of an operations will reduce the COD loading from the facility.

## Water pollutant category

Nitrates

#### Description of water pollutant and potential impacts



Nitrogen is a macronutrient for corn and adequate Nitrogen availability is critical to reach optimal yield potential. Nitrogen is broken down to nitrate ions that are taken up by the plant. However, when the availability of nitrogen compounds exceed consumption by the plants, excess nitrogen carries into the environment and can cause a rapid increase in algal blooms which deplete oxygen in water and can create costal dead zones. Nitrogen is also emitted into the atmosphere from the housing, storage, and spreading of synthetic fertilizers and it acts as a base for emissions of nitrous oxide (a greenhouse gas).

#### Value chain stage

Supply chain

#### Actions and procedures to minimize adverse impacts

Provision of best practice instructions on product use

#### Please explain

As part of our overall regenerative agriculture program, Ingredion works with our stakeholders to promote practices that increase the resiliency of our farmers and our agricultural supply chain. As a founding member of SAI Platform's regenerative agriculture program, we continue to work as part of an industry team building and shaping a regenerative agriculture standard for the food and beverage industry. We see this alignment as critical to progressing against our goals.

As an example: in 2022, Ingredion partnered with Unilever and fertilizer manufacturer Yara on a program to optimize fertilizer use to reduce

CO2e emissions and maximize grower yields. Growers in five locations were provided with tailored fertilizer programs meant to optimize the

timing and type of fertilizer used on their corn fields. The purpose of the custom plan is to allow growers to reduce the amount of fertilizer used

by reducing losses due to volatilization and denitrification. This will allow level-to-increased yields versus typical practices while maintaining input margins for the growers. Based upon the data from the trial locations, growers using the

new fertilizer products saw a 27.5% reduction of CO2e and a 10.3% yield increase vs baseline fields. Information learned in 2022 has helped Ingredion identify specific fertilizer programs to target for a larger scale rollout in 2023.

#### 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
Supply chain
Other stages of the value chain

#### Coverage

Full

#### Risk assessment procedure

Water risks are assessed as a standalone issue

#### 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 International methodologies and standards Databases Other

#### Tools and methods used

**SEDEX** 

WRI Aqueduct

WWF Water Risk Filter

**IPCC Climate Change Projections** 

Internal company methods

Materiality assessment

Other, please specify

Sustainable Agriculture Initiative (SAI) Farm Sustainability Assessment (FSA)

#### Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

#### Stakeholders considered

Customers

**Employees** 

Investors

Local communities

**NGOs** 

Regulators

Suppliers



#### Comment

At a corporate level, we use an Ensemble Tool comprised of multiple models, including WRI Aqueduct current Baseline Water Stress, WWF current Water Depletion, and WWF Basin Risk projected change in drought and flood occurrence. The ensemble tool assesses various aspects of water risk, at our operating facilities, surrounding communities, and agricultural supply chain. Scenarios including both current water stress and predicted changes in water stress to 2040, as well as predicted changes for the 2 degree C climate change scenario. To ensure our materiality aligns with our customers and investors we use external guidance material from sources such as the UN SDG's, CDP, GRI, and SAI as considerations.

At a local level we conduct a biennial internal water survey for sites to assess water risk at each of our facilities. Furthermore, each site is required to ensure their operations protect baseline water quality by ensuring that effluent streams are properly managed and treated to the required quality objectives set forth by local regulators. Influent water quality, and access to WASH services for all employees is integrated in our global safety and quality systems. Each facility complies with policies which require monitoring the quality of water inputs to ensure safe, clean, sanitized water for employee and product safety requirements. By assessing the capabilities to meet withdrawal and discharge quality objectives our sites have the information to identify a future risk mitigation strategy.

Ingredion considers customer and supply chain impacts due to potential disruptions in the transportation system in business continuity risk assessments. Flooding may preclude railroads operations or delay truck deliveries. The business continuity risk assessments consider the probability and likelihood of occurrence and the severity of the impact to customers.

We use the WWF Water Risk Filter to map the key supplier/grower locations to understand specific water stress and ecosystem stressors. We assess agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment to understand where we have water-related risks with growers, so we can implement programs to help address them.

#### W3.3b

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

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row	We assess water-	Our risk assessment	With our agricultural	At a local level, our
1	related risks globally on	process is a critical	suppliers, we continue	facilities will ensure
	an annual basis within	component for the	to work with SAI and	that they acquire the
	our direct	development of our	Field-to-Market to	necessary permits
	manufacturing	long-term	drive improvements in	and that they run
	operations using a	sustainability goals	farming practices that	operations to meet



comprehensive, multifaceted approach of both quantitative and qualitative tools, including the use of an Ensemble Risk Tool. The ensemble tool is comprised of multiple models, including WRI Aqueduct current Baseline Water Stress, WWF current Water Depletion, Aqueduct future change in water stress, and WWF Basin Risk projected change in drought and flood occurrence. The ensemble tool assesses various aspects of water risk, including both current water stress and predicted changes in water stress to 2040, as well as predicted changes for the 2 degree C climate change scenario. We have found that the combination of tools provides us a more reliable assessment and moderates the weaknesses inherent in some of the models. In addition, we conduct a biennial water surveys at the local level for all manufacturing sites. This internal survey is both quantitative and qualitative in nature and addresses contextual and stakeholders' issues. This combined approach allows us to

that support our All Life plan and are communicated in our annual Sustainability report. First, our goals need to meet the expectations of our investors and customers. Secondly, these sustainability goals guide our internal business teams priorities. In 2010-2020 Ingredion had a global, uniform reduction goal of 10%. However, when we created our new targets for 2030 we recognizing that we needs to consider individual stressors on local watersheds; this led us to publicly commit to a 30% reduction in water use for extremely high water-stress geographies. An outcome of this strategic response led our site level engineers, and our corporate sponsored Water Engineering Excellence team, to prioritize innovative water reduction initiatives in these locations. Our tools to assess water availability and quality are used as part of the due

diligence process of

any acquisition we

reduce impacts to water and protect ecosystem services. We engage with customers to tackle shared risks due to a sustainable agriproduct supply chain. In 2022 we collaborated with Pepsi to improve sustainable agriculture practices at Corn and Soy fields in our supply shed located in the Midwest United States. While our direct funding provided incentives for growers to implement projects with verified emission reductions, a USDA RCPP grant incentivized these growers to adapt water management practices that had quantifiable improvements in water quality and water quantity. We also participate with customers in the AgWater Challenge cohort sponsored by Ceres and the WWF. For us, this commitment includes implementing regenerative agriculture practices within our supply chain, including in high water stress

geographies.

the requirements set forth by local regulators. For risks that are more universal, such as the creation of our 2030 All Life Sustainability Goals governing our water reduction goals and sustainable agricultural sourcing, the decisions are made at a board level based on guidance from the Global Sustainability council.



assess risk both on a	consider. This	Another critical	
macro level as well as	assessment may	stakeholder is the	
"on the ground"	preclude a transaction	regulatory agencies in	
observations at the	based on future costs	the areas where we	
asset/site level.	of compliance, supply	operate. It is critical	
	chain risks, or	that our facilities	
	expected operational	operate within the	
	challenges due to an	constrains of an	
	unsecure water	environmental permit	
	supply.	(as required) and we	
		will often work with	
		consultants and	
		municipalities to	
		ensure water quality	
		objectives are met.	

# W4. Risks and opportunities

## W4.1

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

Yes, only within our direct operations

#### W4.1a

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

Depending on the risk type, Ingredion defines substantive and financial risk as:

- 1. One that is greater than 5% of revenue, OR
- 2. One that is greater than 5% of global production (volume), OR
- 3. One that is greater than 5% of operating income, OR
- 4. One that is greater than 5% of available cash

Sites are evaluated against these criteria annually to determine if they meet this definition, indicating a potentially substantive impact. In addition to site level impacts, our Business Continuity Plan (BCP) risk assessment process considers supply chain impacts, including lack of raw material availability (primarily agriculture). The BCP risk a combination of: (1) the probability or likelihood that a consequence/ impact will occur; (2) the severity of the consequences if the impact occurs; and, (3) the strength of the controls in place. Substantive risks would include those that have the potential to impact production and ability to meet commitments to our customers.

We evaluate our suppliers by mapping locations in the WWF Water Risk Filter to determine if any are located in areas having annual average monthly net water depletion equal to or greater than 75%, or seasonal water depletion equal to or greater than 75% (one or months).



An example of a substantive impact would be a strategic facility (e.g., site that accounts for >5% of our global production by volume) needing to curtail production due to lack of water or agricultural raw material availability. In our environmental management system, we define disruption to operations of greater than seven days as high severity. The current probability of this occurring is ranked as unlikely (i.e., has not occurred or may be anticipated to occur less than once/year). This would also result in an impact to our customers if we were to be unable to supply product to them.

#### W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	1-25	One of our manufacturing sites meets the definition of having the potential to result in a substantive impact. This facility is located in an area defined as high water stress using our ensemble risk tool.  While we have evaluated risk and impacts within the supply chain; none currently meet the definition of substantive impact.

### W4.1c

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

### Country/Area & River basin

Mexico

Panuco

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

11-20

Comment



The facility represents approximately 14% of our global production volume.

#### W4.2

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

#### Country/Area & River basin

Mexico

Panuco

### Type of risk & Primary risk driver

Acute physical Drought

#### **Primary potential impact**

Increased operating costs

#### Company-specific description

This site has been identified as being High or Extremely High risk utilizing our ensemble risk tool methodology; accounts for >5% of our global production by volume; In 2022, this facility represented approximately 14% of our global production volume. Increased water stress may increase the site's operating costs primarily due to increased cost of water supply. While this may impact site operating costs, it is not expected to have a substantial financial impact on the overall company. Operating costs with respect to water increased in 2022 primarily related to increased production rates.

#### **Timeframe**

More than 6 years

#### Magnitude of potential impact

Low

#### Likelihood

Unlikely

#### Are you able to provide a potential financial impact figure?

Yes, an estimated range

#### Potential financial impact figure (currency)

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

0

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

775,000



#### **Explanation of financial impact**

If the site were unable to meet all the water supply needs from the on-site water wells, water could be purchased from third party suppliers. It is estimated that the cost to obtain water from third party suppliers could increase operating costs by approximately \$775,000/year. This figure assumes transportation of water using water trucks and was calculated assuming that truck value replaced 20% of the water withdrawal volume for 2022 (592,400 m3), and the average cost of water delivered by truck is \$1.30 per m3. The calculation is 592,400 X 1.30 = 774,860. We do not expect to incur this cost within the next eight years.

#### Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

#### **Description of response**

The company would deploy several risk control strategies depending on the types and magnitude of risk posed. To address increased operating costs, the site will continue their continuous improvement strategies around water efficiency, water re-use, recycling and conservation practices and request capital to expand the wastewater treatment plant to facilitate additional treatment and recycle of treated wastewater in non-food related processes. In addition, we continue to research new technologies, including zero liquid discharge strategies, which would allow treatment of wastewater to a level that would be acceptable for reuse in food production. Acceptance by both regulators and customers will also be needed to deploy this strategy. These response actions are in line with the UN Sustainable Development Goal 6 - Clean Water and Sanitation.

#### Cost of response

10.000.000

#### **Explanation of cost of response**

Projects at this site are being evaluated to:

- 1. Increase the percentage of recovered water for reuse
- 2. Longer-term achieve zero discharge. Cost estimates for these strategies are based on preliminary engineering evaluations, implementation of similar projects at other facilities, and in accordance with our capital strategic planning guidelines.

The \$10,000,000 cost of response estimate is based on engineering estimates of capital expenditures required to upgrade wastewater treatment facilities to treat water to a level that it can be recycled and used in cooling towers and non-food related processes. This would reduce water use. As Ingredion begins implementation of its 2030 Sustainability target to reduce our water use intensity by 30% in all extremely high-stress geographies where we manufacture, including this site, it is likely that additional treatment capacity for this facility will occur within the next ten years.

# 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	The supply chain risk is primarily related to the inability to obtain raw materials. Agricultural supply may be impacted by both floods and droughts, either through not being able to plant fields or reduced yield. Flooding may also impact our ability to transport finished goods, particularly by rail, which may delay shipment to customers. While the risks of increased droughts or flooding may impact the ability to obtain and receive raw materials at select sites, the overall impact to the company is not substantive.  Depending on the risk type, Ingredion defines substantive and financial risk as:  1. One that is greater than 5% of revenue, OR 2. One that is greater than 5% of global production (volume), OR 3. One that is greater than 5% of operating income, OR 4. One that is greater than 5% of available cash.  We have completed an assessment of the geographic locations of our agricultural suppliers and none have been identified to have a substantive impact on the business. Additionally, comprehensive business planning related to planting and potential weather impacts (i.e., droughts, floods, etc.) is completed on an annual basis. Ingredion recognizes that drought could be a threat to our raw material sourcing for our manufacturing sites. To mitigate this risk, Ingredion sources raw materials from a variety of geographies via a variety of shipping methods. Furthermore, Ingredion has a global network of manufacturing sites that can act as a backstop by providing raw materials or finished products in the event of a widespread weather issue. Disruption to transportation from flooding may be mitigated by increasing shipment volumes to customers prior to anticipated storm events or by changing modes of transportation.

## 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

Efficiency

Primary water-related opportunity



#### Cost savings

## Company-specific description & strategy to realize opportunity

Every 1% reduction in process water use intensity results in savings up to approximately \$2,712,000 annually when considering purchase, pumping, preparation, and subsequent wastewater treatment costs.

We use a project prioritization scoring system to define opportunities with a substantive impact. The scoring system includes metrics on business performance, customer initiatives, EHS performance, sustainability (including achieving company goals), and employee development/engagement.

Our continuous improvement teams continually seek opportunities to reduce water consumption, which in turn has a positive cost impact. Many of these opportunities include behavioral changes, employee awareness and operational changes to improve production efficiency.

Ingredion has implemented an environmental conservation initiative to reduce water use intensity 10-30% by 2030 from a baseline of 2019. This strategy has been implemented and is allowing us to track and realize the opportunity of and track water savings initiatives, which leads to cost savings, improved community relations, and improved water efficiency. For example, upgrades to existing wastewater treatment facilities, recovery of several wastewater streams including condensed process vapours (CPV), condensate, and steam (which also are used as heat recovery and energy savings), and reuse of treated wastewater for cooling towers.

#### Estimated timeframe for realization

More than 6 years

#### Magnitude of potential financial impact

Medium

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

# Potential financial impact figure (currency)

21,696,000

Potential financial impact figure - minimum (currency)

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

#### **Explanation of financial impact**

Each 1% reduction in process water use intensity results in savings up to approximately \$2,712,000 annually when considering purchase, pumping, preparation, and subsequent wastewater treatment costs. The figure of 21,696,000 represent the potential cumulative savings for a 1% reduction over the next 8 years (2,712,000 X 8).



# W5. Facility-level water accounting

## W5.1

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

#### Facility reference number

Facility 1

#### Facility name (optional)

Facility 1

#### Country/Area & River basin

Mexico

Panuco

#### Latitude

20.41

#### Longitude

-99.99

#### Located in area with water stress

Yes

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

2,962

## Comparison of total withdrawals with previous reporting year

About the same

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

U

## Withdrawals from brackish surface water/seawater

0

#### Withdrawals from groundwater - renewable

2,696

### Withdrawals from groundwater - non-renewable

0

#### Withdrawals from produced/entrained water

0



#### Withdrawals from third party sources

266

Total water discharges at this facility (megaliters/year)

1.303

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1,303

Total water consumption at this facility (megaliters/year)

1.659

Comparison of total consumption with previous reporting year

About the same

### Please explain

We do not withdraw fresh surface water, brackish surface water, or non-renewable groundwater. Moisture content of our agricultural raw materials represents <1.5% of the water intake and is not considered relevant when considering other water intake sources. Reported volumes are direct measurements that are reported into a corporate database. We consider +/-10% variance to be about the same when making year over year comparisons. We have implemented water reuse programs to reuse treated wastewater as makeup water for cooling towers. We continue to research water efficiency and recycling initiatives applicable to this site.

## W5.1a

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

Water withdrawals - total volumes

% verified

76-100

Verification standard used



For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1. In addition to the facility reported in W5.1, all our facilities were externally verified using ISAE 3000. A third-party verification statement is attached in W9.1.

#### Water withdrawals - volume by source

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1. In addition to the facility reported in W5.1, all our facilities were externally verified using ISAE 3000. A third-party verification statement is attached in W9.1.

#### Water withdrawals - quality by standard water quality parameters

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 99% of discharge volume was verified using ISAE 3000. A third-party verification statement is attached in W9.1.

#### Water discharges - total volumes

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1. In addition to the facility reported in W5.1, all our facilities were externally verified using ISAE 3000. A third-party verification statement is attached in W9.1.

#### Water discharges - volume by destination

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1. In addition to the facility reported in W5.1, all



our facilities were externally verified using ISAE 3000. A third-party verification statement is attached in W9.1.

#### Water discharges - volume by final treatment level

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1

## Water discharges - quality by standard water quality parameters

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1

#### Water consumption - total volume

#### % verified

76-100

#### Verification standard used

For the facility referenced in W5.1, 100% was verified using ISAE 3000. A third-party verification statement is attached in W9.1. In addition to the facility reported in W5.1, all our facilities were externally verified using ISAE 3000. A third-party verification statement is attached in W9.1

# W6. Governance

# W6.1

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

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

## W6.1a

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



	Scope	Content	Please explain
Row 1	Company-wide	Description of the scope (including value chain stages) covered by the policy Description of business dependency on water Description of business impact on water Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to prevent, minimize, and control pollution Commitment to reduce or phase-out hazardous substances Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to reduce water withdrawal and/or consumption volumes in supply chain Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Commitment to stakeholder education and capacity building on water security Commitment to water stewardship and/or collective action	We selected a company-wide scope for the water policy because our business relies on access to water in all areas where we operate and water is essential not only for our direct operations, but across our entire value chain. We recognize the rights of all people to clean water and sanitation; and, we support initiatives that minimize our impact on climate, biodiversity and water resources. We understand that climate change impacts both water availability and quality. We are committed to water stewardship through:  Understanding the local conditions and water scarcity risks in areas where we operate, complying with local regulations and meeting water quality standards (such as those published by the World Health Organization) consistent with food safety requirements.  Setting goals and targets to improve efficiencies and/or reduce water consumption, including going beyond regulatory compliance. Reducing COD by 10% from our wastewater discharges.  We are committed to monitoring and measuring our water use, reporting trends and results to our executives, and maintaining our commitment to transparency through external reporting initiatives.  Exploring innovative solutions to reduce the impacts of our direct operations through process changes, water conservation, recycling and reuse, education and awareness, and transparency.  Utilizing recognized and respected programs and tools to align with recognized global standards, including the SDGs and as a signatory to the United Nations Global Compact.  Improving water efficiency in agriculture through supplier education, awareness, and technology sharing, as well as working with collaborative organizations such as the SAI Platform and Field to Market.  Procurement of sustainably sourced raw materials using the SAI platform to assess our growers  Responsible wastewater discharge through compliance and regulations and treatment sufficient to guard against degradation of water quality.



	Commitment to the conservation of freshwater ecosystems	<ul> <li>Access to WASH services in the workplace and in our local communities.</li> <li>1</li> </ul>
	Commitments beyond regulatory compliance Reference to company	
	water-related targets Acknowledgement of the human right to water and sanitation	
	Recognition of environmental linkages, for example, due to climate	
<u> </u>	change	

<sup>⊕</sup> ¹Water Policy Statement.pdf

# W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?  $_{\mbox{\scriptsize Yes}}$ 

# W6.2a

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

Position of individual or committee	Responsibilities for water-related issues
Chief Sustainability Officer (CSO)	The Board of Directors Governance and Nominating Committee has direct oversight for environmental and sustainability related matters. Ingredion's Executive Leadership Team (C-Suite Officers) attends Board Meetings and reports progress on initiatives. Ingredion's SVP, Chief Commercial and Sustainability Officer is the Executive Leadership Team member responsible for sustainability, including water-related issues, and review with the Board. Environmental and sustainability matters are discussed with the Board of Directors at least quarterly. In addition, water issues, as applicable, are addressed at meetings of the Ingredion Sustainability Council and Operations Leadership Team.  An example of a decision made at the board level was to review our commitment to the AgWater Challenge in 2021. The AgWater Challenge encourages better water stewardship among the world's most influential food and beverage companies. The program objectives and our required commitment was reviewed at the board-level and the decision was made to proceed with our participation in the initiative.



# W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing acquisitions, mergers, and divestitures Overseeing major capital expenditures Overseeing the setting of corporate targets Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding strategy Reviewing innovation/R&D priorities	The Board meets quarterly with scheduled topics covered each quarter. Environmental and sustainability matters are on the agenda at least quarterly. However, potential water-related risks may be discussed during meetings on business continuity planning; engineering and capital projects; acquisitions and divestures; and compliance and risk management. Subject matter experts reporting either to the Chief Sustainability Officer or Sr. VP Global Operations, brief the Board on these topics. The Vice President of Sustainability and the Director of Environmental Affairs are primarily responsible for briefing the board on sustainability initiatives and risks as well as our progress on sustainability goals and targets. These briefings with the Board allow insight into potential water-related issues which can then be addressed, as applicable, in risk management policies, strategy and action plans, including setting aggressive 2030 sustainability targets (e.g., reduce water use intensity by 30% in all extremely highstress geographies where we manufacture products by the end of 2030).

# W6.2d

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

Board member(s)	Criteria used to assess competence of board member(s) on water-
have competence	related issues



	on water-related issues	
Row 1	Yes	Ingredion conducted an internal assessment of board competency relating to the topics of climate change, water management, and deforestation. Subject matter experts developed a survey which required members to self-assess their competency relating to key materiality topics relating to water strategy. The survey was administered to all current board members.

### 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 Sustainability Officer (CSO)

#### Water-related responsibilities of this position

Setting water-related corporate targets

Monitoring progress against water-related corporate targets
Integrating water-related issues into business strategy

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

Quarterly

#### Please explain

The Board of Directors Governance and Nominating Committee has direct oversight for environmental and sustainability related matters. The Senior Vice President, Chief Commercial and Sustainability Officer (CSO), an executive leadership team member reporting to the CEO, is responsible for reviewing sustainability issues at the Board Level. Topics of discussion include water-related issues, progress on our water reduction goals and alignment with stakeholders on environmental sustainability considerations.

Environmental and sustainability matters are discussed with the Board of Directors quarterly. In addition, water issues, as applicable, are addressed at meetings of the Ingredion Sustainability Council and Operations Leadership Team (OLT). The CSO and the OLT Chair (Senior VP Global Operations) bring issues or concerns, including those related to water, to the Executive Team (i.e., C-Suite) and the Board of Directors, as applicable.

#### 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
F	Row	No, not currently but we	The CEO and certain members of the corporate executive team have
1		plan to introduce them	their goals aligned with our 2030 sustainability agenda, in 4
		in the next two years	categories: (1) carbon reduction, (2) sustainable sourcing, (3) Safety
			performance, and (4) DEI. Performance against these objectives
			impacts a portion of the annual bonus incentive.

# **W6.5**

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

Yes, trade associations

#### W6.5a

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

Our Vice President, Global Government Affairs and other trade association representatives are senior leaders knowledgeable of Ingredion's water strategy and consult with internal stakeholders as required. Ingredion has an ESG Executive Advisory team that ensures that activities/decisions regarding water risks that would impact the organization are fully discussed and vetted prior to final action.

If an inconsistency was observed between our internal policies on water management and a trade association we were working with, we would engage further with that party to understand their position.

## W6.6

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

No, and we have no plans to do so

# 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?		Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Water-related issues are considered as a key component in the following processes: (1) availability of water and wastewater capacity during due diligence of mergers and acquisitions, (2) impact of long-term water availability and ability to meet discharge criteria during facility expansion planning, (3) continuous improvement initiatives to meet our water reduction and conservation targets, and (4) impact of water stress on the resiliency of our agricultural supply chain. Estimated changes in water volumes (+/-) are required for capital projects and considered during project approvals. This information also feeds into our longer-term strategic plans as we use the data to project the impact of projects on our water reduction goals and strategy. In addition, the status on each region's environmental conservation goals are reviewed during quarterly business and operational reviews. This is particularly important as we strive to meet the 2030 sustainability targets. The 2030 sustainability strategy is designed to enhance alignment with the UN Sustainable Development Goals. We have declined mergers and acquisitions due to water availability concerns, the ability to cost-effectively treat wastewater to levels that meets permit limits, and the potential for negative impact on the surrounding community to meet the water needs of the project.
Strategy for achieving long-term objectives	Yes, water- related issues are integrated	11-15	We unveiled our All Life Sustainability Strategy with the purpose to make life better. When developing the strategy, Water-related issues were integrated in numerous aspects:  Planet Life - Our focus is to protect and renew the planets resources by enacting science-based targets and other conservation measures to drive improvements. Having science-based targets are crucial inputs when setting operational priorities including future expansions, production planning and continuous improvement plans. The inclusion of water reduction targets that align with regional water-stressors ensures our current and future operational activities



			respect the boundaries imposed by the local water shed.  Connected Life — Our focus is to sustainably source 100% of our priority crops. Improving water resilience in our supply chain is a key output of sustainable agriculture initiatives. The inclusion of water-related issues as a strategic focal point led us to commit to the AgWater Challenge in 2021. As part of the challenge we commit to promote the adoption of locally relevant sustainable agriculture principles that improve water-related outcomes — with an emphasis on regenerative agriculture practices such as soil health and nutrient management- for key agricultural commodities grown in high-risk watersheds.
Financial planning	Yes, water-related issues are integrated	11-15	Water-related issues are considered as a key component in the following processes: (1) availability of water and wastewater capacity during mergers and acquisitions, (2) impact of long-term water availability and ability to meet discharge criteria during facility expansion planning, and (3) continuous improvement initiatives to meet our water reduction and conservation targets.  Our capital planning system includes an EHS category which is given special consideration for capital requests, including water reduction and wastewater treatment projects. Our quarterly business reviews which include the finance team, allow insight into our financial planning related to water and other issues.  Our operations and sustainability leadership teams include cross functional representation from finance, customer excellence, manufacturing, supply chain, engineering and others, including representation from the Executive Leadership Team. Financial planning is a component of our long-term water and other sustainability goals.  As part of our All Life Sustainability plan, we are evaluating even better ways to integrate sustainability considerations like water management into financial planning. In addition to previous efforts, we are now including sustainability goals and financing in regional business planning against our sustainability targets (such as sustainable agriculture and water reduction efforts in high-stress geographies).



#### 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)

98

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

11

Water-related OPEX (+/- % change)

17

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

2

#### Please explain

CAPEX projects have been implemented to improve compliance, implement water recycling initiatives and other water efficiency projects. In 2022 we invested in 12 significant capital project installations globally which prioritized water recovery. Commissioning of these projects will continue into 2023. It is expected that our CAPEX on water spend will increase by 11% to support future targeted water reduction projects. OPEX includes purchase costs, fees, chemical costs, and pumping costs. OPEX spend in 2022 was higher then 2021, driven by operating costs for recent waste treatment expansion projects installed in 2021, and increased production volumes as we continue to recover from the impact of the global pandemic. In future years we expect overall costs to generally trend upward for purchased water as well as additional chemical costs to support increased water reuse as cooling tower make-up water

#### W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	Our water risk ensemble tool is comprised of multiple models: WRI Aqueduct current Baseline Water Stress, WWF current Water Depletion, Aqueduct future change in water stress, and WWF Basin Risk projected change in drought and flood occurrence. The tool assesses current water stress and predicted changes in water stress to 2040, and predictions for the 2° C climate change scenario. The following future change scenarios were also assessed: • SSP2 RCP4.5 denotes a world with stable economic development and carbon emissions



peaking/declining • SSP2 RCP8.5 denotes a world with stable economic development and steadily rising global carbon emissions. • SSP3 RCP8.5 denotes a fragmented world with uneven economic development and steadily rising global carbon emissions.

# W7.3a

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

	Type of scenario	Parameters, assumptions, analytical choices		Influence on business strategy
	analysis used		related outcomes	
Row 1	Water-related Climate-related Socioeconomic	The following future change scenarios were assessed: • SSP2 RCP4.5 denotes a world with stable economic development and carbon emissions peaking/declining • SSP2 RCP8.5 denotes a world with stable economic development and steadily rising global carbon emissions. • SSP3 RCP8.5 denotes a fragmented world with uneven economic development and steadily rising global carbon emissions.	A specific water related outcome identified in our scenario analysis is the quantification of water risk at each of our global facilities based on current and predicted changes to water stress. Furthermore, our scenario analysis identified one site as having the potential for substantive impact based on future scenarios.	Scenario planning is integrated into our definition of water-related risk. The planning tool assesses current water stress and predicted changes in water stress to 2040, and predictions for the 2° C climate change scenario. The company utilizes climate risk scenario planning in our agricultural sourcing strategy (changes in annual precipitation and growing degree days) and assesses alternate areas for evaluation in quarterly business reviews. We continue to identify short-term operational efficiencies including water recycling and reduction measures. We constantly research new technologies which would allow treatment of wastewater to a level that would be



	acceptable for reuse in
	food production.
	Acceptance by both
	regulators and
	customers will also be
	needed to deploy this
	strategy. We are also
	seeking to collaborate
	with customers to
	develop new or
	reformulated products
	to reduce water use. A
	these response options
	are on-going and are
	expected to continue
	for at least the next 10
	years

# W7.4

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

#### Row 1

#### Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

#### Please explain

We continued to explore tools that value water differentially at a site level. The tools containing the robust features we were seeking required business confidential/sensitive inputs and we were concerned with the security of the information in a public tool. We are currently evaluating other methods of determining differential water prices to match the complex geographies in which we operate. Internal cost of water would be used to value go/no-go decisions for project investment.

## W7.5

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

Products and/or	Definition used to classify low water impact	Please explain
services		
classified as		
low water		
impact		



Row	Yes	In 2022 we did a comparison of water	Our Plant-Based Protein growth
1		intensity (Water use per MT of	platform is well aligned to play a part in
		product produced) between wet and	the broader evolution of our food
		dry manufacturing processes for	system. Growing consumer demand for
		Pulse Proteins and calculated a	plant based and hybrid products is
		99.8% reduction in water, and 94.5%	expected to drive dramatic increases in
		reduction in energy when comparing	sales of these products.
		processing requirements of our Ultra	In 2022, Ingredion was pleased to be
		Performance line vs traditional pulse	announced as the World Plant-Based
		protein production.	Awards winner for Best Plant-Based
			Sustainability for our Ultra Performance
			line of products. The Ultra Performance
			line allows for the creation of better-
			tasting plant-based food and beverages
			without typical challenges such as raw
			plant flavor or bitter taste commonly
			associated with dry milling of pulse
			products. Made at Ingredion's Vanscoy,
			Saskatchewan, Canada facility, the
			more sustainable Ultra Performance line
			of pulse protein concentrates does not
			generate any
			wastewater during processing. Our
			proprietary process does not
			incorporate chemicals or additives, and
			uses much less water and energy than
			traditional pulse
			protein concentrate production.

# **W8. Targets**

# W8.1

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

# W8.1a

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

	Target set in this category
Water pollution	Yes
Water withdrawals	Yes



Water, Sanitation, and Hygiene (WASH) services	Yes
Other	Yes

### W8.1b

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

#### Target reference number

Target 1

#### **Category of target**

Water withdrawals

#### **Target coverage**

Company-wide (direct operations only)

#### Quantitative metric

Reduction in withdrawals per unit of production

#### Year target was set

2020

#### Base year

2019

#### Base year figure

4.57

#### **Target year**

2030

### Target year figure

3.95

#### Reporting year figure

4.56

### % of target achieved relative to base year

1.6129032258

#### Target status in reporting year

Underway

#### Please explain

As part of our All-Life sustainability strategy, all of Ingredion sites have a water reduction goal that is reflective of the water stress for the basin where the facility operates. Facilities in extreme high water stress areas have a 30% reduction by 2030, facilities in high stress areas have a 20% reduction, and facilities in low and medium water stress



areas have a 10% reduction goal. The metric presented is a composite of the three goals. By the end of 2022 we have achieved 1.6% of our target. While we are slightly off target we continue to identify opportunities and make strategic investments which will help us attain our goal by 2030.

#### Target reference number

Target 2

#### Category of target

Water withdrawals

#### **Target coverage**

Basin level

#### Quantitative metric

Reduction in withdrawals per unit of production

#### Year target was set

2020

## Base year

2019

#### Base year figure

2.06

#### Target year

2030

### Target year figure

1.44

#### Reporting year figure

2.11

#### % of target achieved relative to base year

-8.064516129

#### Target status in reporting year

Underway

#### Please explain

Water use intensity in our extremely high-stress geographies was flat versus 2019 due to continuous improvement initiatives being offset by higher production rates and product mix. Our team in Mexico, where our manufacturing sites in extremely high-stress geographies are located, were focused on identifying the optimal investments and operational routines to reduce water in 2023 and beyond.



#### Target reference number

Target 3

#### Category of target

Procurement/production of sustainable raw materials

#### **Target coverage**

Company-wide (direct operations only)

#### Quantitative metric

Increase in procurement/production of commodities with improved water management practices

#### Year target was set

2020

#### Base year

2019

### Base year figure

0

## **Target year**

2022

## Target year figure

100

#### Reporting year figure

99

### % of target achieved relative to base year

99

#### Target status in reporting year

Achieved

#### Please explain

We had a target of having 100% of our global waxy corn sustainably sourced by the end of 2022. At the end of 2022, 99% of our waxy corn has met the threshold criteria to be considered sustainably sourced. We are pleased to indicate that we reached 99% against that target, with only a small percentage of waxy corn not being included. This remaining 1% was due to mostly to flooding in Pakistan that impacted corn crops, and a small part due to additional corn needed with the startup of our expansion in China.

#### Target reference number

Target 4

#### Category of target



Procurement/production of sustainable raw materials

#### **Target coverage**

Company-wide (direct operations only)

#### **Quantitative metric**

Increase in procurement/production of commodities with improved water management practices

#### Year target was set

2020

#### Base year

2020

#### Base year figure

0

#### **Target year**

2025

#### Target year figure

100

#### Reporting year figure

48

#### % of target achieved relative to base year

48

#### Target status in reporting year

Underway

#### Please explain

We have a target to sustainably source 100% of our Tier 1 priority crops (corn, tapioca, potatoes, stevia, and pulses) by 2025. We made notable progress this past year against our sustainable agriculture goal of sustainably sourcing 100% of our Tier 1 priority crops and now have 48% of those priority crops being covered under our sustainable sourcing program.

#### Target reference number

Target 5

#### **Category of target**

Water pollution

#### **Target coverage**

Company-wide (direct operations only)



#### Quantitative metric

Reduction in concentration of pollutants

#### Year target was set

2020

#### Base year

2019

#### Base year figure

17.53

#### Target year

2030

### Target year figure

15.77

#### Reporting year figure

18.85

## % of target achieved relative to base year

-75

#### Target status in reporting year

Underway

### Please explain

As part of our All-Life Strategy, Ingredion implemented a goal to reduce the amount of organic material being sent to wastewater treatment from our manufacturing facilities. COD intensity, which measures the amount of organic material sent to wastewater treatment, was higher than our 2019 baseline due to production rates and product changeover frequency to manage a tight supply chain. In 2023, our teams will refocus their efforts on mapping the sources of COD and implementing action plans to drive reductions.

#### Target reference number

Target 6

#### Category of target

Water, Sanitation and Hygiene (WASH) services

#### **Target coverage**

Suppliers

#### **Quantitative metric**

Other, please specify
Sustainable Sourcing of Tier 1 Crops



#### Year target was set

2020

#### Base year

2020

#### Base year figure

0

#### Target year

2025

#### Target year figure

100

#### Reporting year figure

48

#### % of target achieved relative to base year

48

#### Target status in reporting year

Achieved

#### Please explain

We have a target to sustainably source 100% of our Tier 1 priority crops (corn, tapioca, potatoes, stevia, and pulses) by 2025. WASH criteria have been taken into account in the assessment tool and require our supply farms to have access to WASH facilities for all permanent, temporary and seasonal workers and their families, visitors and subcontractors. This requirement is a mandatory element in order for the farm output to qualify as sustainably sourced.

We made notable progress this past year against our sustainable agriculture goal of sustainably sourcing 100% of our Tier 1 priority crops and now have 48% of those priority crops covered under our sustainable sourcing program.

# 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

Ingredion SJDR 2022 Water Assurance Statement\_Final.pdf

Ingredion Corporate 2022 CDP Verification Statement Water ISAE 3000\_Final.pdf

Ingredion SAI Assurance Statement 2022 Final.pdf



# 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 Withdrawals total and by source, Water Discharges by source, Water Consumption for facilities listed in W5.1	ISAE 3000	Third-party verification statement for W5.1 is attached in W9.1. See file Ingredion SJDR 2022 Water Assurance Statement_Final.pdf
W8 Targets	We have a company sustainability goal to sustainable source 100% of our tier 1 crops by 2030. The attachment is the verification for our total volume of tier 1 crops certified as SAI Bronze in 2022 (question 8.1a target 4)	ISAE 3000	A third-party verification statement for W8.1b is attached in W9.1. See file Ingredion SAI Assurance Statement 2022 Final.pdf
W1 Current state	Company total: Water Withdrawals total and by source, Water Discharges by source, Water Consumption	ISAE 3000	A third-party verification statement for W1.2 is attached in W9.1. See file Ingredion Corporate 2022 CDP Verification Statement Water ISAE 3000_Final.pdf

# W10. Plastics

## W10.1

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

	Plastics mapping	Value chain stage	Please explain
Row 1	Yes	Direct operations Supply chain	Ingredion has performed preliminary mapping of where plastics are used within our operations. Primary plastics usage occurs in packaging and shipping/distribution of product to the customer. Smaller amounts of plastics are used in direct operations, but primarily are for quality control, testing of product, and intermediate storage.

# W10.2

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



	Impact assessment	Please explain
Row	Not assessed – but	Ingredion sites have the ability to collect and recycle approved plastic
1	we plan to within	waste materials that are generated on site. Ingredion has yet to survey
	the next two years	end use customers as to the ultimate disposition of plastic material in
		product packaging distributed to customers. Additionally, Ingredion is
		currently working towards a zero landfill goal by 2030 for all sites. This
		goal will continue to drive improvements for increased recycling and
		circular economy of our plastic usage.

# W10.3

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

	Risk exposure	Please explain
Row	Not assessed – but we plan to within	Ingredion has yet to perform a plastics related risk
1 the next two years		analysis impact on our business.

# W10.4

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

	Targets in place	Target type	Target metric	Please explain
Row 1	Yes	Other	Other, please specify Ingredion has a goal to complete a minimum of 3 projects per country where we have operations to drive increased plastics circular economy by the end of 2025	Ingredion has a goal to complete a minimum of 3 projects per country where we have operations to drive increased plastics circular economy by the end of 2025. The scope of these projects are to be driven by eliminating waste, circulating materials back into the economy and reducing the amount of virgin plastics needed to accomplish business needs. An example of a project completed in 2022 is at our Kerr facility in Salem Oregon. The site worked with purchasing and its vendors to source pails delivering raw material to the site with all recyclable components to allow for washing and recycling of these where previously they had been landfilled due to non-recyclable components on the pails.

# W10.5

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



	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	Yes	Some of Ingredion's product are packaged in packaging material containing varying levels of plastic contents depending on shipping/quality/customer requirements.
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

# W10.8

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

	Total weight of plastic packaging sold / used during the reporting year (Metric tonnes)	Raw material content percentages available to report	Please explain
Plastic packaging used	13,492	None	Estimated 2022 usage = 13,492 MT globally of plastic packaging material usage containing 50% plastic (as a percentage of total weight) or greater. Ingredion does not have complete data on the raw material content percentages available for its plastics packaging materials.

# W10.8a

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

Percentages	Please explain
available to report	



	for circularity potential	
Plastic packaging used	None	Ingredion has yet to perform a circularity potential analysis of the plastics used in packaging of our products. In general, it is believed that a majority of the common plastic packaging materials used are available to be recycled, however this can very by country / region and localities.

# W11. Sign off

# W-FI

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

# W11.1

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

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