Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description 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.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

(C0.3) 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

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Direct operations only [Processing/manufacturing/Distribution only]
Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

C-AC0.6b/C-FB0.6b/C-PF0.6b

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Evaluated but judged to be unimportant

Please explain

Ingredion leases 2 farm properties globally (approximately 25 acres total) and one greenhouse (<0.5 acres). These properties are used for research and development, and breeding purposes. Calculated emissions from these leased properties are not significant when compared with our manufacturing operations

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Other, please specify

Corn

% of revenue dependent on this agricultural commodity

60-80%

Produced or sourced

Sourced

Please explain

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 18% is comprised of multiple crops such as potato, rice, pulses, stevia, and blueberries, etc.

Agricultural commodity

Other, please specify

Cassava

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

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 18% is comprised of multiple crops such as potato, rice, pulses, stevia, and blueberries, etc.

Agricultural commodity

Other, please specify

Pulses

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Pulses are used to make protein isolates, flours, and concentrates at our manufacturing locations in the North American region, Canada and the United States. Pulses are primarily sourced through brokers and are grown in the Canadian prairies, Montana, and small volumes throughout the Midwest US.
We are actively evaluating sourcing directly with producers as well as sourcing additional volume from the mid-west United States to support our US operations.

Agricultural commodity

Other, please specify

Stevia

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Stevia leaves are sourced from growers and used to make natural, high-intensity sweeteners at our manufacturing locations in Asia-Pacific and
South American regions. Stevia leaves are primarily sourced directly from farmers in China. All our stevia leaves originate from a closed loop control program where we use

our own varieties from our multi-year program of varietal development in our Stevia Agriculture R&D program. This closed loop process ensures Ingredion is able to consistently produce natural, best tasting high intensity sweeteners.

Agricultural commodity

Other, please specify

Potato

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Potato starch recovered from potato processors is used to make our finished product starches at our manufacturing locations in the North American region. The majority of our potato starch is a co-stream from suppliers that use those potatoes to make chips and fries. We purchase the potato co-stream then refine the potato starch into a finished product that enhances the functionality of their products

C0.8

(C0.8) 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

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues

Board-level committee	The Board of Directors Governance and Nominating Committee has direct oversight for environmental and sustainability related matters, including climate-related issues. Ingredion's Executive Leadership Team (C-Suite Officers), including the Chief Sustainability Officer, attends Board Meetings and reports progress on initiatives. The SVP, Chief Commercial and Sustainability Officer is the Executive Leadership Team member responsible for Ingredion's sustainability program. The Chief Sustainability Officer reviews sustainability, including climate related issues, at the Board Level. Environmental and sustainability matters are discussed with the Board of Directors four times a year. In addition, climate issues, as applicable, are addressed at meetings of the Ingredion Sustainability Council and Operations Leadership Team. An example of a climate-related decision made by the Board of Directors Governance and Nominating Committee was to approve our application to the Science Based Targets Initiative (SBTi), and formalize our commitment to having a science-based goal to guide our GHG reduction strategy.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Overseeing and guiding employee incentives Reviewing and guiding strategy Monitoring progress towards corporate targets Reviewing and guiding the risk management process	The Board meets at least quarterly with scheduled topics covered each meeting. Environmental and sustainability matters, which include climate-related issues, are on the agenda four times per year. The Board of Directors Governance and Nominating Committee reviews and guides the sustainability strategy and risk management plans. The committee reviews the sustainability goals and metrics and status of actions to achieve objectives. Additionally, potential climate change risks may be discussed during meetings on business continuity planning; engineering and capital projects; acquisitions and divestures; compliance, and risk management. Subject matter experts reporting either to the Chief Sustainability Officer or the Sr. VP of Global Operations, brief the Board on these topics. This approach provides the board insight into potential climate change related issues through multiple touch points.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-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 assess their exposure to 12 key materiality topics relating to climate risk strategy. The survey was administered to all current board members.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position

Monitoring progress against climate-related corporate targets
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The SVP, Chief Commercial and Sustainability Officer (CSO), a member of the executive leadership team reporting to the CEO, is responsible for reviewing sustainability at the Board Level. Environmental and sustainability matters, which include our goals and programs to reduce GHG emissions, are discussed with the Board of Directors at least quarterly. In addition, climate-related issues, as applicable,

are addressed at meetings of the ESG Executive Advisory Committee, Ingredion Global Sustainability Council, Global Operations Leadership Team, and Global Operations Sustainability Council.
Ingredion's ESG Executive Advisory Committee oversees the company's ESG agenda, establishes near-term sustainability deliverables, evaluates partnerships and external commitments, as well as other changes that might impact our strategy or approach. Chaired by the Chief Commercial and Sustainability Officer (CSO), the Committee includes the Chief Executive Officer (CEO), Chief Financial Officer (CFO), SVP Global Operations and Chief Supply Chain Officer, SVP and Chief Human Resources Officer, and SVP and Chief Legal Officer, Corporate Secretary, and Chief Compliance Officer, and Vice President, Corporate Sustainability.
Ingredion's Global Sustainability Council is made up of senior leaders within the organization and is tasked with establishing and executing the sustainability strategy. The Council is responsible for making certain the sustainability strategy helps mitigate potential long-term risks for the organization, while aligning us with the needs and expectations of external stakeholders. Chaired by the Vice President of Corporate Sustainability, the Council includes functional leads from Innovation, Commercial, EHSS, Global Operations, Human Resources, Government Affairs, Marketing, Legal, Investor Relations, and our regional businesses.
The Global Operations Leadership Team (OLT), chaired by the SVP Global Operations and Chief Supply Chain Officer continually assesses exposure to operational and reputational risk (including climate-related issues such as transition and physical climate changes) through internal management systems, such our ISO 14001/45001-based Environmental, Health and Safety Management System, Crisis Management and Business Continuity Systems, management reviews and quarterly operations reviews. The OLT generally meets monthly and includes senior global leaders from: EHSS, Sustainability, Regional Operations, Supply Chain, Engineering, Finance, and Procurement.
The Global Operations Sustainability Council, chaired by the VP of Operations Sustainability, leads the operational and strategic agenda for achieving the 2030 environmental sustainability milestones. The Council generally meets monthly and includes senior global leaders from: EHSS, Regional Operations, Innovation, Engineering, Finance, and Procurement.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	We provide a number of incentives for attaining targets, including those related to climate issues. These include bonuses and various recognition opportunities.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The CEO and certain members of the Executive Leadership Team have their goals aligned with our 2030 sustainability agenda, including our climate goal. Performance against these objectives impacts a portion of the annual bonus incentive.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The performance indicator is in line with our near-term science-based target, which drives our GHG reduction strategy.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target
Reduction in absolute emissions
Energy efficiency improvement

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Ingredion grants monetary awards (bonuses) to eligible employees based on company and employee performance. Performance is evaluated in accordance with company strategy, goals and expectations including its publicly stated sustainability targets.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The performance indicators are in line with targets in our 2030 All-Life plan; GHG targets are aligned with our near-term science-based target, which drives our GHG reduction strategy.

Entitled to incentive

All employees

Type of incentive

Non-monetary reward

Incentive(s)

Internal company award

Performance indicator(s)

Achievement of a climate-related target
Implementation of an emissions reduction initiative

Incentive plan(s) this incentive is linked to

Not part of an existing incentive plan

Further details of incentive(s)

Our CEO Awards recognize the people, projects, products and processes that represent Ingredion's ongoing commitment to innovation, sustainability, leadership, manufacturing excellence and diversity, equity and inclusion. Nominees for the sustainability award may encompass the climate change aspects of our business including efficiency projects, emissions and energy reduction projects and supply chain engagement. This award carries global recognition within the company in addition to monetary awards.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The award is aligned with our 2030 All-Life Sustainability Strategy.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	5	Our Business Continuity Plan (BCP) risk assessment process considers climate related risks from weather events, floods, and disruption of raw material supply and transportation. This approach and the time horizons are integrated through the BCP with other business risks.
Medium-term	5	25	Our Business Continuity Plan (BCP) risk assessment process considers climate related risks from weather events, floods, and disruption of raw material supply and transportation. This approach and the time horizons are integrated through the BCP with other business risks.
Long-term	25	99	Our Business Continuity Plan (BCP) risk assessment process considers climate related risks from weather events, floods, and disruption of raw material supply and transportation. This approach and the time horizons are integrated through the BCP with other business risks.

C2.1b

(C2.1b) 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

At the company level, we seek to be aware of and mitigate potential risks in the different facets of our business, including those related to the environment, climate change and energy. Our annual Business Continuity Plan (BCP) risk assessment process considers risk associated with climate and other potential business impacts. The BCP includes calculation of a risk prioritization number (RPN) for various activities based on the likelihood and severity of the impact as well as controls currently in-place to mitigate risk. Climate change risks assessed through the BCP include operational disruptions due to weather events, raw material supply and transportation (i.e., supply chain and commodity impacts), and inability to meet customer demand.

To supplement the BCP process, we also assess climate-related risks using a comprehensive, multi-faceted approach incorporating site-specific surveys and climate modelling. We conduct water risk assessments annually on a manufacturing facility level using an Ensemble Model comprised of multiple tools (i.e., World Wildlife Fund Current Water Depletion model, Aqueduct

Baseline Water Stress, and WWF Water Risk Filter) to assess varied aspects of water risk, including changes in water stress to 2040. We assess water risk based on three categories: current stress, future change in water stress and future change in droughts and floods. We assess agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment to understand where we have water-related risks with growers. In 2022, as part of a broader understanding of measuring risk in our operations and supply chain we conducted a risk assessment with S&P Global Climanomics Climate Risk Analytics platform which provided insights into annual losses due to climate-related expenses and decreased revenue/business interruption.

Risk mitigation plans are required for all "high" level RPNs calculated in the BCP. With our agricultural suppliers, we continue to work with SAI and Field-to-Market to identify areas of vulnerability and drive improvements in farming practices that reduce environmental impacts. For risk reduction opportunities with a substantive impact, projects are evaluated with respect to business performance, customer initiatives, EHS performance, sustainability (including achieving company goals), and employee development/engagement. Prioritized projects are selected for funding and implementation.

In addition, we monitor proceedings which have the potential to result in the adoption or amendment of regulations, policies, and directives. Changes to government regulations, policies and directives are monitored through subscription services (e.g., ORC/NSC), trade associations (e.g., Corn Refiners Associations, Starch Europe, etc.) and consultant newsletters/alerts. The Sustainability Council meets at least quarterly to review the sustainability strategy, metrics, and action plans for the company's global operations. Through its monthly meetings, the Operations Leadership Team (OLT) assesses exposure to operational hazards, including those related to climate change, through internal management systems, including the BCP, and additional processes that are aligned with global standards. The OLT, led by the Sr. VP, Global Operations (a member of the company Executive Leadership Team) and includes senior global leaders from: EHSS, Sustainability, Regional Operations, Supply Chain, Engineering, Finance, and Procurement

An example of a substantive impact would be a facility needing to curtail production due to lack of water or agricultural raw material availability due to climate change. 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. An example of a substantive opportunity is to work collectively within our supply chain, from farms to customers, to reduce the environmental impact of our agricultural raw materials.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

We seek to be aware of and mitigate potential risks (including those related to the environment, climate change and energy) in our direct manufacturing operations, in upstream activities related to raw material supply and government regulations, and in our downstream supply chain potentially impacting our customers.
We utilize a Business Continuity Plan (BCP) risk assessment process with a consistent risk prioritization ranking based on likelihood, severity and existing controls. A substantive impact would include the inability to supply product to our customers and, therefore, we identify operating scenarios that could impact our ability to serve our customers. The BCP considers short-term risk (0-5 years) medium-term risk (5-25 years) and long-term risk (25–99 years). Climate change risks assessed through the BCP include operational disruptions due to weather events, raw material supply and transportation (i.e., supply chain and commodity impacts), and inability to meet customer demand. In addition, the BCP is supplemented with knowledge attained from various models, including water availability risk assessments at our manufacturing facilities, the WWF Water Risk Filter to understand water stress in our key supplier/grower locations, agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment. In 2022, as part of a broader understanding of measuring risk in our operations and supply chain we conducted a risk assessment with S&P Global Climanomics Climate Risk Analytics platform which provided insights into annual losses due to climate-related expenses and decreased revenue/business interruption.
Corrective actions / risk mitigation plans are required for all "high" level RPNs calculated in the BCP, including for substantive climate-related risks. With our agricultural suppliers, we continue to work with SAI and Field-to-Market to identify areas of vulnerability and drive improvements in farming practices that reduce environmental impacts. For risk reduction opportunities with a substantive impact, projects are evaluated with respect to business performance, customer initiatives, EHS performance, sustainability (including achieving company goals), and employee development/ engagement. Prioritized projects are selected for funding and implementation.
A physical climate-related case study assessed in the BCP for our direct operations is the loss of electricity due to rolling blackouts caused by heavy demand to extreme temperatures. Potential responses include self-generation of electricity (Co-Gen, solar/wind), moving production to other plants in the network, increased use of tollers, or short-term use of diesel generators. Ingredion's energy teams and R&D group are constantly assessing reliable sources of energy. If the RPN for the rolling black-out (or

any) scenario is calculated as "high", the potential alternatives would be moved forward for a complete engineering evaluation and costs/benefit analysis with selection of the project that solves the issue with an appropriate return on investment, as applicable.
A transitional climate-related case study evaluated changing consumer/customer preferences for low-carbon ingredients and products. We continuously evaluate investor and end consumer trends through our customer excellence team and other resources. Responses to this risk include evaluation of technologies that more efficiently reduce moisture content of our products throughout the manufacturing process and partnering with our customers to determine if alternate low-carbon processes can provide products with similar characteristics for use in their products. Based on the level of risk, engineering evaluations and costs/benefit analyses of various technologies would be performed with selection of the project that solves the issue with an appropriate return on investment.
To supplement our formalized annual assessment we may use elements of our risk assessment process to conduct targeted assessments throughout the year as required. An example would be the evaluation of possible greenfield sites or business acquisitions which would increase our manufacturing capacities. Part of the overall business review would include an assessment of the water risk for the local basin, country electricity grid factors, and prevailing fuel mix; all of these are critical elements to understand, as they will impact progress towards our climate goals.

Value chain stage(s) covered

Upstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

We seek to be aware of and mitigate potential risks (including those related to the environment, climate change and energy) in our direct manufacturing operations, in upstream activities related to raw material supply and government regulations, and in our downstream supply chain potentially impacting our customers.
We utilize a Business Continuity Plan (BCP) risk assessment process with a consistent risk prioritization ranking based on likelihood, severity and existing controls. A substantive impact would include the inability to supply product to our customers and, therefore, we identify operating scenarios that could impact our ability to serve our customers. The BCP considers short-term risk (0-5 years) medium-term risk (5-25 years) and long-term risk (25–99 years). Climate change risks assessed through the

BCP include operational disruptions due to weather events, raw material supply and transportation (i.e., supply chain and commodity impacts), and inability to meet customer demand. In addition, the BCP is supplemented with knowledge attained from various models, including water availability risk assessments at our manufacturing facilities, the WWF Water Risk Filter to understand water stress in our key supplier/grower locations, agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment. In 2022, as part of a broader understanding of measuring risk in our operations and supply chain we conducted a risk assessment with S&P Global Climanomics Climate Risk Analytics platform which provided insights into annual losses due to climate-related expenses and decreased revenue/business interruption.

Corrective actions / risk mitigation plans are required for all "high" level RPNs calculated in the BCP, including for substantive climate-related risks. With our agricultural suppliers, we continue to work with SAI and Field-to-Market to identify areas of vulnerability and drive improvements in farming practices that reduce environmental impacts. For risk reduction opportunities with a substantive impact, projects are evaluated with respect to business performance, customer initiatives, EHS performance, sustainability (including achieving company goals), and employee development/ engagement. Prioritized projects are selected for funding and implementation.

A physical climate-related case study in the BCP for our upstream operations assessed the loss of raw agricultural materials due to drought or flooding. This would have a potentially substantive impact on our ability to supply customers. Potential responses include sourcing agricultural materials from other plants within our network, from other regions/countries or from competitors. While these responses may be needed in acute situations, we have chosen a more proactive approach by working directly with growers to build resiliency in farming practices to reduce the potential impacts of changing weather patterns. We do this through SAI and Field to Market as well as with customer partnerships.

A transitional climate-related case study evaluated changing consumer/customer preferences for low-carbon ingredients and products. We continuously evaluate investor and end consumer trends through our customer excellence team and other resources. Consumers are interested in understanding the origins of their food, including farming (our upstream operations) and livestock management. This has informed our decision to invest in plant-based proteins and pulses which have an overall lower carbon footprint than meat-based proteins. The case study involves identification of consumer preferences towards alternative non-meat and non-dairy protein sources with a lower carbon footprint. We determined that consumers across all demographics are looking for alternatives to traditional animal proteins for various reasons including health and wellness, planetary wellness, or animal welfare. We also worked with existing customers who had interest in reformulating and innovating with alternative protein products. This led us to invest in a minority stake in a joint venture to manufacture pea and pulse protein. In 2020 we acquired full ownership of the facility and began construction of a new pea protein isolate facility, which has since been completed and has become operational in 2021. We participated with customers to evaluate life cycle GHG and other sustainability aspects associated with farming and pea/pulse manufacturing for comparison with traditional protein footprints. Ingredion has invested and is ready for the

increasing demand for alternative proteins and has chosen to make these new kinds of proteins a primary part of our growth strategy.

Value chain stage(s) covered

Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

We seek to be aware of and mitigate potential risks (including those related to the environment, climate change and energy) in our direct manufacturing operations, in upstream activities related to raw material supply and government regulations, and in our downstream supply chain potentially impacting our customers.
We utilize a Business Continuity Plan (BCP) risk assessment process with a consistent risk prioritization ranking based on likelihood, severity and existing controls. A substantive impact would include the inability to supply product to our customers and, therefore, we identify operating scenarios that could impact our ability to serve our customers. The BCP considers short-term risk (0-5 years) medium-term risk (5-25 years) and long-term risk (25–99 years). Climate change risks assessed through the BCP include operational disruptions due to weather events, raw material supply and transportation (i.e., supply chain and commodity impacts), and inability to meet customer demand. In addition, the BCP is supplemented with knowledge attained from various models, including water availability risk assessments at our manufacturing facilities, the WWF Water Risk Filter to understand water stress in our key supplier/grower locations, agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment. In 2022, as part of a broader understanding of measuring risk in our operations and supply chain we conducted a risk assessment with S&P Global Climanomics Climate Risk Analytics platform which provided insights into annual losses due to climate-related expenses and decreased revenue/business interruption.
Corrective actions / risk mitigation plans are required for all "high" level RPNs calculated in the BCP, including for substantive climate-related risks. With our agricultural suppliers, we continue to work with SAI and Field-to-Market to identify areas of vulnerability and drive improvements in farming practices that reduce environmental impacts. For risk reduction opportunities with a substantive impact, projects are evaluated with respect to business performance, customer initiatives, EHS performance, sustainability (including achieving company goals), and employee development/

engagement. Prioritized projects are selected for funding and implementation.
A physical climate-related case study assessed in the BCP for our downstream operations is the loss of rail transportation due to flooding or other extreme weather patterns. This would have a potentially substantive impact on our ability to supply customers in a timely, cost-effective manner. Potential responses include using other modes of transportation, including trucking, air and barge, as available. We also consider network optimization through strategic placement of warehouse and distribution centers to minimize transport distances; and, strategically locating new production sites or acquisitions close to key customers.
A transitional climate-related case study includes evaluating low-carbon transportation alternatives and the financial impacts on the business as we move away from fossil fuel based transport systems. As energy saving technologies progress, we need to understand the potential infrastructure changes that may be necessary to support low-carbon transportation such as installation of charging stations for trucks, rail and barges. The responses for this case study are continuously evaluated as both technologies and climate policies develop for low-carbon transportation alternatives.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Ingredion has procedures for identifying and managing climate change risk and opportunities in our business and operations, both at a corporate and local level. At the company level, we seek to be aware of and mitigate potential risks in the different facets of our business, including those related to environmental, energy, and climate regulations. Through regulatory subscription services (e.g., ORC/NSC), trade associations and other means, we monitor proceedings which have the potential to result in the adoption or amendment of regulations, policies, and directives. We monitor compliance with existing regulations through our risk-based management systems and in management reviews. Carbon trading programs, carbon tax laws and emissions reduction regulations are all examples of regulatory risks with the potential to impact the business and strategic plans.
Emerging regulation	Relevant, always included	Tracking emerging climate-related regulations is an important aspect of the company's strategy. Changes and proposed changes to government regulations, policies and directives are monitored through subscription services (e.g., ORC/NSC), trade associations (e.g., Corn Refiners Associations, Starch Europe) and consultant newsletters/alerts (e.g., ClearBlue Markets). We then evaluate the risk to the organization due to emerging regulations and implement mitigation plans, as applicable. This helps us build strategies to reduce

		risk and capitalize on opportunities from emerging regulations such as carbon trading programs, carbon tax laws and emissions reduction regulations.
Technology	Relevant, always included	Depending on the type and scope of risks, our research and technology group is consulted to assist with new technologies to reduce the impacts of climate-related issues. Examples include new dryer technologies that improve efficiency and reduce energy use; electric co-generation units; integrated technologies to recover heat from boilers and other processes; and, new/reformulated products. In addition, our Global Process Technology and Engineering teams Teams also research opportunities to deploy new and existing technology to reduce energy, emissions and cost. Our Continuous Improvement (CI) teams conduct routine audits of facilities to identify opportunities for improvement and share best energy/efficiency practices from other sites. Key opportunities include verifying that dryer and evaporation systems are at optimum efficiency for current production rates as well as reviewing processes for heat re-use opportunities. The CI teams assess risks and opportunities in energy supply and continuity, cost impacts related to energy supply and emissions reduction opportunities.
Legal	Relevant, always included	Legal risks are always considered in our assessments of risk. From compliance with regulations and customer agreements to facilitating climate risk conversations with Investors, our legal team is involved. Legal is represented on the Sustainability Council and the Operations Leadership Team (OLT). Significant climate related risks, as determined through the Business Continuity risk assessment process, and mitigation programs are addressed, as applicable, in the, sustainability council, and the OLT meetings. An example of a legal risk that is considered in our assessment is inability to meet customer contract terms due to climate related manufacturing disruptions.
Market	Relevant, always included	Disruption in agricultural supply would impact our ability to produce product and meet customer demand. Shifts in markets, agricultural supply and customer demand for our products are relevant and always considered in Business Continuity Plan risk assessments.
Reputation	Relevant, always included	Protecting our reputation and being a good corporate citizen is always relevant. This is why we have aligned our sustainability efforts with the United Nations Sustainable Development Goals, became a signatory to the Global Compact, and increased transparency about our progress toward our goals through tools such as SEDEX. In addition, we have been recognized by Ethisphere as one of the World's Most Ethical Companies for the ninth consecutive year. Impacts to our reputation, customers and communities in which we operate are assessed in our Business Continuity and EHS risk assessment tools.

Acute physical	Relevant, always included	Acute risks due to flooding and extreme temperatures are always relevant as they pose the potential for curtailing operations, raw material availability, and disruption to transportation routes which affect our ability to obtain raw materials or ship product to customers. We have business continuity risk assessments in place to identify the potential severity of impacts, the probability of occurrence and the controls we have in place to mitigate impacts to costs and customers from these types of events.
Chronic physical	Relevant, always included	Changing weather patterns affecting growing seasons and geographies have the potential to impact our raw material agricultural supply and, therefore, are always relevant. Disruption in agricultural supply would impact our ability to produce product and meet customer demand. These risks are assessed in the Business Continuity Plan and are mitigated by our global supply chain and ability to obtain raw materials from a variety of sources.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Chronic physical

Changing temperature (air, freshwater, marine water)

Primary potential financial impact

Increased direct costs

Company-specific description

Ingredion relies on locally grown agricultural products as feed stocks to our processes. Extreme weather and natural disasters within or outside the United States, such as drought, wildfires, storms, changes in ocean currents and flooding, could make it more difficult and costly for us to manufacture and deliver our products to our customers,

obtain raw materials from our suppliers, or perform other critical corporate functions. In particular, if such climate change impacts negatively affect agricultural productivity, we may be subject to decreased availability or less favorable pricing from certain commodities that are necessary for our products, such as corn, specialty grains, rice, stevia, peas and sugar. Adverse weather conditions and natural disasters could reduce crop size and crop quality, which could reduce our supplies of raw materials, lower recoveries of usable raw materials, increase the prices of our raw materials, increase our costs of storing and transporting raw materials, or disrupt production schedules.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

There is a growing societal concern that carbon dioxide and other greenhouse gases in the atmosphere may have an adverse effect on global temperatures, weather patterns and the frequency and severity of natural disasters. The increasing concern over climate change could result in new domestic or international legal requirements for us to reduce greenhouse gas emissions and other environmental impacts of our operations, improve our energy efficiency, or undertake sustainability measures that exceed those we currently pursue. Furthermore, such measures may result in the taxation of greenhouse gas emissions. Any such regulatory requirements could cause disruptions in the manufacture of our products and result in increased capital, procurement, manufacturing and distribution costs.

Time horizon

Unknown

Likelihood

Unknown

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Reputation

Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact

Increased direct costs

Company-specific description

Our reputation and brand could be harmed if we fail, or are seen as having failed, to respond responsibly and effectively to changes in legal and regulatory measures adopted to address climate change. In addition, changing customer preferences may result in increased demands regarding packaging materials and other components in our products and their environmental impact on sustainability

Time horizon

Unknown

Likelihood

Unknown

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Increased direct costs

Company-specific description

Customers may place increasing importance on purchasing products that are sustainably grown and made, requiring us to incur additional costs for increased due diligence and reporting. These demands may cause us to incur additional costs or make other changes to other operations to respond to such demands, which could adversely affect our financial results

Time horizon

Unknown

Likelihood

Unknown

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Reduced water usage and consumption

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

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. Ingredion has a publicly stated goal to reduce our water intensity by 30% in regions that have extremely high water stress

Time horizon

Medium-term

Likelihood

Likely

Magnitude of 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 figure

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).

Cost to realize opportunity

10,500,000

Strategy to realize opportunity and explanation of cost calculation

Cost to realize water savings is estimated as 25 to 50% of the realized savings ($5.4 to $10.5MM). 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. Our local team of engineers, and technical professionals collaborate and innovate through a global Manufacturing Excellence Water and Wastewater team. This allows our facilities to share best practices, and facilitates the rapid deployment of proven, cost effective technologies across our network of plants.

Comment

Ingredion recognizes that achieving our objectives requires new and existing technical equipment partners to continue to develop new cost-effective technologies that are scalable to our industry.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Other, please specify

Reduced energy use and consumption

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Each 1% reduction in process energy use intensity results in savings up to approximately $517,000 annually in energy purchases. Ingredion has a publicly stated goal to reduce our Scope 1 and 2 GHG footprint by 28%. Energy efficiency will be a critical driver for achieving our CO2 reductions.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,133,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

$4.13MM is the approximate cost savings realized from energy reduction/ continuous improvement initiatives for the 8 year period from 2022 to 2030 resulting in 1% energy savings per year. The number was calculated by multiplying the energy savings 1% per year X 8 years by the 2022 average cost for energy (% per energy use). Additional cost reductions can be anticipated in the future with installation of more energy efficient equipment.

Cost to realize opportunity

4,133,000

Strategy to realize opportunity and explanation of cost calculation

Ingredion has consistently achieved energy reductions primarily related to continuous improvement efficiency initiatives which require low capital requirements. The energy team regularly shares best practices for energy use and monitoring. Furthermore, we will continue to drive energy improvements as we adopt more advanced monitoring

software and replacement of older equipment with more energy efficient equipment. Our financial costs were calculated assuming an average payback period of one year. One year was chosen to account for both zero/low capital projects, as well as capital investments for larger projects.

Comment

Ingredion recognizes that achieving our objectives requires new and existing technical equipment partners to continue to develop new cost-effective technologies that are scalable to our industry.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Recover biogas energy from on-site waste treatment facilities. Currently Ingredion recovers approximately 65% of all biogas that is generated at on-site treatment facilities. For sites without recover, the biogas is flared. Biogas from corn waste has high methane content and is suitable, in most cases, for heat recovery.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

970,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

For cases where Ingredion will utilize biogas as fuel, it is assumed that natural gas volumes will be offset by the biogas fuel. The figure was estimated by multiplying the volume of biogas potentially recovered by the average cost of purchased Natural gas for 2022. We estimate that 50% of biogas that is currently flared will be recovered.

Cost to realize opportunity

1,100,000

Strategy to realize opportunity and explanation of cost calculation

Many sites have infrastructure to utilize biogas as a fuel. While biogas recovery projects can be challenging, the engineering knowledge to assess and develop these projects exists within our organization. Reusing biogas eliminates unnecessary flaring, and provides a bio based fuel to which a traditional fossil fuel could be offset with. Since 2019, Ingredion has increased the amount of biogas that offsets traditional fossil fuel by 15%. The amount of biogas that is currently flared without energy recovery now sits at 34%. It is likely that the amount of biogas that is flared by 2030 will be reduced by 50%, leading to a further reduction in fossil fuel combustion. Financial figures were estimated based on similar projects implemented in the Ingredion network over the past 5 years.

Comment

We have a 2030 goal to reduce our Scope 1, 2 and 3 emissions. Using biogas to offset natural gas will reduce natural gas consumption and reduce well to tank emissions.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

Replace coal in boilers with natural gas at our remaining facilities. This will result in a significant decrease in absolute GHG emissions.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,941,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Coal would likely be replaced with Natural Gas. The figure was estimated using the differential in price between our costs for Coal and Natural gas in 2022.

Cost to realize opportunity

3,500,000

Strategy to realize opportunity and explanation of cost calculation

Ingredion has begun exploring alternative fuel use in the two facilities where we currently utilize coal boilers. Our team is able to use expertise gained in the transition from Coal at our Argo facility in 2021. The basis of the financial figure was from an engineering study completed at one facility. Further refinement will be needed prior to implementation.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a climate transition plan within two years

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

In 2022, Ingredion had our Scope 1, 2 reduction targets, which align with a 'Well below 2 degree Celsius' scenario, validated by the SBTi. Our Scope 3 reduction targets were also validated by the SBTi to a "2 degrees Celsius" scenario.
Ingredion remains focused on trying to identify a pathway to an SBTi 1.5-degree target, which is required before we can have a validated Net Zero target as well. We believe that the SBTi methodology establishes criteria aligned with our own beliefs that reducing physical emissions in our value chain is essential to mitigating climate change. Electrification of assets provides opportunities to significantly reduce emissions when coupled with renewable electricity. We have not estimated the capital investment required, but economics and pace of investment will need to be considered. New technologies, such as those that deliver green hydrogen and renewable natural gas at scale and competitive cost, are also important enablers to achieving a long-term Net Zero target. The timeline for these new technology developments is still uncertain.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Ingredion utilized the S&P Global Climanomics® platform to conduct a climate impact study across our global operations and supply chain. The Climanomics® platform allows a systemic method to translate climate risk into financial terms to provide decision-relevant insights. A cross functional Ingredion team worked with Climanomics® to quantify 500 assets for which to include in the global model - the assets included all our manufacturing facilities as well as key upstream agricultural sourcing areas, and critical supply chain infrastructure (such as 3rd party toll manufacturers and warehouses). Transitional risks that were modelled include Carbon Pricing, which was modelled based on underlying data of the Shared Socioeconomic Pathways (SSP) models used by

			the ICCP. The results are presented as Modeled average annual loss (MAAL) which represents the sum of climate-related expenses, decreased revenue, and/or business interruption and is represented as the percentage (or amount) of loss relative to the total asset value. Transitional losses were modelled along 4 scenarios - RCP 2.6, RCP 4.5, RCP 6.0, and RCP 8.5.
Physical climate scenarios RCP 6.0	Company-wide		Ingredion utilized the S&P Global Climanomics® platform to conduct a climate impact study across our global operations and supply chain. The Climanomics® platform provides climate risk analytics for seven physical hazards (drought, wildfire, temperature extreme, water stress, coastal flooding, river flooding, and tropical cyclones) to real assets, under four climate scenarios based on the Representative Concentration Pathways (RCPs). Adopted by the IPCC, the pathways describe different climate futures, all of which are considered possible depending on the volume of GHGs emitted in the years to come. A cross functional Ingredion team worked with Climanomics® to quantify 500 assets for which to include in the global model - the assets included all our manufacturing facilities as well as key upstream agricultural sourcing areas, and critical supply chain infrastructure (such as 3rd party toll manufacturers and warehouses). The Climanomics® platform is built on the world's latest, most rigorous climate science datasets, including from the IPCC, the NOAA and the WWF. The platform utilizes customized models to develop the scenarios and then present the results as Modeled average annual loss (MAAL) which represents the sum of climate-related expenses, decreased revenue, and/or business interruption and is represented as the percentage (or amount) of loss relative to the total asset value. Physical losses were modelled along 4 scenarios - RCP 2.6, RCP 4.5, RCP 6.0, and RCP 8.5.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

Observations from the climate analysis are important for Ingredion as we evaluate expansions to our manufacturing capacity and plan our global agriproducts sourcing supply chain. Strategy development falls into two categories. First, is how can we use the model to plan future investment/expansion in manufacturing capacities for our business. Secondly, how does the modelling influence our Sustainable Agriculture strategy.

Results of the climate-related scenario analysis with respect to the focal questions

The climate scenario analysis identified what expected losses exist across critical elements in our global operations. The scenario analysis revealed that our agricultural supply chain has the greatest risk due to physical risks, whereas our operations are exposed to both physical and transitional risks. Of the physical risks identified, the balance of the agricultural risks are due to temperature extremes and drought. As our corn supply chain represents over 74% of our agricultural feedstock this represents the largest absolute risk, however, the study allowed us to identify other tier 1 crops, as well as specific corn sourcing regions, which have higher relative risks and where regenerative agriculture practices could have an outsized impact due to local stressors in the coming decades. This is critical insight as we continue to expand our regenerative agriculture program with our growing partners.

The analysis allows us a tool to compare climate risk when comparing greenfield sites. When evaluating perspective sites we have the tools to prioritize where we may face challenges with current and future water stress that may influence our operating costs and raw material supplies. Ingredion can build resiliency into supply chains before the water risk becomes apparent. Predictive analysis is an important tool for Ingredion to use in partnering with growers to increase productivity and resiliency, thus decreasing the risk associated with climate change to our business.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	As a plant-based ingredients company, we are poised to help our customers with the increasing demand to create sustainable products that provide consumers with an exceptional experience. In support of our current All Life Plan, we have enhanced this process by aligning our new product development with the UN Sustainable Development

		Goals (SDGs). We believe that this will better align with our customers' needs, and ultimately the needs of society. Our specialty products, such as specialty starches, have proven to be resilient to risk and have created an opportunity for us to supply versatile and affordable ingredients. In 2022, we were the first major food ingredients company to partner with HowGood, a sustainable food and beverage data platform. This partnership will allow us to continue to be transparent and insight innovation in sustainable food ideas. Many experts agree that alternative proteins have a vital role to play in the world achieving food security by 2030. At Ingredion, our Plant-Based Protein growth platform is well aligned to play a part in the broader evolution of a sustainable food system. Growing consumer demand for plant based and hybrid products is expected to drive dramatic increases in sales of these products. In 2022, our plant based protein Ultra Performance line was named the Best Plant-Based Sustainability winner at the World Plant Based Awards. This line does not generate any wastewater during processing, nor include any chemicals or additives. We continue to partner with the EVERY Company to create plant based protein solutions that our customers enjoy. Staying connected with innovation and thought leadership in the plant protein space is critical to our strategy in this area. Also in acknowledgement that agriculture is heavily impactful on the environment and it's contributions to climate change, Ingredion has committed to having 99 percent of all crops and 100 percent of the company's Tier 1 crops (corn, tapioca, potato, stevia and pulses) to be sustainably sourced by 2025. The Asia Pacific Region has made significant strides to do this, including the release two new products in 2022: next generation waxy tapioca and waxy rice. This strategy aligns us with a climate forward mindset and allows us to manufacture quality ingredients to feed the world's people.
Supply chain and/or value chain	Yes	Changing temperature and precipitation patterns, as indicated in our climate model scenarios, have the potential to significantly impact water availability and plant-based agriculture, our most significant raw materials. Therefore, we have established goals to increase sustainably sourced agriculture and reduce our water use intensity. In 2022, we achieved our goal to sustainably source 100% of our waxy corn supply by 2022. In 2022, 48% of our Tier 1 Priority Crops were also sustainably sourced in support of our goal to sustainably source 100% of our Tier 1 Priority Crops by

		2025. Multiple initiatives helped us achieve this performance, including continued interest and support from our growers, enhanced knowledge on SAI Platform implementation within Ingredion's agricultural teams, increased efforts with some of our grain provider partners and continued collaboration with customers, particularly as part of our work with the SAI Platform. As a result of climate related risks, our 2030 goals and milestones are more aggressive in these areas, including implementing water conservation projects with growers in 100% of extremely high water stressed sourcing geographies by the end of 2025; and, reducing our water use intensity by 30% in all extremely high-stress geographies where we manufacture products by 2030.
Investment in R&D	Yes	At our heart, Ingredion is an innovation company. Every day we work to deliver our customers ingredient solutions that enhance functionality, align with consumer preference, and help those customers achieve their own sustainability goals. And while we know that aligning our product development with sustainability is the right thing to do, we also believe it makes great business sense. For example, we see a growing number of consumers looking to reduce sugar in their diets, which is driving some customers to examine how they formulate certain products to align with this trend. Ingredion continues to develop nature-based, low calorie sweetener solutions like our stevia products that not only help formulate low-sugar consumer products, but which can also help our customers lower their product carbon footprint. In August 2022, Ingredion announced the completion of a peer-reviewed LCA study on several of its sweetener solutions products, such as stevia. This study shows that Reb M stevia innovations offer great-tasting sugar reduction options while simultaneously reducing negative environmental impacts. The findings show fermentation and bioconversion technologies have significantly improved the sustainability of Reb M – a next-generation stevia sweetener from PureCircle by Ingredion.
Operations	Yes	The greatest potential climate-related risk to operations is lack of water and agricultural raw materials, which have been addressed above. However, we also have goals to reduce water and CO2e at our manufacturing locations: Achieve a 28% reduction in absolute Scope 1 and Scope 2

		GHG emissions by the end of 2030; Source 50% of our purchased electricity from renewable sources by the end of 2030; Reduce our water use intensity by 30% in all extremely high-stress geographies where we manufacture products by the end of 2030. These goals were developed to address the impact our operations may have on climate-related risks, including changes in temperature and precipitation as identified in our climate scenario analysis. In 2022, Ingredion launched a project with Schneider Electric to evaluate opportunities around renewable energy in North America, our largest regional business. This work included evaluating opportunities for both purchase and installation of renewable energy. Having more insight into renewable energy options has helped us evaluate a range of opportunities to progress our efforts towards our CO2 and Renewable Electricity goal.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Indirect costs Capital expenditures Acquisitions and divestments	Our continuous improvement teams are highly focused on implementing energy and water efficiency initiatives at our manufacturing facilities through auditing, tracking, trending, and sharing learnings and best practices. These continuous improvement initiatives decrease energy and water inputs resulting in improvement in indirect operating costs. Capital expenditures that reduce our CO2e footprint and climate impact include purchase and installation of more efficient pumps and compressors; installation of variable frequency drives (VFDs) on motors; evaporator improvements, installation of LED lighting), and energy recovery projects (e.g., reuse of steam or heated water in other processes, use of biogas generated from wastewater treatment to replace natural gas in some equipment. In addition, installation of on-line meters to trend and reduce process variability in real-time, results in decrease energy and raw material inputs. For several years we have been evaluating climate impacts and water availability in our due diligence assessment process for mergers and acquisitions. Identification of this aspect of risk influenced decisions on whether to continue with potential acquisitions. The aspects of climate change that influenced this decision were primarily related to the

		availability of a reliable power grid, water availability, access to sustainable raw materials, and the ability to discharge wastewater in compliance with applicable regulations. These are short-term initiatives.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
Row 1	No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,664,375

Base year Scope 2 emissions covered by target (metric tons CO2e)

809,882

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,496,487

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

28

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

2,517,470.64

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,246,831

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

809,882

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

3,056,713

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

% of target achieved relative to base year [auto-calculated]

44.9199847896

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Our target covers all emissions from our global operations as defined by our operational boundary. Note: Our science based target includes biogenic emissions. For disclosure purposes they have been included in the reported Scope 1 emissions for this question. Scope 1 emissions for 2019 are reported as 2,664,375 however the breakdown is Scope 1 emissions 2,623,231 and biogenic 41,144. Scope 1 emissions for 2022 are reported as 2,246,831 however the breakdown is Scope 1 emissions 2,198,870 and biogenic 47,961.

Plan for achieving target, and progress made to the end of the reporting year

Ingredion will implement its Scope 1 emission reduction target through a portfolio of projects across its network of manufacturing plants. These projects include: reduction of coal energy sources; capital investment in more energy efficient process technologies; continuous improvement of daily operating routines to ensure optimal efficiency of existing assets; and conversion to biomass energy sources at select locations. Ingredion will implement its Scope 2 emission reduction targets by; improving the efficiency of our plant consumption of third party electricity and steam; on-site solar at select locations; and, purchasing third-party renewable electricity. The major driver for progress in 2022 has been seen through the phasing out of coal used in our boilers at our Argo USA facility - our largest manufacturing plant globally for the company. We also increased the procurement of renewable energy in China, and switched fuel in Pakistan.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 2

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

2°C aligned

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 10: Processing of sold products
Category 11: Use of sold products

Base year

2019

Base year Scope 1 emissions covered by target (metric tons CO2e)

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

3,588,850

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

748,242

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

1,620,839

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

117,838

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

2,244,121

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

6,477

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

8,326,367

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8,326,367

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

57.7

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

100

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

67

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

67

Target year

2019

Targeted reduction from base year (%)

15

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

7,077,411.95

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

3,677,868

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

547,667

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

1,307,212

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

112,971

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

2,199,892

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

7,845,610

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

7,845,610

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

38.4927383896

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

In alignment with the SBTi guidance our target covers 67% of our Scope 3 inventory boundary. Covered categories were chosen based on materiality to Ingredion and to our external stakeholders, overall size of emissions, and our ability to influence reductions across our value chain. Our target excludes emissions in the following relevant categories: Capital Goods, Business Travel, Employee Commuting, Downstream transportation, End of Life Treatment, and Investments.

Plan for achieving target, and progress made to the end of the reporting year

Ingredion will implement our reduction targets by improving operational efficiency and engaging with key stakeholders within our supply chain. Improving the operational efficiency of our manufacturing facilities will lead to reductions in well to tank (WTT) emissions from our purchased fuels and electricity, reduce the generation of waste, and reduce the consumption of raw materials. Furthermore, we will increase our engagement activities with our farmers to reduce emissions from agricultural operations through the promotion of regenerative agriculture practices. We will also increase our collaboration with customers as it relates to reducing the CO2 footprint needed to process our final product. We are evaluating engaging with our suppliers through the CDP to enable us to collect primary data for categories that currently use secondary data (such as chemicals and packaging materials), and identify opportunities for engagement that will deliver quantifiable reductions.

At the end of 2022 Ingredion's scope 3 emissions across our targeted boundary was reduced by 6%. A significant reduction was due to transitioning away from coal at our largest manufacturing facility in 2021. Progress was seen across category 5 as well as we transitioned some routes to rail.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2020

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2019

Consumption or production of selected energy carrier in base year (MWh)

1,467,096

% share of low-carbon or renewable energy in base year

2.6

Target year

2030

% share of low-carbon or renewable energy in target year

50

% share of low-carbon or renewable energy in reporting year

5

% of target achieved relative to base year [auto-calculated]

5.0632911392

Target status in reporting year

Underway

Is this target part of an emissions target?

The procurement of renewable energy has been identified as one element of an overarching strategy to achieve our Scope 1 and 2 GHG reduction goals.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Our target covers purchased electricity from our global operations as defined by our operational boundary.

Plan for achieving target, and progress made to the end of the reporting year

As we continue to enhance our carbon reduction strategy, we know that the use of renewable energy has a significant role to play in achieving our targets. The decision on where to progress is complex, as some of our geographies of operation have energy grid supply challenges that have to be taken into consideration when evaluating green energy purchases or reducing on-site co-generation from fossil fuels. Some of these efforts are going to take time to evaluate as we progress our roadmap to 2030. Because of reasons like this, we have chosen to focus on North America and South America in building our purchased renewable electricity strategy.
In 2022, we launched a project with Schneider Electric to evaluate opportunities around renewable energy in North America, the company's largest regional business. This work included evaluating opportunities for both purchase and installation of renewable energy. Having more insight into renewable energy options has helped us evaluate a range of opportunities to progress our efforts.
Ingredion began collaboration with one of our customers who is seeking to leverage the purchasing power of their organizations combined with their suppliers to get reduced costs in a voluntary power purchase agreement (VPPA). Evaluation of this project will continue into 2023.
In 2022, our site in Shanghai, China was the first in the Asia Pacific region to purchase 100% renewable electricity. Ingredion has six sites in our global network that have Renewable Energy.

List the actions which contributed most to achieving this target

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2019

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)
Resource consumption or efficiency
Other, please specify
Percentage of Waxy Corn Sustainably Sourced

Target denominator (intensity targets only)

Base year
2018

Figure or percentage in base year
40

Target year
2022

Figure or percentage in target year
100

Figure or percentage in reporting year
99

% of target achieved relative to base year [auto-calculated]
98.3333333333

Target status in reporting year
Achieved

Is this target part of an emissions target?
No

Is this target part of an overarching initiative?
Other, please specify

The overarching goal is to “Make life better for growers, mitigate supply chain risks and help drive food security by sustainably sourcing 100% of primary crops”.

Please explain target coverage and identify any exclusions
Waxy corn is typically used to make specialty products that bring a higher level of innovation to customers, so we decided to focus on covering these volumes first. To qualify our corn as sustainable we utilize the Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment platform. The FSA platform acts as the starting point for identifying deforestation considerations in our agricultural supply chain. The FSA is divided into three types of questions: Essential, Intermediate and Advanced. A negative response to any essential questions automatically disqualifies the farm from being considered sustainable.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target
We engage with agricultural suppliers on sustainable agriculture practices that help reduce climate change (e.g. no tillage, reduced chemical usage, reduced water irrigation, etc.). We require all our Tier 1 crop agricultural suppliers to have achieved a FSA bronze level (or equivalent under a benchmark program) to qualify as being

sourced sustainably. The Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment (FSA) platform was developed as a way for farmers to assess their ability to meet environmental, economic, and social requirements set forth by supply chains and is based on sustainable farming practices recognized in the food and drink industry. The assessment is conducted via a questionnaire (self-assessment) or a third party verification against the requirements (FSA or benchmark equivalent).
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 Project Five Star expansion in China.

Target reference number

Oth 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Resource consumption or efficiency

Other, please specify

Sustainably sourcing 100% of primary crop

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

10

Target year

2025

Figure or percentage in target year

100

Figure or percentage in reporting year

48

% of target achieved relative to base year [auto-calculated]

42.2222222222

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

Other, please specify

The overarching goal is to “Make life better for growers, mitigate supply chain risks and help drive food security by sustainably sourcing 100% of primary crops”.

Please explain target coverage and identify any exclusions

The milestone target is to sustainably source 100% of our Tier 1 priority crops by the end of 2025. Tier 1 priority crops include Corn Cassava, Potatoes, Pulses and Stevia. To qualify our corn as sustainable we utilize the Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment platform. The FSA platform acts as the starting point for identifying deforestation considerations in our agricultural supply chain. The FSA is divided into three types of questions: Essential, Intermediate and Advanced. A negative response to any essential questions automatically disqualifies the farm from being considered sustainable.

Plan for achieving target, and progress made to the end of the reporting year

We engage with agricultural suppliers on sustainable agriculture practices that help reduce climate change (e.g. no tillage, reduced chemical usage, reduced water irrigation, etc.). We require all our Tier 1 crop agricultural suppliers to have achieved a FSA bronze level (or equivalent under a benchmark program) to qualify as being sourced sustainably. The Sustainable Agriculture Initiative's (SAI) Farm Sustainability Assessment (FSA) platform was developed as a way for farmers to assess their ability to meet environmental, economic, and social requirements set forth by supply chains and is based on sustainable farming practices recognized in the food and drink industry. The assessment is conducted via a questionnaire (self-assessment) or a third party verification against the requirements (FSA or benchmark equivalent).
In 2022, we continued to make investments in our sustainable and regenerative agriculture programs, working to create a more climate resilient supply chain while delivering the differentiated ingredients our customers and their consumers want. We continue to make excellent progress on our target to sustainably source 100% of our Tier 1 priority crops (corn, tapioca, potatoes, stevia, and pulses), with 48% of those priority crops being covered under our sustainable sourcing program. This puts us on track to achieve our target by 2025, which will mean that approximately 99% of our global sourcing by volume is covered by our Tier 1 priority crops.

List the actions which contributed most to achieving this target

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	191	231,981
To be implemented*	65	135,600
Implementation commenced*	51	300,478
Implemented*	12	11,715
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy consumption

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

7,500

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Our facility in Shanghai China began to procure renewable energy.

Initiative category & Initiative type

Energy efficiency in production processes

Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)

2,286

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

234,000

Investment required (unit currency – as specified in C0.4)

568,384

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This project covers a series of capital investments to improve insulation and recover waste energy in order to improve the efficiency of onsite steam generation systems.

Initiative category & Initiative type

Energy efficiency in production processes

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

85

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
200,000

Investment required (unit currency – as specified in C0.4)
98,000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Upgraded electrical blowers at on-site waste-water treatment plant

Initiative category & Initiative type
Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1,844

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
151,000

Investment required (unit currency – as specified in C0.4)
111,077

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
Numerous continuous process initiatives were undertaken at many plants globally that led to CO2 reductions. As an example, one of the projects allowed the site to eliminate the requirement for spray drying on specific products in the manufacturing process. This resulted in energy efficiency and less natural gas consumption.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Review of changing regulations, including emissions trading programs and carbon taxes, and how they potentially impact operations are factored into investment decisions.
Other Project Prioritization Score	We use a project prioritization scoring system to define and identify 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.
Internal incentives/recognition programs	Our CEO awards program, now in its eleventh year, is an example of a global recognition program recognizing the great work of many hundreds of employees. The finalists are drawn from all the company's regions and represent excellence in seven categories: Safety, Sustainability, Process, Quality, Innovation, Leadership and Business.
Financial optimization calculations	Multiple analytics are drawn around all projects to determine how to optimize organizational costs. The calculations most commonly include ROI: Return on Investment and discounted cash flow analysis including net present value with a set internal hurdle rate and an independently calculated internal rate of return.
Lower return on investment (ROI) specification	The capital categorization for Environmental Projects has a standalone category which do require a ROI to be calculated allowing the sustainability investments to be made based on the merits of the sustainability initiative without financial calculations.
Internal price on carbon	In an effort to raise awareness of climate change and influence decision makers to embed our climate commitments in our approval process, Ingredion implemented an internal carbon price in 2022. The inclusion of a shadow price introduces a formal mechanism to screen all capital investments against a shadow carbon cost, which incentivizes the development of projects that delivered CO2 reductions, while penalizing projects that increase our GHG footprint. While it is still early to judge the effectiveness of the program, initial observations made indicate an increase in frequency of projects with CO2 savings, including renewable energy.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other

Other, please specify

Bio-Converted RebM Sweetener

Description of product(s) or service(s)

Ingredion produces four variations of stevia sugar substitutes—Leaf-extracted Reb A, Leaf-extracted Reb M, Bio-converted Reb M, and Fermented Sugarcane Reb M. Stevia is a category of sweeteners made of Steviol glycosides that derive from the leaves of the plant species Stevia Rebaudiana. Steviol glycosides are about 100 to 300 times sweeter than conventional white sugar, without carbohydrates, calories, or artificial ingredients. Stevia is a low-carbon alternative to other sweeteners like high fructose corn syrup (HFCS), white sugar from sugarcane, and white sugar from sugar beet. Ingredion commissioned Anthesis LLC to conduct a comparative life cycle assessment (LCA) of the four stevia products against the three traditional sweeteners which found that the stevia products had lower environmental impact scores overall than the traditional sweeteners. Using the category of global warming as our primary focus, all four stevia products have lower global warming impacts than white sugar from sugarcane. This leads Ingredion to believe that the four stevia sweetener products we produce are low-carbon products when compared to the reference product of white sugar from sugar cane, and even other available traditional sweetener alternatives. We chose to specifically focus on bio-fermented Reb M as it is a more differentiated product within the stevia sector from Ingredion's portfolio.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-gate

Functional unit used

The functional unit for this study is defined as: “The sweetening equivalency of 1 kg of white sugar for use in the beverage industry." The function of the product systems is to provide sweetening to the beverage industry to make a variety of products. Sweeteners can be compared based on their relative sweetness, in relation to sucrose (white sugar) by weight. In this study, the relative sweetness is used as a proxy for the quantity of sweeteners needed to obtain a given sweet taste.”

Reference product/service or baseline scenario used

Sweeteners produced from white-sugar from sugar cane.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Cradle-to-gate

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

610

Explain your calculation of avoided emissions, including any assumptions

The third party study identified the GWP of bio-converted Reb M as 556 MT of CO2/KG of white sugar, and the GWP of sugarcane as 1170 MT of CO2/KG. As defined in the WRI attributional approach, avoided emissions are calculated by subtracting life cycle emissions of the reference product by life cycle emissions of the assessed product. (1170MT - 556MT) = 610. We chose an attributional approach because the LCA analysis by Anthesis LLC compares sweetener products to each other. We chose to only calculate for global warming potential, though the Anthesis study has calculations for other environmental, but non-carbon related, categories. We use the ISO 14040/44 procedure for allocation of material and energy flows and environmental emissions. Assumptions were made for the stevia by-products, as economic allocation procedure for ISO was not possible, so a mass-based allocation that uses the production volumes of the different steviol glycosides was performed. Ingredion also does not have information on electricity or natural gas inputs for stevia separately, since stevia is manufactured with other products in the China and Malaysia facilities, so facility-level data was used. ReCiPe 1.06 Global Warming environmental impact indicator is used based on AR4 IPCC Global Warming Potential Factors. Omitted from the study were emissions from:
· Human energy inputs to processes · Production and disposal of the infrastructure (machines, transport vehicles, roads, etc.) and their maintenance · Environmental impacts related to storage phases · Losses of product during the distribution to customers · Handling and potential storage of the product at the customer’s facility. To prevent the sweeteners from absorbing moisture, they should be stored in a cool and dry place and kept well ventilated. This is true for the seven sweeteners under study · Electricity, steam and fossil fuels required for office energy needs, such as heating, cooling, and lighting · Transport of employees to and from their normal place of work and business travel · Environmental impacts associated with support functions (e.g., R&D, marketing, finance, management etc.) · Potential differences in product uses

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.3

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

Ingredion acquired Katech, a privately held company headquartered in Germany that provides advanced texture and stabilization solutions to the food and beverage industry.

Details of structural change(s), including completion dates

The organization was purchased in April of 2021. One new manufacturing facility was incorporated in our boundary for the 2022 reporting year. The acquisition was also added to our 2019 baseline.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	As a result of our SBTi approval process we performed a thorough review of our calculations and identified a few opportunities to improve our calculations. 1) Expansion of Scope 3 Category 12 - it is recognized that our products are key inputs in consumer food production and, may ultimately end up as food waste. We implemented an average data

		method to calculate emissions generated from various pathways of food waste. 2) Addition of Scope 3 Category 11 Use of sold products - Ingredion sold ethanol in 2019 which used a fossil fuel derived denaturant. The emissions from the ultimate combustion of this product was not previously calculated and we use an average data method to calculate the CO2 emissions based off of actual fuel sold. 3) Spend based factors in Category 1, 2, 4 and 6 - when preparing prior spend based methods we used a dataset generated by finance. Our internal finance team has evolved the data collection process which includes a new business system that offers more granularity in category spend. We integrated this new system in system this year, and updated our 2019 data accordingly. 4) Minor Change in method for Scope 3 Category 5 - we updated our methodology for calculating CH4 and N2O for water discharged to land to align with the IPCC Chapter 11 Volume 5. 5) We have expanded our biogenic accounting method to include biogenic gross removals to align with the draft FLAG guidelines.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	A description of the approach for adjusting base year emissions for mergers, acquisitions, divestitures, and outsourcing. 1. Facilities are removed from base year when they are divested. a. Facilities remain part of the base year when they are shut down and in some cases after sale to a third party if third party will not continue to operate the plant for the same type of processing that Ingredion was doing. A key concept is to keep the plant in the base year if it shut down as part of organic growth or decline of Ingredion. b. Will be removed from base year if sold or leased to others who operate them similar to the way we were. 2. Facilities that are acquired and which were active in the base year will be added to the base year in a reasonable time to allow for base year data to be obtained or estimated. In	No

			cases where records are generally not available, this may require that we operate them for one year in order to obtain seasonally representative data to make estimates of base year emissions. a. Include it in the base year if data is available. b. If the facility was not operating during the base year it will added to the base year without any emissions, water use or production. An indication of whether a significance threshold is used to define whether adjustments are made. 1. For manufacturing facilities a significance threshold is not used to define whether adjustments are made. Base year adjustments are made to reflect updates to emission factors (for the boundary year), as well as to correct any errors or methodology changes regardless of materiality. 2. For non-manufacturing facilities and leased vehicles a change which increases their total GHG for all non-manufacturing facilities above 5% of the total inventory would trigger them to be included in the inventory.	

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

2,623,231

Comment

The base year emissions have been recalculated to account for recent acquisitions and minor corrections to base year data. This total excludes the CO2 fraction from direct biogenic emissions. It is important to note that our company reduction goal includes biogenic CO2 emissions.

Scope 2 (location-based)

Base year start
January 1, 2019

Base year end
December 31, 2019

Base year emissions (metric tons CO2e)
850,030

Comment
Base year emissions have increased by 103 MT to account for the acquisition of Katech as well as updated IEA emission factors for 2019.

Scope 2 (market-based)

Base year start
January 1, 2019

Base year end
December 31, 2019

Base year emissions (metric tons CO2e)
832,112

Comment
Base year emissions have increased by 3,033 MT to account for the acquisition of Katech as well as updated IEA emission factors for 2019.

Scope 3 category 1: Purchased goods and services

Base year start
January 1, 2019

Base year end
December 31, 2019

Base year emissions (metric tons CO2e)
3,588,850

Comment
Base year emissions have increased by 512,347 MT to account for a change in primary data source used for global spend.

Scope 3 category 2: Capital goods

Base year start
January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

23,915

Comment

Base year emissions decreased by 1579MT to account for a change in primary data source used for global spend.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

755,142

Comment

Base year emissions decreased by 6900 MT. The changes were due to updated 2019 emission factors published by the IEA, correction of a minor error in a calculation, and the addition of a new acquisition.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

1,620,839

Comment

The base year emissions have increased by 20,654 MT to include updated spend based data from Warehousing operations.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

117,838

Comment

The base year emissions decreased by 3237 MT to correct a minor error in wastewater treatment downstream calculations.

Scope 3 category 6: Business travel

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

4,560

Comment

The base year emissions have decreased by 3,025 MT due to updated spend data.

Scope 3 category 7: Employee commuting

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

14,359

Comment

No change from previously reported data.

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

This category is not relevant.

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

395,901

Comment

No change from previously reported data.

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

3,887,535

Comment

The base year emissions have decreased by 76,525 MT due to the removal of product sold from a divested business in Argentina. The divestment was made in 2021 however last year's CDP report had included these emissions.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

6,477

Comment

The base year emissions were not previously calculated.

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

1,824,690

Comment

The base year emissions increased by 1,824,690 MT to account for sold product that is estimated to end up as waste. This was not previously calculated.

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

This category is not relevant.

Scope 3 category 14: Franchises

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

This category is not relevant to our operations.

Scope 3 category 15: Investments

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

178,878

Comment

The base year emissions increased by 7,265 MT to reflect updated emission factors provided by our joint venture in Argentina.

Scope 3: Other (upstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

This category is not relevant to our operations.

Scope 3: Other (downstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

This category is not relevant to our operations.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

2,198,870

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

841,801

Scope 2, market-based (if applicable)

809,882

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

Company Owned Vehicles

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Compared with our manufacturing operations, the emissions from our company owned vehicles are not significant. Company owned vehicles located at our manufacturing sites often fuel onsite and would be included in scope 1 emissions. Ingredion does not own/operate the vehicles that transfer product/materials to our facilities, or to our customers - these emissions are included in Scope 3. Total emissions are less than 0.005% of our overall scope 1 and 2 footprint.

Explain how you estimated the percentage of emissions this excluded source represents

Estimates were based on accounting for one on-site utility vehicle at each manufacturing facility. The most recent EPA transportation factors were applied to estimate overall CO2 emissions

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Source of excluded emissions

Two small farms used primarily for research and development and one greenhouse.

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Ingredion leases 2 farm properties globally (approximately 25 acres total) and one greenhouse (<0.5 acres). These properties are used for research and development, and breeding purposes. Calculated emissions from these leased properties are not significant when compared with our manufacturing operations. Calculated lifecycle emissions from the research farm are less than 0.0005% of our global scope 1+2 emissions.

Explain how you estimated the percentage of emissions this excluded source represents

Life cycle emissions were calculated based on the quantity of crops grown at the research farms. Greet 1 V1.8d.1 with agronomic data from Greet for U.S. corn purchases assumed representative and applied to all farms.

Source of excluded emissions

Leased vehicles

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Calculated emissions from leased vehicles are not relevant when compared with our manufacturing operations. Calculated emissions for leased vehicles are less than 0.05% of Global Scope 1 emissions.

Explain how you estimated the percentage of emissions this excluded source represents

Emission estimates for our North American fleet are provided by our third party fleet management firm who used EPA emission factors applied to total mileage driven. Estimates for the remaining global fleet were estimated by applying EPA emission factors to estimated distances traveled on our global leased fleet of automobiles.

Source of excluded emissions

Facilities that were acquired during 2022 but did not operate as Ingredion for the entire year. Ingredion purchased 2 facilities in India. On August 1, 2022, we acquired Amishi Drugs and Chemicals Private Limited ("Amishi"), which is an Indian manufacturer of chemically modified starch-based pharmaceutical excipients. On December 1, 2022, we acquired a 65 percent controlling interest in Mannitab Pharma Specialties Private Limited ("Mannitab"), which is an Indian manufacturer of spray dried mannitol and fine grade mannitol.

Scope(s) or Scope 3 category(ies)

Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Relevance of Scope 1 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of location-based Scope 2 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of market-based Scope 2 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

August 1, 2022

Estimated percentage of total Scope 1+2 emissions this excluded source represents

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

These facilities will be added to our corporate inventory and base year for target setting purposes. We allow newly acquired facilities one year to understand our systems and expectations around reporting.

Explain how you estimated the percentage of emissions this excluded source represents

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,677,868

Emissions calculation methodology

Average data method

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Life cycle emissions for Maize + Cassava farming. For Maize, used Greet 1 V1.8d.1 (life cycle CO2e results) with agronomic data from Greet for U.S. corn purchases assumed representative and applied to corn purchases in other parts of the world. Emission

reductions achieved from our Verified Emission Reduction Project (VER) were applied to our emissions; details of the VER are found in question 4.3b. For Cassava, Pulses, Stevia, Potatoes: Ingredion utilized an outside consultant to identify relevant LCA inventory factors from published sources that were then used to calculate farming emissions and third party pre-processing emissions (where applicable). Weights for all agricultural products were collected from certified weight scale receipts that were compiled at every operating facility.
Non-agricultural goods and services: Used spend based method to calculate emissions from toll packing operations, as well as emissions for the production of processing aids, chemicals, packaging, and maintenance consumables used at our facilities. Complete global spend for all relevant activities was obtained from our procurement team, and emission factors (EEIO) used for our spend based analysis were taken from "Supply Chain Emission Factors for US Commodities and Industries" published by the Environmental Protection Agency

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

23,300

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This category represents emissions from the manufacturing of equipment used at our facilities to produce our final products. Emissions are calculated using spend based methods. Complete global spend for all relevant activities was obtained from our procurement team and emission factors (EEIO) used for our spend based analysis were taken from "Supply Chain Emission Factors for US Commodities and Industries" published by the Environmental Protection Agency.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

547,677

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Well to tank emissions for all purchased fuels and electricity were calculated using fuel based method. Actual consumption data for electricity and fuel usage was obtained from vendor invoices, compiled at our local facilities and managed in a central database. For electricity: T&D losses were estimated using Country level "correction for transportation and distribution loss induced emission factors" published by the EPA. For fuels: Well to tank fuel emission factors were published by the United Kingdom, Department for Environment, Food and Rural Affairs (DEFRA).

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,307,212

Emissions calculation methodology

Spend-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Upstream transportation and distribution includes shipment of raw materials to Ingredion's manufacturing facilities and warehouses, semi finished goods transfers to affiliates, and outbound products where Ingredion paid for the transportation. This year we have also included a spend based estimate for estimating emissions from warehousing activities. Inbound and outbound material transportation data (Rail, Truck, Ocean, and Air shipments), which includes cargo weight and average length of haul (shipping distances), was collected from Ingredion's commodity and logistics department. Once collected, Ingredion used emission factors from the EPA Center for Corporate Climate Leadership and GHG global warming potentials from IPCC AR5 to calculate total CO2e. The emission calculations include Well to tank fuel emission factors, which were published by the United Kingdom, Department for Environment, Food and Rural Affairs (DEFRA). To calculate the emissions from our warehousing activities, actual spend for warehousing was gathered from corporate finance. 2022 emission factors (EEIO) used for our spend based analysis were taken from "Supply Chain Emission Factors for US Commodities and Industries."

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

112,971

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This category includes the removal and disposal of solid and liquid waste from operations. Solid waste: Volumes for all waste landfilled, recycled, land applied, and incinerated were provided by each of our manufacturing facilities. 'Mixed MSW', 'Mixed Recyclables' and 'Mixed Organics' emission factors published by the EPA Center for Corporate Climate Leadership (Table 9) were used to calculate emissions. Liquid waste: Most Ingredion sites have liquid waste discharges, of which many sites have on site wastewater treatment facilities. CH4 and N2O emissions from third party treatment of discharged waste, associated biomass, and the final discharge to the natural environment were calculated based on Chapter 6 of the IPCC Guidelines for National GHG Inventories - section 6.2.3.1 & 6.4.1.1 Industrial Wastewater Emissions. Primary process data on treatment methods and effluent quality/quantity was obtained from all manufacturing sites. Emission factors were chosen from the relevant section of the IPCC guidelines. Reasonable technical based assumptions from subject matter experts were made regarding third party treatment capabilities (Anaerobic vs Aerobic treatment), and composition of biogas emissions.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,288

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This category represents emissions from air travel, hotels, car rentals, and livery services for work related travel for all global employees. Emissions are calculated using spend based methods. Complete global spend for all relevant travel activities was

obtained from financial records and emission factors used for our spend based analysis were taken from "Supply Chain Emission Factors for US Commodities and Industries" published by the Environmental Protection Agency.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

12,264

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Employee transit emissions are calculated based on total headcount at all our manufacturing and non-manufacturing sites. Global headcount by site was used for our calculations, and remote work estimations were made in alignment with internal Human Resource Policies. Distances, and mode of transportation were estimated using the website www.numbeo.com, which breaks down average commute mode and distance for major global cities. Emissions were calculated by multiplying the distance travelled by employee (per annum) by an emission factor for that mode of transportation, obtained by the Environmental Protection Agency, Center for Corporate Climate Leadership (Table 9). The emission calculations include Well to tank fuel emission factors, which were published by the United Kingdom, Department for Environment, Food and Rural Affairs (DEFRA).

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

All leased assets are consolidated within Scopes 1 & 2 under the operational boundary. Ingredion does not have any emissions falling within this category.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

426,487

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Downstream transportation and distribution includes shipment of finished product to Ingredion customers where the transportation was not paid for by Ingredion. Outbound material transportation data (Rail, Truck, Ocean, and Air shipments), which includes cargo weight and average length of haul (shipping distances), was collected from Ingredion's commodity and logistics department. Once collected, Ingredion used emission factors from the EPA Center for Corporate Climate Leadership and GHG global warming potentials from IPCC AR5 to calculate total CO2e. WTT emission factors, published by DEFRA, have also been applied.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,810,916

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

As a business-to-business supplier our ingredients are processed by our customers, and in this category we calculate the emissions associated with processing our products into final products. Global weights for all product sold globally was obtained from our finance team and multiplied by a life cycle emission factor. Ingredient specific emission factors for our customer's processes are not readily available so we systematically divided our sold product into 12 broad consumer end product categories and chose an emission factor from public LCA databases that best represent the category. As the 12 categories represent 90% of our sold product, the remaining emissions were estimated using the weighted average emission factor for the 12 categories. Ingredion worked with a third party consultant to identify relevant emission factors from a variety of academic sources.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Downstream emissions from the use of ethanol (during combustion) are estimated based on volume of Ethanol produced and uses IPCC emission factors for the denaturant and biofuel. Note: Ingredion ceased production of Ethanol in 2020.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,592,669

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This represents packaging waste that is disposed of by our business to business customers as well the disposal of end product consumer food waste that includes our products.

Packaging waste: Due to the diverse nature of our global product offering and customer operations, we do not have specific waste information. Our packaging is broken down into 4 categories - resin, fiber, pallets, and metal. For each category we developed a custom weight of package based on dollar spend, and estimate the mass of packaging sold based on our annual global spend in those categories. We use an average US recycling rate provided by Statista, and apply this to the entire weight of calculated packaging to determine the ultimate disposal mechanism and 'Mixed MSW', 'Mixed Recyclables' and 'Mixed Organics' emission factors published by the EPA Center for Corporate Climate Leadership (Table 9) were used to calculate overall emissions.

Food Waste: We estimated waste emissions from the disposal of end product consumer food waste by assuming a small portion of our global production will end up wasted due to various reasons. Information provided by ReFED was used to quantify the percentage/method of food waste disposal, and we used emission factors published by the EPA Center for Corporate Climate Leadership (Table 9) to calculate overall emissions.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

All leased assets are consolidated within Scopes 1 & 2 under the operational boundary. Ingredion does not have any emissions falling within this category.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We do not have any franchises, so this category is not relevant to our organization

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

152,724

Emissions calculation methodology

Supplier-specific method

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

96

Please explain

Ingredion calculates the majority of our investment emissions using direct Scope 1 and Scope 2 emission data provided by the investee company. For the balance, emissions are calculated using a cost base analysis using investee revenue. Corporate finance provides investee revenue from our investments. EEIO emission factors used for our spend based analysis were taken from "Supply Chain Emission Factors for US Commodities and Industries" published by the U.S. Environmental Protection Agency. When data was not available, emissions were estimated based on the average emissions for Ingredion investments in a similar industry sectors.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

At this time, Ingredion believes that the existing scope 3 screening is a comprehensive profile of all our Scope 3 emissions and has not identified any further scope 3 emissions relevant to our organization.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

At this time, Ingredion believes that the existing scope 3 screening is a comprehensive profile of all our Scope 3 emissions and has not identified any further scope 3 emissions relevant to our organization.

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

18,853

Methodology

Default emissions factors

Please explain

This total includes biodiesel, wood and agricultural by-products burned as a fuel for manufacturing processes. CO2 is calculated using 2006 IPCC default CO2 emission factors for Biodiesel, Wood and Wood by-products, and bio-diesel. Biogas is generated in on-site waste treatment facilities and is either combusted as a fuel, or through a flare. Calculations for biogas emissions use the IPCC factor for natural gas, which is adjusted based on methane content to be representative of the biogas generated in our operating facilities.

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

29,108

Methodology

Default emissions factors

Please explain

This represents biogenic emissions from our manufacturing operations that are not disclosed in the first biofuel category above. It includes biogenic CO2 emissions associated with purchased steam from biogenic fuel sources. Calculations for emissions use IPCC factors.

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities

Other, please specify

Corn

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

2,182,050

Denominator: unit of production

Change from last reporting year

About the same

Please explain

We calculate life cycle GHG emissions from the farming of all sourced Corn using a model based on Greet 1 V1.8d.1 (Life cycle CO2e results), with U.S agronomic data for growing areas. U.S. corn purchases are assumed representative and applied to corn purchases in other parts of the world. This is a company-wide assessment. We also engage with agricultural suppliers on sustainable agriculture practices that help reduce climate change (e.g. no tillage, reduced chemical usage, reduced water irrigation, etc). Through Field to Market, we track the carbon footprint of farm-level activity in the United States and provide farmers with a comparison of their carbon footprint versus other farmers in their areas. We collect carbon emission information annually on our specialty corn growers in the United States through Field to Market. In other cases, we purchase corn as a commodity through brokers and do not have direct contact with growers or access to this information.

Calculated emissions are approximately 1.9% lower than 2021 emissions which is why we identified the change as 'about the same.'

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

Agricultural commodities

Other, please specify

Cassava

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

189,752

Denominator: unit of production

Change from last reporting year

About the same

Please explain

We calculate GHG emissions related to sourced farming of Cassava and pre-processing of Tapioca starch delivered to our plants using lifecycle inventory information developed following IPCC 2013 GWP 100a V1.02. Crop yields were derived from 2009-2013 FAO statistics (FAOStat, FAO, 2015). Fertilizer application rates (in terms of N, P and K) were generally derived from Palliere (2011 and Rosas (2011). Energy use was calculated based on data obtained from the farm simulation tool. This assessment is conducted for areas where we source cassava.
Calculated emissions are approximately 0.2% lower than 2021 emissions which is why we identified the change as 'about the same.'

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

Agricultural commodities

Other, please specify

Stevia

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

60,384

Denominator: unit of production

Change from last reporting year

About the same

Please explain

We calculate GHG emissions related to sourced farming of Stevia utilizing a life cycle information and raw material receipts. The life cycle factor was calculated by a third party consultant.
Calculated emissions are approximately 0.2% lower than 2021 emissions which is why we identified the change as 'about the same.'

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

Agricultural commodities

Other, please specify

Potatoes

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

3,118

Denominator: unit of production

Change from last reporting year

Lower

Please explain

We calculate GHG emissions related to sourced farming of potatoes and pre-processing of potato starch delivered to our plants using lifecycle inventory information from LiveLCA.com.
Calculated emissions are approximately 31% lower than 2021 emissions due to production changes.

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

Agricultural commodities

Other, please specify

Pulses

Do you collect or calculate GHG emissions for this commodity?

Yes

Reporting emissions by

Total

Emissions (metric tons CO2e)

43,779

Denominator: unit of production

Change from last reporting year

Higher

Please explain

We calculate GHG emissions related to sourced farming of pulses including yellow split peas, yellow split lentils, and faba beans using public life cycle information from livelca.com.
Production volumes were significantly higher as we increased production capacity facilities in Saskatchewan, Canada, and Nebraska, USA.

Explain why you do not calculate GHG emission for this commodity and your plans to do so in the future

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.000383653

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3,008,752

Metric denominator

unit total revenue

Metric denominator: Unit total

7,946,000,000

Scope 2 figure used

Market-based

% change from previous year

14

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Change in revenue

Please explain

Revenue grew by 15.25% in 2022 vs 2021. Over this same period GHG emissions decreased by 1.4%

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2,167,812.63	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	1,111.51	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	25,815.05	IPCC Fifth Assessment Report (AR5 – 100 year)

HFCs	4,130.6	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Asia, Australasia	119,596.96
Europe, Middle East and Africa (EMEA)	270,543.12
North America	1,397,162.62
South America	411,567.09

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
APAC	119,596.96
EMEA	270,543.12
NA	1,397,162.62
SA	411,567.09

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity

Processing/Manufacturing

Emissions (metric tons CO2e)

2,198,870

Methodology

Default emissions factor

Please explain

This total includes all of our direct operation manufacturing plant scope 1 emissions. The total excludes biogenic CO2 while including CH4 and N2O from combustion of biogenic materials.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Asia, Australasia	216,100.2	208,685.23
Europe, Middle East and Africa (EMEA)	65,453.6	71,996.07
North America	543,300.25	514,763.15
South America	16,325.38	13,816.4

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
APAC	216,100.2	208,685.23
EMEA	65,453.6	71,996.07
NA	543,300.25	514,763.15
SA	841,179.44	809,260.85

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Not relevant as we do not have any subsidiaries

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	21,472.6	Decreased	0.704	The overall change in renewable energy consumption consisted of two key items - the initiation of our REC purchase program in Shanghai (7,415MT), and the increased use of biofuels at our global facilities due to the continued optimization of our biomass assets (14,058MT). In 2022, Ingredion's percentage of biomass energy as part of total energy use increased by 0.5% (from 7.4% to 7.9%) as wood and, to a lesser extent, biogas, replaced fossil fuel consumption in steam and heat processes. Therefore the total reduction of Scope 1 and 2 emissions were (7,415+14,058)/3,048,509MT = %0.7046.(i.e. a 0.704% decrease in emissions).
Other emissions reduction activities	41,916.18	Decreased	1.375	The value presented represents CO2 reductions from a range of capital projects and continuous improvement initiatives implemented by Ingredion in 2022. These projects were focused around improving resource efficiency in our manufacturing facilities. Our engineering teams provide detailed estimates of CO2 savings for new project initiatives and these are validated vs actual performance at year end. We arrived at a -1.375% reduction by dividing the total emissions of the reduction

				initiatives by Scope 1 and Scope 2 emissions for 2021 (41,916/3,048,509 = 1.375%.
Divestment	0	No change	0	There were no divestments in 2022
Acquisitions	170	Increased	0.006	Increase of 170MT due to the acquisition of KaTech. The percentage change was obtained by dividing the total emissions for the new facility divided by 2021 Scope 1 and 2 Emissions. (170/3,048,509 = 0.006%)
Mergers	0	No change	0	There were no mergers in 2022.
Change in output	79,114.02	Increased	2.595	Production volumes were higher by approximately 2.2% in 2022. The net change of emissions due to increased production is estimated to be 42,873MT. The percentage change was obtained by dividing the process emissions attributed to the increase by our Scope 1 and Scope 2 footprint from 2021 (77,770.23/3,048,509 = 2.551%).
Change in methodology	0	No change	0	There was no change in methodology in 2022
Change in boundary	0	No change	0	There was no change in boundary in 2022
Change in physical operating conditions	0	No change	0	There was no change in physical operating conditions in 2022
Unidentified	0	No change	0	There were no unidentified changes.
Other	55,652.24	Decreased	1.826	Others captures emission changes from fuel switching to lower carbon fossil fuels. The CO2 intensity of our fossil fuel consumption was 3% lower due to the fuel mix in facilities in Pakistan and APAC. Year to date emission reductions was 55,652. The percentage change was obtained by dividing the reductions by our Scope 1 and Scope 2 footprint from 2021. This equates to 1.83% reduction (55,652/3,048,509=1.83%).

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh

Consumption of fuel (excluding feedstock)	LHV (lower heating value)	886,127.53	10,360,480.98	11,246,608.5
Consumption of purchased or acquired electricity		73,355.76	1,439,022.5	1,512,378.26
Consumption of purchased or acquired steam		105,088.5	645,005.2	753,060.69
Consumption of self-generated non-fuel renewable energy		73.11		73.11
Total energy consumption		1,067,538.79	12,444,581.79	13,512,120.56

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

163,442.18

MWh fuel consumed for self-generation of electricity
0.99

MWh fuel consumed for self-generation of heat
163,430.04

MWh fuel consumed for self-generation of steam
11.15

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment

Other biomass

Heating value
LHV

Total fuel MWh consumed by the organization
722,685.34

MWh fuel consumed for self-generation of electricity
44,866.74

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
677,818.61

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

No 'other renewable' fuels consumed in 2022

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

382,539.84

MWh fuel consumed for self-generation of electricity

41,156.88

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

341,382.96

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

176,041.69

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

175,061.84

MWh fuel consumed for self-generation of steam

979.86

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

9,801,899.44

MWh fuel consumed for self-generation of electricity

418,655.25

MWh fuel consumed for self-generation of heat

4,366,316.37

MWh fuel consumed for self-generation of steam

1,669,347.98

MWh fuel consumed for self- cogeneration or self-trigeneration

3,347,579.81

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

11,246,608.49

MWh fuel consumed for self-generation of electricity

504,679.89

MWh fuel consumed for self-generation of heat

4,704,808.25

MWh fuel consumed for self-generation of steam

2,689,540.56

MWh fuel consumed for self- cogeneration or self-trigeneration

33,447,579.81

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	1,046,276.11	1,042,112.97	42,211.56	42,211.56
Heat	4,704,808.25	4,704,808.25	163,430.04	163,430.04
Steam	2,366,795.69	2,366,795.69	596,490.19	596,490.19
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption

Peru

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type
Large hydropower (>25 MW)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
14,111

Tracking instrument used
I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute
Peru

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Comment
Sourced from Cerro del Aguila Hydro Plant

Country/area of low-carbon energy consumption
China

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Large hydropower (>25 MW)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
12,010

Tracking instrument used
I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

China

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2014

Comment

Sourced from Kangtuo Hydropower Plant

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Sustainable biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1,837

Tracking instrument used

REGO

Country/area of origin (generation) of the low-carbon energy or energy attribute

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2015

Comment

Source - Springvale Energies Anaerobic Digester Plant

Country/area of low-carbon energy consumption
United States of America

Sourcing method
Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
44,805

Tracking instrument used
Other, please specify
Midwest Renewable Energy Tracking System (M-RET)

Country/area of origin (generation) of the low-carbon energy or energy attribute
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment
Our facility in Cedar Rapids receives default delivered renewable. The utility retired the majority of REC's on behalf of customers across their New Wind I and II resources in English farms, Upland Prairie, Golden Plains, Richland and Whispering Willow North facilities.

Country/area of low-carbon energy consumption
United States of America

Sourcing method
Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier
Electricity

Low-carbon technology type

Renewable energy mix, please specify

Biomass, geothermal, solar, wind, and eligible hydroelectric

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

216

Tracking instrument used

US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Our facility in California receives default delivered renewable. The REC retirement information is provided on the Power Content Label published by the Utility and required by all retail suppliers in the state.

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Biomass, geothermal, solar, wind, and eligible hydroelectric

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

377

Tracking instrument used

Other, please specify

Midwest Renewable Energy Tracking System (M-RET)

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

Our facility in Wisconsin receives default delivered renewable. The REC retirement information is provided on the Annual Compliance Report Issued by the Public Service Commission of Wisconsin.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Brazil

Consumption of purchased electricity (MWh)

90,335.13

Consumption of self-generated electricity (MWh)

285,158.3

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

1,509,375.02

Total non-fuel energy consumption (MWh) [Auto-calculated]

1,884,868.45

Country/area

Canada

Consumption of purchased electricity (MWh)
30,011.18

Consumption of self-generated electricity (MWh)
205,590.03

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
965,498.91

Total non-fuel energy consumption (MWh) [Auto-calculated]

1,201,100.12

Country/area
China

Consumption of purchased electricity (MWh)
52,129.15

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
140,386.42

Consumption of self-generated heat, steam, and cooling (MWh)
40,718.9

Total non-fuel energy consumption (MWh) [Auto-calculated]

233,234.47

Country/area
Colombia

Consumption of purchased electricity (MWh)
23,346.79

Consumption of self-generated electricity (MWh)
54,425.87

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
324,116.12

Total non-fuel energy consumption (MWh) [Auto-calculated]

401,888.78

Country/area
Germany

Consumption of purchased electricity (MWh)
34,854.09

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
42,370.03

Consumption of self-generated heat, steam, and cooling (MWh)
102,373.5

Total non-fuel energy consumption (MWh) [Auto-calculated]

179,597.62

Country/area
Republic of Korea

Consumption of purchased electricity (MWh)
125,838.38

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
315,281.6

Total non-fuel energy consumption (MWh) [Auto-calculated]

441,119.98

Country/area
Malaysia

Consumption of purchased electricity (MWh)
20,972.98

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
39,251.11

Total non-fuel energy consumption (MWh) [Auto-calculated]

60,224.09

Country/area
Mexico

Consumption of purchased electricity (MWh)
223,375.31

Consumption of self-generated electricity (MWh)
183,308

Consumption of purchased heat, steam, and cooling (MWh)
202,586.29

Consumption of self-generated heat, steam, and cooling (MWh)
1,739,568.1

Total non-fuel energy consumption (MWh) [Auto-calculated]

2,348,837.7

Country/area
Pakistan

Consumption of purchased electricity (MWh)
81,595.84

Consumption of self-generated electricity (MWh)
58,678

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
789,134.44

Total non-fuel energy consumption (MWh) [Auto-calculated]

929,408.28

Country/area
Peru

Consumption of purchased electricity (MWh)
14,111.23

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
57,488.63

Total non-fuel energy consumption (MWh) [Auto-calculated]

71,599.86

Country/area
Thailand

Consumption of purchased electricity (MWh)
98,301.92

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
13,124.46

Consumption of self-generated heat, steam, and cooling (MWh)
244,571.35

Total non-fuel energy consumption (MWh) [Auto-calculated]

355,997.73

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)
1,837

Consumption of self-generated electricity (MWh)
0

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
11,561.75

Total non-fuel energy consumption (MWh) [Auto-calculated]

13,398.75

Country/area
United States of America

Consumption of purchased electricity (MWh)
715,669.26

Consumption of self-generated electricity (MWh)
259,115.9

Consumption of purchased heat, steam, and cooling (MWh)
354,593.5

Consumption of self-generated heat, steam, and cooling (MWh)
4,061,466.07

Total non-fuel energy consumption (MWh) [Auto-calculated]

5,390,844.73

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify

Water Use Intensity

Metric value

4.56

Metric numerator

Cubic meters of water

Metric denominator (intensity metric only)

Metric tons of finished product

% change from previous year

0.5

Direction of change

Increased

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. Our water intensity was slightly higher in 2022 (4.56) vs 2021 (4.54) due to continuous improvement initiatives being offset by higher production rates and product mix. However, we have achieved 1.6% reduction in water use compared to our base year (2019) and we continue to identify opportunities and make strategic investments which will help us attain our goal by 2030.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

Ingredion 2022 CDP Verification Statement GHG_Final.pdf

Page/ section reference
page 1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

Ingredion 2022 CDP Verification Statement GHG_Final.pdf

Page/ section reference
Page 1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

Ingredion 2022 CDP Verification Statement GHG_Final.pdf

Page/ section reference
Page 1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Investments

Scope 3: Downstream transportation and distribution
Scope 3: Processing of sold products
Scope 3: End-of-life treatment of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

Ingredion 2022 CDP Verification Statement GHG_Final.pdf

Page/section reference
Page 1

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Ingredion 2022 CDP Verification Statement GHG_Final.pdf

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Renewable energy products	ISO14064-3	We are committed to procuring 50% of our electricity as renewable by 2030. This is our second year verifying progress to this goal. RE% for 2022 was 5%.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS
Korea ETS
Mexico carbon tax
Ontario EPS - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

1

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

18,161

Allowances purchased

2,100

Verified Scope 1 emissions in metric tons CO2e

20,177

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Korea ETS

% of Scope 1 emissions covered by the ETS
3.5

% of Scope 2 emissions covered by the ETS
7

Period start date
January 1, 2022

Period end date
December 31, 2022

Allowances allocated
143,658

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
76,914

Verified Scope 2 emissions in metric tons CO2e
57,875

Details of ownership
Facilities we own and operate

Comment

Ontario EPS - ETS

% of Scope 1 emissions covered by the ETS
10

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1, 2022

Period end date
December 31, 2022

Allowances allocated
229,482

Allowances purchased

1,358

Verified Scope 1 emissions in metric tons CO2e

230,840

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Ingredion has two facilities registered in the Ontario EPS program.

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Mexico carbon tax

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

13

Total cost of tax paid

3,056,300

Comment

Ingredion operates two facilities that are subject to carbon taxes in Mexico.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Our strategy is to utilize existing residual or banked allowances, incorporate carbon pricing into business decisions, reduce CO2e through energy efficiency and other projects such as fuel switching, and purchase allowances as necessary. We also look to take advantage of government grants/incentives that are offered from the proceeds from carbon market auctions. In Ontario carbon pricing is being incorporated into business decisions at the local level. In Korea fuel switching is planned to reduce Scope 1 emissions. As a case study in Korea we recognized that free allowances issued under Korea ETS will be reduced each period through 2030 by as much as 15%. The cost of carbon allowances to cover Scope 1 emissions caused

us to evaluate alternate fossil fuel options differently as some alternate fuel types might increase Scope 1 emissions.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price

Shadow price

How the price is determined

Price with material impact on business decisions

Objective(s) for implementing this internal carbon price

Change internal behavior
Drive low-carbon investment

Scope(s) covered

Scope 1
Scope 2

Pricing approach used – spatial variance

Differentiated

A standard price of $40 is used globally for all jurisdictions that does not have an existing regulatory scheme that imposes a carbon price. If a regulated carbon price exists, a cost sensitivity is performed using the difference between Ingredion's ICP and the actual jurisdictional carbon price. If the jurisdictional carbon price is greater than our ICP then no sensitivity is required.

Pricing approach used – temporal variance

Static

Indicate how you expect the price to change over time

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

40

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

40

Business decision-making processes this internal carbon price is applied to

Capital expenditure

Procurement

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify

The carbon price is applied to all capital projects globally with greater than $1MM spend.

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

A significant driver for Ingredion to achieve our reduction commitments will be through investment in strategic capital projects that reduce emissions through electrification, fuel switching, or process optimization. Capital allocation decisions utilize a financial Net Present Value and Internal Rate of Return evaluation process which prioritizes projects based on fiscal measures. In an effort to raise awareness of climate change and influence decision makers to embed our climate commitments in our approval process, Ingredion implemented an internal carbon price in 2022. The inclusion of a shadow price introduces a formal mechanism to screen all capital investments greater than $1.5M against a shadow carbon cost, which incentivizes the development of projects that delivered CO2 reductions, while penalizing projects that increase our GHG footprint. While it is still early to judge the effectiveness of the program, initial observations made indicate an increase in frequency of projects with CO2 savings, including renewable energy.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number

34

% total procurement spend (direct and indirect)

16

% of supplier-related Scope 3 emissions as reported in C6.5

21

Rationale for the coverage of your engagement

We engage with our diverse network of global farms to support our goal to sustainably source 100% of our Tier 1 priority crops (Corn, Cassava, Potatoes, Pulses, and Stevia) by the end of 2025. The program is currently targeted at all our Tier 1 agriculture suppliers, which represents approximately 34% of our overall suppliers. Through our sustainable sourcing program, we collect grower information on climate related issues and use it to evaluate the suppliers to source from and where to deploy resources to help drive improvements. This in turn helps incentivize suppliers to participate in the program. 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. Finally, we may engage with stakeholders on strategic local projects focused on sustainable agriculture practices that help reduce climate change (e.g., no tillage, reduced chemical usage, reduced water irrigation, reduced fertilizer and pesticides etc.), which can then be scalable to other regions. Ingredion has sustainable sourcing efforts active in Brazil, Canada, China, Colombia, France, Hungary, Mexico, Pakistan, Thailand, and the United States

Impact of engagement, including measures of success

We measure success of our engagement by demonstrating progress towards our sustainability sourcing goal. Our climate-related supplier engagement strategy of deploying resources and support to suppliers based on their growing information enables those suppliers to grow and source sustainably, and therefore contribute to our

goal of 100% sustainably sourced Tier 1 priority crops. We have improved our metric from 33% to 48% globally and are looking to reach 65% by 2023. We also measure success of our engagement by the number of growers we engage with. We engaged ~17,000 growers globally in 2022. In 2021, Ingredion officially became members of the SAI Platform's Regenerative Agriculture Program (RAP). While regenerative agriculture has received significant industry focus, there has not always been common agreement on which practices are considered regenerative. The RAP group will unite food and beverage companies in defining an industry standard for regenerative agriculture and will also lead pilot programs to begin implementing the finalized standard with growers. In 2022, Ingredion Thailand worked with local tapioca growers in our supply chain to implement a SMART agriculture program. Carried out with the help of interns, this program focuses on five key areas to help improve climate-friendly practices with local farmers: Safety and Health, Measurement and Data, Air Quality and Emissions, Regenerative Agriculture, and Technology and Innovation. Using SAI Platform's Farm Sustainability Assessment as a foundation, the program assessed 984 farmers supplying into our operations, validating that their farms met the FSA Silver performance level and resulting in an additional 130,000 metric tons of sustainably sourced crops contributing to Ingredion's overall sustainable sourcing targets.
We also expanded targeted projects in the Midwest US, and in Brazil. Heineken incentivized growers in both locations to adopt new practices on their farms such as innovative technologies for nitrogen application and modified timing of cover crop planting. We also joined our customer PepsiCo and the Soil and Water Outcomes Fund (SWOF) in piloting regenerative agriculture practices across 16,850 acres of Illinois farms to provide a monetary incentive for growers to adopt regenerative practices, such as cover crops and no-till farming.

Comment

For the purposes of calculating supplier related scope 3 emissions, applicable supplier related scope 3 emissions included in the denominator are all Category 1, 2, 3, 4, 5, and 6 values.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

Other, please specify

Ingredion collects information from our grower suppliers in the form of the Farm Sustainability Assessment (FSA), but we also work with them on improvements to help reduce their carbon and water footprints.)

% of suppliers by number

7

% total procurement spend (direct and indirect)

3

% of supplier-related Scope 3 emissions as reported in C6.5

4

Rationale for the coverage of your engagement

Carbon emissions related to agricultural operations have a material impact on our Scope 3 footprint and offer an opportunity to reduce our footprint by better understanding our suppliers' practices. The purpose of this engagement is to encourage the uptake of sustainable agriculture practices that help reduce climate change (e.g. no tillage, reduced chemical usage, reduced water irrigation, etc.). Through Field to Market we track the carbon footprint of farm-level activity and can provide farmers with a comparison of their carbon footprint versus other farmers in their areas. We collect 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 CO2 reductions as part of our overall sustainable agriculture program.

Impact of engagement, including measures of success

In 2022 Ingredion collected field level quantitative data on fields producing 691,727 metric tons of our 10.6M metric tons global footprint. In our sample size, we noted that emissions were down from 298.01kg CO2e/MT production to 258.09kg CO2e/MT of production. The yields for the sampled fields were 6.5% higher versus 2021 which could account for some efficiencies in CO2e reductions as a function of yield but there looks to be additional reductions that are not accounted for by yield. We will continue to track trends over time, as growing conditions vary greatly year to year.

Our information collection process from agriculture suppliers often extend into collaborations with our customers. This includes a collaboration with Heineken for corn growers in both Brazil and the United States. Heineken incentivized growers in both locations to adopt new practices on their farms such as innovative technologies for nitrogen application and modified timing of cover crop planting. Outputs of these new practices were measured versus previous year baselines in the Cool Farm Tool. Ingredion looks forward to scaling up this collaboration in 2023 and beyond and to leverage learnings in this project to other geographies.

In 2021, we joined our customer PepsiCo and the Soil and Water Outcomes Fund (SWOF) in piloting regenerative agriculture practices across 15,000 acres of Illinois farms supplying corn into our U.S. operations. In 2022 this project was expanded to 16,850 acres and resulted in a reduction of 13,033 MT of CO2e from those farms versus 9,000MT in 2021. The goal: Provide a monetary incentive for growers to adopt regenerative practices, such as cover crops and no-till and measure the carbon emission reduction benefits from those practices. SWOF acted as agents on the ground, working directly to engage and enroll growers. PepsiCo and Ingredion collectively provided funding, which helped growers offset any perceived risk from implementing these practices on their farms.

Comment

For the purposes of calculating supplier related scope 3 emissions, applicable supplier related scope 3 emissions included in the denominator are all Category 1, 2, 3, 4, 5, and 6 values.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

0.1

% of customer - related Scope 3 emissions as reported in C6.5

11

Please explain the rationale for selecting this group of customers and scope of engagement

We engage with our customers to progress our sustainable agriculture goals. We recognize that our customers join us in a broader food system, with many of our customers looking to engage with growers to create a resilient supply chain. Our proven history of working with farmers to successfully implement regenerative agriculture projects gives us the expertise to engage with our customers and growers in multi-stakeholder collaborations that cross our value chain where we can provide influence.

Impact of engagement, including measures of success

We measure success of our engagement by demonstrating progress towards our sustainability sourcing goal. We continue to make progress on our goal to sustainably source 100% of all priority one crops by 2025, and have improved our metric from 33% to 48% globally. Given the continued pandemic related challenges, we are pleased to have made some progress on this goal and are looking to deliver even more significant gains in 2023 as we hope to reach 65%

In 2022, we continued our partnership with PepsiCo and the Soil and Water Outcomes Fund (SWOF) in piloting regenerative agriculture practices across 16,850 acres of Illinois farms supplying corn into our U.S. operations. The goal: Provide a monetary incentive for growers to adopt regenerative practices, such as cover crops and no-till and measure the carbon emission reduction benefits from those practices. SWOF acted as agents on the ground, working directly to engage and enroll growers. PepsiCo and Ingredion collectively provided funding, which helped growers offset any perceived risk from implementing these practices on their farms. This project successfully generated approximately 13,033 MT of VER's.

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 engagement & Details of engagement

Education/information sharing

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

0.2

% of customer - related Scope 3 emissions as reported in C6.5

15

Please explain the rationale for selecting this group of customers and scope of engagement

We engage with customers through CDP Supply Chain and with customers who wanted to better understand the carbon footprint of our operations associated with the manufacturing of their products. The size of engagement, while a relatively low percentage, represents some of our larger customers.

Impact of engagement, including 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.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

We engage with investors through CDP, as well as direct dialogue around climate change and our strategies associated with it. We engage with SAI Platform and Field to Market, NGOs, for sustainable agriculture, both of which look at the climate change impacts of agriculture and strategies to mitigate. We are also collaborating with a few universities around climate modeling possibilities related to agriculture. Aside from industry collaborations, we also engaged with academic institutions in this area. Ingredion has engaged in multiple sustainability-related projects as part of the University of Rutgers MBS Externship Exchange Program. As part of this program, our company is assigned a team of students who work on a real-life project to help further our sustainability agenda. In 2022, we focused that project on biodiversity. Our student team worked to evaluate the primary biodiversity impacts in Ingredion's agricultural supply

chain, and do a deeper dive to understand where agricultural practices might be contributing to those impacts. Over the 12-week process, we met weekly with our student team, who continued to work diligently to understand the practices of our growers in various sourcing geographies and pinpoint areas for us to take strategic action. In addition to this, the student team identified local and global NGOs working in those geographies that could further support Ingredion's efforts to have a net positive impact on local biodiversity
Ingredion engages with certain customers on climate-related considerations through customer surveys and dialogue and through online data sharing tools such as CDP and EcoVadis. We also actively engage in dialogue with certain investors. Many of our facilities engage our neighbors and communities through Community Advisory Committees where many topics are covered, including environmental sustainability. Different parts of the organization are engaging with NGOs. For example, our operations in Colombia are completing a water footprint study with the National Association of Entrepreneurs of Colombia and the National Cleaner Production Center, with the support of the Switzerland Embassy, to identify water supply risks, which are impacted by climate change. Our Thailand operations work closely with the Thai Tapioca Starch Association and our Brazil sites engage with the Nature Conservancy. In addition, we are working closely with the Sustainable Agricultural Initiative and Field to Market on continual improvement opportunities.
The functional responsibility for sustainability within Ingredion is under the commercial team. As such, we are working on sustainability engagements with our key customers regionally and globally. These engagements will include discussions around climate change, determination of customer needs in this space, and establishing actions plans moving forward

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Other, please specify

Sustainably Source Tier 1 Crops

Description of this climate related requirement

In alignment with our milestone target to sustainably source 100% of our Tier 1 priority crops by the end of 2025, we require all our Tier 1 crop agricultural suppliers to have achieved a FSA bronze level (or equivalent under a benchmark program) to qualify as met the program objective. The Sustainable Agriculture Initiative's (SAI) Farm

Sustainability Assessment (FSA) platform was developed as a way for farmers to assess their ability to meet environmental, economic, and social requirements set forth by supply chains and is based on sustainable farming practices recognized in the food and drink industry. The assessment is conducted via a questionnaire (self-assessment) or a third party verification against the requirements (FSA or benchmark equivalent). A negative response to any essential questions automatically disqualifies the farm from being considered sustainable. A specific example as to how this program fosters resiliency to climate change can be seen through deforestation transparency; deforestation is one of 23 essential questions on the survey, and a negative response to any essential question automatically disqualifies the farm from being considered sustainable. Note: As the cost of commodity varies in different global markets the % of suppliers in compliance with the climate related requirement was estimated using an average commodity cost.

% suppliers by procurement spend that have to comply with this climate-related requirement

33

% suppliers by procurement spend in compliance with this climate-related requirement

16

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment
Off-site third-party verification
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?

Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number

MP1

Management practice

Crop diversity

Description of management practice

Diversification of crops grown in fields increases agronomic value of farming and disrupts insect and weed cycles.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Communication with growers on crop diversity benefits.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP2

Management practice

Crop rotation

Description of management practice

Rotate between crops grown in a field rather than the same crop in a continuous fashion helps to break insect and weed cycles.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Review benefits of crop rotation when communicating with growers.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP3

Management practice

Equipment maintenance and calibration

Description of management practice

Reduces GHG emissions and carbon footprint of farming activities.
Allows for more accurate precision agriculture data collection.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Communicate with growers on the importance of equipment maintenance.
Poll growers on whether maintenance practices are being employed (via SAI FSA).

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP4

Management practice

Fertilizer management

Description of management practice

Ensure proper amounts and timing of fertilizer applications to ensure efficiency and decrease run off and waste.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Discuss with growers at meetings.
Highlight environmental and economic benefits of proper fertilizer management.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP5

Management practice

Integrated pest management

Description of management practice

Utilize scouting for pests to identify chemical and physical solutions to pest issues targeted at a farm level.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Review IPM strategies with growers in direct communications.
Specific example is a predator wasp release to reduce mealy bug issue in Thailand.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP6

Management practice

Knowledge sharing

Description of management practice

Proactively communicate with growers on new strategies, seeds, technologies, etc. that may improve agronomic, economic, or other conditions at the farm level

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Local grower meetings to facilitate best practice sharing between growers. (Model farmer program in Thailand; development of hybridized seed in Pakistan) and to bring in experts to discuss agriculture with growers.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)

Reduced demand for pesticides (adaptation)

Comment

Local grower meetings to facilitate best practice sharing between growers. (Model farmer program in Thailand; development of hybridized seed in Pakistan) and to bring in experts to discuss Ag with growers (example the NA grower meetings).

Management practice reference number

MP7

Management practice

Low tillage and residue management

Description of management practice

Rely less on annual deep tillage and more on low/no till options.
Recognize the benefits of residue on fields year-round for increased organic matter, decreased run off, and improved water holding capacity.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Communication with growers on this topic at meetings.
Collect information on practices through Sustainable Sourcing platforms.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fossil fuel (adaptation)
Reduced demand for fertilizers (adaptation)

Comment

Management practice reference number

MP8

Management practice

Nitrogen-fixing plants as cover crop

Description of management practice

Where applicable and able to be managed, plant cover crops to fix available N to the soil for use with later crops.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Discuss cover cropping in communications with growers.
Highlight possible benefits of cover cropping.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

Management practice reference number

MP9

Management practice

Pest, disease and weed management practices

Description of management practice

Utilize crop scouting, integrated pest management strategies, and appropriate chemical controls to increase agronomic viability of a farm in a responsible fashion.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Communication with growers.
Examples include herbicide tolerance studies on specialty corn in the US and the model farmer program in Thailand.
We are seeing continued success from a program in previous year where we worked with farmers and local officials to mitigate mealy bug infestation in the Thailand Cassava crop.

Climate change related benefit

Increasing resilience to climate change (adaptation)
Reduced demand for fertilizers (adaptation)
Reduced demand for pesticides (adaptation)

Comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?

Yes

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

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

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Sustainable Agriculture Initiative Platform (SAIP)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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, in 2022, we continued to look for opportunities for new or expanded regenerative agriculture projects with our growers.
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 there are varying definitions and expectations around the terminology "regenerative agriculture," a common framework is expected to help us move farther and faster together with customers and other industry leaders.
Ingredion uses the Sustainable Agriculture Initiative Platform's (SAI Platform) Farm Sustainability Assessment (FSA) to evaluate and confirm the sustainable practices of our growers. The FSA includes over 100 questions, including some around biodiversity. Now that Ingredion has assessed nearly half of our Tier 1 priority crop farmers using the FSA, we are in a position better understand the biodiversity considerations of our agricultural supply chain.
In an effort to continue to play a valuable role in collaborating with SAI Platform and other member organizations, Ingredion applied in 2022 for a position on the SAI Platform's Executive Committee. We are very pleased that Andy Utterback, our head of global sustainable and regenerative agriculture, was elected in October by the member organizations to a seat on the Executive Committee.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

36,000

Describe the aim of your organization's funding

The $36,000 USD represents annual membership fees.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

2023 INGR Proxy.pdf

10-K Ingredion.pdf

Page/Section reference

We disclose climate related materiality topics in our annual 10-K and annual Proxy statements. Page 15 of our 10-K lists risks from climate change. Page 1 of our proxy statement lists our CDP score as well as our recognition of the human right of all people to clean water and sanitation, and we enacted and continue to evaluate initiatives that attempt to minimize our impact on climate, biodiversity, and water resources - including our commitment to the SBTi.

Content elements

Risks & opportunities

Other metrics

Other, please specify

Recognition of the human right of all people to clean water and sanitation, and we enacted and continue to evaluate initiatives that attempt to minimize our impact on climate, biodiversity, and water resources - including our commitment to the SBTi.

Comment

Our annual 10-K public disclosure highlights systemic and chronic macro climate risks that our company/industry is exposed to that may have a material impact on our business. Our annual Proxy statement provides further context on climate-related materiality.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2022 Ingredion Sustainability Report.pdf

Page/Section reference

Pages 23-25 outline our Strategy, Risks and Opportunities, Emissions targets and figures, and select highlights from the year. Pages 44-46 outlines our governance mechanisms.

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures
Emission targets
Other metrics

Comment

Attached is Ingredion's 13th annual sustainability report which highlights progress made in 2022 towards our All Life plan. We believe that ESG performance is a strong indicator of the long-term performance and resiliency of a company. As a company, we are pleased with the progress we have made in the past year. This year's theme is "Growing Forward Together," which reflects the continued growth of our sustainability efforts and our commitment to link sustainability and growth with our customers. We are also strengthening the commitment to our climate change strategy by getting our carbon reduction targets validated by the Science Based Target initiative (SBTi). We see this as the next step as we work toward a Net Zero strategy for our organization.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Sustainable Agriculture Initiative (SAI) UN Global Compact Other, please specify Field to Market	Ingredion is proud to be a signatory to the United Nations Global Compact since 2016 and is committed to upholding its Ten Principles in how we do business. We disclose progress as part of our annual sustainability report. Ingredion uses the Sustainable Agriculture Initiative Platform's (SAI Platform) Farm Sustainability Assessment (FSA) to evaluate and confirm the sustainable practices of our growers. Ingredion also serves on the executive leadership committee. As an active member in Field to Market, Ingredion will work together with grower organizations, academia, conservation groups, public sector partners and other leading companies representing over $1.3 trillion in combined revenue to deliver sustainable outcomes for U.S. agriculture.

C13. Other land management impacts

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?

Yes

C-AC13.2a/C-FB13.2a/C-PF13.2a

(C-AC13.2a/C-FB13.2a/C-PF13.2a) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.

Management practice reference number

MP1

Overall effect

Positive

Which of the following has been impacted?

Soil

Description of impacts

Diversification of crops grown in fields increases the agronomic value of farming and disrupts insect and weed cycles

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Growers are beginning to practice crop diversity as well as crop rotation

Management practice reference number

MP7

Overall effect

Positive

Which of the following has been impacted?

Water

Description of impacts

Rely less on annual deep tillage and more on low/no-till options. This increases organic matter in the soil, decreases runoff and loss of topsoil and improves the water holding capacity of soils

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Growers are implementing low/no-till practices

Management practice reference number

MP2

Overall effect

Positive

Which of the following has been impacted?

Soil

Description of impacts

Rotating crops breaks insect and weed cycles and reduces the potential for soil nutrient depletion

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Growers are implementing crop rotation practices

Management practice reference number

MP4

Overall effect

Positive

Which of the following has been impacted?

Water

Description of impacts

Ensuring proper amounts and timing of fertilizer applications decrease run off and impacts to surface water.

Have any response to these impacts been implemented?

Yes

Description of the response(s)

Fertilizer management practices reduce the amount of fertilizer applied in the field and ensure the proper availability to maximize plant growth.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	The Board of Directors Governance and Nominating Committee has direct oversight for environmental and sustainability related matters, including climate-related issues. Ingredion's Executive Leadership Team (C-Suite Officers), including the Chief Sustainability Officer, attends Board Meetings and reports progress on initiatives. The SVP, Chief Commercial and Sustainability Officer is the Executive Leadership Team member responsible for Ingredion's sustainability program. The Chief Sustainability Officer reviews sustainability, including biodiversity issues, at the Board Level. Environmental and sustainability matters are discussed with the Board of Directors at least semi-annually. In addition, climate issues, as applicable, are addressed at meetings of the Ingredion Sustainability Council and Operations Leadership Team. An example of a climate-related decision made by The Board of Directors Governance and Nominating Committee was the approval of our All Life Strategy, which includes a 2030 goal to protect and improve biodiversity to drive a net positive impact in our crop sourcing areas. Based on the review, the Committee decided that the goals should be published in Ingredion's publicly available Sustainability Report.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to Net Positive Gain	SDG Other, please specify SAI Platform

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Upstream

Tools and methods to assess impacts and/or dependencies on biodiversity

Other, please specify

Critical Ecosystem Partnership Fund (CEPF), SAI Platform, University Collaboration

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

With our 2030 All Life plan, Ingredion is focused on having a net positive impact on sustainability, particularly in our agricultural supply chain. As
a starting point, we mapped our global operations and crop sourcing against the Critical Ecosystem Partnership Fund's (CEPF) 36 global biodiversity hotspots. This helped us identify six areas around the globe where we operate or source agricultural material that are at particular risk for biodiversity loss.
From there, we sought to better understand the growers in our supply chain, particularly how they viewed biodiversity and its impacts to their
farms. Ingredion uses the Sustainable Agriculture Initiative Platform's (SAI Platform) Farm Sustainability Assessment (FSA) to evaluate and
confirm the sustainable practices of our growers. The FSA includes over 100 questions, including some around biodiversity. Now that Ingredion
has assessed nearly half of our Tier 1 priority crop farmers using the FSA, we are in a position better understand the biodiversity considerations
of our agricultural supply chain. For more information on Ingredion's work with growers, please see the Sustainable and Regenerative Agriculture section
of this report.
As part of our collaboration with the University of Rutgers MBS Externship Exchange Program, our company is assigned a team of students who work on a real-life project to

help further our sustainability agenda. In 2022, we focused that project on biodiversity. Our student team evaluated the primary biodiversity impacts in Ingredion's agricultural supply chain, and completed a deeper dive to understand where agricultural practices might be contributing to those impacts. Over the 12-week process, we met weekly with our student team, who continued to work diligently to understand the practices of our growers in various sourcing geographies and pinpoint areas for us to take strategic action. In addition to this, the student team identified local and global NGOs working in those geographies that could further support Ingredion's efforts to have a net positive impact on local biodiversity. As part of the output from our Rutgers project, the student team developed a matrix to help Ingredion understand biodiversity risk causes and where geographically in our supply chain they have the biggest impact relative to sourcing volumes. This work will help us determine prioritization as we start to roll out continual improvement practices with our growers.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management Education & awareness

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Pressure indicators

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Risks and opportunities Biodiversity strategy	Page 31 and 32 provide an overview of our progress, impacts, risks and opportunities. Page 6 highlights our biodiversity commitments 1, 2

[1]2022 Ingredion Sustainability Report.pdf

[2]2022 Ingredion Sustainability Report.pdf

C16. Signoff

C-FI

(C-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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

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