Welcome to your CDP Climate Change Questionnaire 2022

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 2021 net sales of $6.894 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, in the western suburb of Chicago, Ingredion employs approximately 12,000 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 people are our strength. Our product lines include starches, sweeteners, plant based proteins, animal feed products and edible corn oil. Our starch-based products include both food-grade and industrial starches, and biomaterials. Our sweetener products include glucose syrups, high maltose syrups, high fructose corn syrup, stevia, caramel color, dextrose, polyols, maltodextrins, and glucose and syrup solids. 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. 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 2021, 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 2021, Ingredion published its 11th annual sustainability report and our first DEI Report which highlighted 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. We did this for a simple reason: It is the best way to identify and implement change that will make a lasting difference. This has also led to productive, company-wide conversations around our environmental impact reduction objectives, as well as collaboration with our customers around supply chain (Scope 3) emissions. 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. 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.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	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

More than 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 96% of our crop usage globally, while cassava makes up an additional 3%. The remaining 1% 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 3% of our crop usage globally, while corn is the majority at 96%. The remaining 1% 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 as well as a small portion from Africa. 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(s)	Please explain
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 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 reviewed by The Board of Directors was the approval of proceeding with our application to have our GHG reduction target validated by the SBTi. Based on the review, the Committee supported the application which aligns with our overall business 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	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Monitoring implementation and performance of objectives	The Board meets quarterly with scheduled topics covered each meeting. Environmental and sustainability matters, which include climate-related issues, are on the agenda at least semi-annually. 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; and, 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
Row 1	Yes

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other, please specify The Chief Sustainability Officer (CSO) has primary responsibilities for climate related issues. On occasion, senior leaders on our sustainability committee will report to the board on specific climate-related issues.	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The Board of Directors Governance and Nominating Committee has direct oversight for environmental and sustainability related matters. 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 semi-annually. 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	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target	The CEO and certain members of the corporate executive team have their goals aligned with our 2030 sustainability agenda, in 4 categories: (1) carbon reduction, (2) sustainable sourcing, (3) Safety performance, and (4) DEI. Performance against these objectives impacts a portion of the annual bonus incentive. To be eligible for the award, the organization must meet certain key performance indicators that were chosen at the beginning of the year. An example of a climate related KPI would be achieving our year over year GHG reduction goal.
All employees	Monetary reward	Efficiency target	Ingredion has a CEO Award under our CareFirst Value that includes Sustainability Excellence. It encompasses the climate change aspects of our business including efficiency projects, emissions and energy reduction projects and supply chain engagement. This award carries great prestige within the company in addition to monetary awards.

All employees	Monetary reward	Energy reduction target	Ingredion has a CEO Award under our CareFirst Value that includes Sustainability Excellence. It encompasses the climate change aspects of our business including efficiency projects, emissions and energy reduction projects and supply chain engagement. This award carries great prestige within the company in addition to monetary awards.
All employees	Monetary reward	Supply chain engagement	Ingredion has a CEO Award under our CareFirst Value that includes Sustainability Excellence. It encompasses the climate change aspects of our business including efficiency projects, emissions and energy reduction projects and supply chain engagement. This award carries great prestige within the company in addition to monetary awards.
Other, please specify Manufacturing facility operations group	Non-monetary reward	Efficiency project	Ingredion holds a bi-annual global engineering technical conference to promote innovation and peer collaboration. Each facility presents notable projects related to efficiency and cost savings that they have implemented recently. A prestigious award recognizes the manufacturing facility that had previously shared a project idea that was successfully adopted at other facilities in our network. The most recent winner shared a biogas upgrading project, which was subsequently adopted by two other facilities leading to CO2 and cost savings.
All employees	Monetary reward	Efficiency target	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.

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?

Any facility that meets all the following criteria is considered to represent substantive risk related to climate change:

1. Site with climate-related activities identified in the Business Continuity Plan (BCP) risk assessment as having a “high” risk prioritization number (i.e., likelihood x severity x existing controls); and,
2. Site accounts for >5% of our global production by volume; and
3. Site is considered strategic to the growth strategy of the organization.

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 short-term risk (0-5 years) medium-term risk (5-25 years) and long-term risk (25–99 years) 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 use the WWF Water Risk Filter to map the key supplier/grower locations to understand water stress in these geographic areas. We assess agricultural supplier water usage through the SAI Platform's Farm Sustainability Assessment to understand where we have water-related risks with growers. We also completed climate modelling focused on the temperature and precipitation projections based on 21 IPCC CMIP5 climate model projections for the years 2020-2059. This combined approach allows us to assess risk both on a macro level as well as "on the ground" observations at the site level.
Risk mitigation plans are required for all "high" level RPNs calculated in the BCP, including for 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.
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 Operating Excellence 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

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, and climate modelling based on 21 IPCC CMIP5 climate model projections for the years 2020-2059. This combined approach allows us to assess risk both on a macro level as well as "on the ground" observations at the site level.

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.

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, and climate modelling based on 21 IPCC CMIP5 climate model projections for the years 2020-2059. This combined approach allows us to assess risk both on a macro level as well as "on the ground" observations at the site level.

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 draught 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, and climate modelling based on 21 IPCC CMIP5 climate model projections for the years 2020-2059. This combined approach allows us to assess risk both on a macro level as well as "on the ground" observations at the site level.

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 Continuous Improvement (CI) Teams also research opportunities to deploy new and existing technology to reduce energy, emissions and cost. In addition, the 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 Operating Excellence Leadership Team (OLT). Legal also chairs the Risk Management Committee for Operations ("RMCO"). The RMCO implements the Company's global compliance program related to social accountability programs; environmental regulatory compliance; and safety, health, and security among others. The RMCO develops and communicates standards and internal risk controls and periodically assesses, on a prioritized basis, the Company's systems and processes. Significant climate related risks, as determined through the Business Continuity risk assessment process, and mitigation programs are addressed, as applicable, in the RMCO, 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 eighth 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?

No

C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

	Primary reason	Please explain
Row 1	Evaluation in process	We have categorically identified chronic and acute climate-related risks that our operations may be exposed and are in the process of quantifying the overall financial/strategic impact of these risks on our business. Our assessment revealed we are subject to risks associated with the long-term effects of climate change on the global economy and on our industry in particular. 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, plant-based 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. Our manufacturing operations also could be adversely affected by reduced water availability resulting from droughts. 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. 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.

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 $2,357,000 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)

18,856,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The figure of 18,856,000 represent the potential cumulative savings for a 10% reduction in water use globally over an 8 year period (from 2022 to 2030). (2,357,337 X 8).

Cost to realize opportunity

9,430,000

Strategy to realize opportunity and explanation of cost calculation

Cost to realize water savings is estimated as 25 to 50% of the realized savings ($4.71 to $9.43MM). Each 1% reduction in process water use intensity results in savings up to approximately $2,357,337 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 $3,610,000 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

Long-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)

28,880,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

$28.9MM is the approximate cost savings realized from energy reduction/ continuous improvement initiatives for the 8 year period from 2022 to 2030. Additional cost reductions can be anticipated in the future with installation of more energy efficient equipment.

Cost to realize opportunity

36,100,000

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)

750,000

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 using the average cost of purchased Natural gas for 2021.

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 9%. The amount of biogas that is currently flared without energy recovery now sits at 35%. 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

Opp4

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

PureCircle by Ingredion is the leading producer and innovator of great-tasting stevia sweeteners and flavor modifiers for the global beverage and food industry. PureCircle combines advanced R&D with full vertical integration from farm to high-quality, great-tasting innovative stevia ingredients. With the latest stevia innovations in bioconversion and fermented sugarcane to achieve Reb M, PureCircle is bringing the best tasting stevia products to the market while delivering significant environmental improvements. This is evident in our recently completed Life Cycle Assessment showcasing continued reductions in GHG, water scarcity, land use, and energy demand. As the adoption of stevia continues to expand, the new technologies are enabling mass market adoption while driving significant reductions in environmental impacts.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

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

Financial figure has been calculated however is not being disclosed.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

Ingredion currently manufactures Stevia in our network of global facilities. As the adoption of stevia continues to expand future investments will be prioritized.

Comment

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)

1,690,000

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 2021.

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 transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

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

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

Ingredion has recently committed to have our Scope 1, 2, and 3 reduction targets, which align with a 'Well below 2 degree Celsius' scenario, validated by the SBTi.

Ingredion has done a high level assessment of the business feasibility of a transition to 1.5ºC world, however industry advances in scalable, economical technologies such as green hydrogen, renewable natural gas, and/or process electrification are required. We are committed to continuing to evaluate opportunities with energy suppliers and technology providers to find solutions to transition to a 1.5ºC world.

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
Physical climate scenarios RCP 4.5	Company-wide		The Ingredion climate impact study encompassed 31 sites across 9 countries and includes most of the areas where we source crops. The study focused on two climate-based impacts representing the primary risk to our agricultural raw material supply; the change in growing degree days (GDDs) based on shifts in temperature, and changes in the amount of precipitation projected for each location. The study was completed using extended models that integrate climate projections, combined with specific domain rules such as the calculation of GDDs, to determine potential future impacts. Along with climate projections, a historic baseline of climate data from 1986-2005 was utilized to provide an average to compare future projections. For the climate projections, the study included 21 IPCC CMIP5 climate model projections for the years 2020-2059, with specific summaries included for 2030 and 2050 as they represent both the near-term and longer-term risk scenarios. The scenario RCP 4.5 was used, which is the stabilization scenario that projects global mean surface temperatures for 2081–2100, relative to 1986–2005 will likely increase by 1.1°C to 2.6°C. This provides a mid-level impact perspective creating 21 future scenarios plus a historic scenario from which to analyze each location.
Physical climate scenarios RCP 8.5	Company-wide		The Ingredion climate impact study encompassed 31 sites across 9 countries and includes most of the areas where we source crops. The study focused on two climate-based impacts representing the primary risk to our agricultural raw material supply; the change in growing degree days (GDDs) based on shifts in temperature, and changes in the amount of precipitation projected for each location. The study was completed using extended models that integrate climate projections, combined with specific domain rules such as the calculation of GDDs, to determine potential future impacts. Along with climate projections, a historic baseline of climate data from 1986-2005 was utilized to provide an average to compare future projections. For

			the climate projections, the study included 21 IPCC CMIP5 climate model projections for the years 2020-2059, with specific summaries included for 2030 and 2050 as they represent both the near-term and longer-term risk scenarios. The scenario RCP 8.5 was used, which is a “business as usual” scenario that projects temperature increase of 2.6°C to 4.8°C. This provides a high-level impact perspective creating 21 future scenarios plus a historic scenario from which to analyze each location.

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

Most growing regions showed a decrease in precipitation and an increase in GDDs. An important trend was the predicted drop in precipitation in multiple sourcing areas. However, some areas indicated more expected annual precipitation with the potential for increased precipitation outside the normal growing season or too much precipitation falling in one month potentially at the expense of the entire crop season. For GDDs, an increase was predicted in all 31 sites. The trend was an expectation of more GDDs in areas at higher latitudes which could signal a shift of corn growing areas further from the equator. Deeper analysis of monthly predictions of the model show that part of the GDD increase is occurring outside the cropping season. This could lead to more weed and insect pressure as colder weather generally helps control populations of each. The largest increase of GDDs was observed in growing areas in North America. Corn grown in these areas could possibly benefit if the GDDs are in the correct season and do not have overwhelming increases in the winter months.

The analysis allows us a tool to compare baseline water stresses 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. Secondly, the modeling identified

vulnerabilities in the agricultural supply chain where regenerative ag practices could have an outsized impact due to increased water stress in the coming decades. Ingredion can build resiliency into supply chains before the water risk becomes apparent including focus on Integrated Pest Management programs in areas where increased offseason GDDs could intensify pressure from insects and weeds. 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. 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 2021, we continued to make notable local investments in our plant-based protein capabilities. We brought online our facility in South Sioux City, NE, where we are continuing to scale up operations. Additionally, we made a significant expansion to our Vanscoy, Canada facility. Aligned with our high manufacturing and quality standards, including Global Food Safety Initiative certification, our new expansion produces pulse flours and concentrates using proprietary technology that generates no wastewater from the manufacturing process. This expansion was made possible by our investments, as well as investments from the Protein Industries Canada innovation supercluster, which continues its mission of accelerating the innovation of the Canadian

		plant protein sector. In addition to expanding our operation, we have continued to expand our partnerships and collaboration in the plant protein space. One example of this is our ongoing partnership with The EVERY Company. In March 2021, The EVERY Company, for which Ingredion is the exclusive goto-market partner in North America, announced the launch of the first ever animal-free pepsin. Staying connected with innovation and thought leadership in the plant protein space is critical to our strategy in this area.
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 2020, we achieved 95% of our goal to sustainably source 100% of our waxy corn supply by 2022. In 2020, 25% 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. In 2020, we were slightly under (-9.3%) our 10% water intensity reduction goal (baselined to 2010) after exceeding the goal during the past two years. This was primarily due to operational and production related impacts of COVID-19 at our manufacturing facilities. 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	We continue to see a high demand from both consumers and our customers for plant-based protein alternatives and plant-based sweeteners in their food preferences. While Ingredion has been providing plant protein and sweetener solutions to customers for some time now, we continue to expand our capabilities in this space.

		Driving for a more circular economy: We have committed to working with customers and suppliers across our value chain to promote more circular economy practices. For example, we purchase potato co-streams from customers that use those potatoes to make chips and fries, then process them into potato starches that enhance the functionality of their products. Selling these enhanced products back to customers is just one example of how we put circular economy practices into play. To further our understanding of circular economics and have a common framework for customer engagement, we completed The Ellen MacArthur Foundation's Circulytics assessment for the first time this past year. Overall, we rated a C in our assessment, with a B- in our Enablers score.
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 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 2021, Ingredion finalized efforts to exit coal used in our boilers at our Argo, USA facility – the largest manufacturing plant globally for the company. This work included physical and supply chain changes that needed to be completed before the switch to natural gas could be made in our boilers. This change will contribute an estimated 8% reduction in the company's global carbon footprint, and is expected to deliver nearly a third of the reductions planned to meet our science-based climate change goal. We see this as a great first step in executing against our longer-term carbon reduction strategy.

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 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.

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

Year target was set

2020

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)

2,623,231

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

829,079

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

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

3,444,456

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 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]

2,480,008.32

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

2,267,867

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

780,642

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)

3,048,509

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

41.0542747119

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

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. When including biogenic emissions, Ingredion has achieved an 11.3% reduction, using market based Scope 2, compared to our 2019 target base year.

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 the phasing out of coal used in our boilers at our Argo USA facility - our largest manufacturing plant globally for the company. This work included physical and supply chain changes that needed to be completed before the switch to natural gas could be made in our boilers.

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

Target reference number
Abs 2

Year target was set
2020

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

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 emissions covered by target (metric tons CO2e)
6,796,193

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
6,796,193

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 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]

5,776,764.05

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

6,633,870

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

6,633,870

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

15.9229341093

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

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 2021 Ingredion's scope 3 emissions across our targeted boundary was reduced by 2.4%. A significant reduction was due to transitioning away from coal at our largest manufacturing facility. In addition to our Scope 1 reductions, the conversion from Coal to Natural Gas led to a 7% reduction in our category 3 footprint due to lower well to tank emissions.

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
4

% of target achieved relative to base year [auto-calculated]
2.9535864979

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
Ingredion has engaged with an external consultant to develop a strategy to source Renewable Electricity in select markets where Ingredion operates. It is expected that the strategy will be completed in 2021 and will set forth a roadmap to achieve our goal

by the required target year. Minor progress has been made to the goal through our facility in Lima, Peru, and Goole, United Kingdom purchasing 100% Renewable Electricity as validated by REC's.

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)

Land use change

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

87

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

78.3333333333

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

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. One of the 23 essential questions pertains to deforestation at the farm level.

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).
At the end of 2021, 87% of our waxy corn has met the threshold criteria to be considered sustainably sourced. Despite our progress, we still faced pandemic-related challenges in 2021. For example, we had difficulty conducting planned third-party audits to validate grower performance against the Platform’s Farm Sustainability assessment. In some instances, auditors were prevented from traveling or safety protocol kept them from visiting growers in areas with rising infection rates. With these challenges we joined our customers in prioritizing the safety of our growers, employees and third-party partners.

List the actions which contributed most to achieving this target

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)

Land use change

Other, please specify

Percent of Tier 1 priority crops sustainably sourced

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

33

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

25.5555555556

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. One of the 23 essential questions pertains to deforestation at the farm level.

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).

We made notable progress this past year against our sustainable agriculture goal of sustainably sourcing 100% of our Tier 1 priority crops. In addition to advancing our efforts from 24% to 33%, we also laid the foundation for even more progress in 2022 by expanding collaborations with both growers and customers. Despite our progress, we still faced pandemic-related challenges in 2021. For example, we had difficulty conducting planned third-party audits to validate grower performance against the Platform's Farm Sustainability Assessment. In some instances, auditors were prevented from traveling or safety protocol kept them from visiting growers in areas with rising infection rates. With these challenges we joined our customers in prioritizing the safety of our growers, employees and third-party partners.

We are also pleased with the progress our PureCircle team has made in assessing our stevia farmers. 100% of growers completed the SAI Platform's FSA self-assessment, with approximately 90% of those growers having external validation audits.

List the actions which contributed most to achieving this target

Target reference number

Oth 3

Year target was set

2020

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Waste management
metric tons of waste reused

Target denominator (intensity targets only)

metric ton of waste

Base year

2019

Figure or percentage in base year

77.1

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

75.4

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

-7.423580786

Target status in reporting year

Underway

Is this target part of an emissions target?

No

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

Ingredion has committed to 100% elimination of landfill to waste at all manufacturing locations by 2030. To define this metric we are tracking the beneficial reuse of waste. Beneficial reuse of waste is primarily accomplished through reduction, recycling, land application, and incineration with energy reclaim.

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

Currently local awareness and reduction initiatives undertaken at our global manufacturing sites have proven successful. We are piloting a global manufacturing excellence team to continue to achieve waste reductions.

List the actions which contributed most to achieving this target

Target reference number
Oth 4

Year target was set
2020

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

Target type: category & Metric (target numerator if reporting an intensity target)
Resource consumption or efficiency
Other, please specify
Chemical Oxygen Demand (COD) Intensity from Manufacturing Operations

Target denominator (intensity targets only)
metric ton of product

Base year
2019

Figure or percentage in base year
17.31

Target year
2030

Figure or percentage in target year
15.53

Figure or percentage in reporting year
17.67

% of target achieved relative to base year [auto-calculated]
-20.2247191011

Target status in reporting year
Underway

Is this target part of an emissions target?
No

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

COD in our waste streams also present an opportunity as improving our recovery of raw materials improves the efficiencies of our operations while lessening the environmental burden. Our COD reduction goal is designed to hold us accountable to reduce the impact of our liquid waste streams.

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

Our sites are actively working to reduce COD liquid waste by driving efficiencies in yield recovery. Furthermore, our measures to beneficially use all portions of our raw materials is expected to have a positive impact on our wastewater COD. Ingredion has a Manufacturing Excellence team focused on developing and sharing water and COD reduction initiatives. While this team has historically been focused at a regional level, in 2021 we have begun the process of integrating all our global operations on one team for the purposes of wider collaboration and the sharing of best practices. While 3 of our regions delivered reductions, overall progress to goal in 2021 was unfavourable.

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	118	239,261
To be implemented*	14	43,556
Implementation commenced*	147	221,444
Implemented*	55	366,241
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

Other, please specify

Other, please specify

Fuel Switching - Coal to Natural Gas

Estimated annual CO2e savings (metric tonnes CO2e)

331,570

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)

0

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

5,981,000

Payback period

No payback

Estimated lifetime of the initiative

21-30 years

Comment

In March of 2021, Ingredion finalized efforts to exit coal used in our boilers at our Argo, USA facility – the largest manufacturing plant globally for the company. This work included physical and supply chain changes that needed to be completed before the switch to natural gas could be made in our boilers. The savings presented represent expected full year reductions.

Initiative category & Initiative type

Low-carbon energy consumption

Small hydropower (<25 MW)

Estimated annual CO2e savings (metric tonnes CO2e)

2,997

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

Scope 2 (location-based)

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

in 2021 we began sourcing renewable energy at one of our our facilities in South America.

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Continuous Improvement Initiatives

Estimated annual CO2e savings (metric tonnes CO2e)

12,417

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

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

1,778,224

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

0

Payback period

<1 year

Estimated lifetime of the initiative

21-30 years

Comment

28 Continuous Improvement initiatives undertaken at our global manufacturing plants which focus on cost savings and energy reduction. These low capital investments focus on utilizing lean methodologies to identify opportunities and implement systemic changes that eliminate waste and reduce raw material inputs (i.e. energy, water, agricultural feedstock) .

Initiative category & Initiative type

Energy efficiency in production processes
Electrification

Estimated annual CO2e savings (metric tonnes CO2e)

5,200

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)

1,238,124

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

5,187,739

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Replaced a steam tube evaporator with a Mechanical Vapour Recompressor (MVR) at our facility in Pakistan. MVR's are more efficient at evaporation and require electrical power vs steam (which is generated by fossil fuel boiler).

Initiative category & Initiative type

Energy efficiency in production processes
Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

987

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

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

Voluntary/Mandatory

Voluntary

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

165,044

Investment required (unit currency – as specified in C0.4)
660,178

Payback period
4-10 years

Estimated lifetime of the initiative
16-20 years

Comment
Eight facilities upgraded high efficiency electric motors and Variable frequency drives (VFD's) which reduced total electricity demand for the plant.

Initiative category & Initiative type
Low-carbon energy consumption
Biogas

Estimated annual CO2e savings (metric tonnes CO2e)
4,791

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)
669,095

Investment required (unit currency – as specified in C0.4)
2,368,593

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Two facilities installed equipment to utilize biogas generated from on-site wastewater treatment facilities to offset fossil fuel use.

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

Estimated annual CO2e savings (metric tonnes CO2e)

3,842

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

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

Voluntary/Mandatory

Voluntary

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

1,228,356

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

4,913,424

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

13 facilities across our global network installed capital projects to improve the utilization of energy at our facility. Projects undertaken included upgrading older equipment to improve reliability, debottlenecking piping/conveyor systems to reduce energy demand, and the recovery and reuse of waste process heat.

Initiative category & Initiative type

Other, please specify
Other, please specify
Regenerative Agriculture Project

Estimated annual CO2e savings (metric tonnes CO2e)

4,437

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

Scope 3 category 1: Purchased goods & services

Voluntary/Mandatory

Voluntary

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

0

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

37,500

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

Ingredion funded a project that encourages regenerative agriculture practices in the state of Illinois - target crops were corn and soybeans. The project was verified by the Soils and Water Outcomes Fund. A total of 8818.91 MT of CO2 was reduced due to improved practices including reduced till, cover crops, and no till. Corn was deemed to be in our supply shed and the verified emissions for the corn portion (4437 MT) of the project were applied to scope 3 category 1.

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 tenth 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.

C4.5

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

No

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

Acquisitions - Pure Circle Limited (July 1, 2020), Verdient Foods (November 11, 2020), KaTech (April 1, 2021)

Details of structural change(s), including completion dates

On July 1, 2020 Ingredion completed the purchase of Pure Circle Limited, the worlds leading producer and innovator of plant-based stevia sweeteners and flavors for the food and beverage industry. Last years disclosure did not include the Pure Circle facilities, as Pure Circle reported to the CDP separately.
On November 11, 2020 Ingredion signed an agreement to acquire the balance of ownership in Verdient Foods Inc that the company did not already own. Verdient foods produces pulse-based protein concentrates and flours from Lentils.
Both acquisitions have been fully incorporated in Ingredion's operational boundary for this year's report, and historic facility emission information has been added to our target base year inventory (2019).
On April 1, 2021, we acquired KaTech, a German-based provider of advanced texture and stabilization solutions to the food and beverage industry. Our 2021 reporting cycle does not include emissions from KaTech, however they will be included in our operational boundary for future disclosures.

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 boundary	On February 12, 2021, Ingredion entered into an agreement with an affiliate of Grupo Arcor to establish Ingrear Holding S.A., a joint venture to combine and operate five manufacturing facilities in Argentina. For the purposes of our operational boundary, Ingredion does not have operational control, thus the facilities have been removed from our scope 1 and scope 2 inventory. Emissions for the new Joint Venture have been added to our Scope 3, Category 15 (Investments) inventory based on our equity share. In May of 2021, Ingredion submitted our GHG reduction targets to the Science Based Target Initiative for validation. Prior to submittal, Ingredion performed a detailed review of our scope 3 boundary. As a result, we have expanded our Category 1 boundary to include all non-agricultural purchased goods. We have also expanded our Scope 3 boundary to include Category 2 (Capital Goods), Category 3 (Fuel and energy related activities), Category 5 (Waste generated in operations), Category 10 (Processing of sold products), and Category 15 (Investments).

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	The approach for adjusting base year emissions for mergers, acquisitions, divestitures, and outsourcing is defined in our Inventory Management Plant. Adjustments are triggered in the following situations: 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 in a similar fashion. 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 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. Estimate base year based on first year we operate it, or other reasonable method, if data is not available and the facility was in operation during the base year. The preferred method is to ratio missing indicators based on production, adjusting for any significant operational changes that might have occurred. c. If the facility was not operating during the base year it will added to the base year without any emissions, water use or production. Ingredion applies a significance threshold as defined below: 1. For scope 1, 2 emissions at our manufacturing facilities a significance threshold is not used to define whether adjustments are made. 2. For non-manufacturing facilities and leased vehicles a change which increases their total GHG or Water Use for all non-manufacturing facilities above 5% of the total inventory would trigger them to be included in the inventory. 3. For Scope 3 emissions, a threshold of 5% may be used before a recalculation is required. For situations that may not be explicitly defined above, the Corporate Senior Manager of Environment and Climate will review and make a recommendation to the Vice President of Sustainability

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)

849,927

Comment

Base year emissions have reduced by 133,646 MT to account for recent acquisition/divestment and a minor corrections to base year data. To maintain the same basis as the current year, purchased electricity emission factors for the base year were adjusted to reflect those published in IEA Emission Factors (2021 edition) as compared to IEA 2020 edition used last year.

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

829,079

Comment

Base year emissions have reduced by 43,053 MT to account for recent acquisitions/divestment and a minor correction to base year data.

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)

3,072,812

Comment

Base year emissions have increased by 546,992 MT to account for all non-agricultural purchased goods and services. In addition, agricultural emissions for Stevia, Peas, and Potatoes have been added to reflect the feedstock of acquisitions since our target base year.

Scope 3 category 2: Capital goods

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

25,494

Comment

The base year emissions were not previously calculated.

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

The base year emissions were not previously calculated.

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)

1,600,185

Comment

The base year emissions have increased by 153,161 to include well-to-tank factors (WTT) and emissions from warehousing activities.

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)

121,075

Comment

The base year emissions were not previously calculated.

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 411 MT due to an updated calculation methodology which offers a more relevant and complete representation of our global travel activities. Transportation emissions are now calculated using spend based emission factors.

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

Base year end

Base year emissions (metric tons CO2e)

Comment

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

The base year emissions have increased by 69,606 MT to include well-to-tank factors (WTT) and emissions from warehousing activities.

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)

3,964,060

Comment

The base year emissions were not previously calculated.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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)

18,354

Comment

The base year emissions were not previously calculated.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

171,613

Comment

The base year emissions were not previously calculated.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

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)

2,267,867

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

Comment

C6.4

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

Source

Company owned Vehicles

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

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.

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

0

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.

Source

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

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

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.

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

0

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

Leased Vehicles

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

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.

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

0

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.

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)

2,917,419

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)

20,313

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)

542,186

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)

1,838,955

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. 2021 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)

116,239

Emissions calculation methodology

Waste-type-specific method

Other, please specify

Industrial Wastewater Emissions: from IPCC Guidelines for National GHG Inventories - 6.2.31 and 6.4.1.1

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

50

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)

5,008

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 2021 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)

11,437

Emissions calculation methodology

Average data method

Distance-based 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, however with the increase in remote work due to Covid, staffing hours for all non-manufacturing sites were obtained from our global EHS&S team. It was estimated that our manufacturing facilities remained fully staffed. 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)

268,382

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)

3,874,429

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 database's 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

Not relevant, explanation provided

Please explain

There are no significant emissions created through the use of our products, so this category is not relevant to our organization

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

17,240

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. 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.

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)

123,533

Emissions calculation methodology

Supplier-specific method
Spend-based method

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

99

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)

345,797

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)

26,998

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

Corn

Do you collect or calculate GHG emissions for this commodity?

Yes

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.

Agricultural commodities

Other

Cassava

Do you collect or calculate GHG emissions for this commodity?

Yes

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.

Agricultural commodities

Other

Stevia

Do you collect or calculate GHG emissions for this commodity?

Yes

Please explain

We calculate GHG emissions related to sourced farming of Stevia utilizing a life cycle information. The life cycle factor was calculated by a third party consultant.

Agricultural commodities

Other

Potatoes

Do you collect or calculate GHG emissions for this commodity?

Yes

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.

Agricultural commodities

Other

Pulses

Do you collect or calculate GHG emissions for this commodity?

Yes

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

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

(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.

Other

Reporting emissions by

Total

Emissions (metric tons CO2e)

2,383,717

Change from last reporting year

About the same

Please explain

Emissions for our agriproducts are about the same as reported in 2021. Corn volume was less in 2021 due to our divestment in South America, however we are now disclosing emissions for the first time for three crops (Stevia, Pulses, Potatoes). Life cycle GHG emissions for 3rd party farming for Corn, Cassava, Pulses, Stevia and Potatoes are calculated based on actual volumes and a representative LCA factor.

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

0.000442197

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

3,048,509

Metric denominator

unit total revenue

Metric denominator: Unit total

6,894,000,000

Scope 2 figure used

Market-based

% change from previous year

23

Direction of change

Decreased

Reason for change

Revenue grew by 15% in 2021 vs 2020. In addition GHG emissions decreased due to significant CO2 reductions from our divestment from coal at our largest manufacturing facility.

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	2,218,109	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	1,114	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	43,230	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	5,414	IPCC Fifth Assessment Report (AR5 – 100 year)
PFCs	0	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	0	IPCC Fifth Assessment Report (AR5 – 100 year)
NF3	0	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Asia, Australasia	121,311
Europe, Middle East and Africa (EMEA)	276,772
North America	1,453,558
South America	416,226

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	121,311

EMEA	276,772
NA	1,453,558
SA	416,226

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)

2,267,867

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/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Asia, Australasia	204,108	204,108
Europe, Middle East and Africa (EMEA)	55,075	60,996
North America	501,201	504,646
South America	13,894	10,892

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	204,108	204,108
EMEA	55,075	60,996
NA	501,201	504,646
SA	13,894	10,892

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	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	12,718	Decreased	0.386	The overall change in renewable energy consumption consisted of two key items - the initiation of our REC purchase program in Peru (2997MT), and the increased use of biofuels at our global facilities due to the continued optimization of our biomass assets (9721MT). In 2021, Ingredion's percentage of biomass energy as part of total energy use increased by 0.5% (from 6.9% to 7.4%) 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 (2997+9721)/3291847MT = 0.00386.(i.e. a 0.386% decrease in emissions). Please note that our scope 1+2 for 2019 is revised from our previous year submission to reflect minor data corrections and incorporate a recent acquisition and divestment.
Other emissions reduction activities	61,455	Decreased	1.87	The value presented represents CO2 reductions from a range of capital projects and continuous improvement initiatives implemented by Ingredion in 2021. 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 -1.87% reduction by dividing the total emissions of the reduction initiatives by Scope 1 and Scope 2 emissions for 2020 (61455/3291847 = 0187).
Divestment	0	No change	0	Please note that our scope 1+2 for 2020 is revised from our previous year submission to reflect minor data corrections and incorporate a recent acquisition and divestment. As such there is no year over year change due to the divestment.
Acquisitions	0	No change	0	Please note that our scope 1+2 for 2020 is revised from our previous year submission to reflect minor data corrections and incorporate a recent acquisition and divestment. As such there is no year over year change due to the divestment.
Mergers	0	No change	0	
Change in output	52,924	Increased	1.61	Production volumes were higher by approximately 2% in 2021. The net change of emissions due to increased production was 52,924 MT. The percentage change was obtained by dividing the process emissions attributed to the increase by our Scope 1 and Scope

				2 footprint from 2022 (52,924/3291874 = 0.0161).
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	222,088	Decreased	6.75	Others captures emission changes from fuel switching to lower carbon fossil fuels. In March of 2021 we completed the switchover of boiler fuel from Coal to Natural gas. Year to date emission reductions for this project were 222088MT. This equates to 6.747% reduction (222,088/3291874).

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 0% but less than or equal to 5%

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)	839,710.55	10,408,922.62	11,248,633.18
Consumption of purchased or acquired electricity		55,790.08	1,350,346.03	1,406,136.11
Consumption of purchased or acquired steam		100,224.39	600,638.5	700,862.89
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		995,725.03	12,359,907.15	13,355,632.18

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

C8.2d

(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	1,099,132.5	1,090,663.42	47,526.21	47,526.21
Heat	5,396,497.25	5,396,497.25	155,200.41	155,200.41
Steam	1,622,073.22	1,622,073.22	557,914.14	557,914.14
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.

Sourcing method

Direct procurement from an off-site grid- connected generator e.g. Power purchase agreement (PPA)

Energy carrier

Electricity

Low-carbon technology type

Large hydropower (>25 MW)

Country/area of low-carbon energy consumption

Peru

Tracking instrument used

I-REC

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

14,823

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

Peru

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

2,016

Comment

Sourcing method

Unbundled energy attribute certificates (EACs) purchase

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Tracking instrument used

GO

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

1,581

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

Spain

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

2,020

Comment

Our facility in Goole, U.K., procures 100% RE supported with certificates through a local Utility. The renewable energy certificate retirement report is available annually in August. The utility retired 420 GO certificates from January-March, 2021, which corresponds with consumption at the facility. As the report for 2022 is not available yet

low carbon energy consumption for April-December was estimated based on metered consumption.

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

As members of IPL's Electing Customer Program, the Utility annually retires REC's on behalf of Ingredion across the balance of their renewable resources infrastructure.

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

US-REC

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

38,812

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

United States of America

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

2,019

Comment

In April, 2022, the utility released the document "Interstate Power and Light Electric Utility Supplier-Specific Customer Data, Renewable Energy, Energy Mix and Greenhouse Gas Emission Rates (Version April 2022)" which outlined that 42.0% of retail sales will be supported by REC's retired on behalf of customers. The proof of retirement is available after the close of the CDP reporting Cycle and will be commented on in next years report. In 2020 IPL provided REC retirement information to Ingredion which supported their claim of 43.8% Renewable Energy for 2020. IPL retired 3,339915 REC's on behalf of Ingredion across their New Wind I and II resources in English farms, Upland Prairie, Golden Plains, Richland and Whispering Willow North facilities. The remaining 2,727,099 REC's were retired from "Other IPL Renewable Resources". Ingredion selected 2019 as the commissioning year of the energy

generating equipment. This coincides with the oldest installation of the New Wind I and II resource, which represents the largest share of retired REC's from 2020.

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

Ingredion used the Power Content Label published by the utility. The renewable mix backed by REC retirement for 2020 was 0.1% biomass, 5.5% geothermal, 0.8% eligible hydroelectric, and 9.4% wind.

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

US-REC

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

180

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

United States of America

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

Comment

The information on Renewable Energy composition was gathered from the Power Content Label published by the local Utility. Data was for 2020. As the renewable energy is generated by multiple sources Ingredion does not have visibility as to the commissioning year of the resources.

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

The State of Wisconsin requires all Utilities to retire REC's from its owned renewable resources and purchases from third party suppliers. Ingredion does not know the current resources from which the REC's are generated .

Country/area of low-carbon energy consumption

United States of America

Tracking instrument used

US-REC

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

395

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

United States of America

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

Comment

The Public Service Commission of Wisconsin provides an annual report on RPS compliance for the prior year which validates the retirement of REC's on the Midwest Renewable Energy Tracking System. The utility retired REC's totalizing 9.97% of 2020 retail sales load for compliance with the States RPS program. The numbers reported represent the actual renewable energy delivered as default power to our facility in Wisconsin.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Brazil

Consumption of electricity (MWh)

364,129.46

Consumption of heat, steam, and cooling (MWh)

1,708,815.44

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

2,072,944.9

Country/area
Canada

Consumption of electricity (MWh)
227,665.83

Consumption of heat, steam, and cooling (MWh)
921,768.68

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

1,149,434.51

Country/area
China

Consumption of electricity (MWh)
36,834.27

Consumption of heat, steam, and cooling (MWh)
141,636.5

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

178,470.77

Country/area
Colombia

Consumption of electricity (MWh)
74,411.99

Consumption of heat, steam, and cooling (MWh)
273,158.86

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

347,570.85

Country/area
Germany

Consumption of electricity (MWh)

34,507.03

Consumption of heat, steam, and cooling (MWh)

147,194.27

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

181,701.3

Country/area

Democratic People's Republic of Korea

Consumption of electricity (MWh)

129,503.44

Consumption of heat, steam, and cooling (MWh)

327,667.34

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

457,170.78

Country/area

Malaysia

Consumption of electricity (MWh)

21,810

Consumption of heat, steam, and cooling (MWh)

31,780.96

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

53,590.96

Country/area

Mexico

Consumption of electricity (MWh)

393,095.3

Consumption of heat, steam, and cooling (MWh)

1,753,588.02

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

2,146,683.32

Country/area

Pakistan

Consumption of electricity (MWh)

128,743.85

Consumption of heat, steam, and cooling (MWh)

843,303.81

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

972,047.66

Country/area

Peru

Consumption of electricity (MWh)

14,822.94

Consumption of heat, steam, and cooling (MWh)

63,604.72

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

78,427.66

Country/area

Thailand

Consumption of electricity (MWh)

98,597.88

Consumption of heat, steam, and cooling (MWh)

432,720.17

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

531,318.05

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)
1,580.93

Consumption of heat, steam, and cooling (MWh)
11,471.04

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

13,051.97

Country/area
United States of America

Consumption of electricity (MWh)
971,096.62

Consumption of heat, steam, and cooling (MWh)
4,193,653.78

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

5,164,750.4

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
2.11

Metric numerator
Cubic meters of water

Metric denominator (intensity metric only)
Metric tons of finished product

% change from previous year

4

Direction of change

Decreased

Please explain

Our target is to reduce water use intensity (m3 water /unit of production) at our manufacturing sites located in extremely high-water stress geographies by 30% between the baseline and target year. Our definition of water use includes all water intake except for single pass non-contact cooling water that is withdrawn and returned to the same source.

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 2021 CDP Verification Statement GHG_Final.pdf

Page/ section reference

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 2021 CDP Verification Statement GHG_Final.pdf

Page/ section reference
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: 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 2021 CDP Verification Statement GHG_Final.pdf

Page/section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

99

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?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Other, please specify Purchased Renewable Electricity %	International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits	We are committed to procuring 50% of our electricity as renewable by 2030. This is our

		or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015)	first year verifying our progress to this goal. 1
C4. Targets and performance	Other, please specify Sustainable Sourcing	Other, please specify (Sustainable sourcing) International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015	We are committed to working with our growers and have committed to sustainably source 100% of our Tier 1 crops. This is relevant and important to the organization as we continue to see increased interest from our customers looking to purchase products derived from sustainably sourced raw materials. 2
C9. Additional metrics	Other, please specify Water related metrics	International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015)	Underlying volume data for water use intensity, which one of the additional metrics disclosed in C9.1, undergoes assurance. The assurance statement is attached here. 3

[1]Ingredion 2021 CDP Verification Statement GHG_Final.pdf

[2]Ingredion SAI Assurance Statement 2021.pdf

[3]Ingredion W1 Corporate 2021 CDP Verification Statement Water ISAE 3000_Final.pdf

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.

California CaT - ETS

Canada federal Output Based Pricing System (OBPS) - ETS
EU ETS
Korea ETS

C11.1b

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

California CaT - ETS

% of Scope 1 emissions covered by the ETS

0

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

0

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

0

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Ingredion ceased production at our facility in California, stationary combustion equipment has been removed, and the site has been sold. 2021 was our last year of reporting into the California CaT program.

Canada federal OBPS - ETS

% of Scope 1 emissions covered by the ETS

7.5

% of Scope 2 emissions covered by the ETS

0

Period start date
January 1, 2021

Period end date
December 31, 2021

Allowances allocated
169,749

Allowances purchased
45,638

Verified Scope 1 emissions in metric tons CO2e
215,387

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Our Ontario facilities will be transitioning to the Ontario EPS scheme starting in January 1, 2022.

EU ETS

% of Scope 1 emissions covered by the ETS
0.8

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1, 2021

Period end date
December 31, 2021

Allowances allocated
14,807

Allowances purchased
6,058

Verified Scope 1 emissions in metric tons CO2e
20,865

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

4

% of Scope 2 emissions covered by the ETS

8

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

143,658

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

80,547

Verified Scope 2 emissions in metric tons CO2e

59,555

Details of ownership

Facilities we own and operate

Comment

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 California we have stopped manufacturing at the location subject to the ETS and will exit the program at the end of the current compliance cycle. 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 originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Agriculture

Project identification

Soil and Water Outcomes Fund (Corn Portion). Ingredion entered into a contract with Re-Harvest to deliver VER's related to best management practices relating to cover crops, conservation/reduced till, no till, no till and cover crops, and conservation till and cover-crop. Sustainable practices covering 14,684,080 acres produces 8,818.91 metric tons of CO2e VER's. The VER's were inventoried by ReHarvest and the Soil and Water Outcomes Fund in a buffer pool resulting in final delivery of 7,937.02 VER to Ingredion. The agricultural breakdown of the VER's was 4437 MT for Corn farming, and 3500.02 MT for Soy soy farming. As the VER for Corn farming were from our supply shed, they will be applied to our Scope 3 Category 1 emissions, whereas the balance of emissions are reported as an offset.

Verified to which standard

Other, please specify

EcoPractices® Is an independent, third-party verification platform that uses state-of-the-art technology with science as its foundation

Number of credits (metric tonnes CO2e)

4,930

Number of credits (metric tonnes CO2e): Risk adjusted volume

4,437

Credits cancelled

Not relevant

Purpose, e.g. compliance

Other, please specify

As the VER for Corn were from our supply shed, they will be applied to our Scope 3 Category 1 emissions, whereas the balance of emissions are reported as an offset.

Credit origination or credit purchase

Credit purchase

Project type

Agriculture

Project identification

Soil and Water Outcomes Fund (Soy portion). Ingredion entered into a contract with Re-Harvest to deliver VER's related to best management practices relating to cover crops, conservation/reduced till, no till, no till and cover crops, and conservation till and covercrop. Sustainable practices covering 14,684,080 acres produces 8,818.91 metric tons of CO2e VER's. The VER's were inventoried by ReHarvest and the Soil and Water Outcomes Fund in a buffer pool resulting in final delivery of 7,937.02 VER to Ingredion. The agricultural breakdown of the VER's was 4437 MT for Corn farming, and 3500.02 MT for Soy soy farming. As the VER for Corn were from our supply shed, they will be applied to our Scope 3 Category 1 emissions, whereas the balance of emissions are reported as an offset.

Verified to which standard

Other, please specify

EcoPractices® Is an independent, third-party verification platform that uses state-of-the-art technology with science as its foundation

Number of credits (metric tonnes CO2e)

3,888.91

Number of credits (metric tonnes CO2e): Risk adjusted volume

3,500.02

Credits cancelled

Not relevant

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

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

No, but we anticipate doing so in the next two years

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)

10

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

27

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. 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. As reported in C4.2b, 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 31% to 33% 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 2022. We also measure success of our engagement by the number of growers we engage with. We engaged ~15,350 growers globally in 2021. In 2021, our engagements were relatively flat due to the pandemic and the limited ability to further interact with growers. 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.

For example, we worked with growers to improve farming techniques including installing drip-fed irrigation systems in Pakistan. In Thailand, we worked to co-develop the Model Farmer Program to train growers in on-farm efficiencies. In 2021 we identified targeted projects in the Midwest US, and in Brazil. In Brazil, we collaborated 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. We also 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 to 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. Both projects delivered positive environmental benefits which can be leveraged in future projects.

Comment

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information 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

6.7

% total procurement spend (direct and indirect)

2

% 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 2021, Ingredion collected field level quantitative data on fields producing 725,000 metric tons of our 10.9 million metric tons global footprint. In our sample size, we noted that emissions were comparable with 2020. Our data showed a slight decrease in yield which likely was a contributing factor to the flat trend. We will continue to track trends over time, as growing conditions vary greatly year to year. Going forward we also plan to increase data collection with increased specialty contracting and data collection through a sourcing partner.

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 2022 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. 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 9,000 MT of VER's.

Comment

C12.1b

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

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

11

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.

Note: In 2021 we engaged with customers that represent approximately 11% of Scope 3 Category 10 emissions.

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

3

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

Customer engagement is primarily based upon customers reaching out to discuss support in meeting their specific sustainability goals or targets. In some instances, Ingredion may reach out to customers where we feel we have innovation that meets their particular needs and may also help with specific sustainability goals, such as climate change reductions. In other cases, this might be working with our customers on direct or multi-stakeholder collaborations that cross our value chain where we can provide influence or expertise.

Impact of engagement, including measures of success

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. 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 9,000 MT of VER's.

At the request of multiple customers, Ingredion participated in the Supplier Leadership on Climate Transition (LoCT) program to help implement best practices around carbon reduction efforts through online seminars, direct mentoring, and a collaborative platform that focuses on developing a greenhouse gas footprint, setting a science-based target, adopting greenhouse gas abatement measures, and disclosing progress. In 2021, we were selected, along with Danone and Mars, as part of the new AgWater Challenge cohort led by Ceres and the World Wildlife Fund (WWF) which engages companies with significant agricultural supply chains in promoting leading water stewardship practices. We underwent several engagement-focused calls with Ceres and WWF to discuss our proposed commitment. For us, this commitment includes implementing regenerative agriculture practices within our supply chain, including in high water stress geographies. Being part of the new AgWater Challenge cohort will help us leverage outside expertise in promoting more sustainable water management practices at the farm level. It also

helps highlight Ingredion's commitment to protecting water as a natural resource. Ingredion is also a founding member of the SAI Platform Regenerative Agriculture Program, which is focused on defining an industry standard around regenerative agriculture, identifying key metrics, and catalyzing adoption through strategic projects. While we primarily measure success through positive feedback from our customers, we expect that success in any future customer engagement scenario may be evident by reductions in Scope 3 emissions (Category 1 and/or 10).

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. Notably, we participated in the Rutgers University Masters of Business Science (MSB) Externship Exchange Program. Through this program, we were able to mentor students on projects related to carbon sequestration and plastic reduction, while deepening our understanding of current science and practices in these areas. In 2021, we collaborated with Rutgers University on a student led research project on carbon sequestration. The success of the project has led us to explore future engagements on climate related items.

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

Sustainable Source our Tier 1 priority 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

31

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

10

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment
On-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. Breaks 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

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly through trade associations

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 engagement activities are consistent with your overall climate change strategy

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 a Global

Sustainability Steering 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 engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

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

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

We are generally aligned with respect to Climate Change. CRA has made a public commitment to the reduction of GHG emissions associated with our industry by publicly supporting climate change policies proposed by Washington, DC. We differ primarily due to the fact that we are a manufacturing company and we have set very clear and ambitious targets for ourselves (vs. CRA which doesn't have clear reduction targets, but instead is influencing public policy on climate change in the agricultural sector.

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

Describe the aim of your organization's funding

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

No, we have not evaluated

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

Ingredion 10k.pdf

Page/Section reference

Page 18-19

Content elements

Governance
Strategy
Risks & opportunities

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.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

INGR 2021 Sustainability Report.pdf

Page/Section reference

20-25 lists highlights on environmental/biodiversity. Our GRI Content Index begins on page 36.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Attached is Ingredion's 12th annual sustainability report which highlights progress made in 2021 towards our All Life plan. We believe that ESG performance is a strong indicator of the long-term performance and resiliency of a company. There has been a lot of interest in our climate strategy, we are pleased to share that Ingredion has applied to the Science Based Target initiative to have our carbon emission reduction target validated. This is an integral step as part of our longer journey toward continuously reducing the impact of our carbon emissions on climate. In 2021, we also made noted progress against our commitment to sustainably source our Tier 1 priority crops, which represent approximately 99 percent of our global sourcing by volume. We know that there are, and will be, challenges ahead in reaching our targets, but these are challenges we are committed to overcome. Implementing sustainable agriculture practices with our grower suppliers not only creates a more climate resilient supply chain but offers us an opportunity to reduce the Scope 3 carbon emissions associated with those farming operations. Sustainable and regenerative agriculture initiatives have also provided a forum for us to collaborate with customers and other stakeholders in new and innovative ways, as you will read about in this report

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

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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 impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in our upstream value chain only

C15.4

(C15.4) 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

C15.5

(C15.5) 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

C15.6

(C15.6) 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 Biodiversity strategy	Pages 24 and 25 of our 2021 sustainability report highlight our biodiversity progress, which include risks and opportunities, strategy, and impacts of biodiversity. Page 27,28,29 provides details on our sustainable agriculture program. 1

[1]INGR 2021 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	President and Chief Executive Officer	Chief Executive Officer (CEO)