

FMC TCFD Disclosure Content Page

The table below serves as a content page for FMC's TCFD Disclosures. Answers for each category are hyperlinked to relevant sections in our latest CDP Climate Change Questionnaire (appended below in this document) and our sustainability website at www.FMCSustainability.com.

GOVERNANCE Disclose the organization's governance around climate related risks and opportunities.	STRATEGY Disclose the actual and potential impacts of climate related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	RISK MANGEMENT Disclose how the organization identifies, assesses, and manages climate related risks.	METRICS AND TARGETS Disclose the metrics and targets used to assess and manage relevant climate related risks and opportunities where such information is material.
<i>FMC Disclosures:</i> a) Describe the board's oversight of climate related risks and opportunities. C1.1b – Board's oversight of climate-related issues	<i>FMC Disclosures:</i> a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term. C2.1 - Description of FMC's definition of short-, medium and long-term C2.3 & 2.3a – List of climate related risks with potential to have substantive financial/strategic impact C2.4 & 2.4a – List of climate related opportunities to have substantive financial/strategic impact	<i>FMC Disclosures:</i> a) Describe the organization's processes for identifying and assessing climate related risks. C2.2b –FMC's process for identifying and assessing climate-related risks C2.2c – List of risks considered in FMC's climate related risk assessments	<i>FMC Disclosures:</i> a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process. FMC measures the following climate related metrics: <ol style="list-style-type: none">1. Energy2. Greenhouse gases3. Water in high risk locations4. Waste Disposed Historical data can be found on https://fmcsustainability.com/data-gri/
<i>FMC Disclosures:</i> b) Describe management's role in assessing and managing climate related risks and opportunities. C1.2 – Highest management position for climate related issues below board C1.2a – Organizational Structure and associated responsibilities for climate related issues	<i>FMC Disclosures:</i> b) Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning. C2.3a – Impacts of climate related risks with potential to have substantive financial/strategic impact C2.4a – Impacts of climate related opportunities with potential to have substantive financial/strategic impact C2.5 – Where and how climate risks and opportunities have impacted the business	<i>FMC Disclosures:</i> b) Describe the organization's processes for managing climate related risks. C2.2d – FMC's process for managing climate-related risks and opportunities	<i>FMC Disclosures:</i> b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. C6.1 – Gross Scope 1 emissions C6.3 – Gross Scope 2 emissions C6.5 – Scope 3 emissions

	<p><u>C2.6 Where and how climate risks and opportunities have factored into the financial planning process</u></p> <p><u>C3.1 – Statement on if climate related issues are integrated into FMC's business strategy</u></p> <p><u>C3.1c – How climate related issues are integrated into the business objectives and strategy</u></p>		
	<p>c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.</p> <p>-----</p> <p>Currently, FMC does not incorporate scenario planning into our climate strategy. However, we anticipate completing a qualitative scenario analysis in the near future.</p>	<p>c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.</p> <p>-----</p> <p><u>C2.2 – Process for identifying, assessing and managing climate related risk and how these risks are integrated into the organization's overall risk management.</u></p>	<p>c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.</p> <p>-----</p> <p><u>C4.1a & 4.1b– Details of FMC's emissions target and progress on targets.</u></p> <p><u>C4.2 – Details of other climate-related targets</u></p>

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

FMC Corporation is a specialty company serving global agricultural markets by providing innovative solutions, applications and quality products for more than a century. On November 1, 2017 FMC acquired a significant portion of DuPont's Crop Protection business. In March 2019, FMC completely divested its Lithium business to become a pure play Agricultural Sciences business. FMC employed approximately 6,500 people throughout the world. FMC's 2018 revenue totalled approximately USD\$ 4.7 billion.

Agricultural Sciences, 91% of FMC's total business by revenue, helps meet the food and nutrient needs of a growing population. Agricultural Sciences provides innovative and cost-effective solutions to enhance crop yields and quality by controlling a broad spectrum of insects, weeds and diseases, and non-agricultural solutions for pest control. FMC Lithium, 9% of FMC's total business by revenue, produces low carbon products for energy storage, electric vehicle batteries, and energy efficient tires. Sustainability is an enduring, fundamental part of FMC's structure, built into who we are as a company. We continue to integrate sustainability into our innovation, operations, and business practices, which strengthens our business performance and aligns with our corporate strategy. FMC's progress helps us to address some of the world's major global challenges. With our customers' use of our products and changes to our business operations, we are addressing six "major global challenges" that are among society's most profound concerns and have significant implications. They are 1) Food Expectations: Food and crop production must meet the basic needs of a rapidly-growing population and socio-economically diverse population that seek a wider array of nutritional options. 2) Health and Safety Expectations: The need for reduced worker exposure, control of pests known to negatively impact human health. 3) Environmental Consciousness: Growing interest in natural and benign materials is driving the need for new, improved, bio-based products that reduce environmental impacts. 4) Climate Change: Reduction in greenhouse gas emissions is a necessary step in mitigating climate-warming trends. 5) Scarce Resources: To cope with limited availability of fresh water, energy, forests and other essential resources, we must carefully manage them and use more renewable alternatives. 6) Land Competition: Urbanization to accommodate a growing population and poor land management techniques limit the amount of arable land available for agriculture, which intensifies the need to increase farmland productivity and crop yields. Each of these challenges shapes the way FMC does business. In 2019, FMC will take a focused approach to link the "major global challenges" with the United Nations Sustainable Development Goals (SDGs). This will include a detailed review of SDG #2 and #15, and their associated targets on which FMC can make a positive impact. We have outlined our initiatives to address these SDGs in our 2018 Sustainability report. They include increasing crop yield and bringing new technologies including biologically derived agrochemicals (page 3, 2018 FMC Sustainability Report). FMC continues to make progress in sustainability with a 10-year strategy to grow by providing products with value, which motivate our stakeholders to work with FMC. In 2015, FMC established targets to ensure we are a more sustainable enterprise by 2025. 2020 Innovation & Business Practices Targets: • Reduce our Total Recordable Incident Rate (TRIR), a metric for reporting safety performance in manufacturing, to 0.3 or lower • Increase our percent spending on R&D toward sustainably advantaged products to 80 percent • Achieve 100 on FMC's Community Engagement Index, which measures the extent and quality of our interaction with local communities. 2025 Operations Targets: • Reduce our energy, greenhouse gas (GHG) emissions and waste intensities by 15 percent from our 2013 baseline year • Reduce our water use in high-risk areas by 20 percent from our 2013 baseline year. We have worked on programs to integrate the DuPont assets and business processes, and its data for 2018 has been included in the assurance process and included in FMC's 2019 CDP Climate Change report. FMC representatives may from time to time make written or oral statements that are "forward-looking" and provide other than historical information. Such statements are based on our current views and assumptions regarding future events, future business conditions and the outlook for FMC based on currently available information. These statements involve known and unknown risks, uncertainties and factors that may cause actual results to be materially different from any results, levels of activity, performance or achievements expressed or implied by any forward-looking statement. We wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date made.

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	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	No	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Argentina
 Australia
 Brazil
 Canada
 Chile
 China
 Denmark
 France
 Germany
 India
 Indonesia
 Italy
 Pakistan
 Philippines
 Russian Federation
 Singapore
 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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-CH0.7

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Row 1

Bulk organic chemicals

Please select

Bulk inorganic chemicals

Please select

Other chemicals

Specialty chemicals

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
Director on board	The highest responsibility for climate-related initiatives is the Chairman of the Board of Director's Sustainability Committee. In 2018 the Board of Directors adopted a written charter to address climate change by outlining the Sustainability Committee's duties which are •Conducting an annual self-assessment of risks and opportunities related to climate change •Monitoring FMC's Sustainability Program that also includes environmental sustainability, program development and advancement, goals and objectives, and progress toward achieving those objectives •Monitoring FMC's environmental responsibility •Monitoring FMC's programs against American Chemistry Council's Responsible Care initiative related to climate change. The Sustainability Committee is assisted by FMC's internal Sustainability Steering Team, that meets quarterly, to decide on sustainability and climate related goals, risks and opportunities, various reporting responsibilities and discusses sustainability scorecards.

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 – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The highest governance body responsible for climate-related initiatives at FMC is the Board of Directors' Sustainability Committee. This committee was established when sustainability was formalized at FMC in 2011. The committee meets three times per year to review and direct climate change related sustainability programs and submit summary reports to the full Board of Directors. The Sustainability Committee of the Board of Directors (the "Committee") is composed of at five outside members of the Board, one of whom shall be Chairman. The Committee and its Chairman are nominated by the Nominating and Corporate Governance Committee, and elected annually at the organizational meeting of the Board. The Committee's scope encompasses FMC's safety, environmental and sustainability programs as these were found to be important in the Materiality Assessment of the company (Page 8, 2018 FMC Sustainability Report). It reviews these programs (objectives, plans, and performance) and recommends actions, as necessary, to ensure continuous performance improvement and alignment with constituent expectations (both internal and external). The Committee also monitors program goals in light of market, environmental and social trends and expectations. The Committee meets as scheduled by its Chairman, nominally three times per year in conjunction with the April, July and October meetings of the Board of Directors. Assisting the Committee is the Vice President, Global Procurement, Global Facilities and Corporate Sustainability, who will serve as the Committee's executive secretary. The executive secretary prepares the agenda and reports to the Committee the changes in sustainability metrics related to climate change resulting from the Committee's inquiries and recommendations. She also assists the Chairman in preparing reports to be submitted to the Board. The Committee conducts a self-assessment of its performance annually.

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
Chief Procurement Officer (CPO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Environment/ Sustainability manager	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 Global Sustainability Director oversees the implementation and integration of sustainability at FMC. FMC's Global Sustainability Director reports to the Vice President of Global Procurement, Global Facilities, and Corporate Sustainability, who is a member of FMC's executive leadership and FMC's internal Sustainability Steering Team (SST). The SST includes Vice Presidents and executives from Manufacturing, EHS, R&D, Finance, Communications, Procurement, Human Resources, Legal and Government Affairs. The SST meets on a quarterly basis and dives deeply in to climate-related issues such as corporate environmental goals, stakeholder feedback and sustainability initiatives. The Global Sustainability Director also communicates directly with the Board of Directors' Sustainability Committee on sustainability and climate change three times a year. The Global Sustainability Director collaborates with the Vice President of Operations and FMC's Operations, Human Resource and R&D directors to develop and ensure the achievement of FMC's 2020 and 2025 safety, environmental, innovation and social metrics and targets. In 2018, the Board Director's Sustainability Committee discussed matters pertaining to resetting of corporate sustainability goals upon becoming a pure agricultural sciences company, feedback from FMC's external sustainability advisory committee, diversity and inclusion initiatives and the development of FMC's Product Stewardship and Sustainability assessment tool for R&D projects from newly acquired sites. Additionally, this individual manages the Global Sustainability Group, who collects, verifies and audits FMC's metrics for innovation, business practices, and environment (energy, water, greenhouse gas emissions, waste). The Global Sustainability Group works cross-functionally to monitor the implementation of FMC's sustainability programs globally.

C1.3

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

Yes

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).

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

FMC's executive officers and vice presidents, including those who are members of FMC's executive team, are eligible for monetary incentives when they include sustainability-related targets, like greenhouse gas emissions and energy reductions, in their annual performance indicators. For example, the Director of Global Operations for FMC Agricultural Sciences, has also added the management and accomplishment of FMC Agricultural Sciences' sustainability metrics in his goals. FMC Agricultural Sciences have committed to developing business-specific targets that will contribute to FMC's corporate 2025 sustainability targets to reduce energy, greenhouse gas emissions, and waste intensities by 15 percent as well as to reduce water use in high-risk areas by 20 percent. Due to recent changes in FMC's portfolios through Acquisition and Divestiture, FMC will set fresh targets for 2030 using 2018 as the baseline year.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

FMC's Global Sustainability Director, has incentives for the management of climate change-related issues within her annual performance indicators. She was responsible for the completion of the pre-assurance process completed in 2018 and third-party assurance of FMC's environmental data. FMC's Sustainability Group collects FMC's energy and greenhouse gas data to monitor and track FMC's progress on its environmental targets, including the goal to reduce FMC's energy and greenhouse gas intensities by 15% by 2025.

Who is entitled to benefit from these incentives?

Procurement manager

Types of incentives

Monetary reward

Activity incentivized

Behavior change related indicator

Comment

FMC Procurement tracks projects that may have a "Potential Sustainability Advantage", The categories are Energy Usage, Packaging Reduction, Emissions Reductions, Reuse/Recycle Substitutions, Waste Reduction and Water Usage. The results are reviewed and recognized by Management through a merit increase for making a contribution to support our Sustainability goals.

Who is entitled to benefit from these incentives?

Buyers/purchasers

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

FMC Procurement tracks projects that may have a "Potential Sustainability Advantage", The categories are Energy Usage, Packaging Reduction, Emissions Reductions, Reuse/Recycle Substitutions, Waste Reduction and Water Usage. The results are reviewed and recognized by Management through a merit increase for making a contribution to support our Sustainability goals.

Who is entitled to benefit from these incentives?

Other, please specify (An FMC plant location, laboratory, business unit or staff functional department within a Group/Business or a Corporate Staff function)

Types of incentives

Recognition (non-monetary)

Activity incentivized

Behavior change related indicator

Comment

FMC's President's Awards recognize exceptional performance and/or improvement of a plant location, laboratory, business unit or staff functional department within a Group/Business or a Corporate Staff function in the areas of EHS and Sustainability.

Who is entitled to benefit from these incentives?

Other, please specify (FMC employees or small groups)

Types of incentives

Recognition (non-monetary)

Activity incentivized

Behavior change related indicator

Comment

FMC's Chairman's Award recognizes employees or small groups for outstanding achievements and leadership in the areas of EHS and Sustainability.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify (Employee engagement)

Comment

FMC's Global Sustainability Group has produced a sustainability blog, Sustainability + You, which is featured on FMC's sustainability website. The goal of the blog is to inform and engage FMC's international workforce on programs and initiatives related to sustainability at FMC. Employees and stakeholders can submit information to the Global Sustainability Group on how they are creating a more sustainable future within and outside of FMC.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	1	No Comment
Medium-term	1	3	No Comment
Long-term	3	20	No Comment

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	1 to 3 years	FMC's Risk, Control and Audit Group (RC&A), who leads the company's Enterprise Risk Management (ERM) process, conducts a company-wide enterprise risk assessment to report on FMC's exposure to risk factors (generally disclosed in our 10-K). The assessment process includes engaging with business functions globally on issues including risks/opportunities associated with climate change. Assessment findings are reported to the Risk Council and FMC's executive leadership four times a year, and Board of Directors annually. Quarterly- RC&A group reviews key risks with the Risk Council, which is composed of the Chairman of the Board of Directors, CEO, CFO, General Counsel and Chief Compliance Officer, President/Chief Operating Officer, and Head of Risk, Control and Audit. FMC's Risk Council is responsible for ensuring good risk governance, defining strategic risks, and monitoring risk assessment processes in strategic planning, business/capital planning and M&A.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

At a company level, FMC's Risk Control and Audit (RC&A) and Sustainability Group interact with FMC locations and functions on many issues, including climate change risks and opportunities. The Risk Council includes FMC executive leadership and is responsible for ensuring good risk governance, defining strategic risks, and monitoring risk assessment processes in strategic planning, business planning, capital planning and M&A. In addition, the Corporate Sustainability Group conducts an annual materiality assessment that quantitatively and qualitatively analyses material issues. They conduct interviews with employees with a deep understanding of our business for climate change and other material issues to FMC. They also conduct a survey asking internal and external stakeholders to rank environmental sustainability issues based on each issue's perceived impact on and importance to FMC. The 2018 survey had 52 respondents, representing non-government organizations, customers, suppliers, foundations, trade associations and employees. The outcome of the survey were reported to FMC's executive leadership team, Sustainability Steering Committee, Board Sustainability Team and in our Sustainability Report (Page 8, 2018 FMC Sustainability Report).

Separately, on an asset level, Risk Management conducts an annual risk assessment for our manufacturing sites and physical assets for impact of climate change, among other topics, on our operations. It has a review process for potential natural catastrophes and possible sources of risks, which are generally disclosed in our 10-K. The Sustainability Group manages the company's energy consumption, GHG emissions, water use and waste generation data. FMC obtained third-party assurance on its 2015, 2016, 2017 and 2018 data on energy, GHG emission and water use at high risk areas. FMC's sites collect and report this data to the Sustainability Group, ensuring FMC is able to measure its environmental impact. The Sustainability Group conducts water risk assessments and energy audits at FMC facilities and results are applied at other sites as needed.

The FMC Enterprise Risk Management process, led by RC&A, has an Enterprise Risk Assessment component, which includes interviews of FMC's top leaders annually. FMC assesses risks using impact and likelihood definitions as previously defined by the Risk Council to arrive at "enterprise" level risks, those risks are considered substantive and are estimated to have a financial impact of \$50 million or more of EBIT. Based on this initial assessment, a preliminary report is presented to the Risk Council. After incorporating the Risk Council's input, enterprise risks are validated and the top risks prioritized in facilitated workshops with risk owners. These facilitated workshops use voting technology to find greater consensus on key risk impact, likelihood and owner. The final results are reported to the Operating Committee and Board each year.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The global regulatory environment is becoming increasingly complex and requires more resources to effectively manage, which may increase the potential for misunderstanding or misapplication of regulatory standards. Our business is most sensitive to general regulatory risk given the need to obtain and maintain pesticide registrations in every country in which we sell our products. Some of our manufacturing processes and customers are subject to regulation by the US Environmental Protection Agency (EPA) or similar foreign agencies. Regulatory requirements of the EPA are complex, and any failure to comply with them including as a result of contamination due to acts of sabotage could subject us and/or our customers to fines, injunctions, civil penalties, lawsuits, recall or seizure of products, total or partial suspension of production, denial of government approvals, withdrawal of marketing approvals and criminal prosecution. Any of these actions could adversely impact our net sales, undermine goodwill established with our customers, damage commercial prospects for our products and materially adversely affect our results of operations. In the European Union, the regulatory risk specifically includes chemicals regulations known as REACH (Registration, Evaluation, and Authorization of Chemicals), which affects each of our business segments to varying degrees. The fundamental principle behind the REACH regulation is that manufacturers must verify through a special registration system that their chemicals can be marketed safely. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Emerging regulation	Relevant, always included	Changes in the regulatory environment, particularly in the United States, Brazil, China, Argentina and the European Union, could adversely impact our ability to continue producing and/or selling certain products in our domestic and foreign markets or could increase the cost of doing so. Many countries require re-registration of pesticides to meet new and more challenging requirements; while we defend our products vigorously, these re-registration processes may result in significant additional data costs, reduced number of permitted product uses, or potential product cancellation. Compliance with changing laws regulations may involve significant costs or capital expenditures or require changes in business practice that could result in reduced profitability. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Technology	Relevant, always included	Our ability to compete successfully depends in part upon our ability to maintain a superior technological capability and to continue to identify, develop and commercialize new and innovative, high value-added products for existing and future customers. Our investment in the discovery and development of new pesticidal active ingredients relies on discovery of new chemical molecules. Such discovery processes depend on our scientists being able to find new molecules, which are novel and outside of patents held by others, and such molecules being efficacious against target pests without creating an undue risks to human health and the environment, and then meeting applicable regulatory criteria. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Legal	Relevant, always included	We are subject to extensive federal, state, local and foreign environmental and safety laws, regulations, directives, rules and ordinances concerning, among other things, emissions in the air, discharges to land and water, and the generation, handling, treatment, disposal and remediation of hazardous waste and other materials. We may face liability arising out of normal course of business, including alleged personal injury or property damage due to exposure to chemicals that we manufacture, handle or own. We take our environmental responsibilities very seriously, but there is a risk of environmental impact inherent in our manufacturing operations and transportation of chemicals. Any substantial liability for environmental damage could have a material adverse effect on our financial condition, results of operations and cash flow. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Market	Relevant, always included	FMC's operating results could be significantly affected by the cost of commodities, including raw materials. We may not be able to raise prices on our products or improve productivity sufficiently to offset future increases in commodity pricing. Additionally, fluctuations in commodity prices could negatively impact our customers' ability to sell their products at previously forecasted prices, resulting in reduced liquidity amongst our customers. Inadequate liquidity of our customers could affect their ability to pay for our products and affect existing and future sales or our ability to collect on customer receivables. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Reputation	Relevant, always included	We continuously evaluate the diversity of our portfolio in light of our objectives and alignment with our growth strategy. In implementing this strategy, we may not be successful in separating underperforming or non-strategic assets. The gains or losses on the divestiture of, or lost operating income from, such assets (e.g., divesting) may affect the company's earnings. Moreover, we may incur asset impairment charges related to acquisitions or divestitures that reduce earnings. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Acute physical	Relevant, sometimes included	Natural disasters can impact production at our facilities in various parts of the world. The nature of these events makes them difficult to predict. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process. For our former Lithium Business: Adverse weather conditions can impact our ability to extract lithium efficiently from our lithium reserves in Argentina.
Chronic physical	Relevant, sometimes included	Our markets are affected by climatic conditions, which could adversely impact crop pricing and pest infestations; for example, drought may reduce the need for fungicides, which could result in fewer sales and greater unsold inventories in the market, whereas excessive rain could lead to increased plant disease or weed growth requiring growers to purchase and use more pesticides. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Upstream	Relevant, always included	Certain raw materials are critical to our production processes. While we have made supply arrangements to meet planned operating requirements, an inability to obtain the critical raw materials or operate under contract manufacturing arrangements would adversely impact our ability to produce certain products. We increasingly source critical intermediates and finished products from a number of suppliers, largely outside of the United States and principally in China. An inability to obtain these products or execute under contract sourcing arrangements would adversely impact our ability to sell products. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Downstream	Relevant, sometimes included	Fluctuations in commodity prices could negatively impact our customers' ability to sell their products at previously forecasted prices resulting in reduced customer liquidity. Inadequate customer liquidity could affect our customers' ability to pay for our products and, therefore, affect existing and future sales or our ability to collect on customer receivables. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Through the Enterprise Risk Assessment process, including interviews and facilitated workshops the enterprise risks are validated and the top risks prioritized with risk owners. The risk owners are responsible for developing an action plan to address and mitigate the identified risks. Results from the Risk Assessment are presented to the Risk Council, the operating committee and the Board each year. One such example of risk identified as part of this assessment includes having operations subject to the European Union (EU) Emission Trading Scheme (ETS), which has a goal to reduce greenhouse gas emissions by 43 percent by 2030 from 2005 emission levels. FMC's Ronland, Denmark plant is subject to the EU ETS and is below Phase III's emissions cap. FMC continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. FMC had also set an overall 15 percent energy intensity reduction goal for 2025 compared to 2013. In 2018, FMC has surpassed those goals in three out of four categories. In 2019, due to portfolio changes through acquisitions and divestiture, FMC will set new environmental goals for 2030. By reducing our emissions of greenhouse gases and investing in energy and process efficient equipment for our manufacturing facilities for 2030, we lessen the likelihood of a material risk from greenhouse gas legislation. Furthermore, climate change and its impacts have the potential to induce changes in customer preferences for products and/or services. People are increasingly concerned about the environment and the impact that companies' products and operations have on the environment. In response, we are developing sustainably advantaged products and technologies to help address consumers' increasing interest in agricultural products that are less impactful on the environment. We set a goal in 2020 to increase our R&D spending on developing sustainably advantaged products to 80 percent, in 2018 we surpassed this goal achieving 87 percent of spend on sustainably advantaged products.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

FMC is currently subject to the European Union (EU) Emission Trading Scheme (ETS), which has a goal to reduce greenhouse gas emissions by 43 percent by 2030 from 2005 emission levels. Started in 2005, the EU ETS was designed to be implemented in a series of four phases. The third phase (2013-2020) of the EU ETS is currently in effect and the emissions allowances decline by 1.74 percent annually. As of now, each member nation participating in the EU ETS sets the cap and distributes free emissions allowances. FMC's Ronland, Denmark plant is subject to the EU ETS and is below Phase III's emissions cap. In 2021, Phase IV of the EU ETS will come into effect and allowances will decrease by 2.2 percent annually from 2021 to 2030. Our Ronland, Denmark plant will continue to be subject to the EU ETS and the new emissions limits in Phase IV may increase costs at this plant, depending on the new EU-wide emissions cap and the cost of procuring allowances. Additionally, China is in the process of expanding the implementation of the country's cap and trade program across the country in order to limit emissions. General environmental regulations in China and the country's cap-and-trade program are designed to improve air quality and the environment and they are quickly becoming more prevalent throughout the country. FMC realizes the potential impacts on the company's operations due to government's recent increased focus on improving the country's environmental conditions. Environmental regulations have the potential to increase the costs of active ingredient contract manufacturing companies that produce our active ingredients. Depending on how additional countries implement cap and trade in the long-term, FMC could potentially need to increase capital investment in emission reduction technology to reduce its GHG emissions.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential impacts of proposed or established cap and trade schemes on different FMC locations around the world are similar. Requirements of cap and trade schemes may result in increased costs of energy, increased costs for purchasing emissions allowances, and additional capital costs for emissions controls or new equipment. At this point in time, our plant in Denmark is below the EU ETS designated emissions cap for the EU ETS Phase III. The potential financial implications of complying with a lower cap will be determined as the Phase IV of the EU ETS is finalized in 2021. Each member country of the EU ETS sets the emissions cap and the price of allowances. Depending on the yet-to-be determined requirements of cap-and-trade schemes of the EU ETS's Phase IV and China's cap-and-trade scheme, a percentage of FMC's revenues in EMEA (\$584.4 million) and Asia Pacific (\$718.5 million) could be impacted.

Management method

FMC continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. FMC has also set an overall 15 percent energy intensity reduction goal. By reducing our emissions of greenhouse gases and investing in energy and process efficient equipment for our manufacturing facilities for 2025, we lessen the likelihood of a material risk from greenhouse gas legislation. FMC has and will continue to implement energy and process efficiency projects to reduce our energy consumption and GHG emission generation. FMC has a dedicated budget for process improvements at its established Technical Centers, which conduct research in energy efficiency and emissions reductions activities. The Technical Centers perform energy audits and process improvement at FMC facilities and findings from these audits are implemented at other FMC locations as needed. FMC's total annual investment in the technical centers can range, from approximately \$30 to \$35 million.

Cost of management

0

Comment

FMC's total annual investment in the technical centers can range, from approximately \$30 to \$35 million. Direct cost of management of this is unknown.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

According to the U.S. Global Change Research Program's National Climate Assessment, climate change is projected to cause many changes in physical climate parameters. These include increases in extreme weather events as well as changes in sea levels, mean temperatures, precipitation levels and precipitation patterns. The interaction of these physical parameters could have significant impacts on natural resources in the locations in which FMC operates. Several FMC properties are at or near sea level. Dramatic changes in sea levels and more intense storm surges could cause a need to protect both these natural resources and FMC properties from storm surges and flooding. Changes in mean temperature have the potential to increase water scarcity in many parts of the world, and our raw materials sourcing operation depends on access to water. Induced changes in natural resources from climate change could increase the risk of disruptions in production capacity

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

As noted in the International Panel on Climate Change Fifth Assessment Report, quantitative estimates to measure the private costs of climate change may be incomplete due to difficulty in measuring all relevant effects over time. FMC could experience higher costs with adapting to sea level rise, storm surges, rise in mean temperatures and changes in natural resources as we will need to fortify our sites near sea level. The percentage of Agricultural Sciences' and Lithium's revenue that would be impacted would depend on the severity of changes in natural resources. (Agricultural Sciences' 2018 full year segment revenue was USD\$4.3 billion and Lithium's 2018 full year segment revenue was USD\$443 million.)

Management method

FMC is examining options to protect our resources and sites close to sea level against sea level changes and stronger storm surges, like at our Ronland, Denmark site plans to strengthen its dike system. To mitigate potential risks to water quality and supply, we first conducted a Water Risk Assessment in 2013 that compared our sites' water use with the World Resources Institute's Aqueduct™ water mapping tool. A Lithium site in Minera del Altiplano, Argentina indicated a need to better understand potential future water instability. We modeled the system to develop conservancy and contingency strategies to ensure long-term water availability. In 2015, we updated the assessment and created a 2025 goal to reduce water use in water scarce areas by 20 percent from our 2013 baseline. Additionally, FMC has allocated over 82% of its 2017 R&D spend on developing sustainably advantaged products, which are products that address global challenges like climate concerns, scarce resources, food and health expectations, land competition or environmental consciousness. FMC can impact these challenges with our products and technologies as well as by decreasing our operations' environmental footprint. We have surpassed our 2020 goal to increase the percentage of our R&D spend to 80 percent or more on developing sustainably advantaged products.

Cost of management

0

Comment

Direct cost of management of this risk is unknown.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Customer

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact

Reduced revenues from lower sales/output

Company-specific description

Induced changes in natural resources could be both a risk and an opportunity for FMC's Agricultural Sciences business depending on the geographic location and the severity of climate change impacts on our customers. The National Climate Assessment projects that growers in many regions will face impacts on crop yields and livestock development because of changes in growing seasons, insect vectors and species distributions due to increasing extreme weather, changing mean temperatures, precipitation patterns and mean precipitation levels. FMC Agricultural Sciences develops agricultural products and technologies to help growers combat the effects of these changes on their crops and we could experience greater market uncertainty because an increase in unpredictable growing conditions would negatively affect our customers. The severity and extent of induced changes in natural resources would affect our customers and in turn, it could affect their need for our products and technologies. Agricultural Sciences could experience a decrease in demand if our products and technologies do not align with the solutions that growers need.

Time horizon

Long-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

As noted in the International Panel on Climate Change Fifth Assessment Report, quantitative estimates measuring private costs of climate change may be incomplete due to the difficulty in measuring all relevant effects over time. FMC Agricultural Sciences could be impacted by changes in natural resources. If impacts on growers are significant and FMC did not have products in the market to address these impacts, then it could be a material risk to our business. The financial impact on our Agricultural Sciences and our customers is difficult to project at this point in time because of the difficulty in estimating the potential costs to our growers in different geographic locations, in what time frame and the severity of impacts. The percentage of Agricultural Sciences' revenue that would be impacted would depend on the severity of the changes in natural resources. (Agricultural Sciences' 2018 full year segment revenue was \$4.3 billion.)

Management method

FMC Agricultural Sciences helps growers increase crop yields in areas impacted by changes in physical parameters by supplying insecticides for insect control, herbicides for weed control in crops and soil, fungicides for disease control and biologicals, which are materials originating from renewable plant or natural microbial sources. FMC's biologicals have a lower environmental impact and can increase crop yields by up to 9.5 bushels per acre of corn compared to yields from untreated fields. FMC has developed 3RIVE 3DTM, which helps to meet the challenge of feeding the world's growing population with its efficient method of applying crop protection products during planting. FMC continues to expand uses of the commercial on-planter application technology that minimizes labor, water use and fuel use. The patent-pending formulation and delivery system uses small amounts of water and expands the product three-dimensionally to cover 50 times more area than traditional formulations. It allows growers to plant and protect up to 500 acres on a single fill-up of the system and use 90 percent less water than traditional liquid delivery systems. FMC is formulating and testing active ingredients with this technology, including biological products. FMC allocated 87 percent of its 2018 R&D spend on developing sustainably advantaged products, which address global challenges like climate change, scarce resources, land competition, environmental consciousness and food & health expectations.

Cost of management

0

Comment

Direct cost of management of this risk is unknown.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Market: Changing customer behavior

Type of financial impact

Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description

Climate change and its impacts have the potential to induce changes in customer preferences for products and/or services. People are increasingly concerned about the environment and the impact that companies' products and operations have on the environment. In the future, some consumers' preferences could change, and they could prefer to support products, technologies and companies that they perceive as "friendlier" and/or less impactful on the environment. These potential changes in consumer preferences would have an impact on all industries and the chemical sector. An example of conceivable changing consumer preference relates to agricultural livestock production, which currently accounts for approximately 15 percent of gross global greenhouse gas emissions. As some consumers become more concerned about the environment, they could decrease their consumption of meat to lessen their individual impact on the environment and climate change. As a result, FMC's customers could experience a decreased demand for livestock, leading to a decreased demand for FMC's agricultural products used to grow animal feed from corn and soybeans. Depending on the extent to which consumers and our customers' preferences change and our ability to adapt our portfolio to these changing preferences, our product sales and revenue could be impacted.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential risks associated with changing consumer behavior depend on the time frame and extent to which consumers decide to switch to products they perceive as "greener" or more "climate-friendly" because of increased concern for society's negative impacts on the environment. The financial impacts on FMC will also depend on our product portfolio and our ability to adapt our products with changing consumer behavior. The actual financial implications are difficult to quantify and could change over time. The risk of changing consumer behavior has the potential to impact a percentage of FMC's sales of its Agricultural Sciences products. Losses in product sales could be compensated by increased sales of our sustainably advantaged products, including biologicals and Precision Agriculture application technologies.

Management method

The cost of managing changing consumer behavior is difficult to predict and quantify over time to include in an overall strategy. We do track changes affecting customer preferences and are conscious of changing consumer preferences due to climate change and its impacts. In response, we are also developing sustainably advantaged products and technologies to help address consumers' increasing interest in agricultural products that are less impactful on the environment and support the transition to a low-carbon economy with increased demand for lithium battery technology. We increased our R&D spending on developing sustainably advantaged products to 87 percent in 2018, surpassing our 2020 goal to increase our R&D spending to 80 percent, so we can address potential market and other-climate related developments, including changing consumer behavior.

Cost of management

0

Comment

Direct cost of management of this this is unknown.

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?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company-specific description

Climate change is predicted to cause more extreme weather conditions as well as changing temperatures, precipitation patterns and mean precipitation levels. This is expected to result in changes in the pest spectrum for crops. Without crop protection products, there would be epidemics of destructive insects, weeds and diseases that

could cause major crop failures. With increasing food production pressures to feed a rising population, farmers have to sustainably grow more crops on less land using crop protection products, thus significantly increasing crop yields. Depending on how pervasive the effects are in different geographic locations experiencing changes in natural resources, FMC's customers could be significantly impacted.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

It is likely FMC and its customers will be impacted by resource and pest pressures from climate change. FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans/corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions. As temperatures warm in states like Wisconsin, North Dakota and in the Canadian province of Saskatchewan, growers will be able to grow more soybeans and corn. Overall, the geographic range, time frame and significance of climate impacts on regions where our customers are located remain to be determined.

Strategy to realize opportunity

FMC is well-positioned to help farmers overcome these threats and increase crop yields. Market-Driven Innovation -We believe successful innovation doesn't start in a laboratory, but rather by carefully listening to customers in the field. It's an FMC signature strength—to deeply understand the challenges that growers face locally. Pest problems that Brazilian growers must address are very different from those faced by growers in the U.S. They have their own weed species, insect pressures, and disease strains to control, as well as unique soil conditions, weather patterns, and farming practices. Internally, Global and Regional Portfolio/Product managers work to be on the pulse about emerging grower needs and include climate related risks in their analysis. They work very closely with FMC's R&D wing to share information about emerging agronomic trends and determine how FMC's portfolio of existing and upcoming products can best address the needs of our customers in light of climate change and related pest pressures. For example - FMC Pakistan introduced a mobile lab unit called "Dr. Soil," which travels and offers analysis and counsel to growers. This not only benefits local farmers, but it provides our commercial team with a deeper understanding of grower needs. We reach over 155,000 farmers annually. However, in a country with 14 million smallholder farmers, there are significant opportunities to grow in Pakistan and beyond.

Cost to realize opportunity

0

Comment

Not currently known

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Type of financial impact

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description

As people become more aware of product impacts on the environment, they are demanding more natural and benign materials to reduce individuals' impacts on the environment. Changing consumer behavior presents an opportunity for FMC to develop products that are less impactful on the environment and/or products with a low-carbon life cycle. Growers prefer agricultural products with a lighter environmental footprint and ones that reduce labor, time, water, fuel use and GHG emissions. FMC has a potential opportunity to provide products that fulfill these consumer preferences. Consumers are likely to become more concerned about how negative environmental impacts affect their health and wellbeing on a personal level. As a result, they are likely to choose natural products that they perceive as better for the health of the environment and for their personal health.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential opportunities associated with changing consumer behavior will depend on the timeframe and extent to which consumers decide to switch to products they perceive as "greener" or more "climate-friendly" out of increased concern for society's negative impacts on the environment. How FMC will benefit from these opportunities financially will depend on our ability to adapt our products with consumers' changing behavior. As noted in the IPCC's Fifth Assessment Report, quantitative estimates measuring the financial impact of climate change on companies may be incomplete because of difficulties in measuring all relevant climate-change effects over time. More dramatic climate-change effects in the short-term could accelerate consumers' preference for FMC's sustainably advantaged products and technologies.

Strategy to realize opportunity

FMC is actively addressing six major global challenges: Food expectations, Health and Safety Expectations, Scarce Resources, Climate Change, Land Competition and Environmental Consciousness. In 2018, we dedicated 87 percent of our R&D spend to developing sustainably advantaged products and technologies. A sustainably advantaged product addresses the previously mentioned six major global challenges. By addressing these challenges in our R&D spend for developing sustainably advantaged products and technologies, we are better able to address potential market and other-climate related developments, including changing consumer behavior. The cost of these R&D programs has already been incorporated into our business strategy. FMC also helps address growers' need for products with a lighter environmental footprint in our biologicals products. Biological offerings in our Plant Health platform complement synthetic molecules. We continue to invest in the discovery and development of bio-stimulants, bio-fungicides, bio-insecticides, and bio-nematicides, which are unique technologies that protect plants and their root systems against pests and disease, leading to improved crop yields. Moreover, our sustainable active ingredients Rynaxypyr® and Cyazypyr® have highly selective chemistries that only target certain classes of pests. Both active ingredients are unique in their combination of fast action, low dose rate and residual control.

Cost to realize opportunity

0

Comment

Not currently known.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Type of financial impact

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description

Farmers around the world face major productivity challenges. Demand for food is sharply increasing due to a rising population and growing middle class. This, along with climate pressures, results in fewer acres of arable land per capita. According to the UN Food and Agriculture Organization, there has been a rise in hunger for the third year in a row. The population of undernourished people increased to nearly 821 million in 2017 from 784 million in 2014. To meet the nutritional needs of our growing global population, it is essential that we continually improve crop yields on a relatively stable environmental footprint. FMC is committed to addressing these challenges within our current portfolio and in our R&D pipeline.

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)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

A decrease in arable land for agriculture and unpredictable weather patterns put farmers, in particular, small scale farmers at risk of losing their crops, and thus their livelihoods. As such, it is imperative for FMC to develop products and services to address the multitude of issues that farmers around the world currently face. As such, FMC Agricultural Sciences provides products and technologies that increase crop yields and/or water efficiency, which will help to reduce the effects of climate change on growers and support them in meeting increasing food demand. Agricultural Sciences will continue to develop agricultural products and technologies designed to help growers combat the effects of climate-related changes on their crops.

Strategy to realize opportunity

In 2018, we dedicated 87% of our R&D budget to develop sustainably-advantaged products, surpassing our 2020 goal of 80%. A sustainably advantaged product is one that positively impacts at least one of the six major Global Challenges: Food Expectations, Health and Safety Expectations, Environmental Consciousness, Climate Change, Scarce Resources and Land Competition, but does not retreat in any of the other areas. To track this, we developed the award-winning Sustainability Assessment tool. This assessment, along with other stewardship processes and tools, ensures the introduction and continued use of environmentally sustainable agricultural solutions.

Assessment questions are answered in comparison to a benchmark product. A product is considered sustainable if it is better than the benchmark in at least one area, but it cannot retreat in any of the five other areas. If a product is not considered sustainable, FMC works to mitigate the area of concern. Our Precision Agriculture platform also addresses resource and productivity issues. Our 3RIVE 3D™ application technology seamlessly integrates our formulation science, application expertise, and FMC active ingredients to increase the number of acres planted per day—up to 500 acres at a time versus traditional spray methods that require stopping every 80 to 120 acres to refill the spray tanks. It also reduces water use by 95%.

Cost to realize opportunity

0

Comment

Not currently known.

C2.5**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	FMC was a long-time leader in lithium research and innovation. We worked on the challenge of developing lithium products and applications that improve battery performance. We developed new applications of our lithium products in a range of industries. FMC was the only producer of high-purity lithium metal in the Western Hemisphere. It is used in lithium-aluminum alloys that strengthen an aircraft's fuselage while also reducing its weight. Light-weight materials enable an aircraft to be more fuel efficient. Our battery grade lithium is used in electric vehicles and residential energy storage power packs, which can also be used to support the adoption of renewable energy sources. In March 2019, FMC has spun off Lithium business as an independent company. The company is currently known as Livent.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	We have made supply arrangements to meet planned operating requirements, an inability to obtain the critical raw materials or operate under contract manufacturing arrangements could adversely impact our ability to produce certain products. We are increasingly sourcing critical intermediates and finished products from a number of suppliers, largely outside the United States and principally in China.
Adaptation and mitigation activities	Impacted	FMC is examining options to protect our resources and sites close to sea level against sea level changes and stronger storm surges, like at our Ronland, Denmark site plans to strengthen its dike system. To mitigate potential risks to water quality and supply, we conducted a Water Risk Assessment in 2019 that compared our sites' water use with the World Resources Institute's Aqueduct™ water mapping tool. Our study indicated a need to better understand potential future water instability in several sites owned by FMC. We modeled the system to develop conservancy and contingency strategies to ensure long-term water availability. In 2015, we created a 2025 goal to reduce water use in water scarce areas by 20 percent from our 2013 baseline. We have exceeded that goal in 2018 when we achieved 25% reduction water use in the agricultural Sciences business. In 2019, due to recent acquisition and divestitures, we will update our goal for reducing water in the high risk areas.
Investment in R&D	Impacted	FMC allocated 87 percent of its 2018 R&D spend on developing sustainably advantaged products, which address global challenges like climate change, scarce resources, land competition, environmental consciousness and food and health expectations. FMC can impact these challenges by decreasing our operations' environmental footprint and by providing customers with our products and technologies to mitigate and adapt to impacts from climate change. We are managing the risk of induced changes in natural resources by setting a 2020 goal to increase the percentage of our R&D spending to 80 percent or more on developing sustainably advantaged products. We have surpassed this goal three years ahead of the deadline.
Operations	Impacted	One way we are managing our risk is by executing projects to meet our sustainability goals. Through a strong focus on improving energy efficiency, our manufacturing sites have reduced our energy intensity by 18% in 2018 compared to 2013.
Other, please specify	Please select	

C2.6**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	FMC utilizes a cross-functional team as part of the financial planning process to provide insight into changing market conditions, research and development, and short-, medium- and long-term business strategy. This team is responsible for preparing monthly forecasts, quarterly updates, annual budgets and long-term financial planning. Long-term financial planning, greater than 5 years, takes into account many factors, including risk and opportunities related to climate change. Climate change is predicted to cause more extreme weather conditions as well as changing temperatures, precipitation patterns and mean precipitation levels. The National Climate Assessment projects that due to these climate-related changes, growers in many regions of the world will face potential impacts on crop yields and livestock development because of changes in growing seasons, diseases, weeds, insect vectors and species distributions. FMC Agricultural Sciences provides products and technologies that increase crop yields and/or water efficiency, which will help to reduce the effects of climate change on growers and support them in meeting increasing food demand. Depending on how pervasive the effects are in different geographic locations experiencing changes in natural resources, FMC's customers could be significantly impacted. FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans and corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions.
Operating costs	Not yet impacted	We have initiated a Manufacturing Excellence program at several of our manufacturing sites to quantify opportunities to reduce our energy, water and waste footprints by engaging the technical resources at those sites. We will execute those projects to achieve our 2030 sustainability goals.
Capital expenditures / capital allocation	Not yet impacted	We have developed capital plan to replace utility equipment at one of our manufacturing sites in Europe with more efficient equipment and low GWP refrigerants.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	FMC is separating FMC Lithium business at the same time as integrating the DuPont assets into FMC Agricultural Sciences as well as implement other major initiatives such as the migration to a single global instance of SAP S4 HANA, a business suite that is built on SAP's proprietary operational database system and in-memory computing platform called SAP HANA. These three projects will place significant demands on certain functions who are heavily involved in all three projects, particularly finance and information technology. Failure to successfully execute such projects could materially and adversely affect our expected performance in FMC Agricultural Sciences and/or FMC Lithium.
Access to capital	Impacted for some suppliers, facilities, or product lines	With the acquisition of DuPont Crop Protection assets, and continued emphasis on executing sustainability related projects, our business is more capital intensive than it has been historically. FMC relies on cash generated from sales and external financing to fund our growth and ongoing capital needs. Limitations on access to external financing could adversely affect our operating results.
Assets	Not yet impacted	FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans and corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions
Liabilities	Not yet impacted	FMC continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. Changes in regulation could subject FMC to environmental liabilities, such liabilities are included in our financial planning process.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

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

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

In development, we plan to complete it within the next 2 years

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

FMC collects site wise information on our environmental impacts, such as energy usage, GHG emissions, water usage and waste generation, which are our key sustainability performance indicators. We are using these data to develop our sustainability goals for 2030 to reduce our environmental impacts. Our 2030 environmental sustainability goals and strategies were developed using a quantitative model that sets our 2018 environmental footprint as the baseline. Subsequently we have identified sustainability projects at our high footprint sites that will positively impact our sustainability metrics. We are in the process of incorporating the identified initiatives in our capital planning that will ensure their implementation during the target period. As an example: in 2018 and 2019 FMC hired a third party consultant company to perform energy and waste audits at two of our high intensity sites at Mobile AL and Ronland, Denmark. These audits or "Manufacturing Excellence" projects helped the sites identify and quantify opportunities that will significantly reduce the energy, GHG, water and waste footprints at these sites. Similar Manufacturing Excellence audits are planned in the coming months throughout FMC's worldwide operations. Our 2030 goals will ensure FMC's operations and business strategies are more efficient and resilient so we can address potential market, climate, and regulatory-based changes. In addition, FMC Agricultural Sciences is developing targeted chemistries and biological crop protection products (materials originating from renewable plant or natural microbial sources) that will further enhance the environmentally benign nature of our products. An example of how FMC's business strategies have been influenced by climate change is that FMC has identified six major global challenges that we can address through the use of our products, technologies, and changes in our business operations. These challenges are climate change, scarce resources, environmental consciousness, land competition and food and health expectations. Climate change has influenced FMC's short-term strategy in that we are making changes in our business operations to reduce our energy and GHG emissions intensities, conducting life cycle analysis on our products, and third-party assurance assessments of our environmental data, conducting energy assessments to reduce energy intensity at our high energy use manufacturing sites and updating our Water Risk Assessment for our manufacturing sites. FMC is investing in technologies to make our operations more efficient and less impactful on the environment and adapting our product portfolio to provide products that help customers mitigate and adapt to climate change. Our strategic position depends on sustainable investments that ensure our company runs more efficiently and resiliently in the future. FMC aims to reduce its environmental impact while providing customers with sustainably-advantaged products. In the long-term, our Agricultural Sciences products will be needed by growers in locations that are experiencing changes in existing physical environments. FMC Agricultural Sciences is developing products that improve agricultural productivity by helping growers increase crop yields to feed a growing global population. Growers must adapt to less available arable land because of climate change impacts, like temperature and rainfall shifts as well as impacts like increased urbanization. FMC researchers also developed the Product Stewardship and Sustainability Assessment (PSSA) tool to ensure each new product introduction is more sustainable than the current benchmark. The PSSA tool includes questions that address FMC's identified six major global challenges. A product must show progress in at least one of the areas without regressing in another before it continues in the development process. R&D scientists and development managers must complete the PSSA at each development stage. More complete answers to the PSSA questions are developed as the product moves forward and more insights are gained into the product's attributes. Every quarter, FMC aggregates across business units to determine our total R&D spend toward developing sustainably advantaged products. In 2018, 87% of FMC's R&D spending was on developing sustainably advantaged products, surpassing our 2020 goal to achieve 80% of R&D investment toward these products. We will continue to introduce these products and track their sales on a quarterly basis. FMC's 2025 targets, the current work to publish FMC's sustainability goals for 2030, and the company's official climate change statement are indicative of the fact that FMC realizes its responsibility to limit its contributions to climate change. As FMC measures and manages its progress on the 2020 and 2025 targets announced in 2015, it will continue to assess how its business strategies and sustainability initiatives can align with the Intended Nationally Determined Contributions (INDCs) of the Paris Agreement. By investing in our product portfolio and sustainably advantaged products, FMC is positioned to impact the aforementioned six major global challenges.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

On November 1, 2017, FMC divested its Health and Nutrition business and acquired a significant portion of DuPont's Crop Protection business. Due to the planned Initial Public Offering of our Lithium business in late 2018 and business changes related to the acquisition, FMC has not undertaken climate-related scenario analysis to inform its business strategy at this time.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Scope

Scope 1+2 (location-based)

% emissions in Scope

100

Targeted % reduction from base year

15

Metric

Metric tons CO2e per metric ton of product

Base year

2013

Start year

2015

Normalized base year emissions covered by target (metric tons CO2e)

414261

Target year

2025

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

% of target achieved

100

Target status

Underway

Please explain

FMC's Agricultural Science business GHG intensity decreased in 2018 to 0.24 from our 2013 GHG intensity of 0.27, whereas Lithium reduced its GHG intensity from 3.13 to 2.28 during the same period. We set our 2025 target to reduce our greenhouse gas intensity by 15 percent based on our 2013 emissions baseline year. The amount of absolute emissions is highly dependent upon FMC's product production level, which could change the level of our absolute emissions.

% change anticipated in absolute Scope 1+2 emissions

-15

% change anticipated in absolute Scope 3 emissions

0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Waste

KPI – Metric numerator

metric tons of waste

KPI – Metric denominator (intensity targets only)

per metric ton of product

Base year

2013

Start year

2015

Target year

2025

KPI in baseline year

134.62

KPI in target year

107.8

% achieved in reporting year

20

Target Status

Achieved

Please explain

FMC's waste disposed decreased in 2018 by 28.3 percent from our 2013 waste intensity, surpassing our 2025 target to reduce our waste intensity by 15 percent based on our 2013 baseline year. We have prioritized waste reduction over several years due to the volume generated at FMC's Agricultural Sciences sites. This achievement is a result of improving operational efficiencies and repurposing waste streams into value-added materials for other industries

Part of emissions target

The waste included solid and liquid waste and was not part of the emission target. FMC had a separate GHG emission target.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Energy usage

KPI – Metric numerator

Gigajoules

KPI – Metric denominator (intensity targets only)

per metric ton of product

Base year

2013

Start year

2015

Target year

2025

KPI in baseline year

3.13

KPI in target year

2.66

% achieved in reporting year

25

Target Status

Achieved

Please explain

The above numbers are for FMC's Ag Science business only. FMC spun off its Lithium business in March 2019. The lithium business achieved 21% reduction in its energy intensity during the same period. The amount of absolute energy usage is highly dependent upon FMC's production level. As growers' needs change and pest pressures increase, we adjust our active ingredient (AI) product mix to address these challenges for our customers. In some cases, this adjustment results in producing AIs that are more resource intensive. We are committed to minimizing our impacts and; at our manufacturing sites we have invested in energy efficiency equipment improvements to reduce our energy usage.

Part of emissions target

All energy usage in FMC is either Scope 1 or 2 emissions.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

R&D investments

KPI – Metric numerator

USD(\$) of R&D spend toward developing sustainably advantaged products

KPI – Metric denominator (intensity targets only)

Per USD(\$) total R&D spend

Base year

2013

Start year

2015

Target year

2020

KPI in baseline year

67

KPI in target year

80

% achieved in reporting year

87

Target Status

Achieved

Please explain

In 2015, FMC set a goal to dedicate 80 percent of R&D investment toward sustainably advantaged products by 2020. FMC development managers review the sustainability data on projects in development on a quarterly basis. The results are aggregated across the Agricultural Sciences and Lithium businesses to determine total R&D spend. In 2018, we achieved 87 percent of total R&D spend on sustainably advantaged products, surpassing our 2020 goal. This was realized through the dedication of our global R&D teams. With the acquisition of a significant portion of DuPont's Crop Protection business, we expanded FMC's Agricultural Sciences R&D sites from five to 20, safeguarding competitiveness and continued access for growers to new innovative chemistries that protect crops and improve yields.

Part of emissions target

None

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

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 CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	22	
To be implemented*		
Implementation commenced*	1	1745
Implemented*		
Not to be implemented		

C4.3b

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

Initiative type

Low-carbon energy installation

Description of initiative

Solar PV

Estimated annual CO₂e savings (metric tonnes CO₂e)

1745

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

219000

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

10000

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Solar PV will be installed by the supplier at minimal cost to FMC, due to subsidy by the government of India.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	We are in compliance with regulatory requirements and standards. The global regulatory environment is becoming increasingly complex and requires more resources to effectively manage. FMC is currently expanding our government affairs team in our Asia Pacific, EMEA and Latin America regions to better engage and advise on changing regulatory requirements.
Internal incentives/recognition programs	On an annual basis, FMC recognizes its employees' contributions to EHS and sustainability. They are eligible to be nominated for two awards for their achievements in these areas. FMC's President's Award recognizes the exceptional performance and/or improvement of a plant location, laboratory, and business unit or staff functional department within a Group/Business in the areas of EHS and sustainability. FMC's Chairman's Award recognizes employees or small groups within the company for outstanding achievements and leadership in the areas of EHS and Sustainability.
Other (Process Improvement)	FMC has a dedicated budget for process improvements at its established Technical Centers, which conduct research in energy efficiency and emissions reductions activities. The Technical Centers perform energy audits and process improvement at FMC facilities and findings from these audits are implemented at other FMC locations as needed. In 2019 FMC has launched several Manufacturing Excellence projects at our manufacturing sites to reduce our environmental footprint.
Dedicated budget for low-carbon product R&D	In 2015, FMC established its first set of long-term sustainability targets in safety, R&D, and community engagement. We have achieved significant progress while planning how FMC can contribute to a more sustainable future. One of these goals was to increase the percentage of our R&D spend on new solutions that positively impact FMC's six identified major global challenges climate change, scarce resources, land competition, environmental consciousness, food expectations and health expectations that we can address with our products and technologies. Success in this area indicates that FMC is developing products that ensure more sustainable options for our customers. As of 2018, 87 percent of FMC's R&D spend was on developing sustainably advantaged products, which are products that address one of FMC's six identified major global challenges with our products and technologies. We have achieved our goal two years ahead of the deadline. To build on our success in this area, we will be resetting this target in 2019. This focus will ensure a pipeline of improved products far into the future.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

FMC has started to build a strong biological product and technology portfolio through BioSolutions. This portfolio is one component of FMC's comprehensive Plant Health platform, which is dedicated to advancing plant yields using biological products and microbes, which protect and stimulate crops using products derived from natural bacteria found in plants and soil, seed treatments that use bacteria to protect the seed and nurture an emerging plant once in the ground, and plant nutrition, which adds basic nutrients to the soil to ensure optimal conditions for healthy crop growth. FMC's biologicals include Fracture (a fungicide derived from sweet lupine plants), VGR Soil Amendment (a strain of the beneficial bacterium Bacillus licheniformis that creates an improved living seedbed to help increase root system size), and Ethos XB (an insecticide/fungicide that protects corn from a broad spectrum of seedling diseases). This group of products and technologies allows for several environmental advantages for growers, including water savings up to 17%, increased average product yield by 9.5 corn bushels per acre, and decreased applications and passes over crop fields that allow for less energy consumption and avoided emissions. We are following the Climate Bonds Initiative and the development of the Initiative's sector-specific taxonomy for Agriculture, Forestry & Other Land Use (AFOLU). As the parameters of what constitutes a low carbon product are further refined, we will work to further differentiate our sustainably-advantaged products that address climate change, scarce resources, land competition, environmental consciousness and food and health expectations from each other.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Addressing the Avoided Emissions Challenge- Chemicals sector

% revenue from low carbon product(s) in the reporting year

18

Comment

18% percent of FMC's Agricultural Sciences' revenue (excluding newly acquired DuPont products) is made up of the sustainably advantaged group of products. In 2015, FMC established its first set of long-term sustainability targets in safety, R&D and community engagement. We have achieved significant progress while planning how FMC can contribute to a more sustainable future. One of these goals was to increase the percentage of our R&D spend on new solutions that positively impact FMC's six identified major global challenges climate change, scarce resources, land competition, environmental consciousness and food expectations and health expectations that we can address with our products and technologies. Success in this area indicates that FMC is developing products that ensure more sustainable options for our customers. As of 2018, 87% of FMC's R&D spend was on developing sustainably advantaged products, which are products that address one of FMC's five identified major global challenges with our products and technologies. We have achieved our goal three years ahead of the deadline. To build on our success in this area, we will be resetting this target in 2019. This focus will ensure a pipeline of improved products far into the future.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO₂e)

156404

Comment

The above emissions only includes FMC's current operations that were active in 2013.

Scope 2 (location-based)

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO₂e)

52083

Comment

The above emissions only includes FMC's current operations that were active in 2013.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Mandatory Greenhouse Gas Reporting Rule

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)

173308

Start date

January 1 2018

End date

December 31 2018

Comment

This emission includes all the business in 2018

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 have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

FMC will investigate reporting a Scope 2, market-based figure next year

C6.3

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

Reporting year

Scope 2, location-based

113791

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2018

End date

December 31 2018

Comment

At this time FMC has prioritized gathering environmental data, including energy use, greenhouse gas emissions, waste and water, from all owned manufacturing data and reducing associated impacts. FMC will evaluate using market-based Scope 2 emission factors in the next reporting cycle.

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?

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

203000

Emissions calculation methodology

The emissions associated with FMC's purchased goods and services are relevant. We have estimated partial Scope 3 emissions in this category: • Emission from contract manufacturing: 2018 emission was 207 kT CO2e • 4.3 T CO2e avoided through Green packaging in Latin America We are currently evaluating how best to calculate this emissions source that covers all our purchased goods and services.

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

0

Explanation

We have not estimated the percentage of Scope 3 from the sources reported above.

Capital goods

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC has not calculated the emissions associated with our capital goods. In 2018, FMC's total Capital expenditure was \$156 M, most of which was for maintenance. FMC has not made any significant expenditure on capital goods. Therefore, capital goods were not deemed important and therefore was not included in FMC's Scope 3 emissions.

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

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC is not aware of any other significant Scope 3 fuel and energy related activities not already included in this list.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

The emissions from the upstream transportation and distribution are relevant to FMC when considering the size of our overall footprint. We are evaluating how to best calculate this Scope 3 emissions source. FMC utilizes multiple transportation modes to move raw materials and products, including road, rail, air and ocean freight. The decisions we make in logistics have a significant environmental impact. In 2016, FMC evaluated our footprint using industry standards for measuring the sustainability of logistics. Logistics vary widely by region, so we began by assessing the greenhouse gas emissions generated from global ocean freight and North American road freight. In 2018, we established a partnership with BDP International, Inc. and the Smart Freight Centre to pilot a Logistics Emissions Accounting and Reduction Network (LEARN) project. The pilot calculated carbon dioxide equivalent (CO₂e) emissions for select routes within our supply chain. From there, alternative routes were identified, CO₂e emissions measured and compared to existing routes to assess the potential for reduced transportation emissions. We determined that if the alternative routes with the lowest CO₂e emissions were chosen, we could realize emission reduction by up to 38 percent. Moving forward we plan to expand this pilot study to additional routes within our supply chain and apply these findings to our broader GHG emissions reduction strategy.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC has not calculated the emissions associated with our waste generated in operations. We are currently investigating methods for calculating this emissions source.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

7370

Emissions calculation methodology

FMC's Business Travel emissions includes both air and rail travel as booked and reported through FMC's designated travel agencies serving 61 countries where FMC's travelers reside. Travel distances for each route were multiplied with relevant emissions factors provided by the travel vendor. Air: Miles were converted to CO₂e emissions using conversion factors for short-haul, medium-haul and long-haul flights. Train: Rail miles were converted into CO₂e emissions and only include rail travel in the U.S and Europe.

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

90

Explanation

We estimate that we have captured all of our business travel emissions except rail travel outside of US and Europe.

Employee commuting

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC has not calculated the emissions associated with employee commuting. We estimate that it is not relevant when compared to our overall footprint.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC has upstream leased assets that have a small footprint compared to our overall footprint.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

In 2018, we established a partnership with BDP international, Inc. and the SmartFreight Centre to pilot a Logistics Emissions Accounting and Reduction Network (LEARN) project. The pilot calculated carbon dioxide equivalent (CO₂e) emissions for select routes within our supply chain. From there, alternative routes were identified, CO₂e emissions measured and compared to existing routes to assess the potential for reduced transportation emissions. We determined that if the alternative routes with the lowest CO₂e emissions were chosen, we could realize emission reduction by up to 38 percent. Moving forward we plan to expand this pilot study to additional routes within our supply chain and apply these findings to our broader GHG emissions reduction strategy.

Processing of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC estimates that the processing of sold goods are relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions associated with these activities.

Use of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC estimates that the use of sold products is relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions from associated with these activities.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC Agricultural Sciences products are used directly in the field, requiring no end-of-life treatment. Packaging materials and waste are recycled when possible. At this time, FMC is investigating methods to measure the emissions associated with these activities

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC has downstream leased assets that have a small footprint compared to our overall footprint.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC does not have franchises.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO₂e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

FMC does not have emissions from investments that are not captured elsewhere in this response.

Other (upstream)**Evaluation status****Metric tonnes CO2e**

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation**Other (downstream)****Evaluation status****Metric tonnes CO2e**

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

C6.7**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

C6.7a**(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.****Row 1****Emissions from biologically sequestered carbon (metric tons CO2)**

13288

Comment

FMC uses briquette as a significant source of energy at one of its manufacturing plant in India. Briquettes are made from an agricultural byproduct (groundnut shells) that would otherwise be combusted by local farmers without heat recovery. Briquette represents captured CO2 and constitutes 34 percent of site GHG emissions.

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**

60.7

Metric numerator (Gross global combined Scope 1 and 2 emissions)

287098

Metric denominator

unit total revenue

Metric denominator: Unit total

4727.8

Scope 2 figure used

Location-based

% change from previous year

63

Direction of change

Decreased

Reason for change

In 2018, FMC achieved significant reductions in gross global combined Scope 1 and 2 emissions in metric tons CO2e. This achievement is due to efficiency improvements and changes to cleaner burning fuels. Examples of efficiency improvement projects include:

- More efficient steam boilers at Mobile, AL plant
- HVAC Building Automation Upgrades and chiller upgrade at Stine, Delaware
- Replacing old pump motors with more energy efficient motors throughout the company facilities

FMC's annual revenue also increased significantly during that period, thereby achieving significant year over year reduction in CO2 emission intensity. Unit revenue includes full year revenue for FMC's Agricultural Sciences and Lithium businesses.

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 CO ₂ e)	GWP Reference
CO ₂	169942	IPCC Fifth Assessment Report (AR5 – 100 year)
CH ₄	1300	IPCC Fifth Assessment Report (AR5 – 100 year)
N ₂ O	2066	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 CO ₂ e)
Other, please specify (North America)	57873
Other, please specify (EMEA)	30287
Other, please specify (Asia Pacific)	16196
Other, please specify (Latin America)	68953

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 CO ₂ e)
Agricultural Sciences	86993
Lithium	86315

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO₂e.

	Gross Scope 1 emissions, metric tons CO ₂ e	Net Scope 1 emissions , metric tons CO ₂ e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	173308	<Not Applicable>	All FMC operations were related to chemical production activities
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
North America	73045	0	150991	0
Latin America (LATAM)	5599	0	36447	0
Other, please specify (EMEA)	4559	0	20921	0
Other, please specify (Asia Pacific)	30587	0	50759	0

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 emissions (metric tons CO ₂ e)	Scope 2, market-based emissions (metric tons CO ₂ e)
Agricultural Sciences	87705	0
Lithium	26086	0

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO₂e.

	Scope 2, location-based, metric tons CO ₂ e	Scope 2, market-based (if applicable), metric tons CO ₂ e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	113791	0	No market based scope 2 was estimated
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C-CH7.8

(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO ₂ e from purchased feedstock	Explain calculation methodology
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C-CH7.8a

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	
Methane (CH4)	0	
Nitrous oxide (N2O)	0	
Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF6)	0	
Nitrogen trifluoride (NF3)	0	

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?

Increased

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	0	No change	0	FMC did not use renewable energy
Other emissions reduction activities	17969	Decreased	9.1	All operating plants undertook efficiency projects, including installing more efficient boilers and pumps, changing lower emission fuels etc that led to reduction in emissions in FMC's Ag Science and Lithium businesses.
Divestment	67348	Decreased	22	In Nov. 2017, FMC divested its Health and Nutrition business. The emissions from H&N are not included in this years report, but are included in previous year's report .
Acquisitions	107667	Increased	38	On Nov. 2017, FMC acquired a part of DuPont's Agricultural Science business. The product line from DuPont is energy intensive, thereby significantly increasing the GHG emission of the corporation. The DuPont's emissions are included in this report, but not in previous year's report .
Mergers		<Not Applicable >		
Change in output		<Not Applicable >		
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other		<Not Applicable >		

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?

Location-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 undertakes this energy-related activity
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	No

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 MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	898383	898383
Consumption of purchased or acquired electricity	<Not Applicable>	0	214639	214639
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	44479	44479
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	0	1157501	1157501

C-CH8.2a

(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	898383
Consumption of purchased or acquired electricity	<Not Applicable>	214639
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	44479
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	1157501

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	Yes
Consumption of fuel for co-generation or tri-generation	No

C8.2c

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

Fuels (excluding feedstocks)

Agricultural Waste

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

37210

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

37210

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

All Agricultural waste is used to produce steam in boiler, most of which is used for heating.

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6565

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

6565

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Diesel / Gas oil is primarily used for transportation

Fuels (excluding feedstocks)

Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

11738

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

11738

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Mainly used in aviation

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

57900

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

57900

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels used for transportation as well as generating electricity

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

9079

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

9079

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Mostly used for heating

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

773601

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

773601

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Used in steam boilers

Fuels (excluding feedstocks)

Petrol

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1414

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

1414

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

For transportation

Fuels (excluding feedstocks)

Propane Liquid

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

875

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

875

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

For heating

C8.2d**(C8.2d) List the average emission factors of the fuels reported in C8.2c.****Agricultural Waste****Emission factor**

1660

Unitkg CO₂e per metric ton**Emission factor source**

IPCC 2006

Comment

Used for internal accounting

Diesel**Emission factor**

2.67687

Unitmetric tons CO₂ per m³**Emission factor source**

IPCC 2006

Comment

Used for internal accounting

Fuel Oil Number 2**Emission factor**

2.67687

Unitmetric tons CO₂e per m³**Emission factor source**

IPCC 2006

Comment

Used for internal accounting

Jet Kerosene**Emission factor**

2.51975

Unitmetric tons CO₂e per m³**Emission factor source**

IPCC 2006

Comment

Used for internal accounting

Liquefied Petroleum Gas (LPG)

Emission factor

1.61183

Unit

metric tons CO₂e per m³

Emission factor source

IPCC 2006

Comment

Used for internal accounting

Natural Gas

Emission factor

1.9245

Unit

metric tons CO₂e per m³

Emission factor source

IPCC 2006

Comment

Used for internal accounting

Petrol

Emission factor

2.27214

Unit

metric tons CO₂e per m³

Emission factor source

IPCC 2006

Comment

Used for internal accounting

Propane Liquid

Emission factor

1.61183

Unit

metric tons CO₂e per m³

Emission factor source

IPCC 2006

Comment

Used for internal accounting

C8.2f

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

Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type

<Not Applicable>

Region of consumption of low-carbon electricity, heat, steam or cooling

<Not Applicable>

MWh consumed associated with low-carbon electricity, heat, steam or cooling

<Not Applicable>

Emission factor (in units of metric tons CO₂e per MWh)

<Not Applicable>

Comment

At this time, we are not purchasing any low carbon energy.

C-CH8.3

(C-CH8.3) Disclose details on your organization's consumption of feedstocks for chemical production activities.

Feedstocks

Natural gas

Total consumption

81000

Total consumption unit

cubic metres

Inherent carbon dioxide emission factor of feedstock, metric tons CO₂ per consumption unit

1.88

Heating value of feedstock, MWh per consumption unit

0.01

Heating value

LHV

Comment

We use a small amount of Natural gas for production for one of our Active Ingredient.

C-CH8.3a

(C-CH8.3a) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

	Percentage of total chemical feedstock (%)
Oil	0
Natural Gas	0
Coal	0
Biomass	0
Waste	0
Fossil fuel (where coal, gas, oil cannot be distinguished)	0
Unknown source or unable to disaggregate	0

C9. Additional metrics

C9.1

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

C-CH9.3a

(C-CH9.3a) Provide details on your organization's chemical products.

Output product

Specialty chemicals

Production (metric tons)

355411

Capacity (metric tons)

400000

Direct emissions intensity (metric tons CO₂e per metric ton of product)

0.81

Electricity intensity (MWh per metric ton of product)

3.26

Steam intensity (MWh per metric ton of product)

0.13

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

The above figures include data from Legacy FMC, assets acquired from DuPont and Lithium businesses.

C-CH9.6

(C-CH9.6) Disclose your organization's low-carbon investments for chemical production activities.

Investment start date

January 1 2018

Investment end date

December 31 2018

Investment area

Property, plant and equipment

Technology area

Waste heat recovery

Investment maturity

Large scale commercial deployment

Investment figure

451000

Low-carbon investment percentage

81 - 100%

Please explain

Upgrades and new installation of condensate steam recovery

Investment start date

January 1 2018

Investment end date

December 31 2018

Investment area

Property, plant and equipment

Technology area

Carbon capture and storage (CCS)

Investment maturity

Small scale commercial deployment

Investment figure

10000

Low-carbon investment percentage

81 - 100%

Please explain

Solar panel installation at one of our plants in India.

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	No third-party verification or assurance

C10.1a

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

Scope

Scope 1

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

ERM CVS 2018 CDP Assurance Statement FMC_28Jun2019.pdf

Page/ section reference

The attached assurance letter is a 1 page document. The assurance letter can also be found at Page 38 in our Annual Sustainability Report
https://fmcsustainability.com/wp-content/uploads/2019/05/FMC_2018_Sustainability_Report.pdf#page=40

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

ERM CVS 2018 CDP Assurance Statement FMC_28Jun2019.pdf

Page/ section reference

The attached assurance letter is a 1 page document. The assurance letter can also be found at Page 38 in our Annual Sustainability Report
https://fmcsustainability.com/wp-content/uploads/2019/05/FMC_2018_Sustainability_Report.pdf#page=40

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

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
C4. Targets and performance	Year on year emissions intensity figure	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity, total energy use, waste intensity, total waste generated and total waste disposed per disposal type verified.
C8. Energy	Year on year emissions intensity figure	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity and total energy use verified.
C9. Additional metrics	Year on year emissions intensity figure	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity, total energy use, waste intensity, total waste generated and total waste disposed per disposal type verified.

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS

11

Period start date

January 1 2018

Period end date

December 31 2018

Allowances allocated

76401

Allowances purchased

0

Verified emissions in metric tons CO2e

33943

Details of ownership

Facilities we own and operate

Comment

At Ronland Plant , Denmark the level of activity is less than 50% of the historic activity. Therefore the amount of free quotes was lowered to 50% of the basic allocation.

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

In 2015, FMC acquired Cheminova, a chemical company based in Denmark. One of Cheminova's facilities in Ronland, Denmark, participates in the European Union (EU) Emissions Trading Scheme (ETS) and falls below the current emissions cap. In 2021, the next phase of the EU ETS will come into effect. FMC will continue to invest and make improvements in its energy use and greenhouse gas emission levels prior to 2021 to prepare for the lower emissions cap. FMC has already undertaken energy audits at Ronland and identified projects to improve the emission footprint at Ronland. Currently the site is installing wind turbines that will significantly reduce its carbon emission.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

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

No, and we do not currently 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, other partners in the value chain

C12.1a

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

Type of engagement

Compliance & onboarding

Details of engagement

Climate change is integrated into supplier evaluation processes

% of suppliers by number

46

% total procurement spend (direct and indirect)

44

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

Collaboration and strong partnerships with suppliers and customers are very important to FMC to ensure we meet our sustainability commitments, from sourcing, to manufacturing, to transportation and product stewardship. FMC chooses to work only with suppliers and vendors who share our commitment to ethical, environmentally safe and sustainable business practices. We anticipate that our supply chain contributes significant portion of our Scope 3 emissions as well as other sustainability metrics such as energy and water usage and waste generation embodied in our product. Therefore it is extremely important for us to work closely with our supply chain to reduce our life cycle footprint.

Impact of engagement, including measures of success

We measure our success by tracking the percentage of our supplier covered by our Supplier Evaluation process. In 2018, 395 of our suppliers (~ 46%) and approximately 44% of total spend were evaluated for their environmental sustainability commitment using our Supplier evaluation process.

Comment

We are continuing to engage all our suppliers to respond to our sustainability questionnaire.

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

100

% total procurement spend (direct and indirect)

100

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

The above numbers are for Brazil only. Throughout FMC's sustainability journey, employees responsible for product packaging have worked closely with suppliers to find sustainable packaging options while ensuring the highest standards of safety and quality for our customers. FMC estimates that the packaging materials are a measurable source of end-of-life environmental footprint that should be addressed in a responsible manner. In 2012, FMC Agricultural Sciences in Brazil initiated a project to replace the existing 100 percent fossil packages, Virgin Polyethylene HDPE, with more sustainable materials. This effort resulted in FMC developing two types of packages. "Family Green" packages made of at least 51 percent Polyethylene Green, produced from sugarcane. In 2018, Family Green packages represented 100% percent of the packages used in Brazil. It is produced with at least 83 percent of recycled polyethylene and 17 percent of virgin fossil material. FMC supports Ag Container Recycling Council (ACRC), not-for-profit trade association of crop protection companies. A network of ACRC contractors collects and recycles empty, triple rinsed HDPE agricultural chemical containers at no cost to consumers. We are currently not measuring Scope 3 emissions for this workstream.

Impact of engagement, including measures of success

From 2012 to 2018 the Family Green packaging program in Brazil have contributed to the reduction of 13,628 metric tons of CO2 in the atmosphere.

Comment

We are currently evaluating implementing program to our operations at the rest of the world.

C12.1c

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

FMC sources active ingredients (AIs) for FMC-owned formulation sites globally through contract manufacturers. The synthesis of these complex chemicals has a material environmental footprint compared to FMC-owned formulation and packaging operations, so we work with our contract manufacturers to monitor and reduce these impacts. We also disclose their energy, GHG and waste footprints in our annual report as a means to encourage reductions in these metrics. In 2019, FMC has undertaken an initiative to estimate and disclose our Scope 3 emissions, that will involve close engagement with our suppliers.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Energy Storage)	Support	FMC engaged policy makers in the U.S. on issues related to energy storage. Specifically, supported federal funding for the advancement, manufacturing, and adoption of lithium-based energy storage.	FMC has identified six major global challenges that we can address through the use of our products, technologies and changes in our business operations. These challenges are climate change, scarce resources, environmental consciousness, land competition, food expectations and health expectations. We see energy storage as a means to reduce climate change and support the passage of federal funding that helps to advance lithium-based energy storage and its wide scale adoption in the energy sector. Our lithium products are used by customers to create batteries for electrically-powered vehicles, more efficient tires, lighter-weight aluminum for aircraft and other low carbon technologies.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

American Chemistry Council (ACC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The American Chemistry Council (ACC) and its members believe that chemistry plays an integral role in solving our world's sustainability challenges. The ACC is committed to advancing safe, innovative, effective, and economically viable chemical products and technologies that are key to unlocking sustainability solutions. The ACC's sustainability principles call on its members to address the environmental impacts from operations by achieving measurable reductions in greenhouse gas emissions and distribution of products, conserving materials and resources, reducing waste through re-use and recycling, and collaborating to reduce marine debris and its impacts. The ACC has supported a number of proposals designed to reduce greenhouse gases, and improve energy generation and efficiency. The ACC has not endorsed a specific climate change policy proposal.

How have you influenced, or are you attempting to influence their position?

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC supports the ACC in its mission to deliver business value through advocacy, political engagement, communications and scientific research. The members of ACC are a diverse group of companies with differing positions on issues that impact the chemical industry. Overall, FMC supports the ACC's sustainability principles that call on ACC members to address their environmental impacts.

Trade association

CropLife America (CLA)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

CropLife America (CLA) supports a number of proposals designed to impact greenhouse gas generation, energy generation and energy efficiency.

How have you influenced, or are you attempting to influence their position?

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC's Vice President, Chief Marketing Officer, serves on CLA's Board of Directors and was elected the 46th Chair of the board in 2015 to serve a 2-year term. She was the first woman to hold this position. FMC supports CLA in its efforts to engage with policy makers at the federal, state and local levels to develop policies and regulations. CLA is comprised of a diverse group of members that could potentially differ on certain issues that impact its members. In situations of conflict, all members have the right to advocate for an alternative position.

Trade association

CropLife International (CLI) (Farming First)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

CropLife International (CLI) supports and is a member of Farming First, a coalition of multi-stakeholder organizations that articulates, endorses and promotes practical, actionable programs and activities to further sustainable agricultural development worldwide. Farming First has a set of recommendations on climate change to all governments: 1) Support the unique role of agriculture in the global climate change response, 2) Encourage the use of all available and applicable climate change solutions, 3) Promote funding mechanisms which support the needs of all levels and forms of farming, 4) Reward resource-based productivity improvements as the direct contributor to climate-change effectiveness, and 5) Invest in capability sharing to encourage all farmers to play a role in climate change while safeguarding local and global security.

How have you influenced, or are you attempting to influence their position?

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC's President and Chief Operating Officer, is a member of CLI's Strategy committee. FMC supports CLI in its efforts to engage with policy makers to develop policies and regulations. CLI is comprised of a diverse group of members that could potentially differ on certain issues that impact its members. In situations of conflict, all members have the right to advocate for an alternative position.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

The communities in which FMC operates are vital to the company's success. To understand how FMC can positively influence those communities, each FMC-owned manufacturing site reports quarterly on community activities, which are organized into four categories: safety, operational transparency, community partnership and community leadership. If a site completes an activity in each of the four categories, thus providing diverse and valuable interactions with the community they earn a 100 on the Community Engagement Index. The 2018 combined Agricultural Sciences and Lithium result of 90 on the Index shows that we are making meaningful progress towards the 2020 goal of 100. In addition to the four categories in a calendar year, promoting food security and improved nutrition across our locations is an important part of FMC's community engagement strategy. One of our long-term partnership is Philabundance – an impactful and collaborative organization distributing more than 24 million pounds of food each year to those in need – in Philadelphia, Pennsylvania, United States.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

FMC has an established set of strategic and governance processes that ensure the collaboration of FMC's Governmental Affairs team with FMC's executive leadership team, business leaders, and sustainability group on many issues, including sustainability and climate change-related issues. For example, members of FMC's Governmental Affairs Group participate on FMC's Sustainability Steering Team alongside leaders of FMC's executive leadership, as well as group leaders from Manufacturing, EHS, R&D, Finance, Communications, Procurement, Human Resources, and Legal. In addition, members of FMC's Corporate Government Affairs have regular interactions with FMC's leaders from each function and geography in which FMC operates to define and ensure the priorities of the company are advocated for in our interactions with policy makers, trade associations, and research organizations. Through these interactions and meetings, FMC is able to discuss and ensure the company's common approach to climate change is consistent.

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

NYSE_FMC_2018.pdf
FMC_2018_Cultivating Tomorrow.pdf

Page/Section reference

Sustainability Report: Page 2, 29 Website: <https://fmcsustainability.com/data-gri/>

Content elements

Governance
Strategy
Emissions figures
Emission targets

Comment

We provide summary of our current emissions, progress towards our environmental, social and governance goals and our future strategies in our annual report.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Page/Section reference

Throughout the report. Our progress towards our environmental goals are given in pages: 3, 35. We have also provided interactive charts of our energy, GHG, waste disposed and water use at high risk area on our website

Content elements

Governance
Strategy
Emissions figures
Emission targets
Other metrics

Comment

Our externally assured Sustainability Report provides comprehensive report of our Environmental, Social and Governance strategy, goals and performances.

C14. 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.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

Job title	Corresponding job category
Row 1 Chief Executive Officer and Chairman of the Board, FMC Corporation	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Please refer to the introduction in C 0.2 for company introduction.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	4727800000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

No

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	An accurate product trail that will help us understand where our products are going and the corresponding quantities. Currently, majority of our products are sold through intermediate distributors.
Customer base is too large and diverse to accurately track emissions to the customer level	An accurate product trail that will help us understand where our products are going and the corresponding quantities. Currently, majority of our products are sold through intermediate distributors.
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	We have manufacturing and R&D operations in more than 26 sites throughout the world.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Corporate Sustainability group within FMC has undertaken a project to quantify FMC's Scope 3 emissions. Among the 15 categories that makes up Scope 3, Use of sold goods quantifies the emissions associated with our product when used by our customers. FMC has partnered with external consultancy service provider to quantify our Scope 3 emissions that would include the emissions to our customers.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member

Please select

Group type of project

Reduce Logistics Emissions

Type of project

Route optimization

Emissions targeted

Actions that would reduce our own supply chain emissions (our own scope 3)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO₂e savings

Estimated payback

Please select

Details of proposal

In 2018, we established a partnership with BDP international, Inc. and the Smart Freight Centre to pilot a Logistics Emissions Accounting and Reduction Network (LEARN) project. The pilot calculated carbon dioxide equivalent (CO₂e) emissions for select routes within our supply chain. From there, alternative routes were identified, CO₂e emissions measured and compared to existing routes to assess the potential for reduced transportation emissions. We determined that if the alternative routes with the lowest CO₂e emissions were chosen, we could realize emission reduction by up to 38 percent. Moving forward we plan to expand this pilot study to additional routes within our supply chain and apply these findings to our broader GHG emissions reduction strategy.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms