

Welcome to your CDP Climate Change Questionnaire 2020

C0. Introduction

C0.1

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

Headquartered in Muttenz near Basel, Switzerland, with annual sales of CHF 6'526 billion in 2019, Clariant is a world leader in specialty chemicals.

World-wide operations, with more than 100 group companies and 17'223 total staff. As one of the world's leading specialty chemical companies, Clariant contributes to value creation with innovative and sustainable solutions for customers from many industries. In its three core Business Areas (Care Chemicals, Catalysis, Natural Resources), Clariant focuses on developing differentiated, customer-specific products and offerings that have attractive growth prospects and above-average value potential. Clariant has divested the Healthcare Packaging and Masterbatches divisions, and is working on divesting the Pigments unit. These are together form a 4th business area called "discontinued operations". For the CDP submission, both continued and discontinued operations are in scope.

Five strategic pillars were defined for future performance increase:

- Focus on innovation and research & development (R&D)
- Add value with sustainability
- Reposition the portfolio
- Intensify growth
- Increase profitability

Our portfolio is designed to meet very specific needs with as much precision as possible. At the same time, our research and development is focused on addressing the key trends of our time. These include energy efficiency, renewable raw materials, efficient mobility, nutrition and conserving finite resources.

Clariant extended the corporate strategy to an additional pillar at the beginning of September 2014: add value with sustainability. This theme plays a key role in reaching the Group's growth objectives. On the one hand, sustainability is an important element of the innovation process and therefore is focused on meeting global trends like climate change, environmental protection and conservation of resources; on the other hand, it ensures that costs are saved, and Clariant and its customers are positioned as positive companies in public awareness.

As a leading company in the field of specialty chemicals, Clariant does not limit itself to simply comply with the legal requirements, but also takes part in a variety of voluntary sustainability programs, including voluntary commitments as part of the Responsible Care Global Charter, the Global Product Strategy, the UN Global Compact; self-initiated commitments such as the Code of Conduct and the Code of Conduct for Suppliers, as well as other commitments, such

as related to the certification of sustainable palm-oil and developing a traceability approach for palm oil.

In all of its activities, Clariant puts a high emphasis on environmental protection and safety. The company's own regulations on environment, health and safety are in line with the objective of the Responsible Care Global Charter. In addition, Clariant has ISO 9001, ISO 14001, and OHSAS 18001 certification worldwide and is also gradually achieving ISO 50001 certification for energy efficiency. Each production facility adheres vigorously to the company's global guidelines for environmentally compatible and safe business operations. Moreover, Clariant has a global system for event reporting and emergency management in place.

Clariant's environmental objectives for 2025 include relevant indicators for which there are sufficient and detailed data from across all areas of the company extending back over a long period of time.

In Clariant's Portfolio Value Program (PVP), clear sustainability criteria for the product portfolio were established. The PVP is a systematic approach for assessing and continuously improve the sustainability performance of Clariant's products. PwC performed an independent assurance in December 2015 on the system. Under the PVP, Clariant's portfolio is assessed based on 36 sustainability criteria in terms of social, environmental and economic aspects across the entire life cycle. Screened products are ultimately divided into three broad categories: (1) Product standing out for their sustainability excellence performance, which can be distinguished by Clariant's EcoTain® label; (2) Products representing a standard that is considered by Clariant an acceptable level of sustainability (which, however, goes beyond the regulatory requirements); and (3) Products falling below the Clariant sustainability standards, which will be part of an "Improvement Roadmap" and particularly checked for improvement opportunities, replacement, or even discontinuation.

In 2019, the sustainability screening coverage of the continuing operations' portfolio was maintained at 76%, according to the description above. Of these, 68% meet the definition of sustainability set out by Clariant and 171 of Clariant's products carried the EcoTain label for sustainability excellence (Clariant Integrated Report 2019 p. 150).

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2019	December 31, 2019	No

C0.3

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

- Argentina
- Australia

Belgium
Brazil
Canada
Chile
China
Colombia
France
Germany
Guatemala
India
Indonesia
Ireland
Italy
Japan
Malaysia
Mexico
Morocco
New Zealand
Pakistan
Peru
Poland
Qatar
Republic of Korea
Saudi Arabia
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan, Greater China
Thailand
Turkey
Ukraine
United Kingdom of Great Britain and Northern Ireland
United States of America
Venezuela (Bolivarian Republic of)
Viet Nam

C0.4

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

CHF

C0.5

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

Financial control

C-CH0.7

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

Row 1

Bulk organic chemicals

Bulk inorganic chemicals

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
Chief Sustainability Officer (CSO)	A member of the Executive Committee and Head of Corporate Sustainability & Regulatory Affairs (responsible for climate-related issues)
Chief Executive Officer (CEO)	Member of the Board and Chair of Clariant Sustainability Council

C1.1b

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

Frequency with which climate-	Governance mechanisms into	Please explain
-------------------------------	----------------------------	----------------

related issues are a scheduled agenda item	which climate-related issues are integrated	
Sporadic - as important matters arise	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The Board of Directors ultimately monitors the company's risk management performance - including environmental risks - as part of the performance cycle once a year. In addition, the topic of Climate Change is managed by the Head of Corporate Sustainability & Advocacy and by the Head of Corporate ESHA, who are currently reporting directly to one of our Executive Committee members. Relevant topics in the field of climate change are discussed when important matters arise.

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 Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	As important matters arise
Other committee, please specify Executive Committee	Both assessing and managing climate-related risks and opportunities	As important matters arise

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).

Clariant CEO heads the Sustainability Council as the group-wide steering committee for all sustainability issues, including climate change. The Sustainability Council meets at least twice a year and its mandate is to supervise the sustainable development of the company according to Clariant's Sustainability Policy. It evaluates the global challenges and megatrends (including climate change) and sets long- and mid-term Group goals to initiate ambitious projects and activities in the field of sustainability and climate change in particular (e.g.: renewable energy strategy, risk management process). It can define specific working groups and approves and reviews their projects. While the set-up of the council is currently under review, we in this context refer to it as the main body until changes in the governance are clarified.

Corporate Sustainability and Regulatory Affairs (CSRA) is under the responsibility of an Executive Committee member. CSRA is dealing with all sustainability topics of relevance to the company, including climate change. CSRA establishes the group policy, strategy and

standards, coordinates and monitors their implementation and provides service and support for the businesses. CSRA coordinates the work of the group Portfolio Value Program and the EcoTain label initiative. CSRA provides information and advice on sustainability, environment and safety matters, monitors environmental and climate Key Performance Indicators, the development and implementation of programs and campaigns, and is in charge of developing group-wide sustainability projects.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	All members of the Executive Committee, including Clariant CEO, are part of the Group Management Bonus plan which includes benefits related to energy, environmental, water and waste savings achievements. The individual amount of bonus payments generated in a year is determined by the achieved result of the Clariant Group measured against clear objectives. Strategic sustainability projects can be relevant for performance management implying salary development.
Business unit manager	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	All Management levels ML 1-5 are covered by the same incentive scheme. The Group Management Bonus plan includes benefits related to energy, environmental, water and waste savings achievements. The individual amount of bonus payments generated in a year is determined by the achieved result of the Clariant Group measured against clear objectives. Strategic sustainability projects can be relevant for performance management implying salary development.
All employees	Non-monetary reward	Emissions reduction project Energy reduction project	Rewards and recognition for improvements (energy efficiency, carbon emissions) in the frame of employee suggestions scheme.

		Efficiency project	
--	--	--------------------	--

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	1	3	
Medium-term	3	10	
Long-term	10	25	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

The identification and classification of risks to the business is a key aspect of being able to manage risk. Risk evaluation defines risk as a function of likelihood (representing the possibility that a given event will occur) and impact (describing the extent to which a risk event might affect Clariant) being illustrated as a dot on a risk map (Heat map).

The likelihood is categorized as follows: Very low (0-20% likelihood of occurrence), Low (21-40%), Medium (41-60%), High (61-80%), Very High (above 80%).

The impact is categorized either as a financial risk or reputational risk. For financial risk the categorization is: Very Low (1-10 mCHF), Low (10-50 mCHF), Medium (50-100 mCHF), High (100-250 mCHF), Very High (above 250 mCHF). The reputational risk is measured based on the level of coverage in the media and the ability to attract talent.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Clariant Climate Strategy covers all regions where the company has a footprint. Climate change risks (e.g. natural hazard risks) are evaluated on site level for all relevant production sites globally and checked regularly in the framework of insurance audits. Clariant's Enterprise Risk Management process (ERM) assesses the financial, operational, and reputational impacts. Risk criteria (quantitative and qualitative) are used. Risk maps are completed by incorporating detailed reputational and operational risk assessments into the overall assessment and scoring process. Measures are reported and monitored until 'risk' is closed. Annual assessments to the Board of Directors are based on threat and opportunities to the business target for the following year. Risk categories are Strategic, Operational, Financial, Legal & Regulatory, Human Capital and Technology. The Group Risk Manager is meeting the Management Committees of each Business Unit (BU), Business Service, Region at least once/year to review the risks profile and the respective mitigation measures, and give guidance and internal benchmarks. BUs (major risk taking units) report their risk profile status to the Executive Committee (EC). The short term risks are reviewed by the EC within Quarterly Performance Reviews, while the long terms risks are discussed with EC during the annual strategy meeting. Clariant reviews regularly risks related to natural hazards, i.e.: flooding, severe weather events, for all its sites. Using a dedicated software, worst-case and other scenarios are calculated. Risk mitigation measures such as technical measures, investments and insurance, are then considered accordingly for managing the risk.

A corporate project investigated options to integrate a specific Climate Risks and Opportunities process for all Clariant businesses and regions. Clariant Sustainability Council, chaired by our CEO, endorsed the proposal which is under implementation. Discussions on the results of the Climate Risk and Opportunities management process should take place in "Climate risk & opportunities workshop" as part of the annual risk management process. Our renewed approach to climate change risk management is based on the recommendations of the Task-Force on Climate Financial Disclosure (TCFD) and the risks and opportunities drivers listed by the Carbon Disclosure Project. The conclusions of such integration will result into a specific risk & opportunities management process for climate change issues.

Starting in 2019, Clariant has set up a Climate Change Core team responsible for

developing a carbon analysis covering the top 20 sites globally which are contributing to 80% circa of the company's overall Global Warming Potential (Scope 1 + 2). Based on these most relevant sites, several workshops were carried out to identify the hotspots of emissions sources, and opportunities for improvement. The Core Team will also be responsible for managing the project pipeline, select and prioritize the projects for emission reduction roadmap following a set of criteria and an internal stage gate process. The highest investment decisions carried out at the company are approved by the Executive Committee. From the top projects identified, a carbon pricing sensitivity analysis was carried out based on a CHF 50 per ton of CO₂ to identify which projects would become more attractive in terms of payback and NPV. This analysis will serve as a basis to develop a proposal for an internal carbon pricing mechanism, which will be finalized later in 2020.

Starting in 2019 there was also a workstream to develop a roadmap to reduce Clariant's Scope 3 emissions. It started with a deep-dive analysis with a group of internal experts to evaluate the main emission sources, followed by the collection of potential ideas for emission reduction. These ideas were prioritized in terms of technical approval needs, influenceability by Clariant, and potential cost impacts. A systematic approach for engaging with value chain partners will be further developed in 2020.

All these efforts will serve to reveal hidden risks and opportunities in the company's operations and in its supply chains; help Clariant anticipating a future where carbon regulations could become very costly; would become an important factor in the business case for R&D investments; and ultimately become more resilient.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, sometimes included	The company may be exposed to regulatory risks, unless such are properly anticipated and response strategies developed. // Risk example: Certain sites are regulated under the EU ETS and the Switzerland Carbon Tax. //Risk assessment: Our risk management process has therefore embedded specific climate change driven risks such as weather and natural hazards or risks driven by regulatory changes that may affect our business: Fuel/energy taxes and regulations (increased energy taxes could increase operational costs); Carbon taxes (increased carbon taxes and regulations that lead to higher costs or require additional infrastructure investments); Renewable energy regulations (increased energy taxes and regulations could increase operational costs); The integration of energy and emission related targets in the BU business plans strongly supports investments leading to improvements in this field. Other risk drivers include additional physical parameters or reputational impacts such as stakeholder conflicts, litigations or negative media coverage.

Emerging regulation	Relevant, sometimes included	<p>Carbon taxes (increased carbon taxes and regulations that lead to higher costs or require additional infrastructure investments) or the emergence of emission trading schemes where the company operates. // Risk example: In many countries where Clariant operates, rising energy prices can be expected in the mid term. Increasing energy taxes and regulatory driven costs (fuel, energy for production) could thus increase operational costs. Energy costs are on average 6% of our production costs. Depending on rise in energy prices, whereas increased costs could partly be compensated by energy efficiency measures and price increase. In addition, Clariant has set clear targets for energy / CO2 / greenhouse gas emissions to reduce resource consumption and mitigate this risk. // Risk assessment: Our risk management process has therefore embedded specific climate change driven risks such as weather and natural hazards or risks driven by regulatory changes that may affect our business: Fuel/energy taxes and regulations (increased energy taxes could increase operational costs); Carbon taxes (increased carbon taxes and regulations that lead to higher costs or require additional infrastructure investments); Renewable energy regulations (increased energy taxes and regulations could increase operational costs); The integration of energy and emission related targets in the BU business plans strongly supports investments leading to improvements in this field. Other risk drivers include additional physical parameters or reputational impacts such as stakeholder conflicts, litigations or negative media coverage.</p>
Technology	Relevant, always included	<p>This is a relevant topic for Clariant because it is related to competitiveness. // Risk example: Cost to transition to a low-carbon technology.// Risk assessment: Clariant's Enterprise Risk Management process (ERM) assesses the financial, operational, and reputational impacts. Risk criteria (quantitative and qualitative) are used. Risk maps are completed by incorporating detailed reputational and operational risk assessments into the overall assessment and scoring process. Measures are reported and monitored until 'risk' is closed. Annual assessments to the Board of Directors are based on threat and opportunities to the business target for the following year. Risk categories are Strategic, Operational, Financial, Legal ; Regulatory, Human Capital and Technology. The Group Risk Manager is meeting the Management Committees of each Business Unit (BU), Business Service, Region at least once/year to review the risks profile and the respective mitigation measures, and give guidance and internal benchmarks. BUs (major risk taking units) report their risk profile status to the Executive Committee (EC). The short term risks are reviewed by the EC within Quarterly Performance Reviews, while the long terms risks are discussed with EC during the annual strategy meeting.</p>
Legal	Relevant, always included	<p>This is a relevant topic for Clariant because it is related to competitiveness and license to operate. // Risk example: Potential legal costs or removal of license to operate.// Risk assessment:</p>

		<p>Clariant's Enterprise Risk Management process (ERM) assesses the financial, operational, and reputational impacts. Risk criteria (quantitative and qualitative) are used. Risk maps are completed by incorporating detailed reputational and operational risk assessments into the overall assessment and scoring process. Measures are reported and monitored until 'risk' is closed. Annual assessments to the Board of Directors are based on threat and opportunities to the business target for the following year. Risk categories are Strategic, Operational, Financial, Legal ; Regulatory, Human Capital and Technology. The Group Risk Manager is meeting the Management Committees of each Business Unit (BU), Business Service, Region at least once/year to review the risks profile and the respective mitigation measures, and give guidance and internal benchmarks. BUs (major risk taking units) report their risk profile status to the Executive Committee (EC). The short term risks are reviewed by the EC within Quarterly Performance Reviews, while the long terms risks are discussed with EC during the annual strategy meeting.</p>
Market	Relevant, always included	<p>Increasing demand for products that have a climate friendly profile may affect customers and public opinion on products with high energy demand or a negative lifecycle footprint. // Risk example: products containing palm oil from non-sustainable sources // Risk assessment: According to Clariant's Sustainability Policy we proactively address this risk and Clariant's opportunities where we can contribute with innovative solutions. Our Portfolio Value Program helps classifying products as (1) Product standing out for their sustainability excellence performance, which can be distinguished by Clariant's EcoTain label; (2) Products representing a standard that is considered by Clariant an acceptable level of sustainability (which, however, goes beyond the regulatory requirements); and (3) Products falling below the Clariant sustainability standards, which will be part of an "Improvement Roadmap" and particularly checked for opportunities for improvement, replacement, or even discontinuation.</p>
Reputation	Relevant, sometimes included	<p>Risk assessment: Clariant's Enterprise Risk Management process (ERM) assesses the financial, operational, and reputational impacts. Risk criteria (quantitative and qualitative) are used. Risk maps are completed by incorporating detailed reputational and operational risk assessments into the overall assessment and scoring process. Measures are reported and monitored until 'risk' is closed. Annual assessments to the Board of Directors are based on threat and opportunities to the business target for the following year. Risk categories are Strategic, Operational, Financial, Legal ; Regulatory, Human Capital and Technology. The Group Risk Manager is meeting the Management Committees of each Business Unit (BU), Business Service, Region at least once/year to review the risks profile and the respective mitigation measures, and give guidance and internal benchmarks. BUs (major risk taking units) report their risk profile status</p>

		to the Executive Committee (EC). The short term risks are reviewed by the EC within Quarterly Performance Reviews, while the long terms risks are discussed with EC during the annual strategy meeting.
Acute physical	Relevant, always included	Clariant has operations world-wide, with 7000 suppliers around the world. // Risk example: Change in precipitation extremes and droughts (potential local reduction or disruption in production capacity and supply chain) -Tropical cyclones (hurricanes and typhoons) (potential local reduction or disruption in production capacity - Induced changes in natural resources (potential higher costs and local shortages in the supply chain) // Risk assessment: Climate change risks (e.g. natural hazard risks) are evaluated on site level for all relevant production sites globally and checked regularly in the framework of insurance audits. Clariant Climate Strategy covers all regions globally where Clariant has a footprint, including specific regional focus.
Chronic physical	Relevant, sometimes included	Clariant has operations world-wide, with 7000 suppliers around the world. // Risk example: Change in precipitation extremes and droughts (potential local reduction or disruption in production capacity and supply chain) -Tropical cyclones (hurricanes and typhoons) (potential local reduction or disruption in production capacity - Induced changes in natural resources (potential higher costs and local shortages in the supply chain) // Risk assessment: Clariant performs a detailed annual water assessment for all Clariant sites located in water stressed areas (based on the World Resource Institute Aqueduct mapping). Clariant systematically tracks existing impacts and emerging risks related to the water availability according to CDP classification and categories (physical impact/risk due to increased water scarcity or water stress). Responsible ESHA country and site Managers have to report developments on water availability. Clariant is currently running a Pilot project with several sites under high water risks to implement a systematic and in-depth water related risks management process coupled with scenario analysis investigating future changes in 1. water availability, 2. quality, 3. regulations 4. supply chains and 4. possible stakeholder conflicts at local level.

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 & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased insurance claims liability

Company-specific description

Clariant Climate Strategy covers all regions globally where Clariant has a footprint (Noram, Latam, EMEA, India, South East Asia, Greater China), including specific regional or country specific focus.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Mainly precautionary costs. Costs for risk assessment covered over regular budgets. In addition to the Enterprise Risk Management process, Clariant also look specifically at climate related risks such as ee.g.: climate change related water risks (drought, precipitation, inundations) during the risk analysis of our production sites. It is one of the factors which influences the insurance rating of the site and has therefore a direct cost aspect.

Cost of response to risk

200,000

Description of response and explanation of cost calculation

Clariant reviews regularly risks related to natural hazards, i.e.: flooding, severe weather e.g. tornados, tsunami for all its sites. Climate change risks are evaluated on site level for all relevant production sites globally and checked regularly in the framework of insurance audits. Using a dedicated software, worst-case and other scenarios are calculated. Risk mitigation measures such as technical measures, investments and insurance, are then considered accordingly for managing the risk. Necessary costs for risk mitigation are covered over the regular budgets.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

In many countries where Clariant operates, rising energy prices can be expected in the short- to mid-term. Increasing energy or carbon taxes and regulatory driven costs (fuel, energy for production) increase operational costs. Based on our product portfolio the energy costs are on average at around 5% of our production costs. Depending on rise in energy prices, whereas increased costs could partly be compensated by energy efficiency measures and price increase. Increasing energy prices affect the chemical industry, making energy improvement always more important. Clariant's environmental performance has continuously improved in recent years thanks to sites' continuous efforts and our global programs to manage energy use and provide training.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12,000,000

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Based on our product portfolio the energy costs are on average below 5% of our production costs but can be much higher for certain businesses or operations. Depending on rise in energy prices, whereas increased costs could partly be compensated by energy efficiency measures and price increase.

Cost of response to risk

5,000,000

Description of response and explanation of cost calculation

Clariant has set clear targets for energy / CO₂ / greenhouse gas emissions to reduce resource consumption and mitigate this risk. Clariant consequently addresses production efficiency measures with a thorough, detail-oriented, and holistic approach. The Clariant Production System Yield, Energy, Environment (CPS YEE) approach takes into account the fact that costs related to yield (raw materials), energy, and environment usually make up a major part of production costs. This tool directly serves to increase yields and improving energy efficiency by analyzing specific production processes or production units to create a comprehensive picture of energy optimization. Through CPS YEE, Clariant identified savings of more than CHF 80 million since 2012. Clariant has also developed a comprehensive energy efficiency program called eWATCH that identifies savings potential through detailed analysis of energy consumption across operations. eWATCH oversees all forms and usages of energy at Clariant – electricity, heating and cooling, steam, natural gas, nitrogen, and the production of deionized water – by taking into account the design and setup of equipment and processes across Clariant's facilities. eWATCH is considering the generation of all energy types needed on site, by taking into account a holistic view, with respect to synergies, CO₂ reduction, make or buy decisions.

Comment**Identifier**

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Market

Increased cost of raw materials

Primary potential financial impact

Increased direct costs

Company-specific description

While climate change risks and impacts are generally well understood regarding the company's own footprint, there are high levels of uncertainty about the magnitude of their impact in the supply chain. Anticipating and responding to such risks is key. Climate change risks in the supply chain can increase existing risks, for example raw material availability (e.g. water, energy) or transport disruption due to extreme weather events. The resulting shocks on the global supply chain can be severe and persistent.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is not possible to date to indicate a specific global figure for supply chain (indirect) risks. Most impacts are local especially affecting the cost of raw materials.

Cost of response to risk

20,000

Description of response and explanation of cost calculation

Clariant supply chain risks assessment focusses on single source and geographical criteria and includes environmental aspects. Clariant assesses its supplier base (ca 25'000 companies) with regards to their sustainability performance. By joining the »Together for Sustainability« (TfS) initiative, Clariant has taken the sustainability monitoring of its suppliers to a new and much higher level. The TfS evaluation of suppliers – both with regard to raw materials and services – is based on a standard approach jointly developed by leading global chemical companies. It is managed through leading external services providers globally specialized in sustainability such as EcoVadis for assessments and DQU-UL, ERM, Intertek, and SGS for the audits.

Comment

It is not possible to date to indicate a specific global figure for supply chain risks. Most impacts are local especially affecting the cost of raw materials. The above sum only covers managing TfS membership costs.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Reputation
Shifts in consumer preferences

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Increasing demand for products that have a climate-friendly profile may affect customers and public opinion on products with high energy demand or a negative lifecycle footprint. According to Clariant's Sustainability Policy we proactively address this risk and Clariant's opportunities where we can contribute with innovative solutions. Our Portfolio Value Program helps classifying products as (1) Product standing out for their sustainability excellence performance, which can be distinguished by Clariant's EcoTain label; (2) Products representing a standard that is considered by Clariant an acceptable level of sustainability (which, however, goes beyond the regulatory requirements); and (3) Products falling below the Clariant sustainability standards, which will be part of an "Improvement Roadmap" and particularly checked for opportunities for improvement, replacement, or even discontinuation.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Clariant Portfolio Value Program aims to specifically address and further promote sustainability integration focusing on the product portfolio and innovation. This will help to equip us for the future with regard to how our products are produced and perform in terms of sustainability, enabling us to address specific sustainability topics such as Climate, as well as to strengthen the promotion of the sustainability performance of our products.

EcoTain® is Clariant's label for sustainability excellence products and solutions showcasing a best-in-class performance. Each product and solution carrying the EcoTain® label has undergone a systematic, in-depth screening process using 36 criteria in all three sustainability dimensions: social, environmental and economic.

Through this process, EcoTain® sets an ambitious benchmark that distinguishes products that significantly exceed market standards in general and have a best-in-class performance in one or several criteria screened. We evaluate the overall benefits and impacts across the entire value chain and product life cycle.

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

A significant share of Clariant's sales (approx. 30%) is based on products that contribute to reduction of carbon emissions: Our Catalysts business aims to be the preferred provider of innovative catalytic solutions to key markets. Catalysts serve for example for end of pipe solutions (e.g. EnviCat for NOx removal) or for methanization of CO2 (e.g. FCM 100).

Other flagship products contributing to emissions reduction are bio-based raw materials replacing fossil-based (for coatings, pigments, personal care, home care, and other), lightweighting solutions for automotive (foaming agent Hydrocerol®), sophisticated solutions for exhaust catalytic converters in vehicles (Advanced Zeolite Materials), or recycling of de-icing fluids (mitigating transportation and water use).

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,600,000,000

Potential financial impact figure – maximum (currency)

1,800,000,000

Explanation of financial impact figure

The estimated number for annual financial positive implications represents the estimated growth of the respective Businesses that are benefiting from low carbon and climate-friendly solutions.

Cost to realize opportunity

30,000,000

Strategy to realize opportunity and explanation of cost calculation

Clariant' aims to address sustainability in future-oriented ways that go beyond compliance and current standards. This holistic approach forms an important milestone for us on the way to realizing our vision and performance goals.

Clariant Portfolio Value Program (PVP) aims to specifically address and further promote sustainability integration focusing on the product portfolio and innovation. This helps to equip us for the future with regard to how our products are produced and perform in terms of sustainability, enabling us to address specific sustainability topics such as climate. The program is coordinated by Corporate Sustainability & Regulatory Affairs (CSRA) and a working group made up of representatives from all business units and relevant functions (e.g. Technology & Innovation, Product Stewardship, Procurement, Logistics, Legal and Communications).

To support the PVP program, Clariant has established the EcoTain® is own label for sustainability excellence products and solutions showcasing a best-in-class performance. Each product and solution carrying the EcoTain® label has undergone a systematic process, EcoTain® sets an ambitious benchmark that distinguishes products that significantly exceed market standards in general and have a best-in-class performance in one or several criteria (e.g.: emission reduction) screened.

Comment

The estimated cost figure is based on R&D spent

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Clariant is promoting the development of advanced 2nd generation biofuels and in particular biofuels using straw as a feedstock.

At EU level Clariant is proactively addressing these topic with policy makers (e.g.: EU Clean Energy Package and Renewable Energy Directive) in order to secure a binding blending target for advanced biofuels and secure a faster market deployment of our Sunliquid solution.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Regulatory developments in Europe and other regions could pave the way for a faster market deployment of second-generation biofuels. This would lead to significant financial opportunities resulting from sales of Clariant Sunliquid solution. Using the sunliquid process, 27 million tons of cellulosic ethanol could be produced from this volume of straw, which is equivalent to the energy content of almost 18 million tons of fossil-based petrol. This means that around 25% of the EU's demand for gasoline predicted for 2020 could be met by cellulosic ethanol.

Cost to realize opportunity

100,000,000

Strategy to realize opportunity and explanation of cost calculation

Clariant is proactively participating to the stakeholder dialog with public authorities both at EU and Member States level. Clariant is a member of several associations promoting the interest of biofuels' producers such as ePure, and the Leaders of Sustainable Biofuels. Clariant is also following closely the EU Renewable Energy policy developments and move towards a low-carbon economy. Clariant supports the deployment of clean, efficient and affordable Renewable energy sources to achieve the EU decarbonisation efforts.

Comment

The potential financial impact amounts to 100 m CHF of annual sales.
Cost to realize this opportunity is in line with published in the media.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Increasing energy prices affect Clariant, making energy improvement even more important especially for some sites and business activities.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,400,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Through eWATCH™, Clariant crafted a comprehensive energy efficiency program that analyzes energy consumption across operations and identifies potential cost-saving opportunities. Since 2013, a total of CHF 37.3 million was saved by implementing energy efficiency measures and energy-purchasing optimizations. In 2019 alone, Clariant managed to save CHF 4.4 million.

Cost to realize opportunity

5,000,000

Strategy to realize opportunity and explanation of cost calculation

The Clariant Production System Yield, Energy, Environment (CPS YEE) approach takes into account the fact that costs related to yield (raw materials), energy, and environment usually make up a major part of production costs. This tool directly serves to increase yields and improving energy efficiency by analyzing specific production processes or production units to create a comprehensive picture of energy optimization. Through CPS YEE, Clariant identified savings of more than CHF 80 million since 2012.

Clariant has also developed a comprehensive energy efficiency program called eWATCH that identifies savings potential through detailed analysis of energy

consumption across operations. Through large and small projects, energy consumption per kilogram of manufactured products has decreased by more than 20% in total compared to the base year 2013.

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Participation in renewable energy programs and adoption of energy-efficiency measures

Primary potential financial impact

Increased access to capital

Company-specific description

Responsible behavior qualifies for investors that focus on sustainable investments.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

56,700,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

A hypothetical increase in 1% of stock-price would equal a market value of CHF 56.7m.
(Market capitalization status 04.08.2020)

Cost to realize opportunity

30,000,000

Strategy to realize opportunity and explanation of cost calculation

Clariant is currently running a project to determine the feasibility of a roadmap to significantly reduce the emissions, which includes a Renewable Energy Procurement strategy. The expected benefits are resilience to climate change, energy security and mid to long-term cost savings.

Comment

Under evaluation

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization’s strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

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

Yes, qualitative

C3.1b

(C3.1b) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
IRENA	Clariant actively investigates both climate transitional and physical risks. This year, Clariant is working toward the integration of a dedicated risk and opportunity management process for all our businesses. This will be performed based on a number of tools and climate-related scenario analysis. In this context, Clariant will follow the recommendations of the Task Force on Climate related Financial Disclosures (TCFD), use the climate risk drivers as developed by CDP, and complement our approach with scenario analysis such as IRENA's REmap to guide our future investment decisions on e.g.: possible technology pathways with regard to renewable energy.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>Clariant's Carbon footprint is mostly coming from its Scope 3 emissions (86% in 2019), so our strategy is not only focused on our own operations, but also covers the value chain.</p> <p>Considering that more than 80% of the environmental impacts of a product is determined at the design stage, at Clariant the topics of climate change, bio-economy and energy-efficiency – to mention a few – are taken into account at the early stage of the R&D process using Clariant's Portfolio Value Program (PVP).</p> <p>The PVP is a systematic approach for assessing and continuously improving the sustainability performance of products and innovation projects. Based on 36 criteria the solutions are assessed throughout their entire life cycle on their strengths and weaknesses with regards to environment, social and economic aspects. This evaluation provides better visibility of specific product sustainability performances, and generates concrete actions in order to optimize the product or its value chain.</p> <p>As a result of the PVP, more than 25% of Clariant's sales in 2019 can be associated with solutions that enable a third party to avoid GHG emissions or that are classified as low carbon. Examples of existing products contributing to GHG emissions reduction are lightweight solutions for automotive applications, such as the foaming agent Hydrocerol or the catalyst EnviCat, which significantly reduces nitrogen oxide emissions.</p> <p>Starting in 2019 a dedicated workstream was put in place to develop a roadmap to reduce Clariant's Scope 3 emissions. It started with a deep-dive analysis with a group of internal experts to evaluate the main emission sources, followed by the collection of potential ideas for emission reduction. These ideas were prioritized in terms of technical approval needs, influenceability by Clariant, and potential cost impacts. A systematic approach for engaging with value chain partners will be further developed in 2020.</p>
Supply chain and/or value chain	Yes	<p>Clariant's Carbon footprint is mostly coming from its Scope 3 emissions (86% in 2019), so our strategy is not only focused on our own operations, but also covers the value chain.</p> <p>More than 50% of the Clariant's 2019 carbon footprint is derived from purchased raw materials. In the future, an increasing share of bio-based raw materials will replace fossil-based resources, potentially leading to a reduced product carbon footprint. Therefore, in 2018 Clariant has signed an agreement for a new partnership with NESTE, the world's</p>

		<p>leading provider of sustainable renewable chemical solutions. Through this partnership, Clariant can create advanced polyolefin solutions derived from renewable hydrocarbons for a wide range of applications. Starting in 2019 a dedicated workstream was put in place to develop a roadmap to reduce Clariant's Scope 3 emissions. It started with a deep-dive analysis with a group of internal experts to evaluate the main emission sources, followed by the collection of potential ideas for emission reduction. These ideas were prioritized in terms of technical approval needs, influenceability by Clariant, and potential cost impacts. A systematic approach for engaging with value chain partners will be further developed in 2020.</p>
Investment in R&D	Yes	<p>Clariant's climate strategy also aims to boost and incentivize low carbon innovations, such as the sunliquid technology and Carbon2Chem. Please see below some company specific examples of how these business objectives and strategy have been influenced by climate-related issues:</p> <ul style="list-style-type: none"> - Regulatory environment: In China's fast-growing market, for example, stricter emission legislation led to an increase in demand for catalysts. In the EU, the Renewable Energy Directive foresees a 3.5% usage of advanced bio-fuels by 2030, and China is aiming to achieve a 10% renewable ethanol content in transportation fuels in the next few years. These commitments offer substantial growth potential for the Business Line Biofuels & Derivatives. In September 2018 Clariant officially started the construction of the first large-scale commercial sunliquid® plant. The Clariant's sunliquid® is a groundbreaking technology to produce biofuels and renewable raw materials from agricultural residues, where the resulting cellulosic ethanol is an advanced biofuel that is practically carbon-neutral. Link: https://www.clariant.com/en/Corporate/News/2018/09/Groundbreaking-for-Clariant-s-sunliquid-reg-cellulosic-ethanol-plant-in-Romania - Opportunities to develop sustainable business: In the 2nd half of 2018 the pilot plant of the Carbon2Chem® project has started its operation. The Carbon2Chem project aims at using emissions from steel production as raw material for chemicals. The step change is that the share of blast furnace gases in the steel production will be used for a second time in the chemical production. This cross-sectoral collaboration will deliver on both, value creation in a circular economy as well as significant CO₂ savings. Clariant is a partner in this program for the sustainable methanol production together with other players. Link: http://www.circularity.eu/project/carbon2chem/
Operations	Yes	<p>At operational level, Clariant's Scope 1 and 2 together represent 14% of the company's carbon footprint. Although they are lower than the Scope 3, the influence for emission reduction activities is higher. Clariant aims to reduce energy consumption and direct CO₂ emissions by 30 %, GHG emissions, water consumption, and waste volume by 35 %, and</p>

		<p>wastewater volume by 40 % in relation to produced goods (base year: 2013). Clariant Operational Excellence is the tool to continuously investigate and implement environmental improvements. Starting in 2019, Clariant has also set up a Climate Change Core team responsible for developing a carbon analysis covering the top 20 sites globally which are contributing to 80% circa of the company's overall Global Scope 1 and 2 emissions. Based on these most relevant sites, several workshops were carried out to identify the hotspots of emissions sources, and opportunities for improvement. To increase the share of clean electricity in the consumed mix, Clariant started developing a global strategy by investigating drivers, sourcing options, contractual instruments, and the feasibility of green energy solutions. The increase in renewable energy use will have a positive, direct effect on GHG emissions. The Core Team will also be responsible for managing the project pipeline, selecting and prioritizing the projects for emission reduction roadmap following an internal stage gate process. The highest investment decisions carried out at the company are approved by the Executive Committee. From the top projects identified, a carbon pricing sensitivity analysis was carried out based on a CHF 50 per ton of CO2 to identify which projects would become more attractive. This analysis will serve as a basis to develop a proposal for an internal carbon pricing mechanism, which will be finalized later in 2020. In addition, and following the TCFD recommendations, Clariant is currently assessing how to further integrate a dedicated climate risks and opportunities management process at the group-wide level, supported by the establishment of an internal carbon pricing mechanism.</p>
--	--	---

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	<p>Clariant strives to be known as a powerhouse for Research and Development and Innovation and to increase value by applying a forward-looking sustainability lens to operations and market offerings. The PVPR&D methodology enables researchers to evaluate their new developed products for sustainability criteria on an early stage. The criteria of the PVPR&D tool covers all environmental, economic and social criteria named in this chapter of this sustainability assessment. Climate-related risks and opportunities are identified at this stage. // Magnitude: High. As disclosed in C4.5a the 2019 share of revenue from low-carbon products and avoided emissions products are 3% and 25%, respectively.</p> <p>As disclosed in C11.1a, one Clariant plant in Europe is under the EU</p>

	<p>ETS and one in Switzerland (under Switzerland carbon tax). For these two sites and all other Clariant's sites, we have internal programs to reduce operating costs - such as the eWATCH, Clariant Operational Excellence, and the Clariant Production System Yield, Energy, Environment (YEE) initiative. // Magnitude: High. Since 2013, a total of CHF 37.3 million was saved by implementing energy efficiency measures and energy-purchasing optimizations through eWATCH. In 2019 Clariant managed to save CHF 4.4 million. The YEE achieved savings of CHF 80 million since 2012, while in 2019 alone the savings amounted to CHF 6 million.</p> <p>A corporate project investigated options to integrate a specific Climate Risks and Opportunities process for all Clariant Businesses and regions. Clariant Sustainability Council, chaired by our CEO, endorsed the proposal which is under implementation. Discussion on the results of the Climate Risk and Opportunities management process should take place in "Climate risk & opportunities workshop" as part of the annual risk management process. Our renewed approach to climate change risk management is based on the recommendations of the Task-Force on Climate Financial Disclosure (TCFD) and the risks and opportunities drivers listed by the Carbon Disclosure Project. The conclusions of such integration will result into a specific risk & opportunities management process for climate change issues. Starting in 2019, Clariant has set up a Climate Change Core team responsible for developing a carbon analysis covering the top 20 sites globally which are contributing to 80% circa of the company's overall Global Warming Potential (Scope 1 + 2). Based on these most relevant sites, several workshops were carried out to identify the hotspots of emissions sources, and opportunities for improvement. The Core Team will also be responsible for managing the project pipeline, select and prioritize the projects for emission reduction roadmap following a set of criteria and an internal stage gate process. The highest investment decisions carried out at the company are approved by the Executive Committee. From the top projects identified, a carbon pricing sensitivity analysis was carried out based on a CHF 50 per ton of CO₂ to identify which projects would become more attractive. This analysis will serve as a basis to develop a proposal for an internal carbon pricing mechanism, which will be finalized later in 2020. // Magnitude: Over two digit million CHF to significantly reduce emissions in absolute terms in the next decade.</p> <p>Clariant has a strong commitment to sustainability and is a signatory to the chemical industry's Responsible Care initiative. Its Sustainability Policy is publicly available on its web-site and outlines the company's commitment. the company has established several guidelines, policies, and processes for ensuring the implementation of its sustainability commitment. These are mainly in the area of Environment, Health and Safety Aspects (ESHA), but not exclusively as Clariant integrates relevant requirements ensuring environment, health and safety are</p>
--	--

		<p>considered across its various activities. Guidelines are therefore also developed and applicable in Group Engineering, Group Logistics Services, and Group Procurement Services. For new products and projects, applicable requirements are developed by Corporate Sustainability & Regulatory Affairs as well as Corporate Product Stewardship, Group Technology and Innovation and Group Process Engineering. Requirements also exist for due diligence, mergers and acquisitions, and a guideline has been developed by Group M&A outlining the different responsibilities. In addition, Corporate Sustainability & Regulatory Affairs/ESHA is developing more detailed guidance with regard to certain responsibilities in business transactions. // Magnitude: unknown.</p>
--	--	--

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

Sustainability is one of the 5 pillars of Clariant's corporate strategy and climate change was identified as a theme of high materiality for the company. Climate change influence Clariant's business strategy both from a risk and opportunity perspective, e.g. regulation, costs, reputation, market opportunities, customer demands, carbon market.

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

Year target was set

2014

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO₂e per unit of production

Base year

2013

Intensity figure in base year (metric tons CO₂e per unit of activity)

0.3

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

35

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated]

0.195

% change anticipated in absolute Scope 1+2 emissions

35

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO₂e per unit of activity)

0.198

% of target achieved [auto-calculated]

97.1428571429

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

A 34% reduction of scope 1 and 2 emissions (as intensity target measure) from base year 2013 has been achieved. We are well on track towards achieving our target which is 35% reduction of scope 1+2 emissions per ton production by 2025. We have understood the % change anticipated to be the gross/absolute emissions change in 2025 (target year) relative to the base year. Direction of change anticipated in absolute Scope 1+2 emissions at target completion is decrease in emissions. We maintained consistency with last year's understanding of the % change anticipated by 2025.

Target reference number

Int 2

Year target was set

2014

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Other, please specify

Direct CO2

Intensity metric

Metric tons CO2e per unit of production

Base year

2013

Intensity figure in base year (metric tons CO2e per unit of activity)

0.12

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

30

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.084

% change anticipated in absolute Scope 1+2 emissions

30

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.089

% of target achieved [auto-calculated]

86.1111111111

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

An 25% reduction of direct CO2 emissions from own boilers and processes per ton production (as intensity target measure) from base year 2013 has been achieved. We are well on track towards achieving our target reduction of 30% of direct CO2 by 2025.

C4.2

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

Other climate-related target(s)

C4.2b

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

Target reference number

Oth 1

Year target was set

2014

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Target denominator (intensity targets only)

GJ

Base year

2013

Figure or percentage in base year

3.3

Target year

2025

Figure or percentage in target year

2.3

Figure or percentage in reporting year

2.59

% of target achieved [auto-calculated]

71

Target status in reporting year

Underway

Is this target part of an emissions target?

A 22% reduction of energy consumption per ton produced (as intensity target measure) from base year 2013 has been achieved. We are well on track towards achieving our target reduction of 30% of energy consumption (as intensity target measure) by 2025

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)**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	0	0
To be implemented*	13	42,000
Implementation commenced*	12	846
Implemented*	118	146,984
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

934

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

2,441

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

142

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Projects for optimization of lightning and air conditioning implemented

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

12,963.1

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

4,510

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

11,317

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Projects implemented for energy efficiency process optimization include thermal efficiency improvements such as the utilization or recuperation of waste heat/steam, shift from coal to gas, reduced usage or utilities such as compressed air, isolation of pipelines, elimination of leakages, and more.

Initiative category & Initiative type

Non-energy industrial process emissions reductions
 Process equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

100,006

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

537

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

7

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Implemented process emission reductions include replacement of less efficient equipment, setup optimization, etc.

C4.3c

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

Method	Comment
--------	---------

Compliance with regulatory requirements/standards	Clariant is convinced that sustainable business success is closely linked to strict compliance with laws, regulations, and ethical standards. Clariant has always been committed to this principle.
Dedicated budget for energy efficiency	Clariant has developed an extensive energy efficiency program under the name »eWATCH« which identifies savings potential through the calculation and analysis of energy consumption. This potential results from an optimized use of machines and systems. Machines are incorporated and used in the production process so that they run at or near the best level of efficiency. This is supplemented through a sharpening of the energy awareness of employees and through training in the areas surrounding energy-saving possibilities.
Other Business strategy	Energy savings and emission reduction goals are integrated part of the businesses strategies and supervised by Clariant Executive committee.
Internal incentives/recognition programs	Monetary and recognition rewards from Executive committee to all employees level.

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

Company-wide

Description of product/Group of products

Clariant has reviewed its product portfolio and classified those products that made based on renewable raw materials as low carbon products. However, where such products are also enabling third parties to avoid GHG emissions, these are excluded and instead considered as "avoided emissions" in line with our focus on providing value to our customers. and downstream industries. Thus, only products that are bio-based without added GHG emission reduction functionality are currently being defined as Clariant's "low carbon" products. This current approach based on the available screenings leads to a low share of 3% of the total product portfolio sales, while 25% are to be allocated to the products enabling GHG emission reductions.

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

Low-carbon product

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

Other, please specify

Please see "comment" below

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

3

Comment

Clariant does in principle not differentiate between products that are enabling a third party to avoid emissions, on the one side, and so called low carbon products, on the other side. This is due to its position in the value chain, i.e. the company is rather upstream in the value chain, a B2B-business and many of its products are intermediates that are further processed or used by other manufacturing industries. Clariant being a specialty chemicals company is focused on developing performance advantages and solutions for its customers. Hence, its focus is on developing and marketing the abilities, particular functions and value of its chemicals rather than the product composition. This is also part of our value-based offering and selling strategy which moves away from the pure product strategy.

There is no currently available or commonly recognized of "low-carbon product" in the chemical industry. A definition for chemicals would have to relate to a particular benchmark that can support easy and rather accepted distinction between products, e.g. comparing bio-based to fossil-based chemicals, or otherwise have to be defined by the company itself in terms of internal benchmarks. Choosing the first option, Clariant has reviewed its product portfolio and classified those products that are based on renewable raw materials as low-carbon products. As the review under the Portfolio Value Program mainly concerned products, where the biobased content is claimed and plays a role in the marketing for down-stream user markets, the full number of bio-based products in Clariant's product portfolio is however not captured.

Level of aggregation

Company-wide

Description of product/Group of products

Catalysts for chemical processes directly and indirectly (e.g. via energy savings) reduce emissions, e.g. nitrous oxide purification equivalent to an output of 12 million tons CO₂e with Clariant's EnviCat - Substitute natural gas (SNG) can be produced in an environmentally compatible manner from hydrogen and CO₂ generated using renewable energies with Clariant's FCM 100catalyst. 2 800 t of CO₂ are bound by producing 1.4 m³ of SNG in this way.

– Other examples include: Packaging materials use and transportation footprint for products with Clariant's foaming agent for insulation material, special pigments reducing the energy consumption and VOC emissions for the customers when using our products, foundry additives supporting emission reductions for foundries, deicing fluids that are recyclable, home care products that are more energy efficient.

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

Other, please specify

Please see "comment" below

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

25

Comment

From all products listed, only the below mentioned were included in the evaluation and, therefore, the total avoided emissions is underestimated. However, we have started putting more efforts in avoided emissions calculations and we are confident that we will improve our data coverage and representativeness for the upcoming years. For avoided emissions to third parties: full BU Catalyst and Hydrocerol (lightweight solution) for automotive applications were estimated based mainly on ICCA/ECOFYS and DECHEMA studies, as well as one Masterbatch product compared to another solution in the market, which was based on a study verified by DNV.

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)

677,781

Comment

We are systematically monitoring our scope 1 emissions (direct CO₂ and other greenhouse gases) across all our operations. For our Target 2025 initiative, the selected KPI is direct CO₂ emissions which is to be reduced by 30% until 2025.

Scope 2 (location-based)**Base year start**

January 1, 2013

Base year end

December 31, 2013

Base year emissions (metric tons CO2e)

629,465

Comment

We are systematically monitoring our scope 2 emissions across all our operations. For our Target 2025 initiative, the selected KPI is indirect GHG emissions, which combined with Scope 1, is to be reduced by 35% until 2025.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Clariant is reviewing scope 2 reporting methodology in order to also calculate emissions based on market-based approach and the GHG Protocol accounting standards. A dual reporting methodology could be considered in the next reporting year to disclose emissions from purchased electricity and residual data when a location-based calculation is exclusively available.

C5.2

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

- European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
- The GHG Indicator: UNEP Guidelines for Calculating Greenhouse Gas Emissions for Businesses and Non-Commercial Organizations
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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)

381,341.1

Comment

The gross global scope 1 emissions in the year 2019 is reported here. We have achieved 43% reduction in gross scope 1 emissions from the base year 2013.

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 operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based

461,093.9

Comment

The gross global scope 2 emissions in the year 2019 is reported here. We have achieved 27% reduction in gross scope 2 emissions from the base year 2013

C6.4

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

Yes

C6.4a

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

Source

We have collected the 2019 environmental key figure data from all production sites, except from those smaller sites having a very limited footprint. The sites not included are considered irrelevant in relation to the total emission, of which the total sum of sites excluded is lower than 5% of the group-wide emissions. The full scope of key figure data collection from all production sites (including the smaller sites) is done every 3 years, of which the latest was done for the 2017 full year. This approach has been externally verified by PWC.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

We have collected the 2019 environmental key figure data from all production sites, except from those smaller sites having a very limited footprint. The sites not included are considered irrelevant in relation to the total emission, of which the total sum of excluded sites is lower than 5% of the group-wide emissions. The full scope of key figure data collection from all production sites (including the smaller sites) is done every 3 years, of which the latest was done for the 2017 full year. This approach has been externally verified by PWC.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

3,210,000

Emissions calculation methodology

In accordance with the WBCSD "Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain", this calculation is based on a list comprising 80% (by weight) of most relevant purchased raw materials, which were multiplied by their respective emissions factors provided from life cycle inventory databases. The resulting GHG emissions were extrapolated to 100%. Note: Services and capital goods are not included in this category.

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

0

Please explain

The relevance of this category was based on the Table 6.1 of the "Corporate Value Chain (Scope 3) Accounting and Reporting Standard". This category is a relevant calculated sources of scope 3 emissions for Clariant which accounted for the majority of scope 3 emissions in the reporting year. In addition to the size of emissions, this category is considered relevant due to potential risks (supply chain disruptions as well as reputation risks), due to potential for emission reduction activities, and also is the most relevant category indicated by the stakeholders for the chemical industry (see WBCSD Chemicals guidance).

Capital goods**Evaluation status**

Not relevant, explanation provided

Please explain

In 2019, Clariant purchased roughly CHF 2.6 billion (60%) worth of raw materials and CHF 1.6 billion (40%) of other products and services, such as technical equipment and energy. Considering that a relevant part of these 40% is the purchase of energy, which is already taken into account in Category 3 of Scope 3 emissions and Scope 2 emissions, it is estimated that the amount actually related to capital goods emissions are lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are much lower than compared to the other Scope 3 categories.

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

Relevant, calculated

Metric tonnes CO₂e

290,000

Emissions calculation methodology

For category 3A Clariant collected fuels based on the energy content (GJ). For Category 3B information on electricity and steam purchased per country were collected and multiplied by well-to-tank emission factors, reflecting the emissions from extraction, refining and transportation or primary fuels before their use in the generation of electricity. For Category 3C it was collected electricity and steam purchased per country, and for Category 3D Clariant collected electricity purchased and sold to end users. The well-to-tank and combustion emissions factors were taken from life cycle inventory databases and DEFRA (Department for Environment, Food and Rural Affairs: United Kingdom). Electric power transmission and distribution losses per country were taken from World Development Indicators.

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

0

Please explain

Fuel and energy-related emissions are predominantly due to electricity consumption. Most of our sites, we do not record the renewable/non-renewable parts of the electricity we purchase and sell. This is also the case of our other indirect energies, which is mainly steam. Therefore our total renewable energy consumption is underestimated which in turn results in over-estimation of our scope 2 and 3 emissions. However, we have started to increase data transparency in our renewable electricity consumption and we expect this will result in use of primary data in the coming years.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

170,000

Emissions calculation methodology

Following GHG Protocol "Technical Guidance for Calculating Scope 3 Emissions", the distance-based method was applied using extrapolated materials purchased. In this method, distance is multiplied by mass of goods transported and emission factors for the mode of transport. For Europe, road, rail, ship, pipeline and intermodal were considered, while for other regions deep-sea shipping and road were considered. The deep-sea port-to-port travel distances were determined from online maps, and for road a general 500 km distance is applied. Emission factors were taken from CEFIC-Ecta "Guidelines for Measuring and Managing CO₂ Emissions from Freight Transport Operations".

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

0

Please explain

This category is one of the most relevant calculated sources of scope 3 emissions for Clariant which accounted for relevant scope 3 emissions in the reporting year. In addition to the size of emissions, this category is considered relevant due to potential risks (mainly supply chain disruptions), due to the potential for emission reduction activities, being one of the most relevant category indicated by the stakeholders for the chemical industry (see WBCSD Chemicals guidance).

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Please explain

This category emissions are lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are lower than compared to the other Scope 3 categories.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

34,415

Emissions calculation methodology

Business travel data (flights, rental cars, rail and hotels) was analyzed and calculated by a German NGO (Atmosfair) using the VDR and DEFRA/GHG Protocol methodology.

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

0

Please explain

This category emissions are much lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are lower than compared to the other Scope 3 categories.

Employee commuting

Evaluation status

Not relevant, explanation provided

Please explain

This category emissions are much lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are lower than compared to the other Scope 3 categories.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

This category emissions are lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are lower than compared to the other Scope 3 categories.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

330,000

Emissions calculation methodology

Following GHG Protocol “Technical Guidance for Calculating Scope 3 Emissions”, the distance-based method was applied using extrapolated materials sold. In this method, distance is multiplied by mass of goods transported and emission factors for the mode of transport. For Europe, road, rail, ship, pipeline and intermodal were considered, while for other regions deep-sea shipping and road were considered. The deep-sea port-to-port travel distances were determined from online maps, and for road a general 500 km distance is applied. Emission factors were taken from CEFIC-Ecta “Guidelines for Measuring and Managing CO₂ Emissions from Freight Transport Operations”.

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

0

Please explain

This category is one of the most relevant calculated sources of scope 3 emissions for Clariant which accounted for the majority of scope 3 emissions in the reporting year. In addition to the size of emissions, this category is considered relevant due to potential risks (mainly supply chain disruptions), due to the potential for emission reduction activities, being one of the most relevant category indicated by the stakeholders for the chemical industry (see WBCSD Chemicals guidance).

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Following WBCSD “Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain”, this Scope 3 source is not calculated because the diversity of applications generally cannot be reasonably tracked.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Generally, basically none of Clariant products are GHG or directly emit GHG at use phase, therefore it is expected that the use of sold products emissions are much lower than 3% of the overall corporate emissions and therefore less relevant than other Scope 3 categories

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,000,000

Emissions calculation methodology

Following the WBCSD “Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain” and the GHG Protocol “Technical Guidance for Calculating Scope 3 Emissions”, the waste-type-specific method was applied. The emission factor was based on the carbon content of the raw materials, and regional treatment shares included landfill and incineration (with and without energy recovery). Recycling was not included as a conservative approach as reliable data is not yet available in the regions.

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

0

Please explain

This category is one of the most relevant calculated sources of scope 3 emissions for Clariant which accounted for the majority of scope 3 emissions in the reporting year. In addition to the size of emissions, this category is considered relevant due to the influence on emissions, being one of the most relevant category indicated by the stakeholders for the chemical industry (see WBCSD Chemicals guidance).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

It is expected that downstream leased assets emissions are lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories. In addition, the risks, the potential for emission reduction and the relevance to stakeholders are lower than compared to the other Scope 3 categories.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Not relevant for Clariant business model.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

In 2019 the vast majority of Clariant's revenues from investments are due to associates. The most relevant associates with over 20% interest (as recommended by WBCSD) are Infraserivs (see Clariant's 2019 Financial Report), of which a relevant portion of the emissions are already reflected in Clariant's Scope 2 emissions reporting. With regards to Joint Ventures (JVs), the revenues in 2019 represent around 2% of Clariant sales in 2019. As a consequence, it is expected that investments emissions, not yet included in Scope 1 or 2, are lower than 3% of the overall corporate emissions, and therefore less relevant than other Scope 3 categories.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	81,043	The emissions of CO2 from biologically sequestered carbon were calculated based on the total amount of biomass, biofuels, and/or biogas consumed multiplied by their respective emission factors.

C6.10

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

Intensity figure

0.198

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

842,435

Metric denominator

metric ton of product

Metric denominator: Unit total

4,247,454

Scope 2 figure used

Location-based

% change from previous year

7.9

Direction of change

Decreased

Reason for change

In 2019, the energy consumption per ton of produced goods decreased by 2.7%, while the GHG emissions from production and energy (Scope 1 & 2) decreased by 7.9% compared to 2018.

The decrease in emissions indicates Clariant's shift to cleaner energy sources, such as natural gas. Other activities leading to emissions reduction are disclosed in Section C4.3a of this 2019 CDP response.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	379,381.18	Other, please specify

		GHG Indicator obtained from GHGprotocol.org
HFCs	1,902.52	Other, please specify GHG Indicator obtained from GHGprotocol.org
CH4	7	Other, please specify GHG Indicator obtained from GHGprotocol.org
N2O	50	Other, please specify GHG Indicator obtained from GHGprotocol.org

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Germany	71,047
Indonesia	63,388
United States of America	58,544
China	45,140
Switzerland	415
India	34,440
Brazil	24,610
Other, please specify Rest of the world	83,758

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
BU FM	201,373
BU ICS	60,775
BU CA	88,908
BU PI	20,923

OTHERS	9,363
--------	-------

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Germany 1	37,222	48.57	11.95
United States 3	11,588	38.173866	-85.748683
China 1	39,840	41.45	119.54
Indonesia 1	35,718	-7.12	106.75
Indonesia 2	23,595	-6.38	106.97
United States 1	29,819	38.24	-85.77
Brazil 1	16,762	-23.53	-46.29
Mexico 1	18,316	19.1	-98.21
United States 2	12,926	35.3	-81.01
Others	142,521	0	0

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
From Boilers and Combustion Sources	360,288.82
From Process Sources	19,092.36
Other sources	1,959.92

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 CO2e	Comment
Chemicals production activities	381,341	Clariant is a specialty chemicals company. Therefore our group gross Scope 1 emission value is given here.

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Germany	214,187.88		906,138.45	
United States of America	61,853.87		122,486.13	
Indonesia	24,501.21		28,565.92	
China	55,278		112,766.9	
India	40,855.92		49,166.89	
Brazil	0		38,085.88	
Mexico	10,291.92		23,475.42	
Other, please specify Rest of the world	54,125.1		128,963.9	

C7.6

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

- By business division
- By facility
- By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
BU FM	60,801.92	
BU ICS	139,258.77	
BU PI	105,858.98	
BU CA	78,499.08	
Others	76,675.14	

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Germany 1	79,732.26	
Germany 2	74,498.74	
Germany 3	35,771.38	
United States 1	23,917	
India 1	17,206.59	
China 1	14,000.24	
United States 2	14,889.95	
China 2	12,536.96	
India 2	9,812.09	
Others	166,822.3	

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
All activities	461,093.9	

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 CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	461,093.9		Clariant is a specialty chemicals company our group wide production activity is chemical production. Therefore our group gross Scope 2 emission value is given here.

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
Methanol	1	Emissions from the selected purchased feedstock were divided by total Scope 3 emissions, Category 1
High Value Chemicals (Steam cracking)	11	Emissions from the selected purchased feedstock were divided by total Scope 3 emissions, Category 1

C-CH7.8a

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

	Sales, metric tons	Comment
Carbon dioxide (CO ₂)	686	
Methane (CH ₄)		
Nitrous oxide (N ₂ O)		
Hydrofluorocarbons (HFC)		
Perfluorocarbons (PFC)		
Sulphur hexafluoride (SF ₆)		
Nitrogen trifluoride (NF ₃)		

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
--	---	---------------------	------------------------------	----------------------------

Change in renewable energy consumption	28,989.6	Decreased	3.1	Clariant is starting to increased renewable energy use across all its businesses. This in turn is reflected in a decreased Scope 2 emissions.
Other emissions reduction activities	113,976	Decreased	12.19	Emissions saved from projects implemented in 2019 as disclosed in CDP chapter 4.3a.
Divestment				In 2019, Clariant divested its Healthcare Packaging unit. Although, this will affect the emission data, we are unable to capture the exact data due to the structure of the organization.
Acquisitions				No relevant changes
Mergers				No relevant changes
Change in output	1,439	Increased	0.15	Clariant's GHG emissions decreased from 0.93 million t to 0.84 million t, partly due to the reduced production volume in 2019 (-2.2%). At the same time other factors contributed, to the decrease, for example reduction projects, which means a decrease in emission intensity from 215 to 198 kg per manufactured ton of production. Therefore, assuming that the 2018 specific KPI would have been applied in 2019 production, the GHG emissions would be 0.91 million t. The difference between the estimated emissions and real emissions is 18305 tCO ₂ e.
Change in methodology				No relevant changes
Change in boundary	44,137.88	Decreased	4.7	The change in boundary is due to the fact that once every 3 years reporting cycles, we also includes smaller sites which have less than 5% effect on the group KPIs.
Change in physical operating conditions				No relevant changes
Unidentified				Not relevant

Other	93,232.6	Increased	9.97	This figure is also related to "Change in output", however, it is not possible to add a new field named "Change in output", therefore this category was used. Although there was an overall production decrease, certain sites had increased production, leading to increased emissions.
-------	----------	-----------	------	--

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 5% but less than or equal to 10%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	125,160.77	1,509,081.25	1,634,242.02
Consumption of purchased or acquired electricity		239,106	464,535.66	703,641.66
Consumption of purchased or acquired steam		0	684,696.86	684,696.86
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		364,266.77	2,658,313.77	3,022,580.54

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)	Unable to confirm heating value	1,634,242.02
Consumption of purchased or acquired electricity		703,641.66
Consumption of purchased or acquired steam		684,696.86
Consumption of self-generated non-fuel renewable energy		0
Total energy consumption		3,022,580.54

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	No

Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Fuels (excluding feedstocks)

Bituminous Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

31,077

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

31,077

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

2.4

Unit

metric tons CO2 per metric ton

Emissions factor source

This is average emission factor calculated based on historical emission factors.

Comment

Bituminous coal for steam generation

Fuels (excluding feedstocks)

Diesel

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

54,886

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

3.2

Unit

metric tons CO2 per metric ton

Emissions factor source

This is average emission factor calculated based on historical emission factors.

Comment

Diesel mostly used for forklifts

Fuels (excluding feedstocks)

Lignite Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

145,302

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

145,302

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

2.4

Unit

metric tons CO2 per metric ton

Emissions factor source

This is average emission factor calculated based on historical emission factors.

Comment

Lignite coal for steam generation

Fuels (excluding feedstocks)

Natural Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

1,217,589

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

1,217,589

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

2.6

Unit

metric tons CO2 per metric ton

Emissions factor source

This is average emission factor calculated based on historical emission factors.

Comment

Natural gas for steam generation

Fuels (excluding feedstocks)

Bagasse

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

125,161

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

125,161

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

2.7

Unit

metric tons CO2 per metric ton

Emissions factor source

For our scope 1 calculations, we consider the emissions from bagasse to be 0 due to its biogenic carbon.

Comment

Bagasse for steam generation

Fuels (excluding feedstocks)

Crude Oil Heavy

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

60,227

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

60,227

MWh fuel consumed for self-cogeneration or self-trigeneration

Emission factor

3.1

Unit

metric tons CO2 per metric ton

Emissions factor source

This is average emission factor calculated based on historical emission factors.

Comment

Crude oil for steam generation

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	39,020	39,020		
Heat				
Steam	1,263,484.68	1,263,484.68	100,128.61	100,128.61
Cooling				

C-CH8.2d

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

	Total gross generation (MWh) inside chemicals sector boundary	Generation that is consumed (MWh) inside chemicals sector boundary
Electricity	39,020	39,020
Heat		
Steam	1,263,484.68	1,263,484.68
Cooling		

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

Yes

C-CH8.3a

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

Fuels used as feedstocks

Naphtha

Total consumption

21,613

Total consumption unit

metric tons

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

3.1

Heating value of feedstock, MWh per consumption unit

13.4

Heating value

HHV

Comment

Inherent CO2 emission factor was based on the carbon content * 44/12. The heating value of feedstock is based on the specific fuel HHV.

Fuels used as feedstocks

Diesel oil

Total consumption

16,809

Total consumption unit

metric tons

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

3.2

Heating value of feedstock, MWh per consumption unit

12.7

Heating value

HHV

Comment

Inherent CO2 emission factor was based on the carbon content * 44/12. The heating value of feedstock is based on the specific fuel HHV.

C-CH8.3b

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

	Percentage of total chemical feedstock (%)
Oil	95
Natural Gas	
Coal	
Biomass	5

Waste (non-biomass)	
Fossil fuel (where coal, gas, oil cannot be distinguished)	
Unknown source or unable to disaggregate	

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)

4,247,454.4

Capacity (metric tons)

0

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

0.0897

Electricity intensity (MWh per metric ton of product)

0.1656

Steam intensity (MWh per metric ton of product)

0.1612

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

0

Comment

See chapters C4, C5, C6, C7, C8 for more details. The capacity data is set as zero because it is not possible to provide an accurate figure due to the broad portfolio and production mix, especially in multi-purpose sites where many different types of products are manufactured with different production times. Clariant reuses heat energy, but so far this has not yet been calculated at group-wide level, therefore we have set it to zero as well.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CH9.6a

(C-CH9.6a) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Bio technology	Small scale commercial deployment	≤20%		In 2018 Clariant officially started the construction of the first large-scale commercial sunliquid plant for the production of cellulosic ethanol made from agricultural residues. At full capacity, the plant will process around 250 000 tons of wheat and other cereal straw sourced from local farmers to 50 000 tons of cellulosic ethanol annually. It will allow local farmers to industrially market straw for the first time, which was previously practically unutilized agricultural residue. By-products from the process will be used for the generation of renewable energy with the goal of making the plant independent from fossil energy sources. The resulting cellulosic ethanol is therefore an advanced biofuel that is practically carbon-neutral.

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/ section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 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

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/ section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services

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

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

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

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

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Upstream transportation and distribution

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

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Downstream transportation and distribution

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

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: End-of-life treatment of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 clariant_integrated_report_2019_en.pdf

 clariant_gri_report_2019_en.pdf

Page/section reference

2019 Integrated Report: pp. 194-195

2019 GRI Report: pp. 85-87

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100


C10.2

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


Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISAE 3000, ISAE 3410	Clariant verifies the progress of its 2025 environmental targets on an annual basis. Please see on the enclosed Integrated Report (pp. 194-195) the limited assurance including the environmental data.  1, 2

 ¹clariant_integrated_report_2019_en.pdf

 ²clariant_gri_report_2019_en.pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

EU ETS

Switzerland carbon tax

C11.1b

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

EU ETS

% of Scope 1 emissions covered by the ETS

17.2

% of Scope 2 emissions covered by the ETS

Period start date

January 1, 2019

Period end date

December 31, 2019

Allowances allocated

48,950

Allowances purchased

Verified Scope 1 emissions in metric tons CO₂e

65,676

Verified Scope 2 emissions in metric tons CO₂e

Details of ownership

Facilities we own and operate

Comment

ETS is only relevant for one site and covers all of its Scope 1 emissions. In spite of reduced allocations, we did not purchase any allowances for this site. The missing EUAs have been taken from our existing / remaining stock from former activities.

C11.1c

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

Switzerland carbon tax

Period start date

January 1, 2019

Period end date

December 31, 2019

% of total Scope 1 emissions covered by tax

0.1

Total cost of tax paid

38,000

Comment

Carbon taxes are paid for the consumption of primary fuel (natural gas), representing 0.1% of the direct CO₂ emissions of Scope 1 emissions. In 2019, Clariant sold parts of its production in Switzerland which lead to a decrease in energy consumed

In several other countries tax systems exist but none of them are applied to our sites directly. As we do not actively "participate" in these taxes, we understand that this question is not relevant for us. Even if the tax should be relevant in the respective country it is only one of several components of fuel or energy costs and therefore could not be quantified as requested.

C11.1d

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

For complying with the emission trading scheme we have established an internal organization for emission trading items with defined responsibilities. For trading certificates we would use the additional support of an external consultant. As mentioned above only one plant falling under the EU ETS has been operated in 2019. The remaining certificates from former activities have been transferred to a traders account and are used if certificates are needed.

Further developments in this area are monitored and starting in 2019, Clariant has set up a Climate Change Core team responsible for developing a carbon analysis covering the top 20

sites globally which are contributing to 80% circa of the company's overall Global Warming Potential (Scope 1 + 2). Based on these most relevant sites, several workshops were carried out to identify the hotspots of emissions sources, and opportunities for improvement. The Core Team will also be responsible for managing the project pipeline, select and prioritize the projects for emission reduction roadmap following a set of criteria and an internal stage gate process. The highest investment decisions carried out at the company are approved by the Executive Committee. From the top projects identified, a carbon pricing sensitivity analysis was carried out based on a CHF 50 per ton of CO₂ to identify which projects would become more attractive in terms of payback and NPV. This analysis will serve as a basis to develop a proposal for an internal carbon pricing mechanism, which will be finalized later in 2020. In this context as one possible element also a possible internal carbon pricing is evaluated (see 11.3).

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, but we anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers

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

4.6

% total procurement spend (direct and indirect)

9.43

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

11.4

Rationale for the coverage of your engagement

The percentages represent the number of suppliers, related spend and Scope 3 emissions (Category 1) - respectively - with medium and high risk level out of the total, including both direct and indirect spend. The share of suppliers related scope 3 emissions increased in relation to last report due to increased coverage of raw materials and suppliers with emission factors.

Impact of engagement, including measures of success

Clariant has access to 5479 companies (direct and indirect spend) in more than 100 countries and to the results of numerous audits carried out by Together for Sustainability, the program to assess and manage the sustainability performance of our suppliers. The scope of an EcoVadis scorecard/assessment and TfS audit covers all the critical aspects of management, including emissions, environmental and carbon related aspects.

Comment**C12.1b**

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

3.5

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

0

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

The size of engagement represents the customers that received product or site related CO₂ information versus the total number of Clariant sales. Clariant mainly addresses key customers with the biggest CO₂ emission reduction opportunities. The % of Scope 3 emissions is zero because we do not calculate the processing of sold products, as disclosed in C6.5.

Impact of engagement, including measures of success

By sharing the carbon footprint of products currently sold, it was also possible to promote alternatives with lower footprint and, therefore, promote a reduction of the customer emissions. For success measures, please see the next section about "Collaboration & Innovation".

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

14

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

0

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

The size of engagement represents the Business Area Catalysis customers who are actively involved in the development of innovative catalyts, which supports combating climate change. Other Business Areas are also involved with customers to develop low-carbon solutions. The % of Scope 3 emissions is zero because we do not calculate the processing of sold products, as disclosed in C6.5.

Impact of engagement, including measures of success

The measure of success is based on the number of launched innovation projects or shift of products with lower carbon footprint in relation to the total number of initiatives, the R&D costs as well as the carbon footprint reduction. Some examples of this success: AmoMax® 10 is a highly active catalyst that has helped customers avoid the release of 500'000 tons of CO₂ and save approximately 1'000 gigawatt hours of energy annually – the energy need of an 80'000-household city. Other examples: the replacement of a standard pigment by the Clariant Easily Dispersible Pigments, leading to energy savings, time savings and also waste reduction at our customers; traceability of palm-based products including RSPO MB certification (which is available for any customer); increase the use of renewable raw materials; shift to light-weight materials (especially for automotive applications); among others.

C12.1d

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

One example of a climate-related and zero-deforestation focused engagement in the value chain is the SPOTS project, which stands for Sustainable Palm Oil and Traceability with Sabah small producers. In this project Clariant and other partners along the value chain successfully integrated Malaysian small producers of palm into the sourcing for promoting

traceability, certification and sustainability of palm based products.

Another example is the partnership of Clariant with WeAreSpinDye and other players in the garment value chain. This collaboration is promoting the use of spin dye as an alternative to bath dyeing, which consumes much more energy, water, chemicals, generates much more waste and also has less durability performance.

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

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 Low carbon transportation	Support	Clariant engages both directly and through national and European associations (ePure, Leaders of Sustainable Biofuels) on regulatory developments related to renewable energy and low carbon fuels. We actively participate to the public dialog in order to support a faster market deployment of advanced and sustainable fuels. Clariant also benefits from public funding at EU level (in the context of the Horizon 2020 program).	Secure mandatory blending target at EU level as part of the Renewable Energy share in transport to promote the deployment of sustainable, advanced, second-generation biofuels produced from agricultural residues.
Adaptation or resilience	Support with minor exceptions	Protecting customers, consumers, and the environment by providing safer and more sustainable and climate-friendly solutions. Clariant product stewardship and other experts actively promote these goals through their participation to International, European, national and local chemical associations.	Depending on policy dossier

C12.3b

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

No

C12.3d

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

No

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?

Position Papers and internal memos are adopted to secure consistency in positioning across the company and provide guidelines across businesses, Regions and Clariant Senior Management. Relevant documentation as well as detailed positioning and key messages are made available to all relevant functions, regional or BUs representatives. The engagement of Clariant representatives in trade associations and other platforms ensures a direct link to our strategic alignment. Advocacy strategy is internally coordinated by the Sustainability Council chaired by Clariant CEO and implemented at Corporate level by the Corporate Sustainability and Advocacy team.

Clariant actively engages in trade associations on several public policies themes such as climate change, energy, circular economy and the bioeconomy.

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 voluntary sustainability report

Status

Complete

Attach the document

 clariant_gri_report_2019_en.pdf

Page/Section reference

GRI 2019: section Climate Change (page 41 onwards - includes Strategy, Emissions figures, Emissions targets and other environmental targets such as energy), Governance page 70, Risks and Opportunities (page 24).

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 clariant_integrated_report_2019_en.pdf

Page/Section reference

Integrated Report 2019: section 1.3 Climate Change (page 182 onwards)

Content elements

Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Head of Sustainability Affairs	Other, please specify Department head

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms